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Policy Studies



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Institute of Education
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technopolis group

Progress in higher education reform across Europe

Governance and Funding Reform



Volume 2: Methodology, performance data,
literature survey, national system analyses
and case studies



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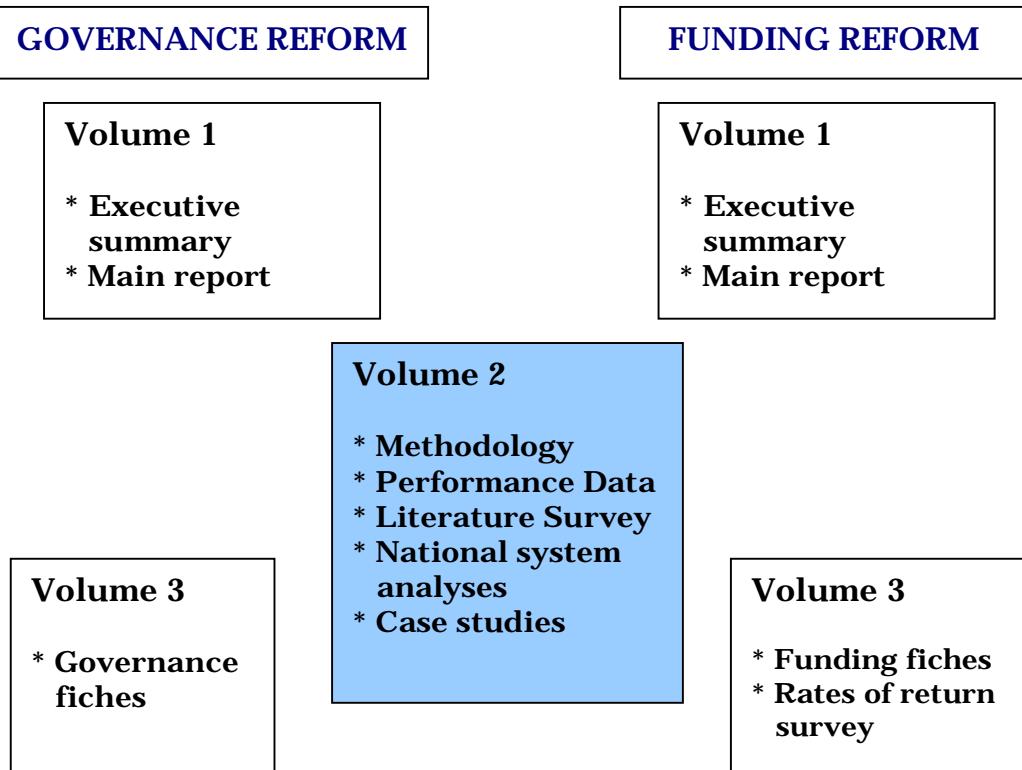
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Progress in higher education reform across Europe

Governance and Funding Reform

Structure of the final reports

Two CHEPS-led consortia were commissioned to undertake parallel studies on higher education governance and funding reforms across Europe and their relation to system performance. With the agreement of DG EAC the literature review, performance overviews, national system analyses and case study components of the two projects were integrated which allowed a broader selection of case studies than originally envisaged. All of these “joint products” can be found in Volume 2 which is a common volume in both project reports. The current volume is shaded for ease of reference.



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*Includes two institutional case studies

Note on Methodology

In this section we outline the broad methodology used in the governance and funding reform studies. The key project activities are depicted in Figure 1 below in a broadly sequential way.

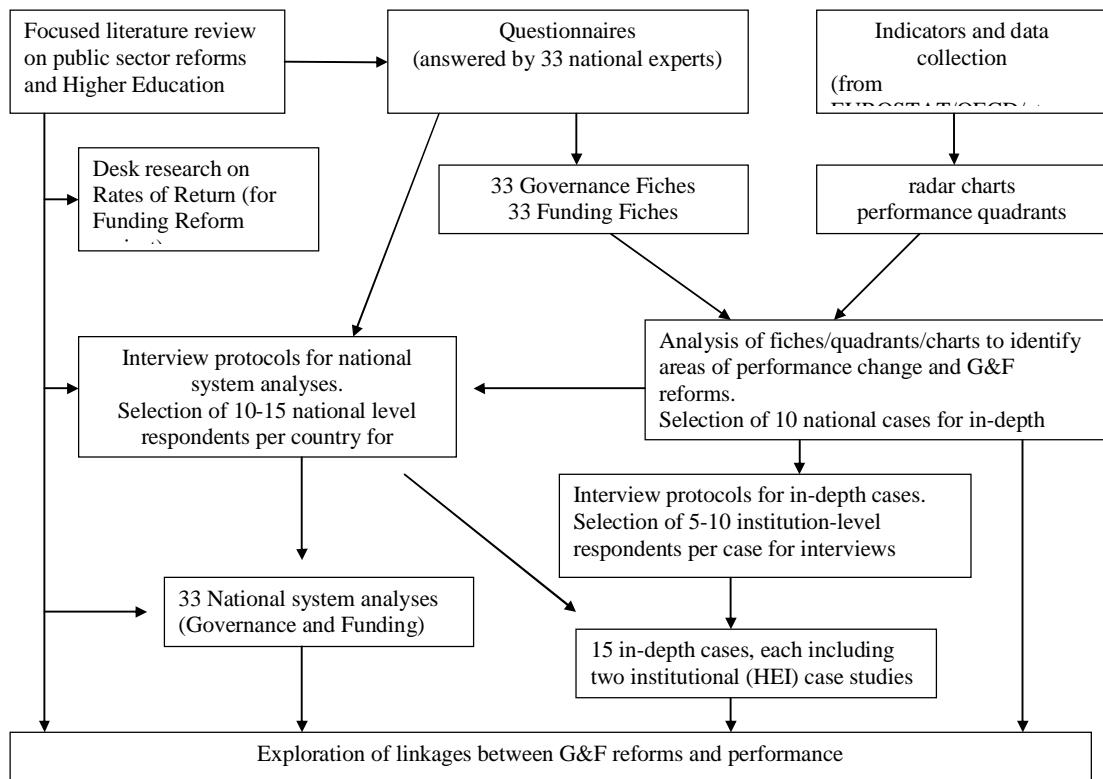


Figure 1: Architecture of the EU Governance and Funding Reform projects

Apart from the final main reports analysing governance and funding reforms and containing an exploration of the linkages between reforms and performance, other important outputs of the studies have been:

- **Literature surveys:** (1) a general survey on reforms in public sector funding and governance, higher education reforms and their relationship to performance; (2) a report on rates of return to higher education in the various countries included in our study. The literature survey provides an overview of the major literature readily available on higher education governance and funding reforms and other related issues in Europe. Apart from feeding into the design of the questionnaires and interview protocols, the literature survey also identifies holes in “what we know” about the impact of higher education reforms. For the funding reform project a separate review of the most up to date information on *rates of return* to higher education readily available from other studies was undertaken.
- **Protocols/questionnaires/templates** for collating information about higher education governance and funding practices on national and institutional levels.
- **Governance and Funding fiches** summarizing the reforms in each country’s HE system. The fiches provide a quick overview of the current trends, issues and developments related to higher education funding and governance for each of the 33 countries. They follow a uniform format, with a short list of relevant aspects of governance and funding arrangements, reforms. For funding they pay special attention to the aspects of diversification of institutional income, tuition fees, grants and student loans. For governance they pay special attention to the various dimensions of autonomy and accountability.
- **List of indicators** (including definitions and data sources) for measuring performance (for each of the eight parameters of higher education performance: access, graduation, employability, mobility, mature learners, research output, capacity to attract funding, cost effectiveness). These are discussed in more detail below.
- **Radar charts and performance quadrants:** visualisations of higher education system’s performance, either for an individual country or for the country compared to other countries in the sample.
- **National system analyses.** The 33 national system analyses describe the countries’ governance and funding arrangements, as well as the changes over the recent decade and a half. The objective of the system analyses is to provide an in-depth overview of the main structures and reforms in higher education governance and funding across the 33 countries. In addition, stakeholders’ perceptions of the relationship between higher education reforms and system performance were recorded. Primary attention was paid to the most salient areas identified from the desk research, the national fiches and the system performance overviews. The stakeholder perceptions are based on interviews with selected representatives from various stakeholders in each country’s higher education system.

Ten to fifteen stakeholders were identified and questioned in interviews. The respondents were from different fields: policy field (ministries, funding council), intermediary organizations (e.g. rectors' conferences), research councils, national advisory boards, accreditation bodies, employers' organisations, and student unions.

- **Institutional case studies** exploring the possible linkages between national reforms and institution-level performance. For fifteen out of the 33 countries we also selected two higher education institutions for an in-depth study. Interviews were held with their leaders to get a bottom-up perspective on the implementation of governance and funding reforms and their potential impact on performance. In total more than 450 interviews were conducted across 33 countries for the system analyses and case studies.

Interviews were only one method of data collection. The various activities in the reform projects each involved different research methods that are necessary for collecting the information needed to address the research questions. Table 1 provides an overview of the data sources and how these link to the analysis.

Data sources	Data Analysis
Literature review	Secondary analysis of literature on HE governance and funding Desk research on rates of return (for Funding Reform study)
Questionnaire to national experts	Identification by national expert of the main features of HE governance and funding, highlighting main reforms on the system level, and including some basic funding statistics over period 1995-2008.
Policy reports for 33 countries	Secondary analysis of international and national policy reports on higher education, research and innovation policies
Statistical data on HE performance and national context for 33 countries	Analysis of indicators of 8 performance parameters collected from OECD, Eurostat, Eurydice, UNESCO on HE performance in 33 countries Analysis of countries' background characteristics (context) that potentially affect performance
Structured interviews with stakeholders in 33 countries	Analysis of the stakeholder perceptions of the HE governance and funding reforms over the recent 10-15 years, with a specific focus on changes in HE system performance and the underlying factors (e.g. reforms) driving that change.
National policy documents for 15 selected countries	HE regulatory frameworks, other policy documents on HE governance and funding, and HE performance
University external/internal reports for 15 selected countries	Secondary analysis of selected universities reports to analyze institutional governance, funding and performance
Semi-structured in situ interviews with university academics and leaders in 5 selected countries	Analysis of the perception of academic and administrative staff on the changes in institutional funding and their views on institutional performance and the link between the two

Table 1. An overview of data sources and data analysis

Apart from the researchers drawn from the five research institutes included in the two research consortia and other individual researchers included in the research teams, we received valuable inputs, information and comments from:

- Representatives of DG Education and Culture (European Commission). At various instances during the project, intermediary reports and proposals were discussed with three to five representatives from DGEAC, the client for this study.
- National experts (one each from the 33 countries). National experts have answered a comprehensive questionnaire on governance and funding arrangements, and in a number of cases have assisted members of the research team in carrying out interviews in their country with national stakeholders (on average 10-15 per country) and synthesising this in a national system analysis that describes governance and funding, the reforms, as well as the opinions of stakeholders on the linkages between reforms and performance.
- Senior advisers. Three senior advisers (Profs. Van Vught, Mateju and Kwiek) have given advice on the intermediary outcomes of the study. Another senior adviser (Prof Psacharopoulos) was specifically commissioned the task of writing the rates of return report for the funding reform project, included in Volume 3.
- International panel. An international panel, consisting of researchers external to the project and coming from mostly non-European countries (South Africa, Argentina, Australia, the USA, China, Japan, Saudi Arabia, Netherlands) commented on a pre-final draft of the project report and attended a testing seminar in Brussels (December 2, 2009). Stakeholder representatives were also invited to this seminar and commented on the preliminary results of the project.
- Eurydice. Eurydice kindly made the country background reports from their 2009 report *Higher Education Governance in Europe* available to the research team.

To provide more insight in the performances of the 33 higher education systems we developed a grid of indicators to map the relative performance of the systems. Based on DGEAC's Terms of Reference for this study, the following performance dimensions were selected:

1. Access
2. Mature students (Lifelong learning)
3. International mobility of students
4. Graduation
5. Employability
6. Cost effectiveness
7. Capacity to attract funds
8. Research and innovation

Table 2: Performance dimensions

For each performance dimension, two or more indicators were selected by the researchers after consultation with DGEAC and EUROSTAT. Based on our experience in research into indicators in higher education, it was agreed to use the indicators shown in Table 3.

Dimensions	Indicators	Data sources
Access	Entry rate (new entrants per age group/total population, for ages 17-30) Net participation rate (enrolment rates added for ages 17-30)	eurostat eurostat
Lifelong learning	Entry rate 18-25 yrs divided by entry rate 26-45 yrs (population by age)	eurostat
	Mature (> 30) enrolment in education (ISCED 5 and 6)	eurostat
Graduation	Attainment (% 25-34 population holding tertiary degree) Total graduates per 1000 of population aged 20-29	eurostat eurostat
Employability	Relative unemployment rate of graduates (reciprocal) Relative earnings of tertiary education graduates	eurostat OECD EaG
Mobility	Mobile students in other EU-25, EEA or Candidate country as % of all stud. Mobile students from EU-25, EEA and Cand. countries as % of all students	eurostat eurostat
Research output	Patent applications to the EPO per mln inhabitants Scientific articles per fte in HEIs	eurostat OECD STIS
Capacity to attract funds	Investments in HEIs by private households as % of total % of HERD financed by industry % of HERD from international sources	OECD EaG OECD STIS OECD STIS
Cost effectiveness	Expenditure per HE student in EUR PPS Expenditure per HE student compared to GDP per capita	OECD EaG OECD EaG

Table 3. Performance dimensions, indicators and data sources

For each indicator, international data sources with generally agreed definitions can be used for retrieval of the data. The main data sources are:

- OECD Science, Technology and Industry Scoreboard (STIS) 2007
- OECD Education at a Glance (EaG)
- Eurostat online statistical database

For the 33 countries, data were needed for the beginning, middle and end of the period 1998-2006. Unfortunately there are missing data for some countries, in particular for the year 1998. Another problem was that the OECD databases only include data for the OECD member states, which means mostly Western European countries are represented and many countries in Eastern and Central Europe are not covered.

The tables that follow at the end of this Note on Methodology present the performance dimensions and the indicators selected for each dimension. The tables include the name of the indicator (in a short hand way), the definition, the rationale, the data sources and some 'methodological comments'. The data for the indicators for the year 2006 as well as the change over the period 2002-2006 are included in the section on national performance data in this volume.

A complicating factor when making comparisons across countries is the differences in national contexts. Amongst other things, these contextual specificities relate to the institutional context (laws, regulations), the economic climate and the social structure. These differences were captured by means of the following background variables:

1. the rate of unemployment in the economy
2. demographic structure
3. an index of the competitiveness of the national economy
4. the level of public expenditure on higher education
5. the level of expenditure on research and development activities
6. the share of Science &Engineering students in the higher education system

Table 4: Background indicators

In the tables that follow at the end of this section we present an overview of the background variables (definitions, rationale), along with some methodological comments. Taking the background aspects into account produced a fairer – ‘controlled’ – comparison of national HE systems. One may compare the performance of national systems that have similar background characteristics or one may trace the difference in performance back to differences in context. The data on background indicators for each country can also be found in the section on performance data.

Despite the comprehensiveness of this study, it has some inevitable methodological limitations that should be taken into account when reading the outcomes. First, the diversity of higher education systems in Europe is so large that during the project process some choices had to be made. Most of the descriptions of the reforms, their effects and potential impacts on system performances relate to the public university sectors. This is of course a serious limitation as some countries have significant non-university higher education sectors (binary systems). Moreover, there are countries that have private higher education institutions with a substantial number of students. Where possible we have taken the changes and perspectives of these other higher education sectors into consideration, but the main descriptions and analyses refer to public university sectors.

Second, the data for the national higher education system performances on the different performance parameters are extracted from existing international data bases. Not all of the data for every single country over the time period 1995-2008 is available through these databases nor were we for this reason able to select all the parameter indicators that we would have liked for more accurate analyses.

Third, it takes time before reforms have (real) effects. Sometimes reforms lead more or less immediately to different (short term) outputs but their (long term) impacts may take a while before they become noticeable. This means for the analysis in this study on reforms on the one hand and system performances on the other that we focused primarily on reforms that were implemented before 2004 (and even five years may be too short a time span to demonstrate real impact).

However, in terms of the descriptions of the reforms and their (perceived short term) effects, we have attempted to include all reforms over the period 1995 to 2008.

Fourth, part of the country specific information has been collected and analysed by a national expert in each country. Although national experts were guided by interview protocols and questionnaires some of the reform issues lend themselves to different interpretations. In complex and dynamic reform processes or in the interpretations of their effects other experts may hold different views on some issues.

Finally, it goes without saying that even a report of over one thousand pages of information about governance and funding reforms and their effects in 33 European countries cannot do full justice to the complexities of today's higher education systems. We believe however that these reports have produced useful insights as well as valuable input for future research and for future policy discussions.

Performance indicators

Dimension	Indicators, Definition, data sources	Rationale	Methodological Comments
Access			
	<p>Net enrolment rate N_ENR_RT_56</p> <p>The sum of the ratios of students enrolled, age n years, and population, age n years, with n ranging from 17 till 29 (looking at ISCED levels 5 and 6).</p> <p>Data sources:</p> <p>Enrolment: http://epp.eurostat.ec.europa.eu/extracton/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/educ/educ_enrl1</p> <p>Population: http://epp.eurostat.ec.europa.eu/extracton/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/demo/demo_pian</p>	<p>The indicator captures the proportion of the population that experiences a higher education.</p>	<p>International comparison may be biased by national differences in demographic fluctuations and by differences in average time to degree. The latter bias is an upward bias for those HE systems where the average time to degree is relatively high.</p> <p>An alternative indicator is the entry rate. This indicator refers to students who are enrolled for the first time in higher education. There are various definitions of entry rate, varying in the age groups that are taken in. OECD uses 17-70 year old new entrants. An alternative to this indicator might be entry rates, but that indicator suffers from another bias (for countries where people make a break after the bachelor and re-enter higher education to take a master later - like in the UK or Ireland - there might be double counting of entrants).</p>
	<p>Net entry rate N_ENT_RT_5</p> <p>The sum of the ratios of new entrants, age n years, and population, age n years, with n ranging from 17 till 29.</p> <p>Data sources:</p> <p>New entrants: http://epp.eurostat.ec.europa.eu/extracton/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/educ/educ_entr2</p> <p>Population: http://epp.eurostat.ec.europa.eu/extracton/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/demo/demo_pian</p>	<p>The indicator indicates what proportion of a cohort starts a HE education.</p>	<p>The bias caused by the national differences in time to degree does not apply to this indicator.</p>

Dimension	Indicators, Definition, data sources	Rationale	Methodological Comments
Research output			
	<p>Scientific articles</p> <p>ARTICLE</p> <p>Scientific articles per million inhabitants</p> <p>Data source:</p> <p>OECD Science, Technology and Industry Scoreboard, A.14</p>	<p>The publication of scientific articles is an important result of scientific research activity. Moreover, it can be considered as a proxy for the reputation of the national research system in the worldwide scientific community.</p>	<p>This indicator is biased because only articles published in ISI journals are covered, implying an overemphasis on English-language articles and an overrepresentation of the 'hard sciences' vis-à-vis the arts, humanities and social sciences.</p> <p>Moreover, this is a volume indicator, while impact factors and % of top-cited publications can provide better information on scientific excellence.</p> <p>Information of scientific articles can be found in the OECD Science, Technology and Industry Scoreboard. This implies that we do not have data on some EU member states that are non-OECD members.</p> <p>We do not look at patenting (EPO patent applications) as an indicator of research output.</p>
	<p>Patent applications</p> <p>PATENT</p> <p>Patent applications to the EPO by priority year at the national level per million of inhabitants</p> <p>Data source:</p> <p>http://epp.eurostat.ec.europa.eu/extraction/evalight/EVAlight.jsp?A=1&language=en&root=/them/e9/pat/pat_ep_ntot</p>	<p>The indicator reflects one of the results of research activities in the national R&D system. It does not reflect the research output of the national HE system only.</p>	<p>This indicator flags the effort of the national R&D system in putting R&D activities to use. Since patents are more common in certain disciplines than in others, the indicator may be biased by national differences in the disciplinary mix in the research system</p>

Dimension	Indicators, Definition, data sources	Rationale	Methodological Comments
Lifelong learning			
	<p>Mature enrolment (at ISCED 5, respectively ISCED 5 and 6)</p> <p>MAT_5 and MAT_56</p> <p>The number of students aged 30 years and older as a percentage of total enrolment</p> <p>Enrolment: http://epp.eurostat.ec.europa.eu/extration/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/educ/education_enr11</p> <p>Population: http://epp.eurostat.ec.europa.eu/extration/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/demo/demo_pjan</p>	<p>The indicator captures postponed participation in higher education, as an indication of participation in lifelong learning.</p>	<p>National differences in demographic fluctuations may have an effect on this indicator. The indicator does not capture students in short courses that fall outside the spectrum of Bachelor and Masters courses.</p> <p>Countries like the UK and Ireland where relatively many professionals take an MBA later in life will probably come out relatively well in this indicator by people re-entering higher education rather than entering it at a mature age for the first time.</p>
	<p>Mature entry rate (at ISCED 5, respectively ISCED 5 and 6)</p> <p>MAT_ENTR5A and MAT_ENTR5B</p> <p>Ratio of entry rates of old (25-45) and young (17-25) new entrants</p> <p>New entrants: http://epp.eurostat.ec.europa.eu/extraction/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/educ/education_entr21</p> <p>Population: http://epp.eurostat.ec.europa.eu/extration/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/demo/demo_pjan</p>	<p>The indicator captures postponed entry into higher education, as an indication of access to lifelong learning.</p>	<p>Again: two indicators (ISCED levels 5A and 5B).</p> <p>National differences in demographic fluctuations may have an effect on this indicator.</p>

Dimension	Indicators, Definition and Data source	Rationale	Methodological Comments
Capacity to attract funds			
	<p>% of HERD financed by industry</p> <p>HERD_BUS</p> <p>Expenditure on R&D in the higher education sector from business and industry as percentage of total expenditure on R&D</p> <p>Data source: OECD: MSTI</p>	The dimension refers to the capacity of the HE system to attract funds from sources other than the traditional public sector/ government. Business and industry is one of the sectors that can provide such funds.	This indicator only looks at R&D and not at the total revenues generated from business. Moreover, the reliability of the data is very much dependent on what countries classify as R&D knowing that university revenues are often difficult to split in R&D and education.
	<p>Contributions to HEIs by private households</p> <p>PRIV_CONTR</p> <p>Relative proportion of private expenditure on HEIs</p> <p>Data source: OECD Education at a Glance, table 3.2.b, 2007 2008</p>	In the realm of teaching activities, fees paid by private households are the major alternative source of income of HEIs.	In most countries, this indicator will be interpreted as the part students have to contribute to the funding of higher education. Does this indicate the capacity to attract funds or does it indicate the autonomy the HEIs have to levy fees? There is an obvious comparative bias due to national differences in the level of tuition fees. In most countries tuition fees are fixed and HEIs have only limited possibilities to attract additional income from private households. Comparability was in the past affected by differences in the level of coverage of private spending in different countries and by breaks in series. One may doubt whether we have good enough data to look at trends 1998-2006.
	<p>% of HERD financed by international sources</p> <p>P_HERD_ABR</p> <p>Expenditure on R&D in the higher education sector from international sources as percentage of total expenditure on R&D</p> <p>Data source: EUROSTAT http://epp.eurostat.ec.europa.eu/extracts/evalight/EVAlight.jsp?A=1&language=en&root=/theme9/rd/rd_e_gerdfund</p>	The dimension refers to the capacity of the HE system to attract funds from sources other than the traditional public sector/ government. International government agencies are fast becoming an alternative revenue source.	

Dimension	Indicators, Definition, data sources	Rationale	Methodological Comments
Employability			
	<p>Relative earnings of tertiary education graduates</p> <p>REL_EARN</p> <p>Relative earnings of the population with income from employment holding a tertiary education qualification (upper secondary and post-secondary non-tertiary education set at 100).</p> <p>Data source:</p> <p>OECD, Education at a Glance 2008, table A9.2.a; http://dx.doi.org/10.1787/401781614508</p>	<p>The indicator refers to the position of HE graduates on the labour market. A high level of relative earnings reflects a favourable position on the labour market.</p>	<p>The indicator is not just an expression of the performance of the higher education sector but is also a reflection of the economic situation and labour market surpluses/shortages.</p> <p>The indicator could be affected by a scarcity of HE graduates and thus be biased towards countries with low graduation rates and by the level of compression of wage scales (more compressed in Nordic countries, less compressed in Anglo-Saxon countries). Does it really show the appreciation of higher education qualifications or something else?</p>
	<p>Relative unemployment rate of tertiary education degree holders</p> <p>REL_UNEMPL</p> <p>Unemployment rate of labour force aged 25-39 with upper secondary qualification divided by unemployment rate of labour force aged 25-39 with tertiary qualification (ISCED 5/6)</p> <p>Data source:</p> <p>http://epp.eurostat.ec.europa.eu/extraction/e_valight/EVAlight.jsp?A=1&language=en&root=/theme3/educ/educ_iunemp</p>	<p>The indicator refers to the position of HE graduates on the labour market. A high score on this indicator reflects a favourable position of higher education graduates on the labour market.</p>	<p>Again relative scarcity of tertiary degrees comes into play. Potential bias towards countries with low graduation rates. The earlier years of this cohort might be affected by frictional unemployment, the difficulties to find a first job. Upper secondary graduates had at age 25+ more time to find a job than tertiary graduates. The later tertiary students in a country on average graduate the more the indicator will be affected by the search for a first job unemployment.</p>

Dimension	Indicators, Definition, data sources	Rationale	Methodological Comments
Graduation			
	<p>Educational attainment</p> <p>ATTAIN</p> <p>Percentage of the population aged 25-34 with tertiary qualification</p> <p>Data source: OECD Education at a Glance, tab A1.3a</p>	<p>This indicator shows the educational attainment of the population by looking at the share that holds a tertiary degree</p>	<p>The age group covered by the indicator is limited, which does not give a full picture of performance regarding LLL.</p> <p>At the lower end, the age group 25-34 might be a bit young for countries where many students graduate at 25+. The proposal for the Commission's benchmark on tertiary attainment is currently to use the age group 30-34.</p>
	<p>Graduates per 1000 population aged 20-29</p> <p>GRAD1000</p> <p>Total number of graduates (ISCED level 5 and 6) as a percentage of the population aged 20-29 times 1000</p> <p>Data sources: Graduates: http://epp.eurostat.ec.europa.eu/extraction/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/educ/educ_iterc Population: http://epp.eurostat.ec.europa.eu/extraction/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/demo/demo_pjan</p>	<p>This indicator shows the educational attainment of the population</p>	<p>The age group is relatively young, which may lead to substantial biases in the comparison of HE systems with a relatively young typical age of graduation and systems with a relatively old typical age of graduation.</p>

Dimension	Indicators, Definition, data sources	Rationale	Methodological Comments
International mobility			<p>Both indicators for this dimension do not cover mobility to and from outside Europe (EU 27, EEA and candidates) and in this sense the term "international mobility" needs to be qualified. Data availability prevents us from using a more adequate mobility indicator.</p> <p>Biased towards small countries like CY, MT, LU that some decades ago didn't have universities and hence developed a tradition of going abroad. In small countries in some cases 'abroad' means also less far away than in bigger countries and languages are often shared with other countries.</p>
	<p>Mobile students incoming</p> <p>ST_INCOMING</p> <p>Inflow of students (ISCED 5-6) from EU-27, EEA and Candidate countries - as % of all students in the country</p> <p>Data source: http://epp.eurostat.ec.europa.eu/extr action/evalight/EVAlight.jsp?A=1&lan guage=en&root=/theme3/educ/edu thmob</p>	<p>The indicator flags how open a HE system is to international mobility of students. A high percentage of incoming students also creates an international setting for non-mobile students, which contributes to the overall rationale of the enhancement of mobility, which is to enhance the international orientation of students.</p>	<p>The mobility indicators refer to 'mobile' students, but it is not clear what a mobile student is. Three options are open: students who participated in international exchange programs; students who get their degree in a different country than where they got their secondary school diploma; students who are 'free movers'.</p> <p>It is clear that the international databases are not yet fully geared to monitor student mobility in all its aspects.</p> <p>The data on the incoming students in the past covered also many resident foreigners and hence overstated mobility. There is a move to new concepts, based on country of residence or country of prior education, but this is only available for parts of the countries for 2006 (and mostly unavailable for 1998 and 2002).</p>
	<p>Mobile students sent out</p> <p>ST_SENT</p> <p>Students (ISCED 5-6) studying in another EU-27, EEA or Candidate country - as % of all students</p> <p>Data source: <a href="http://epp.eurostat.ec.europa.eu/extr
action/evalight/EVAlight.jsp?A=1&lan
guage=en&root=/theme3/educ/edu
thmob">http://epp.eurostat.ec.europa.eu/extr action/evalight/EVAlight.jsp?A=1&lan guage=en&root=/theme3/educ/edu thmob</p>	<p>The indicator flags how active a HE system is in stimulating international mobility of students. A high percentage of students sent out contributes to the overall rationale of enhancing the international orientation of students.</p>	<p>There is a possible interference of another characteristic of the HE system, i.e. the capacity of the system. If the capacity of the system is insufficient to accommodate the domestic demand, it is not uncommon that students go abroad to get a higher education. The mobility is in those cases not 'international orientation' driven but 'capacity driven'. The latter mobility is mainly between neighbouring countries.</p> <p>Data (e.g. Eurostat) don't include short term/programme mobility and hence show only parts of total outgoing mobility.</p>

Dimension	Indicator, Definition, data sources	Rationale	Methodological comments
Cost effectiveness			Both indicators for this dimension are a very crude approximation of cost effectiveness. However, in combination with the indicators in the dimension 'Graduation', they may provide a better indication of the cost effectiveness of the HE system.
	<p>Expenditure per HE student compared to GDP per capita</p> <p>EXP_STUD_GDP</p> <p>Annual expenditure on public educational institutions per student compared to GDP per capita, at tertiary level of education (ISCED 5,6), based on full-time equivalents</p> <p>Data sources: http://epp.eurostat.ec.europa.eu/extraction/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/education/educ_fipubin and OECD Education at a Glance, table B1.1</p>	Proxy for the HE-system's cost effectiveness.	Using GDP per capita as denominator 'compensates' for the national differences in relative wealth.
	<p>Expenditure per HE student in Euro PPS</p> <p>EXP_STUD_EUR</p> <p>Annual expenditure on public educational institutions per student in EURO PPS, at tertiary level of education (ISCED 5,6), based on full-time equivalents</p> <p>http://epp.eurostat.ec.europa.eu/extraction/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/education/educ_fipubin and OECD Education at a Glance, table B1.1</p>	Proxy for the HE-systems cost effectiveness.	May be argued that a high value of the indicator is not so much an indication of low cost effectiveness, but rather an indication of high quality.

Background indicators

Background variable	Indicator	Definition	Rationale	Methodological Comments
Demographic structure	Change in 18 years olds in population	The number of 18 years olds in the population in the reference year as a percentage of the number of 18 years olds in the population in 1995 Source: http://epp.eurostat.ec.europa.eu/extraction/evalight/EVAlight.jsp?A=1&language=en&root=/theme3/demo/demo_pian	Strong fluctuations in the age group that forms the traditional cohort of new entrants may have a significant impact on the scores on a number of indicators.	Some dramatic changes, i.e. the demographic transition crisis in Eastern Europe will come into play only after 2006. Otherwise the decline of the birth rate in Southern Europe in the 1980s will be visible in the data.
Competitiveness	GCI rank score	The rank score within the group of 33 countries, based on the rank score on the Global Competitiveness Index, as published by the World Economic Forum Source: World Economic Forum, The Global Competitiveness Report 2008-2009 and 2001-2002 http://www.weforum.org/en/initiatives/gcp/index.htm	The CGI rank scores give an overall indication on economic competitiveness. The relative competitiveness is needed as background information because it may have an impact on the scores of a number of indicators. If competitiveness is high, investments and reforms may be 'easier' than when competitiveness is low.	The suggested causality should be 'distrusted' since it is not clear what influences what at what time. Although the indicator is relatively crude, it is one of the few indicators that produces this valuable background information.
R&D intensity	GERD funded by government as % of GDP	Total intramural expenditure on R&D funded by government as a percentage of GDP Source: Eurostat	The indicator specifies the nation's priority for investment in R&D (one of the Lisbon targets).	Since GERD funded by government comprises R&D activities in the HE sector as well as in public research institutes and, to a lesser extent, business and industry changes in the indicator may be possibly attributed to HE reform activities. Moreover, this indicator largely depends on national organisation of research systems.
HE expenditures	Public expenditure on HE as % of GDP	Total public expenditure on education as % of GDP, at tertiary level of education (ISCED 5-6) Source: Eurostat table educ_figdp, indicator fp02_3	This indicator reflects the priority the government gives to higher education: how much of its wealth was the government willing to spend on HE?	Demography comes into play here too. A country with a lower share of young people might have to spend relatively less than a country with a higher share.

Background variable	Indicator	Definition	Rationale	Methodological Comments
Share of Science students	Disciplinary mix	Share of students (ISCED 5_6) in science and engineering Source: Eurostat	More students (and therefore staff) in the laboratory-based disciplines is reflected in performance, specialization and cost patterns in HE.	We have left out medicine/health.
Labour market condition	Unemployment rate	Unemployment rates represent unemployed persons as a percentage of the labour force Source: Eurostat http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=0&language=en&pcode=tsiem110	The indicator reflects an aspect of the economic health of a country. It may have an impact on the decisions to invest in higher education, both at the national level as on the individual level.	Unemployment rates represent unemployed persons as a percentage of the labour force. The unemployment rate is fluctuating a lot over time. If we compare countries do we catch them at the same phase of the business cycle (UK and Ireland in the past more attached to the US business cycle than to the Continental one). The absolute levels have also to do with economic and social policies of a country. Spain for example had till 2008 a strong economy with a lot of job creation and still a relatively high unemployment rate if compared to the UK or the Netherlands. The impact on the decision to invest in higher education at an individual level is complex: in Spain many left schools early because jobs were plenty in the service sector. In a time of crisis education participation tend to increase, while some participants might at the same time shy away from expensive studies.

National higher education performance data

This section includes the underlying data that was used in chapter 4 to highlight the dimensions where the 33 higher education systems included in our study have shown an increased performance as well as the data on the context variables for each country. Definitions and data sources for the performance indicators and the context variables are included in the Note on Methodology in this volume.

The changes in performance in each country are visualised using *radar charts* (or spider webs) that show the increase (or decrease) in the value of the 19 indicators that were selected for capturing elements of higher education system performance.

All indicator changes are shown insofar as there are data for the two years 2006 and 2002 (which is not always the case).

The 33 radar charts (one for each country) show *index numbers* for the relative change in the indicators over the period 2002-2006 compared to the year 2002. A value above unity indicates an increase (for example, 1.1 equals a 10% change) and a value below unity indicates decreased performance (0.9 equals a 10% decrease).

At the end of this section the underlying information for the context variables is presented.

Country codes

BE	Belgium
BE fr	Belgium – French Community
BE nl	Belgium – Flemish Community
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
GR	Greece
ES	Spain
FR	France
IE	Ireland
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary

MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom
IS	Iceland
LI	Liechtenstein
HR	Croatia
NO	Norway
TR	Turkey
CH	Switzerland

Share of HE R&D financed by business

HERD_BUS		STC_HERD_BUS	
Absolute value		Index of change	
TR	0,24	SK	5,19
BG	0,19	IS	2,82
DE	0,14	HU	2,13
LV	0,13	GR	1,67
HU	0,13	FI	1,39
IS	0,11	SE	1,27
BE	0,10	DE	1,26
SI	0,09	NL	1,25
GR	0,08	DK	1,19
ES	0,08	TR	1,09
HR	0,08	SI	1,03
FI	0,07	ES	1,02
NL	0,06	BE	0,96
RO	0,06	NO	0,86
EE	0,05	PT	0,81
AT	0,05	BG	0,71
PL	0,05	UK	0,66
SK	0,05	CY	0,61
SE	0,05	LV	0,57
UK	0,05	CZ	0,55
LT	0,04	PL	0,55
NO	0,04	EE	0,51
DK	0,02	FR	0,51
IE	0,02	RO	0,34
FR	0,02	IE	0,31
CZ	0,01	IT	
IT	0,01	LT	
CY	0,01	LU	
PT	0,01	MT	
LU	.	AT	
MT	.	HR	
LI	.	LI	
CH	.	CH	

Incoming European students

STC_ST_INCOMING		ST_INCOMING	
Index of change		Absolute value	
LT	3,00	AT	12,1
CZ	2,38	UK	8,4
EE	2,20	BE	8,1
ES	2,00	DE	5,6
NL	1,77	CZ	5,0
UK	1,71	SE	4,8
DK	1,50	CY	4,6
SI	1,33	DK	4,5
BG	1,27	NL	3,9
FI	1,22	IS	3,3
LV	1,20	BG	2,8
BE	1,19	NO	2,6
AT	1,19	IE	2,5
CY	1,18	FR	2,3
NO	1,18	MT	2,2
FR	1,15	HU	2,1
GR	1,14	GR	1,6
IT	1,14	EE	1,1
SE	1,12	FI	1,1
IS	1,06	ES	0,8
IE	1,04	IT	0,8
DE	1,02	PT	0,8
HU	1,00	SI	0,8
PL	1,00	LV	0,6
SK	1,00	SK	0,5
MT	0,73	LT	0,3
TR	0,50	RO	0,2
RO	0,40	PL	0,1
LU		TR	0,1
PT		LU	
HR		HR	
LI		LI	
CH		CH	

European students sent out

STC_ST_SENT		ST_SENT	
Index of change		Absolute value	
IE	1,86	LU	80,8
LV	1,69	CY	53,2
PT	1,61	IS	17,4
PL	1,60	IE	13,8
SK	1,59	SK	10,2
BG	1,48	MT	10,0
DE	1,47	BG	8,9
LT	1,43	HR	6,4
UK	1,40	GR	5,5
EE	1,37	NO	4,9
FR	1,26	AT	4,6
CZ	1,25	EE	4,1
NL	1,24	PT	3,7
SI	1,24	LT	3,0
LU	1,22	FI	3,0
ES	1,18	DE	2,8
IS	1,14	SE	2,7
SE	1,13	DK	2,6
NO	1,07	BE	2,5
IT	1,06	FR	2,4
RO	1,05	LV	2,2
BE	1,04	RO	2,2
CY	1,02	NL	2,1
DK	1,00	SI	2,1
HU	1,00	CZ	2,0
FI	1,00	IT	1,7
AT	0,98	HU	1,7
MT	0,81	PL	1,6
TR	0,76	TR	1,6
GR	0,64	ES	1,3
HR		UK	0,7
LI		LI	
CH		CH	

Share of mature students (ISCED 5)

STC_MAT_5		MATURE STUDENTS	
Index of change		Absolute value (%)	
TR	4,65	IS	0,38
SK	2,20	SE	0,34
CZ	2,03	UK	0,32
CY	1,90	DK	0,30
RO	1,88	LV	0,29
LT	1,53	FI	0,24
ES	1,51	EE	0,21
FR	1,38	HU	0,21
DK	1,36	LI	0,21
HU	1,35	MT	0,19
EE	1,34	LT	0,18
MT	1,34	NO	0,18
IT	1,26	SI	0,17
IS	1,24	AT	0,16
LV	1,21	DE	0,15
BE	1,16	ES	0,15
BG	1,16	IT	0,15
SI	1,15	PT	0,15
SE	1,02	SK	0,15
PT	1,00	CZ	0,13
FI	1,00	NL	0,13
PL	0,94	CH	0,13
UK	0,94	BE	0,11
NL	0,90	RO	0,11
AT	0,90	BG	0,10
DE	0,72	PL	0,10
CH	0,61	TR	0,10
NO	0,54	FR	0,08
IE		HR	0,08
GR		CY	0,06
LU		IE	
HR	.	GR	
LI	.	LU	

Relative graduate earnings

STC_REL_EARN		REL_EARN	
Index of change		Absolute value	
IE	1,15	HU	215,19
DE	1,09	IE	166,31
IT	1,08	IT	164,50
HU	1,05	DE	156,03
ES	1,03	CH	155,65
DK	1,01	UK	155,10
BE	1,00	FI	148,75
CH	1,00	FR	143,92
FI	0,99	BE	132,74
UK	0,98	ES	132,04
SE	0,97	NO	129,31
NO	0,97	SE	126,45
FR	0,96	DK	125,42
CZ	.	CZ	
BG	.	PL	
EE	.	PT	
GR	.	SI	
CY	.	TR	
LV	.	BG	.
LT	.	EE	.
LU	.	GR	.
MT	.	CY	.
NL	.	LV	.
AT	.	LT	.
PL	.	LU	.
PT	.	MT	.
RO	.	NL	.
SI	.	AT	.
SK	.	RO	.
HR	.	SK	.
IS	.	HR	.
LI	.	IS	.
TR	.	LI	.

Relative graduate employability

REL_UNEMPLOY		STC_REL_UNEMPL	
Absolute value		Index of change	
SK	4,46	CZ	1,62
CZ	3,67	SK	1,47
PL	2,67	FI	1,11
HU	2,43	LT	1,08
DE	2,21	NO	1,02
RO	2,10	BE	0,92
LT	2,06	ES	0,92
BE	2,06	LV	0,90
FI	1,98	RO	0,87
AT	1,92	CH	0,82
LV	1,81	IT	0,77
BG	1,76	GR	0,75
UK	1,48	PT	0,72
IE	1,43	NL	0,69
SI	1,34	SE	0,68
TR	1,33	HU	0,66
SE	1,32	PL	0,61
HR	1,27	SI	0,51
GR	1,25	DK	0,44
PT	1,20	BG	.
NL	1,11	DE	.
ES	1,10	EE	.
CY	1,08	IE	.
NO	0,97	FR	.
IT	0,93	CY	.
CH	0,82	LU	.
DK	0,61	MT	.
LU	0,44	AT	.
EE	.	UK	.
FR	.	HR	.
MT	.	IS	.
IS	.	LI	.
LI	.	TR	.

Note: equals unemployment rate upper secondary education graduates divided by unemployment rate tertiary education graduates

Private contributions to higher education from households

STC_PRIV_CONTR		PRIV CONTR	
Index of change		Absolute value	
GR	5,00	UK	33,09
PT	4,25	PT	31,89
SK	2,57	IT	30,41
AT	1,92	PL	26,02
IS	1,73	SK	22,65
FI	1,38	NL	22,38
DK	1,37	ES	22,10
IT	1,35	HU	21,54
SE	1,35	CZ	18,80
CZ	1,29	FR	16,42
DE	1,25	IE	16,02
BE	1,11	DE	14,70
FR	1,05	SE	11,75
NL	1,03	BE	9,40
UK	1,02	IS	8,80
HU	0,92	AT	7,09
ES	0,86	FI	3,87
PL	0,78	GR	3,31
IE	0,77	DK	3,29
BG		BG	
EE		EE	
CY		CY	
LV		LV	
LT		LT	
LU		LU	
MT		MT	
RO		RO	
SI		SI	
HR		HR	
LI		LI	
NO		NO	
CH		CH	
TR		TR	

Educational attainment

STC_ATTAI NMENT		ATTAINMENT	
Index of change		Absolute value	
PL	1,75	BE	42
LU	1,43	IE	42
IT	1,42	NO	42
SK	1,42	DK	41
DK	1,41	FR	41
HU	1,40	ES	39
AT	1,36	SE	39
NL	1,33	FI	38
PT	1,33	UK	37
CZ	1,25	NL	36
UK	1,19	LU	33
CH	1,19	IS	32
TR	1,18	CH	32
IE	1,14	PL	28
FR	1,14	GR	27
GR	1,13	DE	22
BE	1,11	HU	21
IS	1,10	PT	20
NO	1,08	AT	19
DE	1,05	IT	17
ES	1,05	SK	17
SE	1,00	CZ	15
FI	0,95	TR	13
BG	.	BG	
EE	.	SI	
CY	.	EE	.
LV	.	CY	.
LT	.	LV	.
MT	.	LT	.
RO	.	MT	.
SI	.	RO	.
HR	.	HR	.
LI	.	LI	.

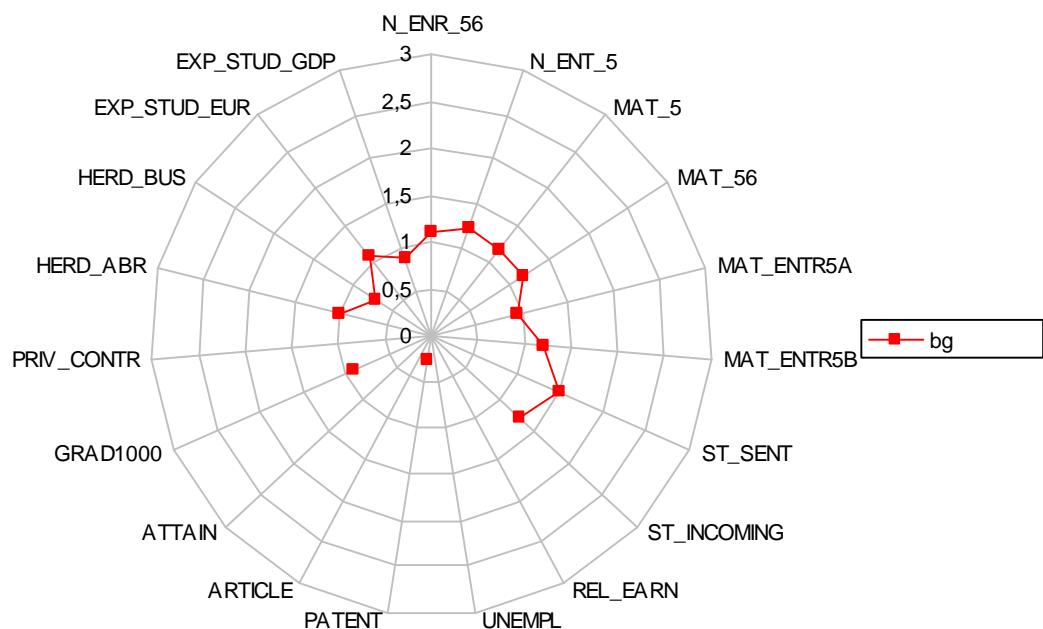
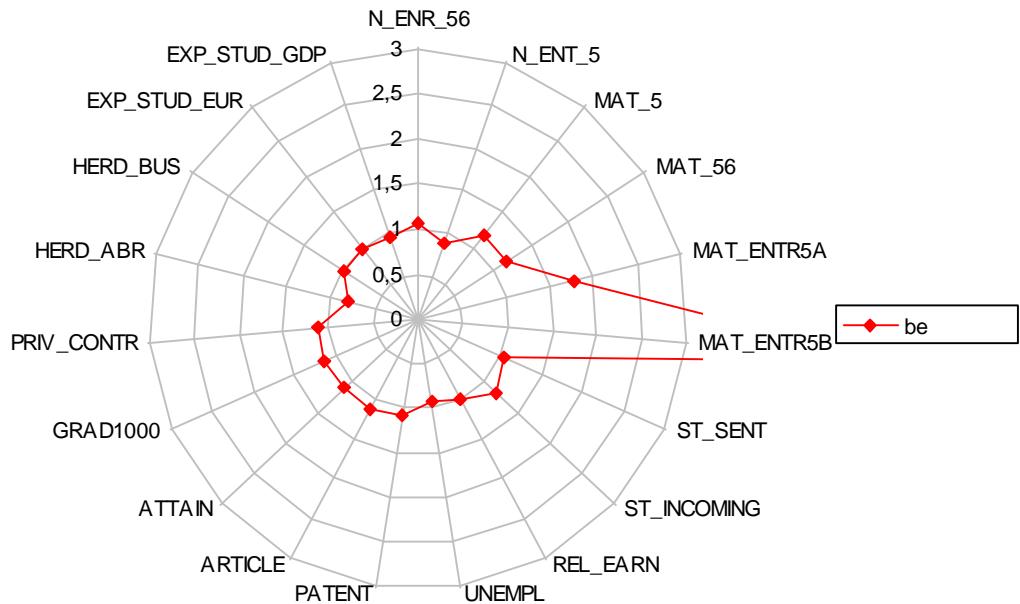
Scientific articles published (per million inhabitants)

STC_ARTICLES		ARTICLES	
Index of change		Absolute value	
GR	1,27	CH	1166,38
CZ	1,21	SE	1108,75
IE	1,18	DK	930,06
IS	1,14	FI	917,24
BE	1,12	NL	850,95
NO	1,09	NO	788,40
ES	1,09	UK	756,78
IT	1,09	IS	696,27
NL	1,08	BE	653,14
HU	1,07	AT	554,58
CH	1,04	DE	535,32
DE	1,01	SI	518,12
DK	1,00	IE	511,01
AT	0,98	FR	482,49
SK	0,97	ES	422,51
SE	0,96	IT	420,51
FR	0,94	GR	386,44
UK	0,94	CZ	309,65
FI	0,94	PT	275,84
PL	0,86	HU	259,14
BG		PL	179,35
CY		SK	170,59
EE		LU	129,02
HR		BG	
LI		EE	
LT		CY	
LU		LV	
LV		LT	
MT		MT	
PT		RO	
RO		HR	
SI		LI	
TR		TR	

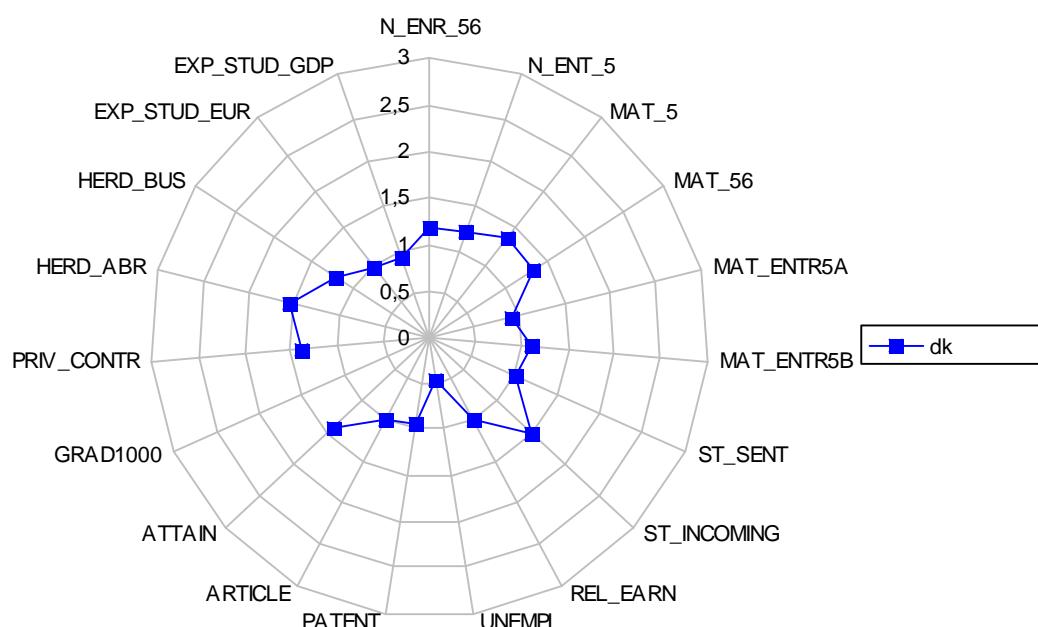
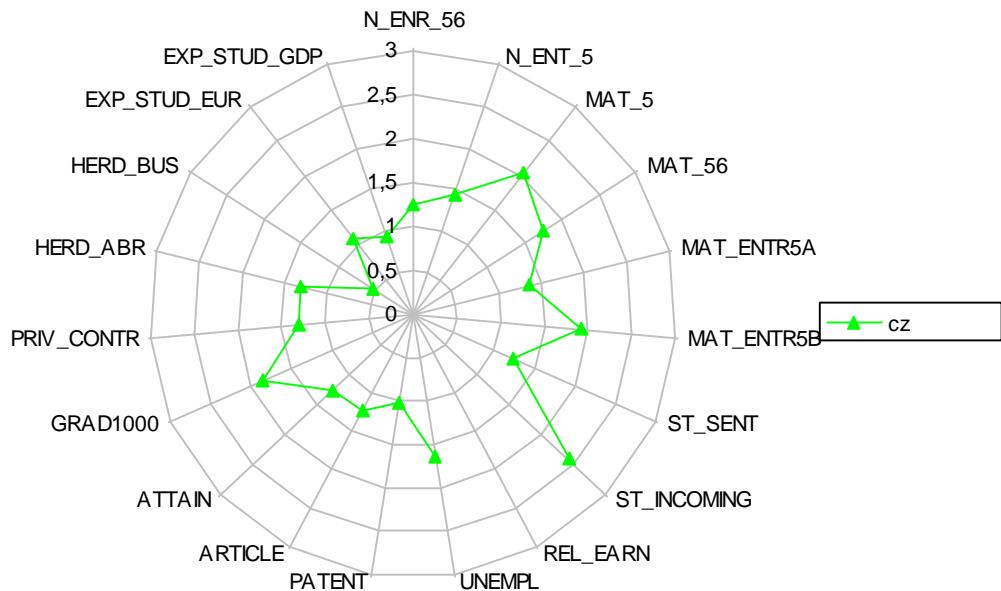
Net enrolment rate

STC_ACCESS		ACCESS	
Index of change		Absolute value	
TR	1,95	GR	4,53
HU	1,28	SI	3,42
CY	1,25	FI	3,36
CZ	1,23	LT	3,13
SK	1,23	BE	2,76
IS	1,21	LV	2,63
SI	1,20	EE	2,60
DK	1,17	ES	2,59
LT	1,16	DK	2,58
CH	1,16	NO	2,57
NL	1,13	NL	2,56
NO	1,12	SE	2,55
AT	1,11	HU	2,50
DE	1,11	FR	2,46
BG	1,10	IE	2,32
SE	1,09	IS	2,23
BE	1,06	BG	2,02
FI	1,06	CZ	2,01
FR	1,06	DE	1,96
IE	1,05	UK	1,96
LV	1,04	AT	1,87
EE	1,00	SK	1,85
UK	0,98	CH	1,73
ES	0,98	TR	1,62
GR		CY	1,55
IT		LU	0,43
LU		IT	.
MT		MT	.
PL		PL	.
PT		PT	.
RO		RO	.
HR		HR	.
LI		LI	.

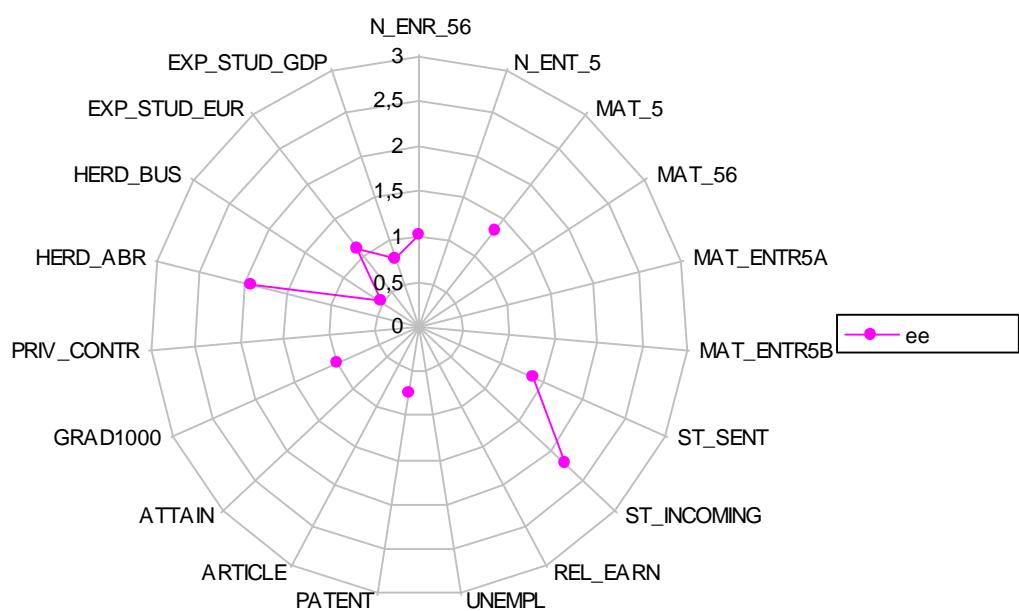
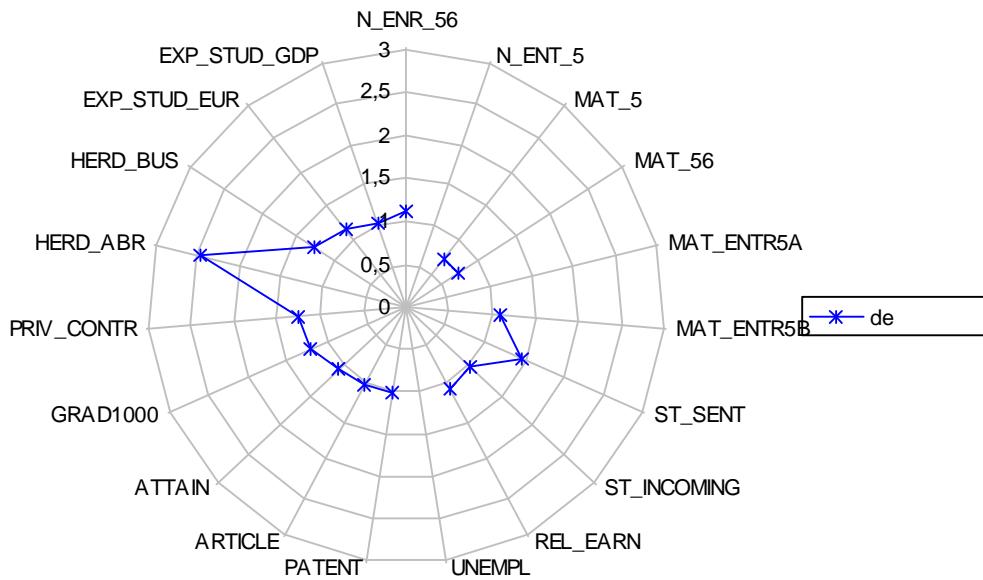
Radar charts Belgium and Bulgaria



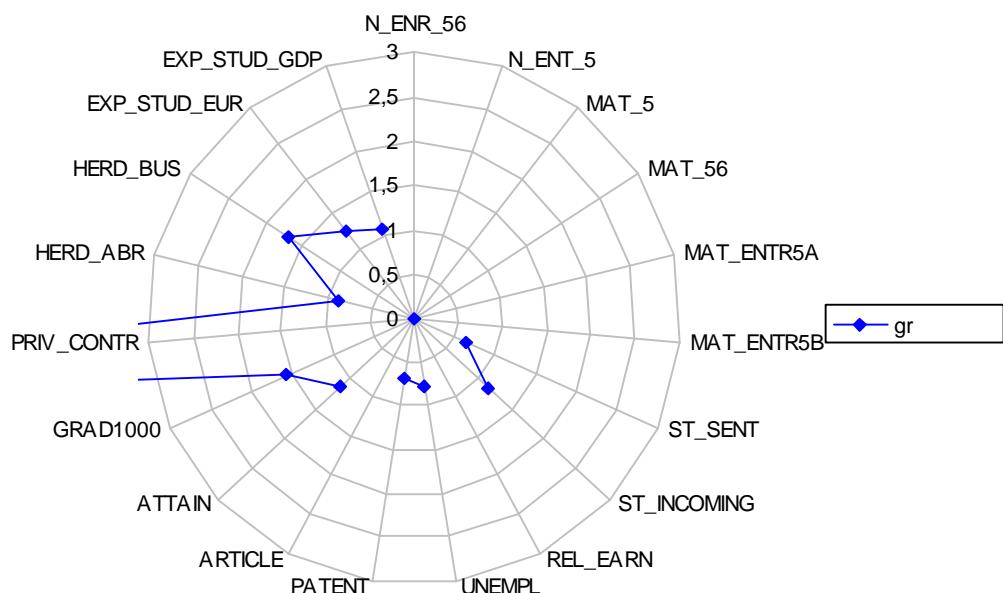
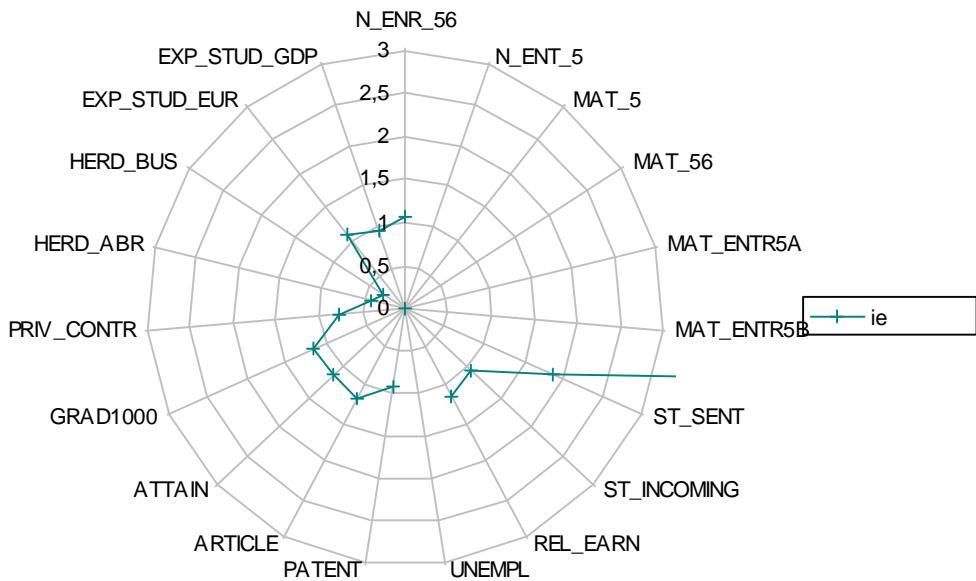
Radar charts Czech Rep and Denmark



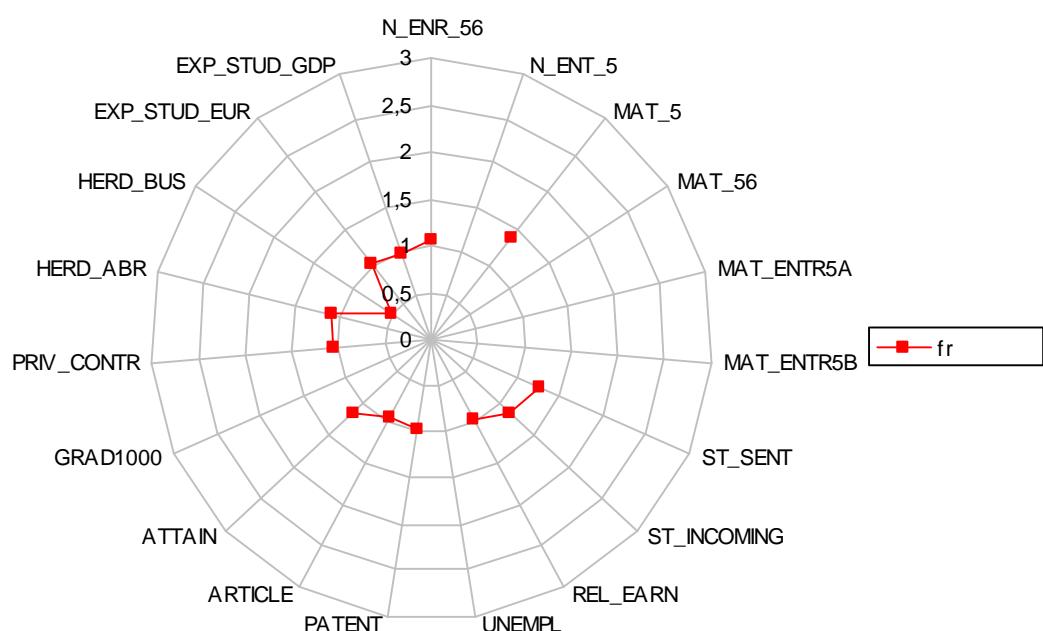
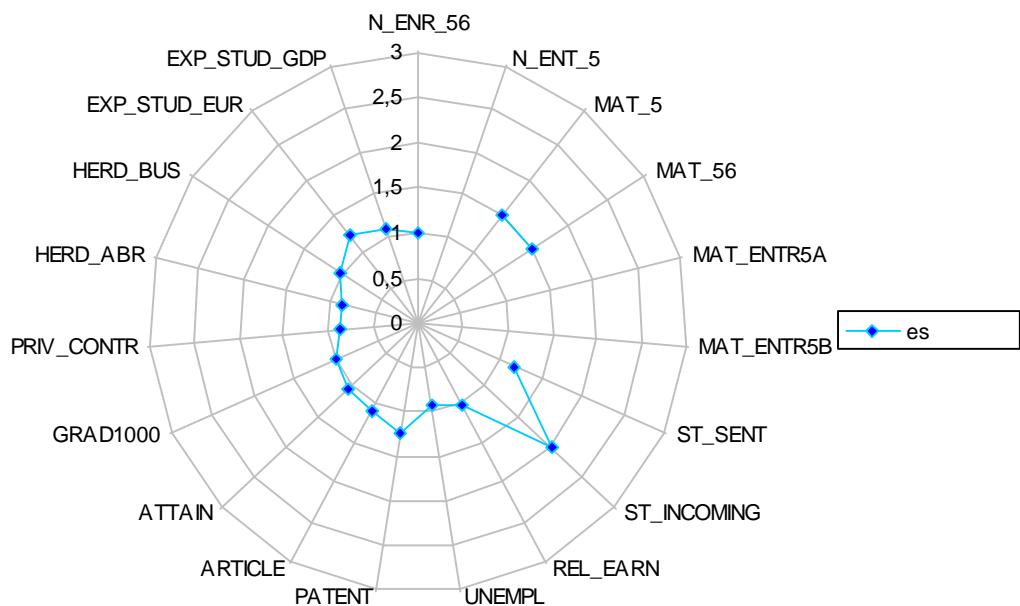
Radar charts Germany and Estonia



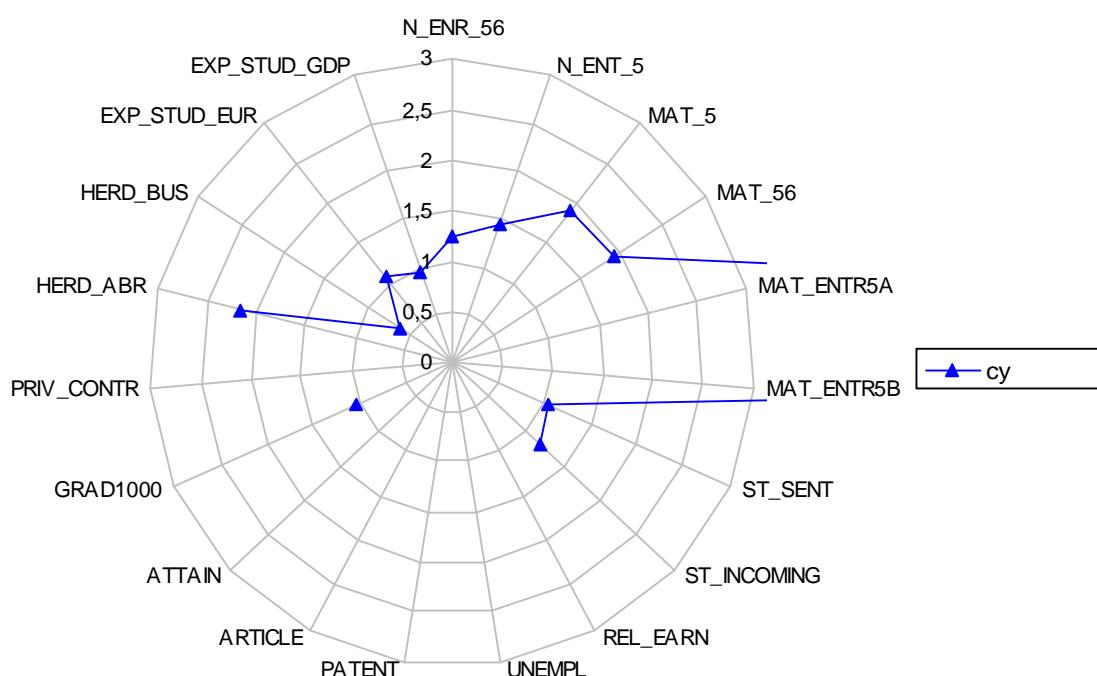
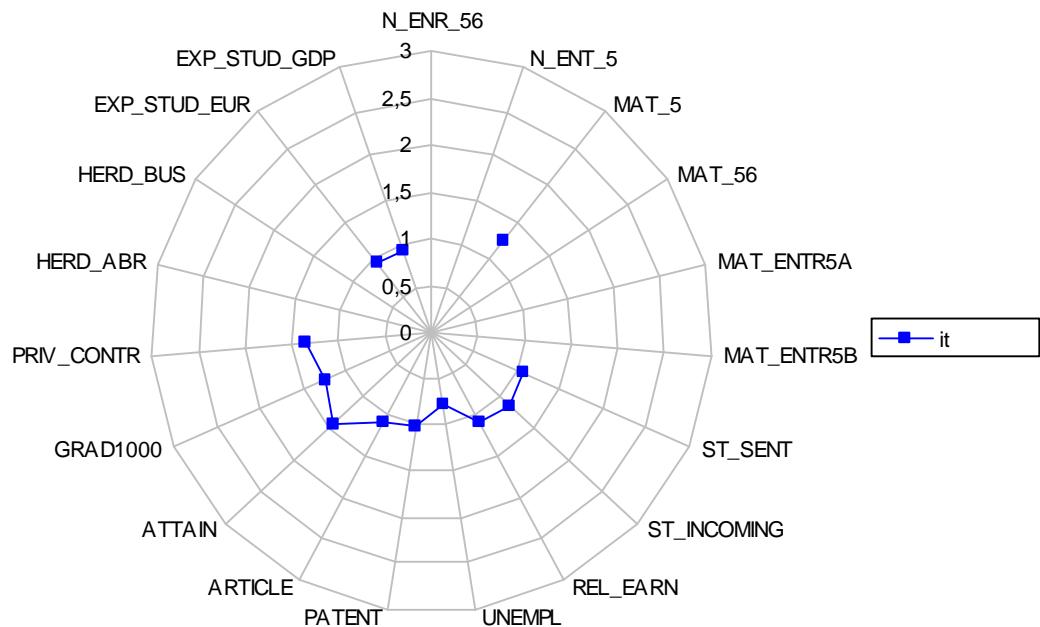
Radar charts Ireland and Greece



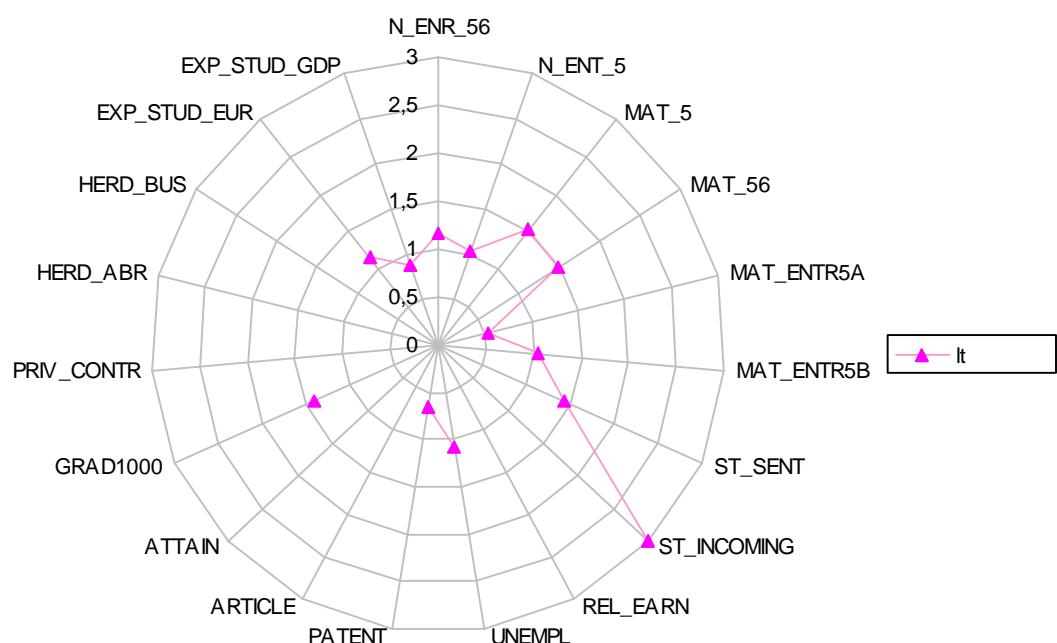
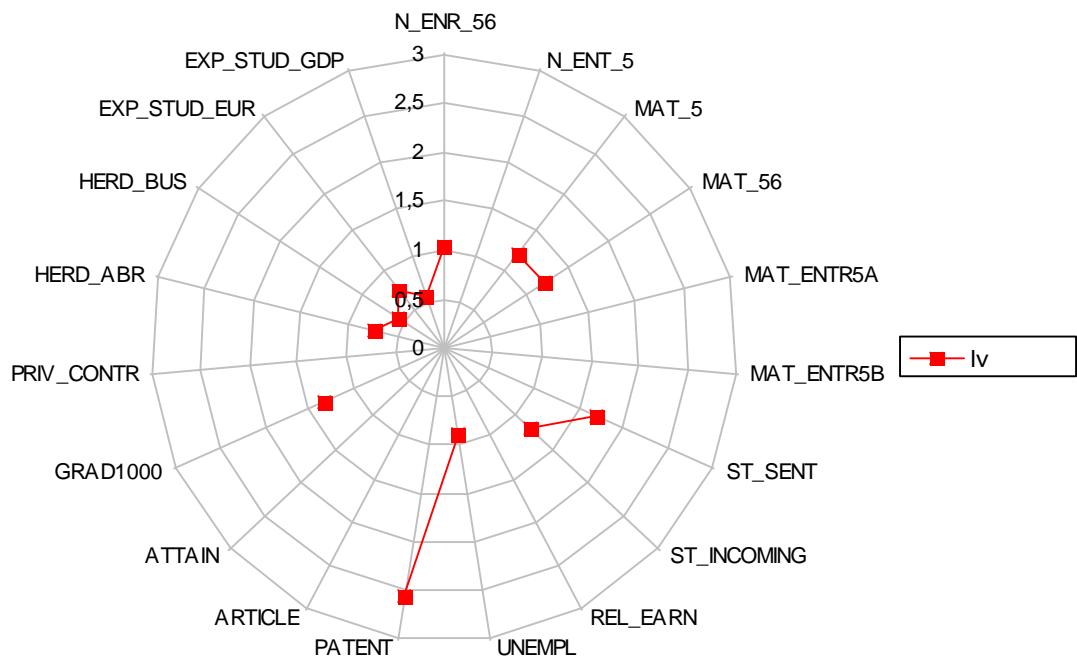
Radar charts Spain and France



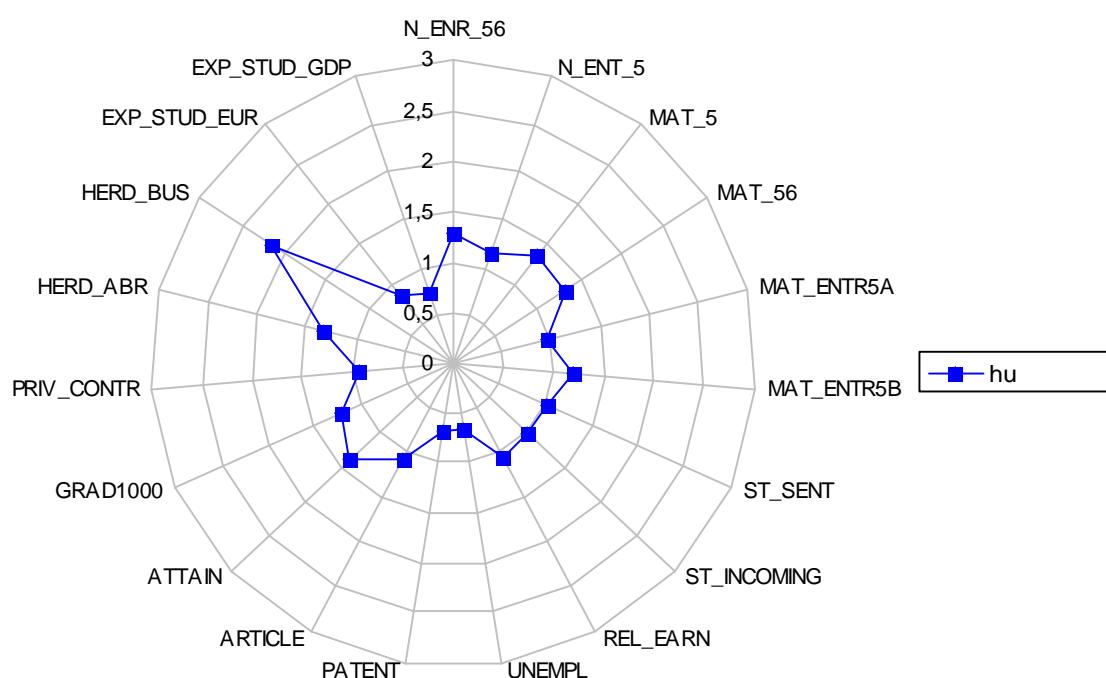
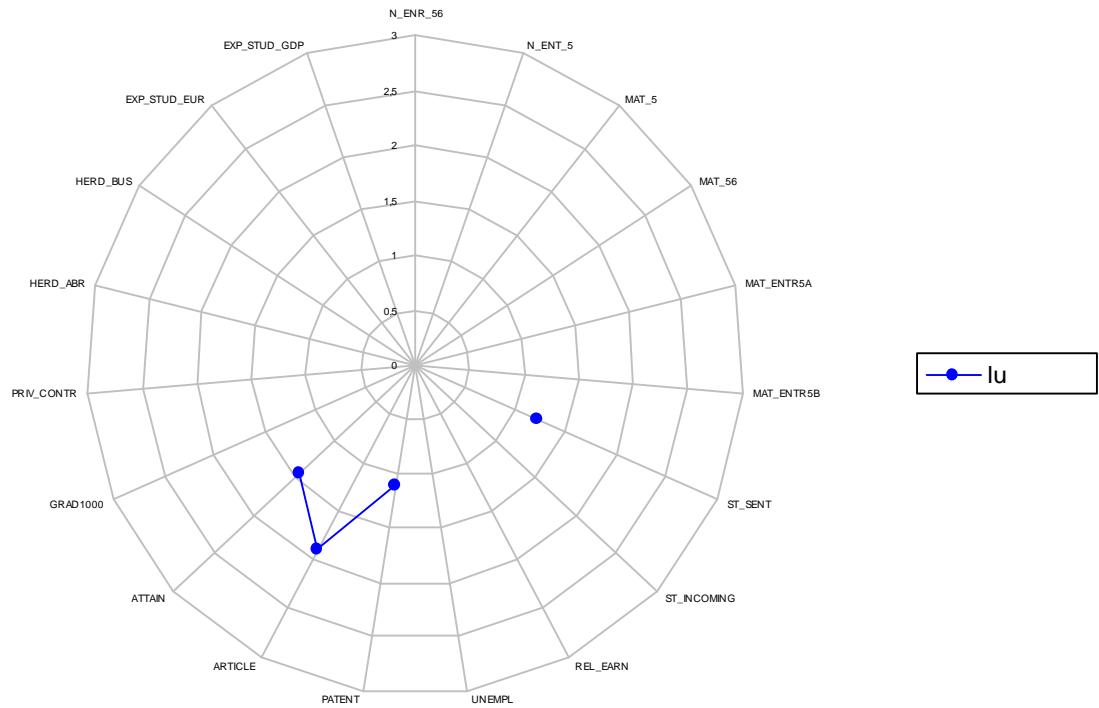
Radar charts Italy and Cyprus



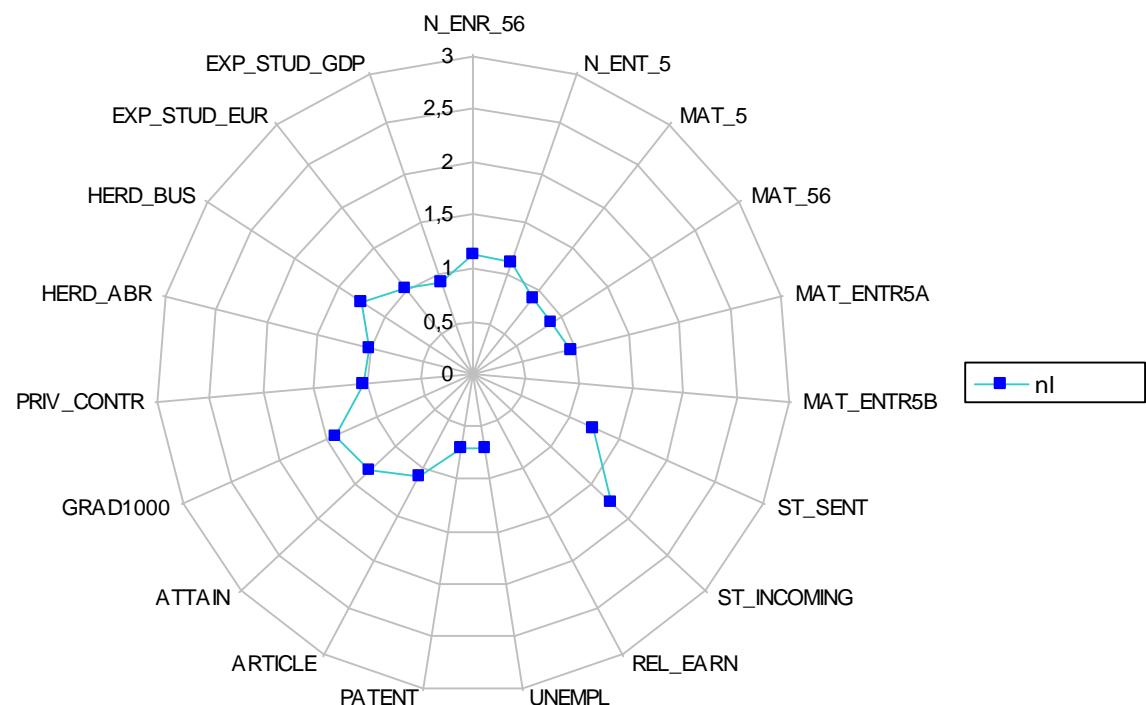
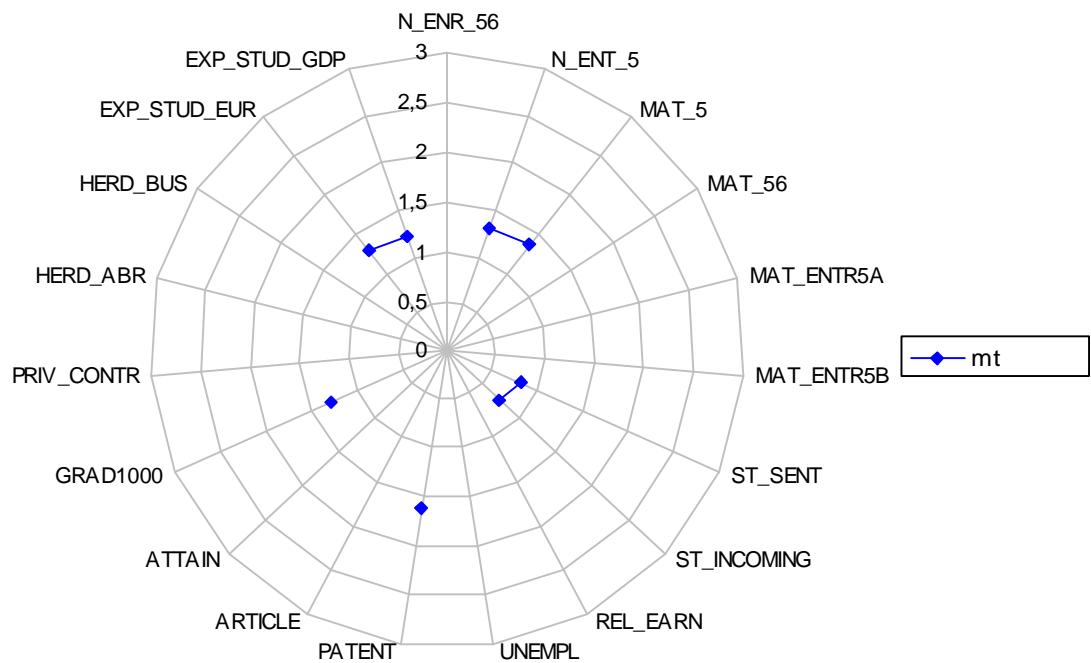
Radar charts Latvia and Lithuania



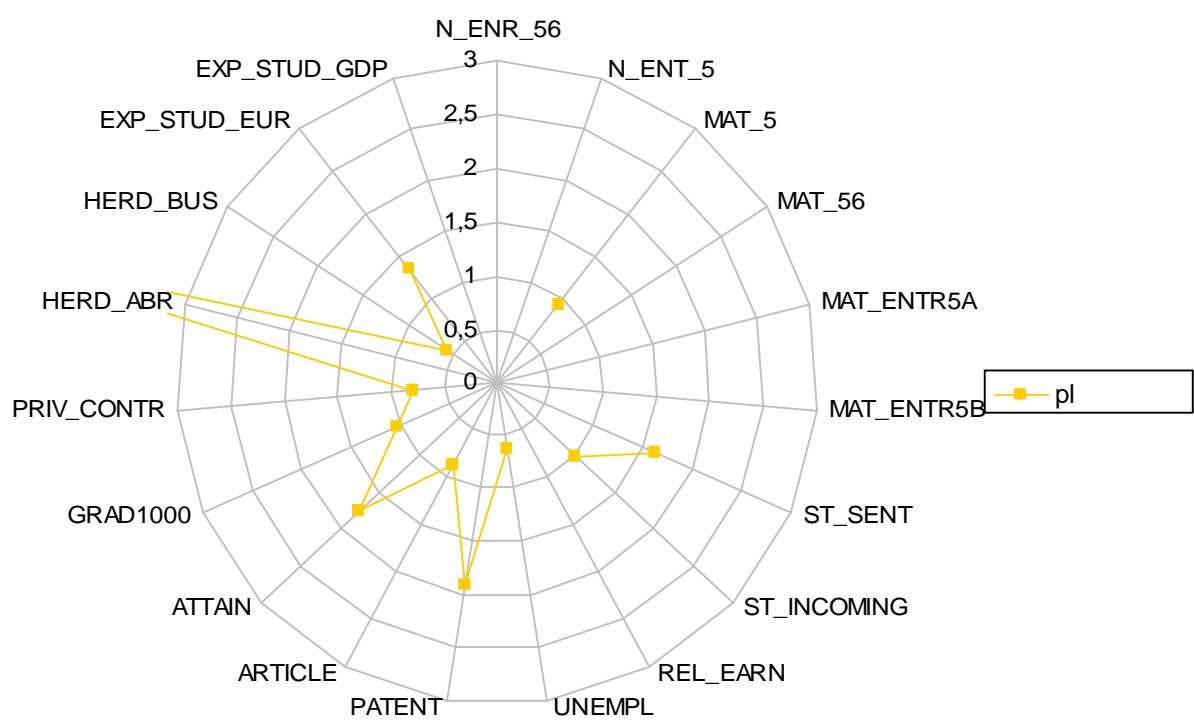
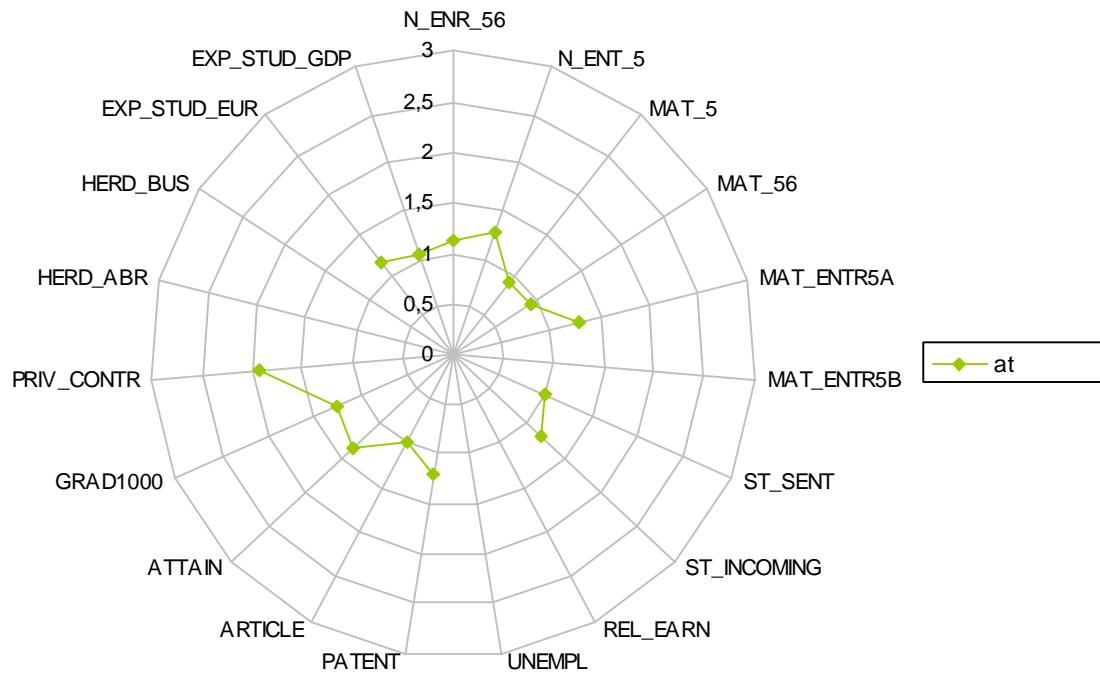
Radar charts Luxembourg and Hungary



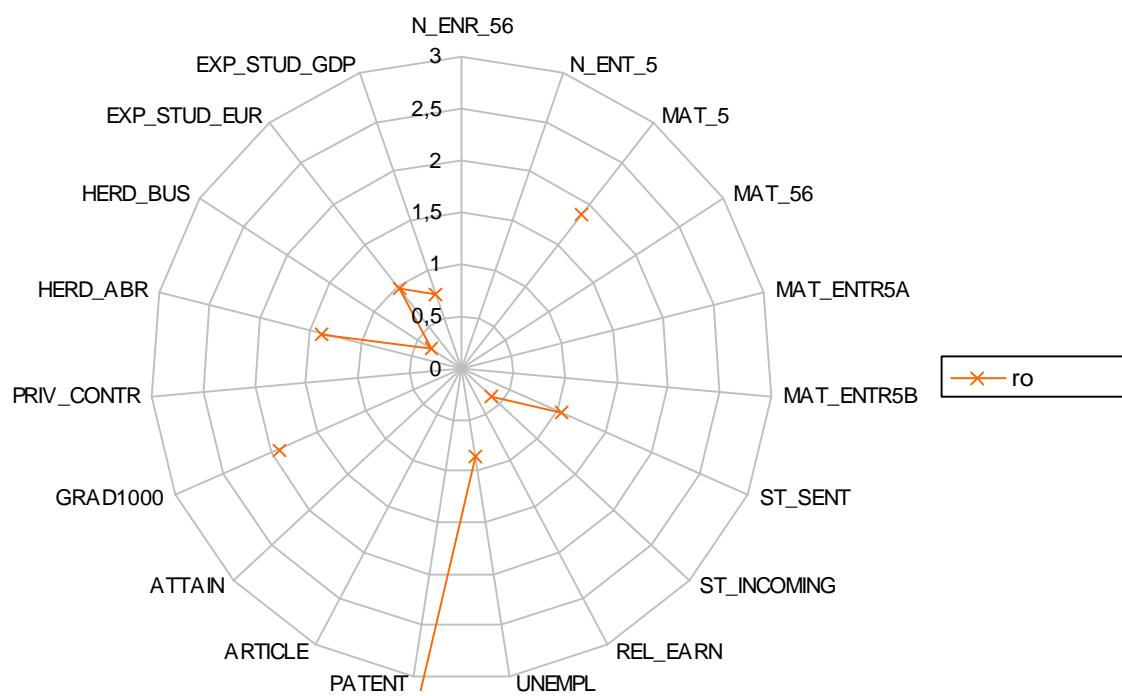
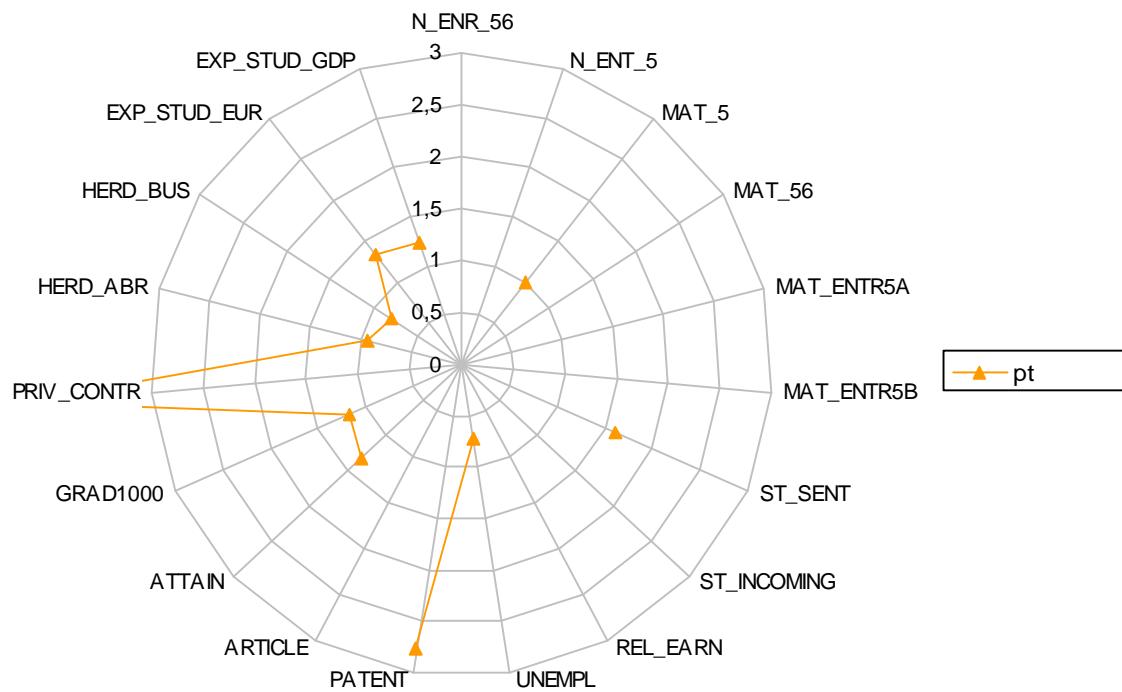
Radar charts Malta and the Netherlands



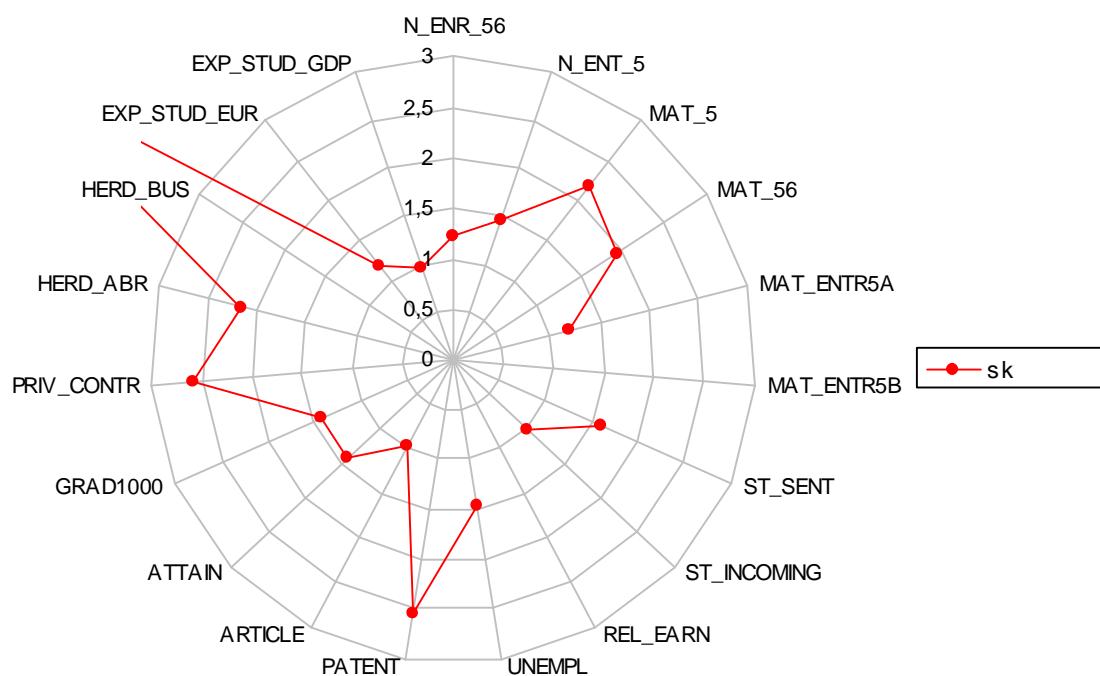
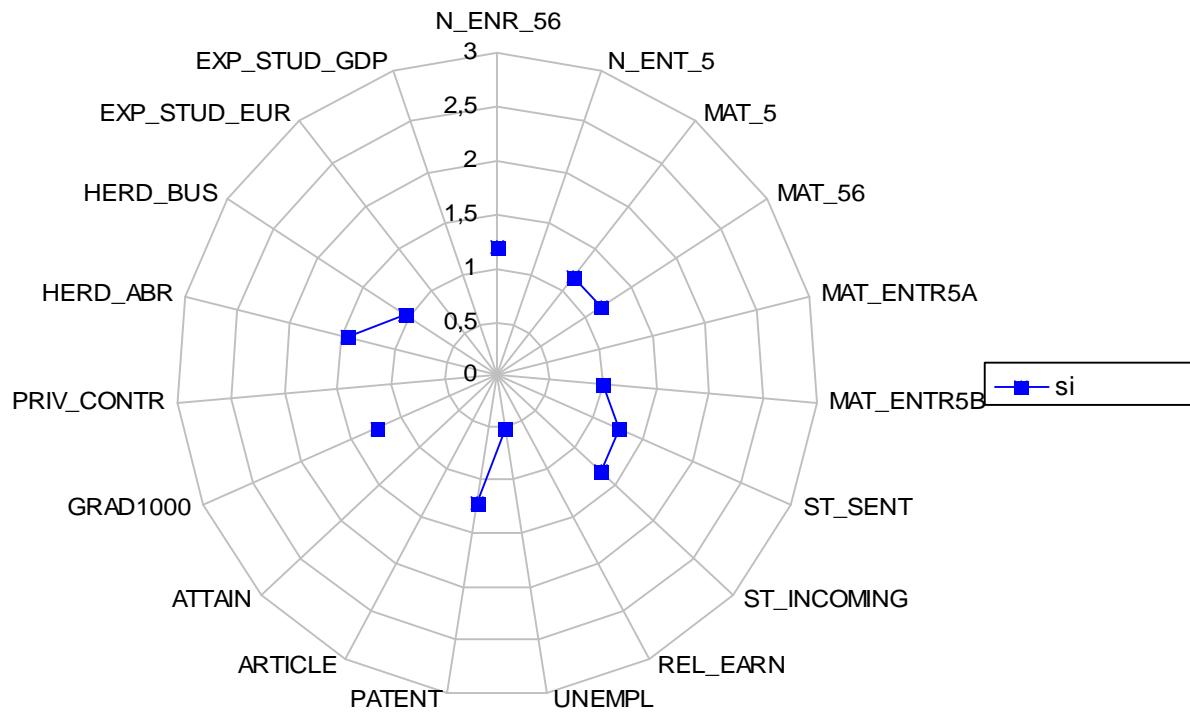
Radar charts Austria and Poland



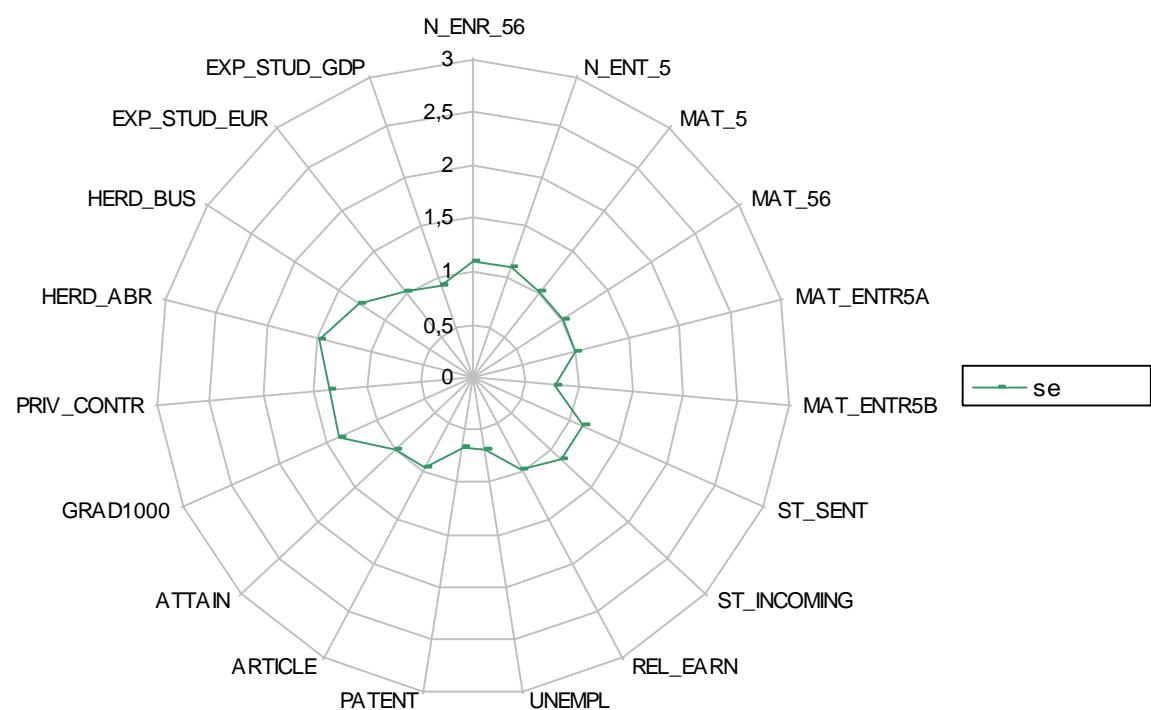
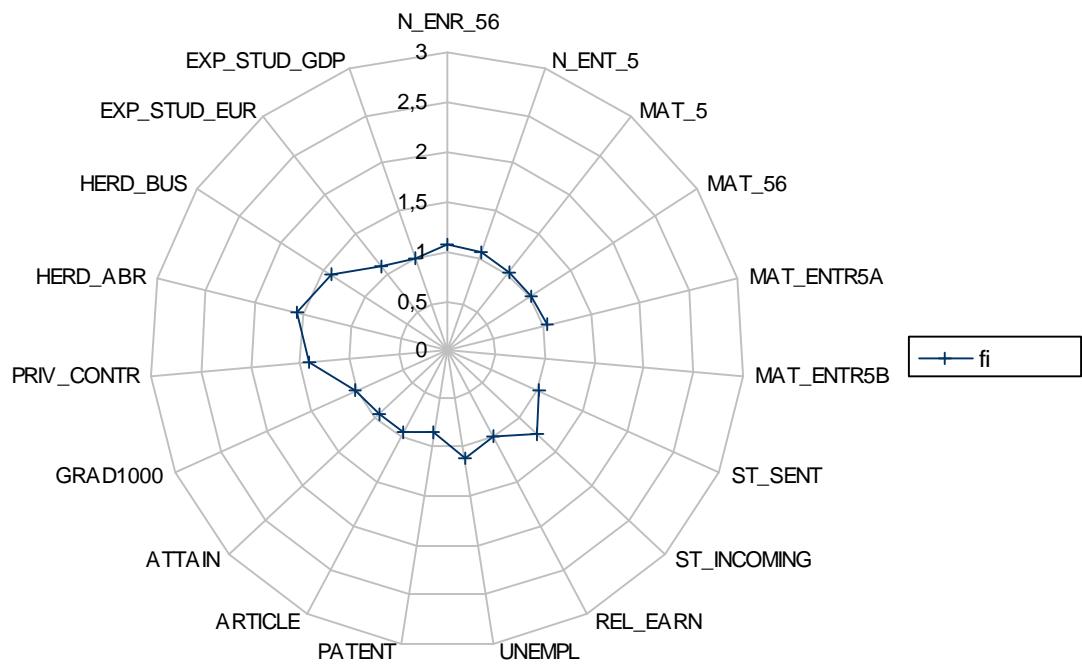
Radar charts Portugal and Romania



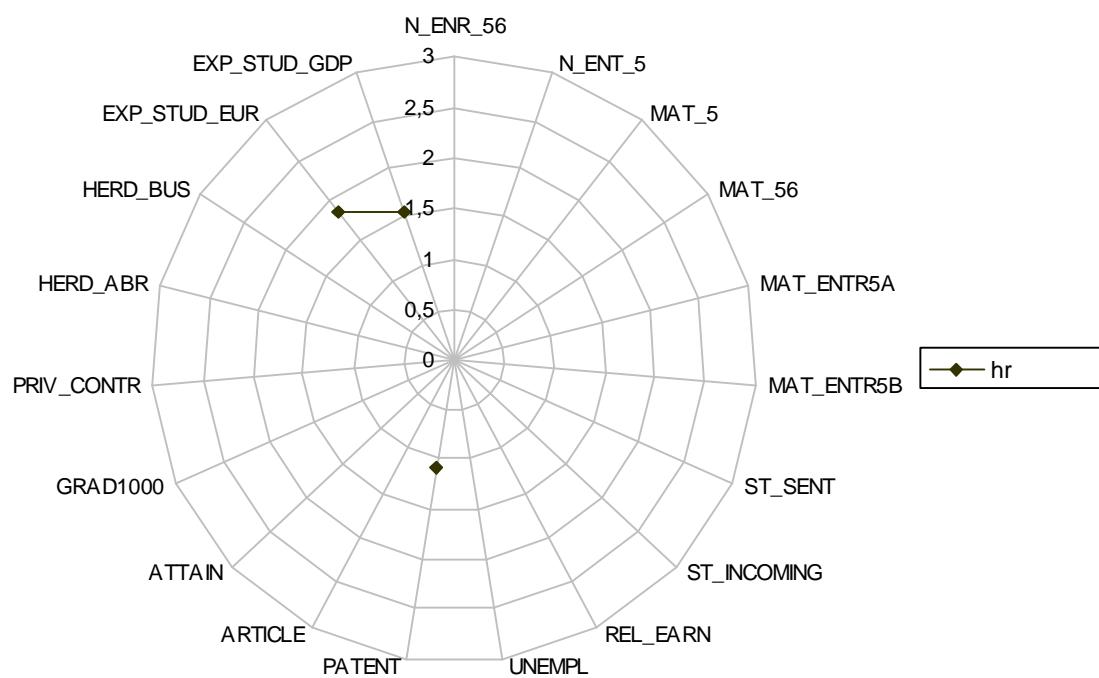
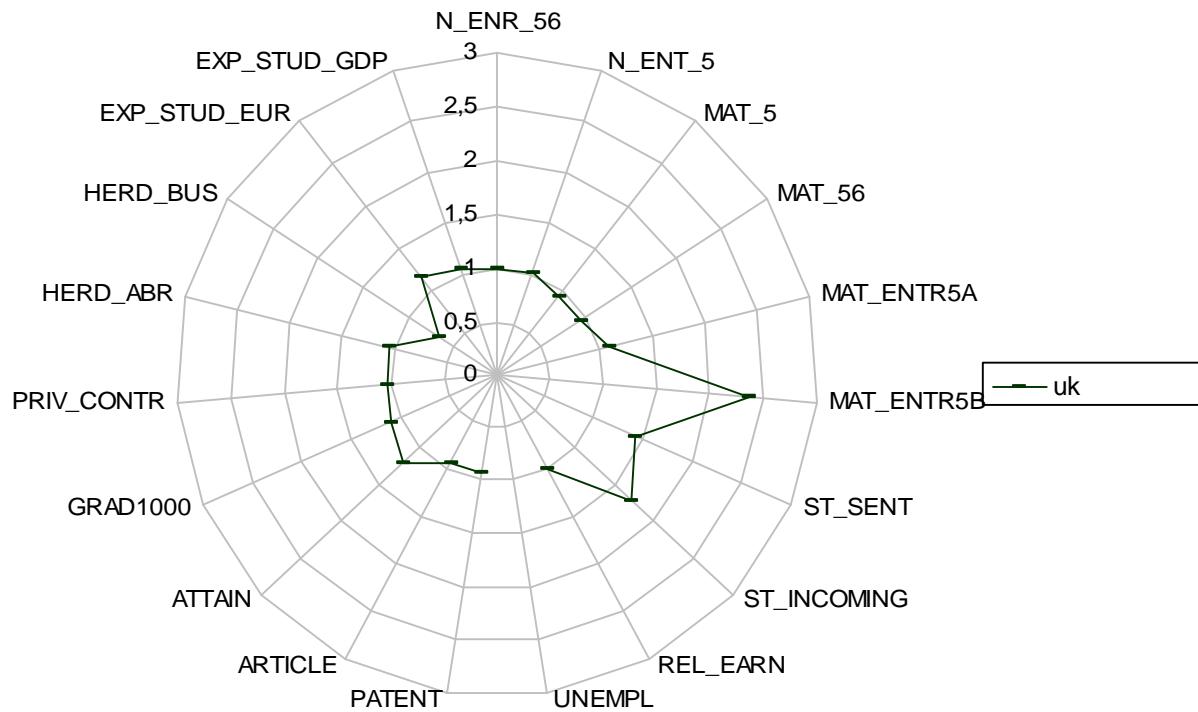
Radar charts Slovenia and Slovakia



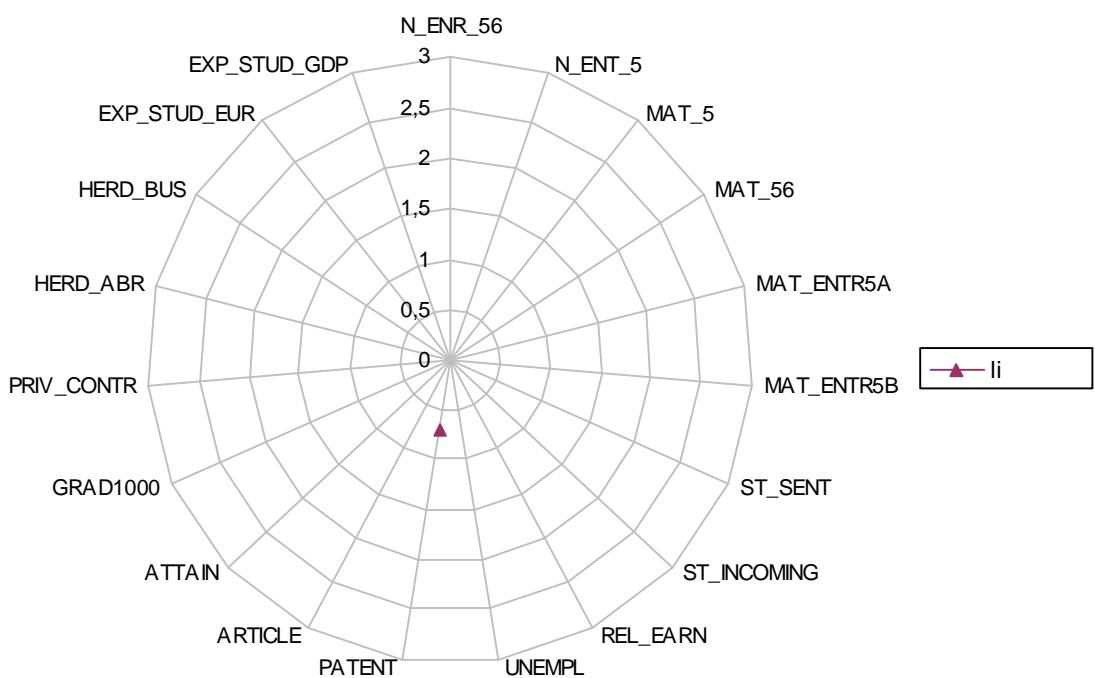
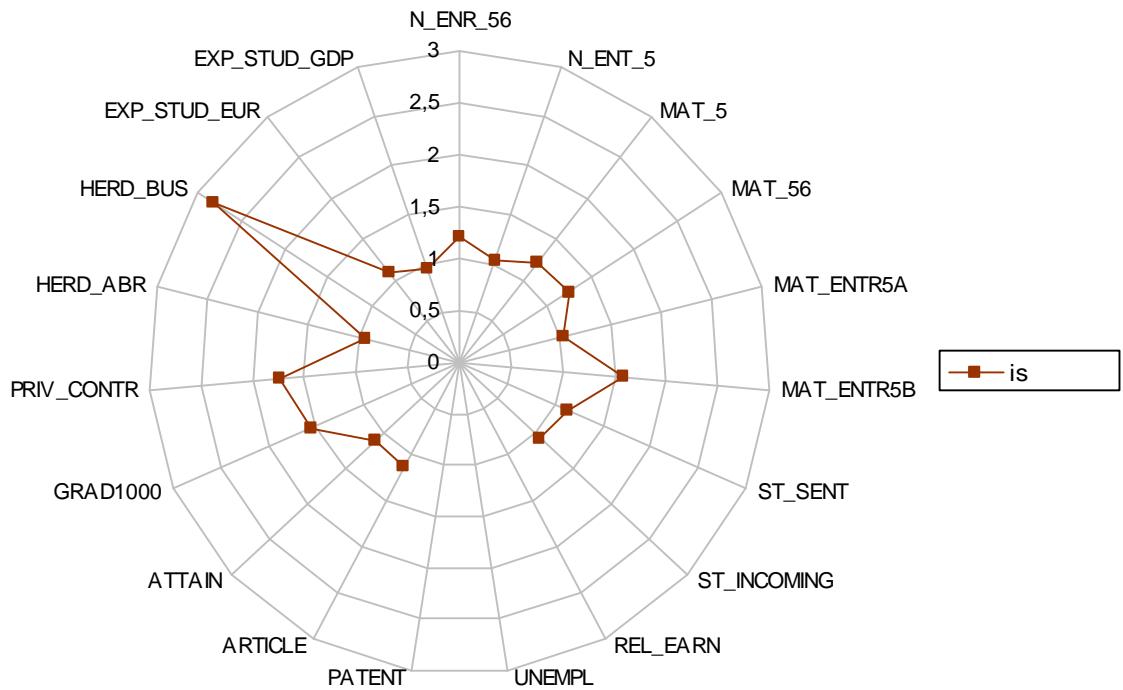
Radar charts Finland and Sweden



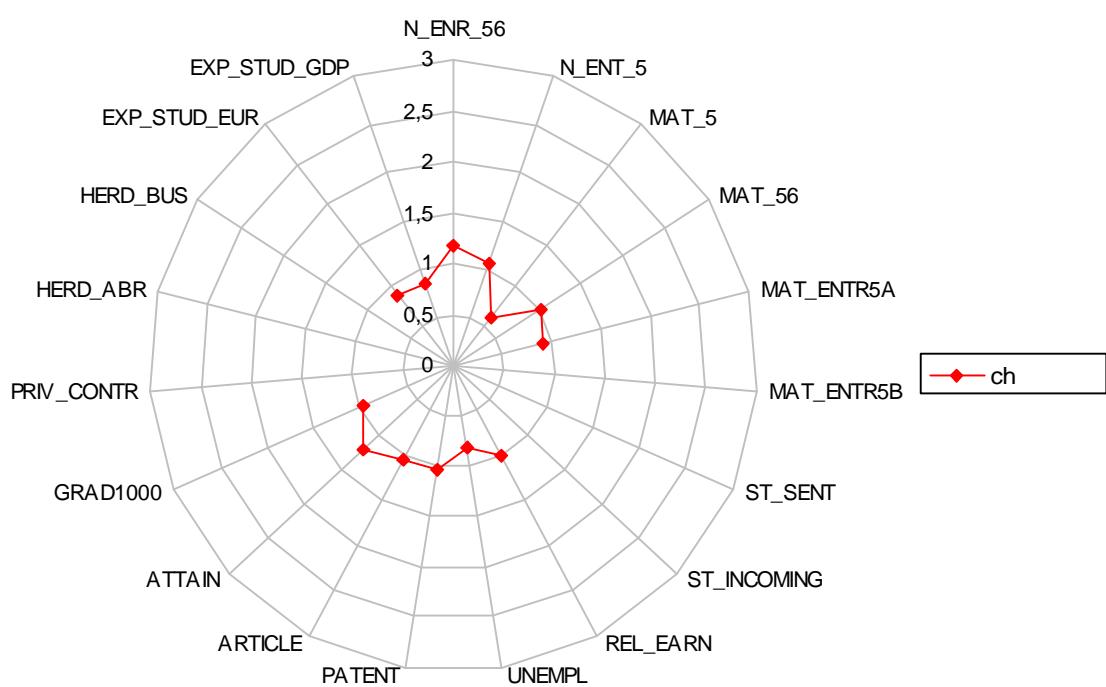
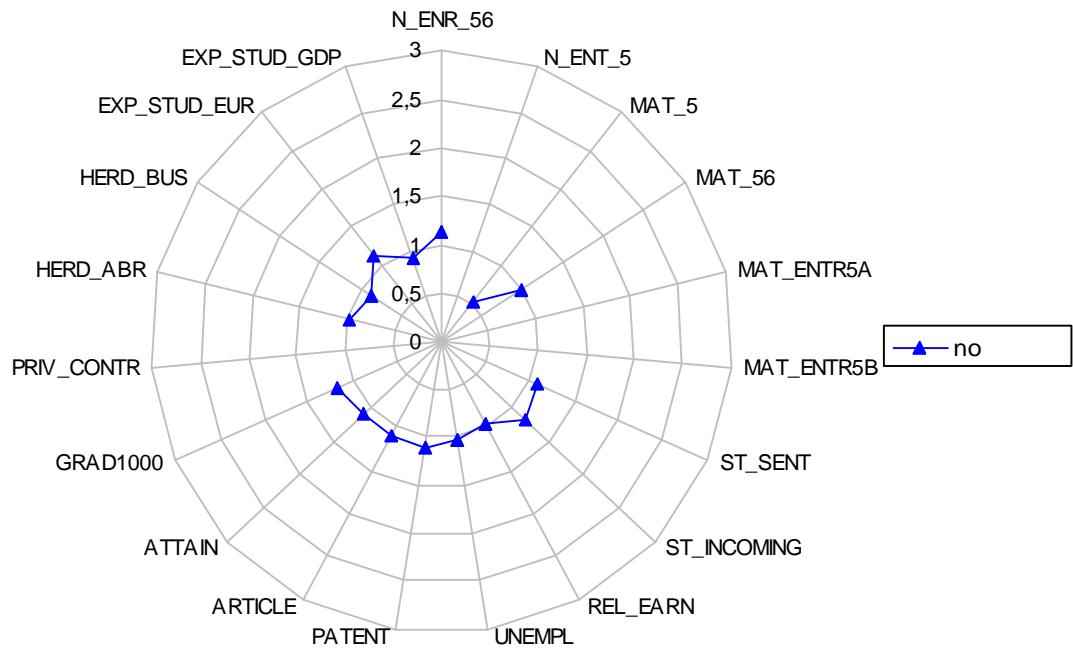
Radar charts United Kingdom and Croatia



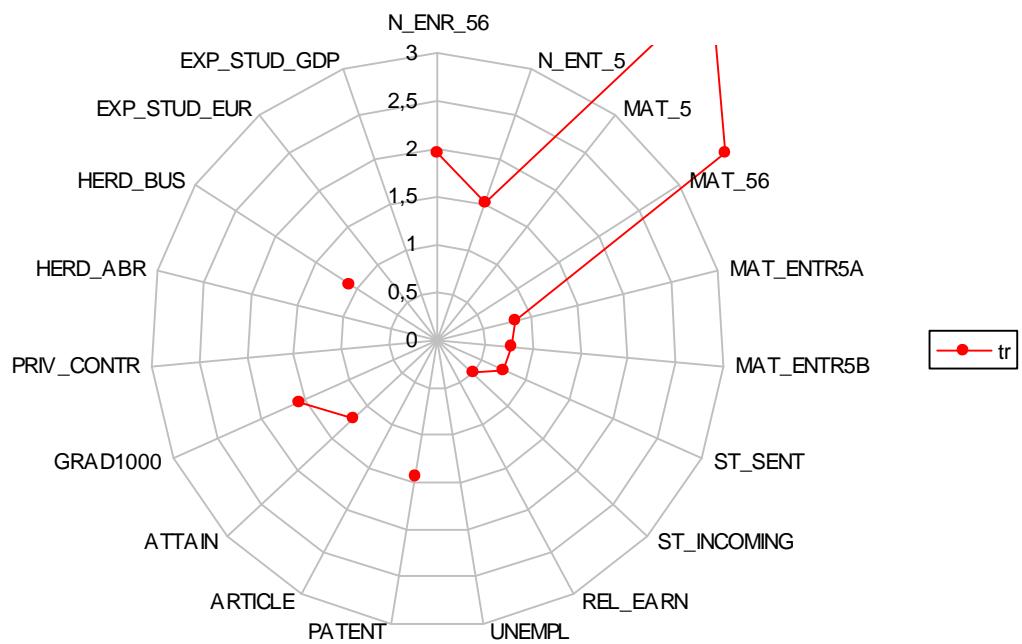
Radar charts Iceland and Liechtenstein



Radar charts Norway and Switzerland



Radar chart Turkey



Context Variables

Public expenditure on HE (%GDP)

By country		In rank order		
at	1,48	dk	2,27	1
be	1,32	no	2,07	2
bg	0,73	fi	1,94	3
ch	1,46	se	1,84	4
cy	1,65	cy	1,65	5
cz	1,23	nl	1,5	6
de	1,11	at	1,48	7
dk	2,27	ch	1,46	8
ee	0,92	gr	1,44	9
es	0,95	is	1,36	10
fi	1,94	be	1,32	11
fr	1,19	si	1,24	12
gr	1,44	cz	1,23	13
hr	0,88	fr	1,19	14
hu	1,04	ie	1,14	15
ie	1,14	de	1,11	16
is	1,36	uk	1,1	17
it	0,8	mt	1,06	18
li	0,19	hu	1,04	19
lt	1	lt	1	20
lu	.	pt	1	21
lv	0,91	pl	0,96	22
mt	1,06	es	0,95	23
nl	1,5	ee	0,92	24
no	2,07	lv	0,91	25
pl	0,96	tr	0,91	26
pt	1	sk	0,9	27
ro	0,81	hr	0,88	28
se	1,84	ro	0,81	29
si	1,24	it	0,8	30
sk	0,9	bg	0,73	31
tr	0,91	li	0,19	32
uk	1,1	lu		

GCI rank within sample

By country		In rank order	
at	8	ch	1
be	11	dk	2
bg	32	se	3
ch	1	fi	4
cy	18	de	5
cz	17	nl	6
de	5	uk	7
dk	2	at	8
ee	16	no	9
es	15	fr	10
fi	4	be	11
fr	10	is	12
gr	30	ie	13
hr	27	lu	14
hu	28	es	15
ie	13	ee	16
is	12	cz	17
it	23	cy	18
li	.	si	19
lt	21	pt	20
lu	14	lt	21
lv	26	sk	22
mt	24	it	23
nl	6	mt	24
no	9	pl	25
pl	25	lv	26
pt	20	hr	27
ro	31	hu	28
se	3	tr	29
si	19	gr	30
sk	22	ro	31
tr	29	bg	32
uk	7	li	

Unemployment rate

By country		In rank order		
at	4,4	no	2,5	1
be	7,5	nl	3,2	2
bg	6,9	dk	3,8	3
ch		cy	4	4
cy	4,0	lu	4,2	5
cz	5,3	lt	4,3	6
de	8,4	at	4,4	7
dk	3,8	ie	4,6	8
ee	4,7	ee	4,7	9
es	8,3	si	4,9	10
fi	6,9	cz	5,3	11
fr	8,4	uk	5,3	12
gr	8,3	lv	6	13
hr	9,6	it	6,1	14
hu	7,4	se	6,1	15
ie	4,6	mt	6,4	16
is		ro	6,4	17
it	6,1	bg	6,9	18
li		fi	6,9	19
lt	4,3	hu	7,4	20
lu	4,2	be	7,5	21
lv	6,0	pt	8,1	22
mt	6,4	gr	8,3	23
nl	3,2	es	8,3	24
no	2,5	de	8,4	25
pl	9,6	fr	8,4	26
pt	8,1	tr	8,5	27
ro	6,4	pl	9,6	28
se	6,1	hr	9,6	29
si	4,9	sk	11,1	30
sk	11,1	is		
tr	8,5	li		
uk	5,3	ch		

Population

By country		In rank order		
at	8.265.925	de	82.437.995	1
be	10.511.382	tr	72.519.974	2
bg	7.718.750	fr	62.998.773	3
ch	7.459.128	uk	60.393.100	4
cy	766.414	it	58.751.711	5
cz	10.251.079	es	43.758.250	6
de	82.437.995	pl	38.157.055	7
dk	5.427.459	ro	21.610.213	8
ee	1.344.684	nl	16.334.210	9
es	43.758.250	gr	11.125.179	10
fi	5.255.580	pt	10.569.592	11
fr	62.998.773	be	10.511.382	12
gr	11.125.179	cz	10.251.079	13
hr	4.442.884	hu	10.076.581	14
hu	10.076.581	se	9.047.752	15
ie	4.209.019	at	8.265.925	16
is	299.891	bg	7.718.750	17
it	58.751.711	ch	7.459.128	18
li	.	dk	5.427.459	19
lt	3.403.284	sk	5.389.180	20
lu	469.086	fi	5.255.580	21
lv	2.294.590	no	4.640.219	22
mt	405.006	hr	4.442.884	23
nl	16.334.210	ie	4.209.019	24
no	4.640.219	lt	3.403.284	25
pl	38.157.055	lv	2.294.590	26
pt	10.569.592	si	2.003.358	27
ro	21.610.213	ee	1.344.684	28
se	9.047.752	cy	766.414	29
si	2.003.358	lu	469.086	30
sk	5.389.180	mt	405.006	31
tr	72.519.974	is	299.891	32
uk	60.393.100	li		

Gross expenditure on R&D (GERD)

By country		In rank order		
at	2,49	se	3,73	1
be	1,81	fi	3,45	2
bg	0,48	ch	2,94	3
ch	2,94	is	2,77	4
cy	0,42	de	2,53	5
cz	1,54	at	2,49	6
de	2,53	dk	2,43	7
dk	2,43	fr	2,09	8
ee	1,14	be	1,81	9
es	1,20	uk	1,78	10
fi	3,45	nl	1,67	11
fr	2,09	si	1,59	12
gr	0,57	cz	1,54	13
hr	0,87	no	1,52	14
hu	1,00	lu	1,47	15
ie	1,32	ie	1,32	16
is	2,77	es	1,2	17
it	1,09	ee	1,14	18
li	.	it	1,09	19
lt	0,80	hu	1	20
lu	1,47	hr	0,87	21
lv	0,70	pt	0,83	22
mt	0,54	lt	0,8	23
nl	1,67	lv	0,7	24
no	1,52	tr	0,58	25
pl	0,56	gr	0,57	26
pt	0,83	pl	0,56	27
ro	0,45	mt	0,54	28
se	3,73	sk	0,49	29
si	1,59	bg	0,48	30
sk	0,49	ro	0,45	31
tr	0,58	cy	0,42	32
uk	1,78	li		

% S&T students

By country		In rank order		
at	32,3	li	34,8	1
be	17,0	at	32,3	2
bg	20,9	fi	29,4	3
ch	22,3	gr	27,3	4
cy	13,9	se	26,6	5
cz	22,6	es	26,5	6
de	25,0	pt	26,5	7
dk	18,1	ie	25,9	8
ee	19,3	fr	25,8	9
es	26,5	de	25	10
fi	29,4	sk	23,6	11
fr	25,8	it	22,7	12
gr	27,3	cz	22,6	13
hr	17,8	ch	22,3	14
hu	12,5	tr	22,1	15
ie	25,9	lt	21,8	16
is	14,4	uk	21,7	17
it	22,7	bg	20,9	18
li	34,8	ro	20,3	19
lt	21,8	ee	19,3	20
lu		dk	18,1	21
lv	11,4	hr	17,8	22
mt	11,1	be	17	23
nl	15,0	pl	16,9	24
no	15,7	si	16,2	25
pl	16,9	no	15,7	26
pt	26,5	nl	15	27
ro	20,3	is	14,4	28
se	26,6	cy	13,9	29
si	16,2	hu	12,5	30
sk	23,6	lv	11,4	31
tr	22,1	mt	11,1	32
uk	21,7	lu		

Index of change in 18 yr olds 2007/1998

By country		In rank order		
at	1,06	cy	1,23	1
be	1,02	uk	1,23	2
bg	0,80	lu	1,22	3
ch	1,08	de	1,14	4
cy	1,23	lv	1,13	5
cz	0,72	se	1,10	6
de	1,14	ee	1,09	7
dk	0,90	lt	1,09	8
ee	1,09	ch	1,08	9
es	0,71	fr	1,08	10
fi	0,92	at	1,06	11
fr	1,08	nl	1,06	12
gr	0,75	li	1,05	13
hr		no	1,04	14
hu	0,71	be	1,02	15
ie	0,93	is	1,01	16
is	1,01	mt	0,98	17
it	0,74	ie	0,93	18
li	1,05	fi	0,92	19
lt	1,09	pl	0,91	20
lu	1,22	tr	0,90	21
lv	1,13	dk	0,90	22
mt	0,98	ro	0,88	23
nl	1,06	sk	0,87	24
no	1,04	si	0,85	25
pl	0,91	bg	0,80	26
pt	0,70	gr	0,75	27
ro	0,88	it	0,74	28
se	1,10	cz	0,72	29
si	0,85	es	0,71	30
sk	0,87	hu	0,71	31
tr	0,90	pt	0,70	32
uk	1,23	hr		

	Open HE system? Yes No	Significant private sector (> 25% enrolment)?	Binary HE system?
at	y	n	y
be	y	n	y
bg	n	n	n
ch	y	n	y
cy	n	n	y
cz	n	n	n
de	n	n	y
dk	n	n	y
ee	n	n	n
es	n	n	n
fi	n	n	y
fr	y	n	y
gr	n	n	y
hr	n	n	n
hu	n	n	y
ie	n	n	y
is	y	n	n
it	n	n	n
li	n	n	n
lt	n	n	n
lu	y	n	n
lv	n	y	n
mt	y	n	n
nl	y	n	y
no	n	n	y
pl	n	y	y
pt	n	y	y
ro	n	y	n
se	n	n	y
si	n	n	n
sk	n	n	n
tr	n	n	n
uk	n	n	n

Progress in higher education reform across Europe – Governance and funding reforms

Review of research literature on governance, governance
reforms, funding and performance

Nicoline Frølich, Bjørn Stensaker & Taran Thune NIFU STEP

1 Introduction

The current study aims at analysing the progress of higher education governance and funding reforms in 33 European countries and their relationship to higher education performance – at system and institutional level. In particular we want to analyse the actual implementation of higher education reforms and their relationship with higher education system performance.

Our ambition is not only to provide an overview of main developments in HE governance and funding in Europe, but also to study the relationship between implementation of governance and funding reforms and performance of higher education at national and institutional levels.

As a backdrop to the empirical studies of reforms, implementation and performance in the 33 countries, a literature review of prior research on these issues have been carried out. The review has not been restricted to the higher education field. Rather, our ambition was to search and review more broadly on research on governance, governance reforms, funding and performance in the public sector. Section 3 of this paper will provide details on the search strategies we employed to search for literature, the databases used, the number of hits and the preliminary analysis and sorting of the research literature. Section 4 will present the focused review on the relationship between governance, reforms and performance, based on a number of relevant sources. In section 5 a similar review is undertaken with respect to the literature on funding. First however, we will discuss what is meant by governance and governance reforms, and its potential links to the issue of performance. This section is a conceptual framework attempting to link the literature on governance, governance reforms and performance, as is a backdrop for the more focused review of governance, funding and performance as described in sections 4 and 5.

2 Governance, governance reforms and performance

The governance concept and governance as an area of investigation

The higher education sector, as other parts of the public sector, is increasingly preoccupied with the concept of governance and particularly with “new” or “modern” modes of governance (Goodin, Rein & Moran 2006, p. 15). Governance is often in the literature used as a concept to describe changes in the meaning, system and processes of governmental steering and coordination. The governance debate focuses on the role of state in society and focuses on the relationship between state intervention and societal self-regulation or societal autonomy – seen as a continuum rather than a dichotomy.

Although the concept is frequently used in political science, it is not an exclusively political concept. A fairly general definition of governance is “steering and coordination of interdependent (usually collective) actors based on institutionalised rule systems” (Benz 2004, in Treib, Bähr & Falkner 2005). Thus, changes in governance concerns changes in actor constellations involved in governance (both the governing and governed), processes, methods/instruments and content of the issues that are steered and coordinated, and the legitimization by which governance is exercised. Governance therefore concerns both policy dimensions, politics dimensions and polity dimensions (Treib, Bähr & Falkner 2005).

	State intervention	Societal autonomy
Policy dimension	Legal bindingness Rigid approach to implementation Presence of sanctions Material regulation Fixed norms	Soft law Flexible approach to implementation Absence of sanctions Procedural regulation Malleable norms
Politics dimension	Only public actors involved	Only private actors involved
Polity dimension	Hierarchy Central locus of authority Institutionalized interactions	Market Dispersed locus of authority Non-institutionalized interactions

Table 1: Three dimensions of the governance concept (source: Treib, Bähr & Falkner 2005)

State intervention and societal autonomy are not alternative concepts of governance, rather should be seen as continuum. Furthermore, since governance entails a multitude of dimensions, new modes of governance are hybrids that combine elements of different dimensions. The following figure presents a “simple typology of governance types” (Jordan, Wurzel & Zito 2005). According to Jordan, Wurzel & Zito (2005) government and governance is much more intertwined in practical policy than is often stressed by some governance theorists. Consequently, when actual policies are investigated empirically the neat distinction between government and governance is in fact rather blurred.

	Government determines societal goals	Society determines societal goals
Government selects the means of policy	Strong government: Hierarchical steering from the centre	Hybrid types
Society selects the means of policy	Hybrid types	Strong governance: Society is self-steering and self-organizing

Table 2: A simple typology of governance types (Source: Jordan, Wurzel and Zito 2005)

According to Kersbergen & Waarden (2004) changes in governance have not only occurred within state, but have occurred both in private, semi-private and public spheres and on different levels within these spheres (global, international, national, regional, local, organizational). Consequently, new modes of governance might be a “solution” to coordination and steering problems that occur in both private and public sector organizations and networks. Kersbergen & Waarden argue that the study of governance is cross-disciplinary with contributions from political science, sociology, economics, law, international studies and organization studies. Based on their multidisciplinary review of the governance literature, they identify nine different meanings of governance. Some of the approaches they identify primarily focus on governance as a set of techniques/instruments for creating effective coordination *within* public or private organizations (“Good governance”), for instance the recent focus on corporate governance or new public management. Others focus on the achievement of coordination and steering without the presence of government (“Governing without government”), either in international relations or in market exchanges. The final interpretations of governance focus on coordination in and by networks, both in network exchanges more generally and in policy networks particularly (“Network governance”). Although the approaches described span different disciplines and empirical objects, Kersbergen & Waarden claim that they have several characteristics in common: They are pluricentric, networks play an important role, emphasis is put on the processes of governing rather than on systems aspects, these processes are relatively similar in the private and public sectors, collaboration/networks pose particular risks and uncertainties that must be reduced, and many of the approaches are prescriptive or normative.

Although governance is a broad concept with several different connotations and applications, it is most commonly used to describe changes in the state – society relationship, and particularly “a change in the nature and meaning of government” (Bevis & Rhodes 2003). Governance within this context is primarily associated with “a decline in central governments’ ability to steer society” (Jordan, Wurzel & Zito 2005). According to Kersbergen & Waarden (2004) the government’s ability to steer society since control is shifted horizontally and vertically away from central government. Vertically control is shifted upwards to regional and international organizations such as the EU and downwards to regional and local authorities. Horizontally control is shifted from one part of the governance system to another, as well as outwards to non-governmental, private and quasi-private organizations (Pierre & Peters 2000). Due to various vertical-horizontal shifts in control “governance decisions are made in complicated networks encompassing supranational, national and sub-national actors – public, semi-public and private” (Kersbergen & Waarden 2004, p. 155). These reflections on changes in mode of governance mainly focus on constellation and locus of actors involved in policy making and control. But when location of government changes, the processes and mechanisms of governance change as well, since traditional approaches to steering and control is less effective in complicated network structures.

Governance by “new” policy instruments

What kinds of policies and policy instruments have primarily been associated with the shift from government to governance? According to Jordan, Wurzel and Zito (2005) governance is characterized by a growing use of non-regulatory policy instruments. Some writers on governance claim that governance is essentially about the shift to increasing use of non-regulatory policy instruments “which do not rest on recourse to the authority and sanctions of government” (Stoker 1998, in Jordan et al 2005). A large variety of policy instruments have been associated with governance, which can be clustered under four headings.

New public management

New public management is not a theory or a specific practice but is a concept used to refer to empirically observable elements in governance of the public sector in many different countries. According to Power (1997, p. 43) new public management consists of “a cluster of ideas borrowed from the conceptual framework of private sector administrative practice”. Christensen & Lægreid (2008) divide NPM reforms into “four families of tools”: management- oriented tools, structural tools, cultural-oriented tools and marked-oriented tools.

Management oriented tools focus on public organizations’ freedom to manage and run their own affairs, including an increased focus in issues like leadership, incentives and performance. Management oriented tools also entails a strong focus on efficiency, cost control, financial accountability and performance management. Bleiklie (1998) claims that the underlying idea of new public management is to make public sector organizations act like corporate enterprises. Christensen & Lægreid (2008) also identifies cultural managerial tools as part of the NPM reform program, and this includes softer managerial tools focusing on norms, ethical issues and leadership. At a system level new public management reforms include structural and market-oriented reform tools, such as decentralization and disaggregating public bureaucracies, creation of quasi-markets, privatization and contracting out to foster competition (Bevir, Rhodes & Weller 2003, Hood & Peters 2004, Christensen & Lægreid 2008). Empowerment of users and consumers also belong to this family of tools (Christensen & Lægreid 2008).

The governance literature particularly targets the structural devolution and market oriented aspects of NPM reforms. Other new public management tools runs counter to the governance logic, first and foremost because new public management tools primarily focus on increased efficiency and management of *intra-organizational* affairs (Rhodes 1997). Rhodes argues that the managerial aspects of NPM reforms might not be very suitable tools for governing increasingly heterogeneous interorganizational networks that now comprise the public sector.

Autonomization

As part of the new public management approach, increasing focus has been on devolution of decision making authority and increasing autonomy in public sector organizations. There are several arguments for why increasing autonomy is beneficial and necessary. From a governance perspective, autonomy is necessary for handling an increasingly complex environment and for engaging in networking behavior, collaborating, entering into alliances etc. It is also argued that autonomy will lead to increasing specialization, increasing awareness of market signals, clients' needs, etc that will lead to better performance (Verhoerst et al 2004). However, the link between autonomy and performance seems to be weak empirically, partly because autonomy is a multidimensional concept, encompassing legal, organizational, managerial and economic aspects. Verhoerst et al argue that autonomy in terms of altered formal-legal status does not necessarily imply increased autonomy in terms of managerial, financial, policy autonomy etc.

As also suggested by NPM reforms, increased devolution of authority to lower level public agencies, "agencyfication" (Bevir, Rhodes & Weller 2003) and "autonomisation" (Verhoerst et al 2004) of the public sector are commonly used public sector reform tools. But increasing autonomy of public agencies has been simultaneously accompanied by increasing focus on monitoring and performance measurement systems. The problem here is still that there are huge technical challenges related to such systems with respect to the validity of the performance indicators, the quality of the data, the timeliness of the data, analysis, and presentation of performance information (Hatry 2008, p. 227-228). Hence, the risk is that future decisions can be based on relatively poor data.

Network governance, multilevel governance and intergovernmental management
A primary policy change brought about with the change from government to governance is increased interorganizational coordination and the "rise of intergovernmental management" (Rhodes 1997). Since control is shifted vertically and horizontally, coordination of a diverse network of agencies is a primary responsibility for the central government.

Network governance is in the literature frequently used to characterize coordination of activities and exchange of resources in policy networks consisting of public and private organizations. Policy networks share the following characteristics: Policy networks are defined as clusters of separate but interdependent organizations, "that co-ordinate their actions through interdependencies of resources and interests" (Börzel 1998, 259). Interactions in these networks are relatively stable over time, and through network interactions resources are mobilized and pooled so that "collective action can be orchestrated towards the solution of a common policy. "A policy network includes all actors involved in the formulation and implementation of a policy in a policy sector" (Börzel 1998, p. 260). Activities and resource exchange in networks are carried out and coordinated through game-like interactions, "rooted in trust and regulated by rules of the game negotiated and agreed by network participants" (Smith 2007, p. 377). Policy networks are non-hierarchical, self-organizing and not accountable to the state (Rhodes 1997).

The terms intergovernmental management and multi-level governance are also central to the governance literature, but carry other connotations. As seen above, governance both focuses on horizontal and vertical shifts in power. The network governance approach targets the horizontal dimension where control is shifted outwards to public –private policy networks. Intergovernmental management was originally a term developed in the US and focuses on the growing interdependence between levels of government and increasing public-private interdependence. Rather than focusing on the decreasing role of government, research on intergovernmental government focuses on the need for new management skills for intergovernmental managers, such as bargaining and networking, but also on the use of instruments of intergovernmental relations (Radin 2007). These include structural, programmatic and behavioral instruments as well as research and capacity building (*ibid*). Ebbinghaus and Hassel (2000) use the concept concertation to describe the states effort to coordinate and bargain across different sets of actors in implementing public sector reforms. Intergovernmental management and multi-level governance also emphasize the vertical dimension as these concepts focuses on the complex interconnections between sub-national, national and international levels of government. According to Smith (2007) the concept multi-level governance has been most fully developed in connection to questions relating to integration and intergovernmental relations in the European Union. Complex patterns of policy making involving sub-national and supranational levels challenges the sovereignty of nation states in an indirect manner (Marks, Hooge & Blank 1996).

Funding

New modes of governance, notably policy instruments like the introduction of new public management and autonomization include often in practice the redesign of funding mechanisms. Since the 1970ties and based on the expanding welfare states of developed countries the frequent question became “what do we get for all these money?” (Talbot 2005: 491-492). The traditional focus had been on taxes and spending, rather than achieving (Talbot 2005: 492). In public administration the perspective shifted from compliance with rules to production of results (Burke 2005: 216). Theories borrowed from economics influenced on theories on (redesign of) public administration (March and Olsen 1996). In the realm of politics, the influence of neo-liberal thinkers and economists grew.

However there is hardly a clear cut scholarly literature on the design of funding mechanisms. Rather the design and redesign of funding mechanisms can be characterised as a mixed field of evaluations studies, implementation studies, contract research and policy formulation. The academic interest has been directed more at explaining growth in public spending like in the analysis of public finance, a discipline on the border between political sciences, public administration and economics. Also in political sciences, researchers have focused on aspects of public administration that complicate the direct influence of funding mechanisms, such as in implementation studies or neo-institutional perspectives on public administration.

In higher education vast differences in funding systems can be observed, and governmental allocation takes place through different mechanisms (Frølich et al.

2010). There are several classifications of funding systems in higher education (Geuna and Martin 2001; Jongbloed 2007; Jongbloed and Vossensteyn 2001; Kaiser et al. 1992). Salmi and Hauptman (2006) distinguish between direct on the one hand public funding of institutions which can be based on negotiated formula, demand-side vouchers, performance-based funding, funding for specific purposes and/or combined funding for teaching and research, block grant funding and project funding; and on the other hand funding for students via government grants and scholarships, tax benefits and student loan models. Braun (2003) and Whitley (2003) discuss different allocation models in the realm of research policy. The classifications of funding systems are applied in empirical studies of recent changes in funding systems for higher education.

Governance and performance

The issue of performance is intimately but uneasily linked to governance. Changes in governance, such as shifting of control from central government horizontally and vertically, increasing autonomy of public organizations, increasing use of management tools borrowed from the private sector and increasing complexity of networks involved in the making and implementation of public policy, have led to a strengthened focus on the outcomes of public policy and on the performance of public organizations. The issue of public sector performance and how to measure it is a large research area that will not be discussed in detail here. The aim is to look into a few approaches that have attempted to link and problematize the relationship between governance and performance.

Heinrich (2007) claims that the issue of performance and performance management has been a leitmotif in public policy since the 1990s, and that many countries have implemented performance management systems as a core component of public management reforms in recent years. Evolving systems of performance measurement implemented in many countries and parts of the public sector share some common features (Heinrich 2007): 1) performance measures are focused on quality, outcomes or results; 2) performance is judged against standards or performance goals; 3) public organizations are accountable to multiple levels and agents, particularly in decentralized services or programmes; 4) performance measurement systems are often tied to incentive systems and performance information are used to promote continuous improvement and customer satisfaction. Teelken (2008) finds that even though performance management systems have generated considerable interest as a public management tool, implementation of these systems occur slowly. Furthermore, evidence so far does not indicate that increasing use of performance measurement lead to better services or more satisfied clients, although this also might be related to a traditional instrumental way of looking at "use" which block alternative explanations of how measurements and indicators are linked to policy-making (Hatr 2008).

More specifically tying performance and governance together, Pollitt (2008) discusses the increasing use of international performance indicators for governance, such as

world governance indicators, public sector efficiency indicators etc. Pollitt claim that such indicators and rankings of countries based on them are highly problematic, partly because governance is such a complex issue. He claims that although technical problems of measuring governance are indeed huge, the main problem is that the concept governance is vague, value-laden and multifaced. He reflects with reference to Bovaird & Loeffler (2003) that "...measurement of governance quality seems like attempting to "nail a pudding to the wall" (p. 316).

Bovaird and Loefflers (2003) paper on evaluating the quality of public governance claims that good governance is about ensuring that outcomes are right – that is, are policies archiving the desired outcomes? Further they argue, that it is an "interest in measuring the success of public interventions in terms of the quality of life changes which they bring about for those affected by them, rather than the quality of the activities themselves" (*ibid*, p. 317). They list the following ten characteristics of "good governance" that can be used for measuring the quality of public governance: citizen engagement, transparency, accountability, quality, ethical and honest behavior, equity, ability to compete in a global environment, ability to work effectively in partnership, sustainability and respect for the rule of law.

The measurement of governance success and failure is also addressed in a book by Bovens, Hart and Peters (2001). They claim that assessment of public governance performance is made up by both programmatic and political dimensions of success and failure. Programmatic aspects of assessment include issues like effectiveness, efficiency and resilience. The political dimension of assessment focuses on the way policies and policy makers become represented and evaluated in the political arena. They claim that it is often disparities between these two aspects of performance, but that they are also related: "Whether programmatic success is acknowledged and how much it counts for the overall judgement about its performance is determined in political processes" (*Ibid*, p. 20). They argue that the assessment of performance is not always symmetric. Policies that are assessed as successful on the programmatic aspects tend to be assessed positively on the political dimension. Policies that are assessed negatively on the programmatic dimensions are not necessarily seen as failures politically. They claim that the politicization of performance depend on the policy structure and policy culture in a given country. Countries that have a more inclusive and consensus oriented policy system have lower likelihood of intense politicization of policy failures.

Based on the above analysis of governance and governance reforms, the following four governance reform elements will be subjected to further analysis: Leadership and strategic management in public sector organizations, increased institutional autonomy, increasing use of strategic partnerships, alliances and networks and funding.

The focus in these analyzes is the relationship between the policy instrument and the evidence for the performance of that policy initiative. By way of a systematic literature, the aim of this report is to provide information about the performance of these initiatives.

	Governance reforms			
Performance	Leadership	Institutional autonomy	Alliances, partnerships and networks	Funding
Programmatic performance (efficiency, effectiveness) and performance indicators used				
Assessment of overall success and failure, “performance talk”				

Table 3: Governance reforms and performance: a conceptual framework

With reference to Bovens, Hart and Peters (2001), performance is seen both in terms of programmatic aspects and the more political dimensions. Consequently we look at both indications to goal-effectiveness, efficiency, relevance, and identify the performance indicators used to assess such aspects of performance, but also assessments of a more political and normative type. That is “performance talk” - or general assessments of success and failures of governance reforms and public policies.

3 Methods and materials: Search strategies, hits and preliminary analysis

Analysis of articles in the Thompson ISI-Web of Science database

In reviewing the literature, we concentrated the effort on journal articles/proceedings searchable in Thompson ISI-Web of Science database. Hence, the search identifies literature of a more general character than the higher education literature. In searching ISI several quantitative search strategies were applied:

Firstly the following search combinations were run:

A. All key words in combination with all search words

1. "policy implementation" AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*): 7 hits
2. reform* AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*): 2939 hits
3. governance AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*): 1569 hits
4. funding AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*): 644 hits
5. "public sector" AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*): 535 hits
6. "higher education" AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*): 1271 hits

B. Bologna in combination with the key words:

Bologna AND ("policy implementation" OR reform* OR governance OR funding OR "public sector" OR "higher education"): 22 hits

C. "*Bologna process*" in combination with search words:

"Bologna process" AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*): 11 hits

D. *Bologna* in combination with the search words resulted in a vast number of irrelevant hits

Based on these four main searches the literature generated by these strategies was collected through the following selection procedures:

- "policy implementation*" AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*)
- (EU AND reform*) AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*)
- (EU AND governance) AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*)

- funding* AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*)
- “public sector” AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*)
- (EU and “higher education”) AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*)
- Bologna AND (“policy implementation” OR reform* OR governance OR funding* OR “public sector” OR “higher education”)
- “Bologna process” AND (effect* OR outcome* OR result* OR achievement* OR performance OR quality OR impact*)

In order to reduce the huge amount of references, we undertook several qualitative screening processes intending to reduce the number of articles as much as possible. However, still the total number of articles is 359. In the review as presented below, the analysis and presentations are based on reading the abstract alone. We have seldom consulted the full papers. And as a consequence, we might have misinterpreted and misrepresent the findings in these papers.

Within the database containing the 359 references, we run several specific searches on the keywords public policy, funding and leadership. The keyword “funding” generated 111 references, “governance” generated 28 references, “networks and alliances” 16 references, “autonomy” generated 8 references and “leadership” 18 references each. In addition, we have also included a number of books covering the issues we are interested in. This search has not been as systematic as the search for articles. In general, we have either checked various “handbooks” on public administration and/or governance, or identified book with titles matching the keywords we are interested in.

Supplementary search strategy

If addition to the systematic search strategy described above, the consortium opted for an additional approach to finding relevant publications that involved the use of experts in the field of higher education governance and funding. The reason for this is that within higher education research, a lot of research results are not reported in peer reviewed journals but are reported in either books or reports. Searching only in journals indexed in ISI-Web of Science would mean that a significant part of research on the areas of interest would be excluded from the analysis. Due to this, a group of eight experts on higher education governance and funding were asked to nominate up to five research publications regardless of channel that they in their experience considered being the most central research publications on governance and funding reforms and performance. That exercise yielded another 16 suggestions on research publications to be included in the review.

4 Review of literature on governance reforms and performance

Governance and governance reforms

In the database, 28 papers contained the keyword governance or governance reforms. The papers deal with a large number of issues, ranging from European integration and modes of coordination, public sector reforms in different countries and parts of the public sector (health, education, local administration, agriculture, economic policy etc).

Many of the papers are theoretical and conceptual and a few of the papers are methodological, and focus on describing and analyzing the governance concept and how governance reforms should be understood and evaluated empirically. Some of the paper are empirical, but most often of a descriptive kind. That means that they focus on describing changes in governance and implementation processes, and rarely contains assessment of the performance of the reforms or policies. The first observation that arises from the analysis of this material is that research on governance and governance reforms to date, has not been strongly preoccupied with evaluating the performance of governance reforms. The papers are largely conceptual or descriptive. The dominant themes are:

- The governance concept – conceptual and methodological reflections (Bevir and Rhodes et al 2003; Bovaird and Loffler 2003; Moore and Hartley 2008; Provan and Kenis 2008)
- Governance of European integration (Eberlein and Kerwer 2004; (Eberlein and Newman 2008); Egeberg 2004; Gornitzka and Sverdrup 2008; Hodson and Maher 2001; Horeth 1999; Radaelli 2007)
- Particular governance reform initiatives and their implementation (Ferlie and Hartley et al 2003; Heinrich 2007; Jackson and Stainsby 2000; Lodge 2005; Ongaro 2006; Romeo 2003; Sanderson 2001; Wigan 2007)
- Effects of governance reforms (Argyriades 2006; Bache 2003; Fitz and Beers 2002; Robbins and White 2000)

Nine of the papers focus on describing particular governance reforms and their implementation. The issues covered in these papers include overviews of recent public governance and management reforms in the UK, performance management and evidence based policy, use and management of networks to deliver public services in the UK, international benchmarking and innovations in regulation, devolution in the public sector, decentralization and economic reforms – also in the UK. None of these papers deal with the performance of the described governance reform initiatives.

Four papers focus on performance of recent governance reforms, but none of them are systematic evaluations. They also focus on a very diverse set of policy issues. Argyriades (2006) discuss the effects of policy learning and implementation of new modes of governance in developing countries, and indicates that the effects have been mixed or negative. Bache (2003) discuss the effects of new modes of governance in the

UK educational system. The author claim that new modes of governance has lead to increased centralized control over education policy and increased goal achievement in education policy. Fitz and Beers (2002) discuss the policy framework and effects of increasing use of Education Management Organizations in the UK and US educational systems. EMOs are a form of public-private partnership where for-profit and non-profit management companies are engaged in take-over and operation of public education. The paper mainly describes the policies that have led to the increasing use of EMOs, but also some assessments as to their performance. According to the authors EMOs have not produced the promised results in terms of cost-effectiveness or raised student performance levels. Robins and White et al (2000) focus on the effect of funding on educational innovations in one US university department. Consequently, the empirical evidence for the performance of governance reforms is too weak to make any firm conclusions. Rather, it is remarkable how little focus there is on the performance of governance and governance reforms. Some of the papers classified as "theoretical and methodological" (Bovaird and Loffler 2003, Provan and Kenis 2008) do however discuss evaluation of governance and governance reforms, but on a conceptual level (see above in section 2.3).

Networks, alliances and partnerships

Although the issue of networks and alliances is embedded within the general literature of governance and governance reforms, we did particular searches on literature on networks, alliances and partnerships in the public sector. The search generated 16 papers in database, of which 12 concerned the issues of interest. Five of these papers are fairly general and concern descriptions of public sector networks, their management and effectiveness (Jackson and Stainsby 2000; O'Toole and Meier 2004; Provan and Kenis 2008; Provan and Milward 2001; Rethemeyer and Hatmaker 2008). Four of the papers address public-private partnerships specifically (Clark and Jensen 2001; Fitz and Beers 2002; Grimshaw, Vincent et al 2002; Romeao 2003) and three of the papers address policy networks in EU policy (Curtin and Egeberg 2008; Eberlein and Newman 2008; Gornitzka and Sverdrup 2008).

The general papers on networks and network management discuss different benefits and problems with networks. Networks are claimed to have potential benefits in terms of adding value and enhancing performance, increasing learning and increased capacity for dealing with complex problems (Jackson and Stainsby 2000; Provan and Kenis 2008), but networks can also have negative effects (O'Toole and Meier 2004). According to Provan and Kenis (2008) there is still little knowledge about the actual function of networks and how they produce particular outcomes. Provan and Milward (2001) claim that due to this, evaluating the effectiveness of networks is complex and has generally been neglected. They argue that network effectiveness must be evaluated at three levels of analysis: community, network and organization/participant levels, and that effectiveness at one level of analysis may not match effectiveness criteria at other levels of analysis.

Public-private partnerships have become a commonly used approach for the delivery of a number of public services. The small number of papers on this topic in this sample of papers does not allow for an evaluation of the performance of such initiatives. Three of the papers provide information about performance, and all are negative in their assessment of PPPs as more effective means of delivering public services (Fitz and Beers 2002; Grimshaw, Vincent et al 2002; Romeo 2003).

Institutional autonomy

In the database, we have only identified eight papers that include the keyword autonomy. The eight papers reflect a diverse approach to the topic, ranging from autonomy at the individual level (Bolton 2004), national autonomy vis a vis international policy (Svensson 2002) as well as different policies intended to increase institutional autonomy in different public organizations (Greve 2006, O'Brien & Fairbrother 2000, Paczynska 2007). Three of the papers focus in institutional autonomy in the higher education sector - and are all connected to funding and increased financial autonomy for universities (Lopez 2006; Lowrey 2001; Talib 2001). However, few of these papers include assessment as to the performance of reforms intended to increase autonomy, most describe initiatives for increasing autonomy or implementation processes. A paper by Verhorst et al (2004) provides an overview of research on autonomy and the effects of autonomy on performance of public organizations. According to the authors, a central argument behind reforms intended to increase autonomy to public organizations is that autonomy will lead to increased specialization and superior performance (in terms of efficiency, economy and effectiveness), "but only if enough incentives for the public agency to perform well are present" (p. 102). Autonomy is also seen as necessary for coping with increasingly complex environments and for developing services that fits the needs of the clients. According to the authors, the evidence for increased performance as a result of increased autonomy is inconclusive. The main reason for this is that the conceptualization of autonomy and performance differs as do measures and analyses of these concepts. They also provide a taxonomy of autonomy encompassing six separate but related aspects of autonomy, which are related to two main dimensions - autonomy as decision-making competences and autonomy as the exemption of constraints on the actual use of the decision-making competences.

Autonomy as decision-making competences		Autonomy as the exemption of constraints on the actual use of the decision-making competences			
Managerial autonomy	Policy autonomy	Structural autonomy	Financial autonomy	Legal autonomy	Interventional autonomy
Control over managerial decisions, procedures, transactions	Control over policy goals and use of policy instruments	Control over leadership and board	Source of funding	Legal status	Supervision, reporting and sanctions

Table 4: Dimensions of autonomy (Source: Verhorst et al 2004)

They argue that part of the confusion with respect to the link between autonomy and performance is due to different aspects of autonomy being emphasized by different researchers. Their empirical research on Flemish public sector agencies indicates that autonomy is multidimensional and that this is important for the issue of performance. They argue that positive effects of one dimension of autonomy can be overarched by negative effects of autonomy on other dimensions, which will have effect on the overall assessment of the performance of initiatives to increase autonomy of public sector organizations.

Leadership in public sector organizations

In the database, 18 papers were found that included the keyword leadership and 11 of these papers were relevant to the issues in focus here – leadership in public sector organizations and potential link to performance. Several of the papers discuss public sector performance systems and the role of leadership in such systems (Andrews and Boyne et al 2006; Jas and Skelcher 2005; Moynihan and Ingraham 2004), other papers discuss leadership in public organizations more generally (Currie, Humphreys et al 2008, Farrell 2005; Trottier and Van Wart et al 2008; Wallis and McLoughlin 2007), and some focus on leadership as an explanation for success or failure on certain policies/initiatives, or on performance more generally (Bertucci 2006; Brown, Anfara et al 2004; Fernandez 2005; Sa and Kanji 2003). Again, few of these papers are actual evaluations of the role leadership in public organizations in explain public sector performance. Some of the papers are however quite interesting and relevant for the relationship we investigate.

Andrews and Boyne's (2006) paper investigates what explains performance failure in the UK public sector. Their evidence show that failure to some extent is attributable to difficult circumstances (what they label misfortunes) but also to particular management characteristics (weak leadership and poor performance management). Jas and Skelcher (2005) provides another perspective focusing on the role of leadership in promoting turnaround in low performing public organizations, and Moynihan and Ingraham (2004) focus on the importance of leadership for the use of performance information in decision making in the public sector. Fernandez (2005) paper focuses on explaining leadership and leader's influence on organizational performance in the public sector, and the data indicate that leadership to a large extent explains variance in public sector performance. The papers do not give any conclusive evidence as to the importance of leadership for explaining performance, but they emphasize that leadership is key to organizational development when organizations are failing. Lack of leadership is also a commonly used explanation for why organizations fail.

Governance studies in higher education – some recent contributions

The point of departure for this review has been rather general: What does the literature say on the relationship between governance, reform and performance? During our search for literature, articles and studies from the area of higher education has not really been very visible. That does not mean that governance has not been an important topic in higher education research. Rather, for various reasons (conceptual, type of articles included in ISI, a lot of research published in reports, books etc) this material may have been published through other channels. Due to this we have included in this review studies that are not found in the ISI base under the keywords we have used. There are many contributions, so we have selected some of the more recent articles, books and reports from the higher education literature on governance, governance reforms and performance, based on input from a panel of expert on higher education governance and funding.

Governance in higher education

There is no lack of research on governance and governance reforms in higher education and several recent edited books have been published on the topic (Dee 2006, Paradeise et al 2009, Martens, Rusconi and Leuze 2007, Kehm and Lazendorf 2006, Jansen 2007, Ehrenberg 2004, Amaral, Jones and Karsch 2001, Braun and Merrien 1999). The majority of papers published in these edited volumes are descriptive, describing governance and changes in governance in higher education in particular countries, or comparative (see for instance Kehm and Lazendorf 2006; Paradeise et al 2009). Some of the papers are also conceptual, aiming at conceptualizing governance in terms of different perspectives, with a particular focus on changes in governance concepts (Braun and Merrien 1999; Ferlie, Musslin and Andreasani 2008, 2009; Jansen 2009). The concept governance is used both as a macro-level phenomenon focusing on governance of higher education system, with particular focus on changes in the state – university relationship, associated with concepts like autonomy, accountability, new public management, etc. Governance is also conceptualized at a meso- and micro-level phenomenon focusing on internal governance of higher education institutions, particularly focusing on managerialism (Kehm and Lazendorf 2006, Paradeise et al 2009).

Kehm and Lazendorf (2006) define governance within a university system as a system of rules that coordinates the actions of the following actors: Universities as organizations and their inter-organisational relations, the academic communities and the state. They further point to five governance dimensions that make up particular governance regimes: external regulation of universities (state regulation), external guidance of universities (accountability), competition for scarce resources (market coordination), academic self-governance and managerial self-governance. “Specific governance regimes are characterized by the different weights of individual dimensions (*ibid*, p. 188). These dimensions are used to map changes in university governance in four European countries (UK, Germany, Austria and Netherlands). According to the authors, in all four countries (but to different extents), managerial governance regimes have developed.

In light of the five dimensions, less weight is put on state regulation and academic self-governance, and more weight is put on accountability, market coordination and managerial self-governance. The effects of the above mentioned changes are not addressed in this book.

Like Kehm and Lazendorf's (2006) book, Paradeise et al (2009) is also an edited volume of papers of country studies of governance of national higher education systems (France, Germany, Italy, Netherlands, Norway, Switzerland and UK). Governance is here conceptualized in terms of two narratives of public management reforming, new public management and network governance, and the operationalization of those narratives in terms of particular reform elements. In addition to the policy analyses of each country, the case studies include empirical investigation of two particular policy issues: research funding and the development of doctoral schools. They largely reach the same conclusion as Kehm & Lazendorf, that the managerial approach to the governance of universities has increased. But the authors do not see a universal governance approach or a convergence of governance in the countries they study. Rather, governance of higher education is incredibly complex and national responses is a mix of different approaches and models.

Ferlie, Musselin & Andresani (2008) link developments in higher education governance in European countries with broader trends within governance, and identify three narratives of public sector reforms: New public management, network governance and the Neo-Weberian narrative (increased focus on control, standards, rules and formalization by the state). In their conclusion they claim that reforms in the organization, management and steering of higher education should be considered as part of a broader pattern of public sector reforming. This paper mainly describes the policy framework in which recent European higher education reforms should be understood. There is no assessment of the degree of implementation or the performance of higher education governance reforms in this paper.

De Boer, Enders & Leisyte (2007) have written an empirically based paper on shifts in mode of governance in the Dutch higher education system. They argue that a consequence of this shift, the university is transformed from loosely coupled organizations into complete 'corporate actors'. This paper is interesting as it attempts to study the impact of governance reforms on universities as organizations, but still is mainly descriptive in that it attempts to account for how this transformation process occurs.

King (2007) discusses changes in higher education governance, and drawing on regulatory theory he discusses policy initiatives such as quality assurance in light of altered relationships between state and society. This paper is conceptual and attempts to understand the implementation of governance reforms.

Wald, Franke & Jansen (2007) have investigated changes in governance of research on research strategies, taking the individual research group as a unit of analysis. In their research, they measure recent changes in the governance of research at the micro level against three potential models: the management model, academic self-governance and a mixed model. The management model is conceptualized as a governance model with external competitive pressures, external accountability combined with managerial self-management. The traditional self-governance model is a combination of strong state control and strong collegial control over decisions. The mixed model (professional model) should ideally be a combination of competitive pressures and professionally governed research organizations. The empirical data focused on governance of two decisions: choice of research projects and network formation within astrophysics research groups in Germany. Their results indicate that governance arrangements move towards a management model, particularly competitive distributions of research funds, combined with strong coordination by the scientific community. This entails that even though governance regimes changes at system level, the link to micro-level changes is not straight forward.

Governance and performance in higher education

There is no lack of literature that discusses the issue of governance in higher education, but as seen above, this literature is descriptive and comparative. Very few studies have investigated the impact of governance and governance reforms on performance in higher education.

Knott & Payne (2004) have studied the impact of state governance structures on management and performance in the US higher education system, and particularly statewide governance boards. In the US system, statewide governance boards represent a centralization of governance within each state. Their analysis shows that decentralized governance structures, where the university is highly influential over resource allocation and sources of revenue, are better performers in terms of resources and scholarly productivity.

Another recent publication on performance is a recent report by the National Bureau of Economic Research in the USA (Aghion et al 2009). This study investigates the relationship between autonomy, competition and performance in European and US research universities, and find that it is a correlation between university autonomy and university performance. In this paper, university performance is measured by "The academic ranking of world universities", which is a ranking of universities based on six indices: number of alumni and faculty who are Nobel prize laureates, number of articles authored by faculty in the journals Science or Nature, number of articles authored by faculty that are in the Science Citation Index or Social Science Citation Index, number of highly cited researchers. Autonomy and competition was measured by a survey for European universities and a combination of register data and survey data for US universities.

Measures of autonomy includes the following issues: control over curriculum, control over student recruitment, control over hiring of academic staff, state intervention in wage policies, wage policies, share of budgets from government funding and share of funding from research grants for which the university must compete. The analyses show that there is a correlation between autonomy, competition (for staff and research grants) and performance both for European and US universities, although they also find that good research performance may occur in countries with limited institutional autonomy (e.g., Switzerland).

5 Review of literature on funding

Based on the literature reviewed for the purpose of this study, we have focused separately on literature that addresses funding issues. Although we consider funding as being part of the overall governance arrangements, it is still an instrument that can be divided into a large number of measures. Thus, we have decided to treat this as a separate section in our review.

Regarding the funding literature, we found that three main themes with regard to impacts of funding can be identified: one major theme in the literature discusses the effect of different funding mechanisms, a second major issue treats the effect of different funding mechanisms on different target groups in society, and the third main issue relates to 'the effect in context' e.g. the impact of several structural arrangements on the impact of funding mechanisms. We also discovered two key underlying perspectives on the impacts of funding on performance: A solution-oriented perspective (what works?) and a critical perspective (does it really work?).

The effect of different funding mechanisms

This part of the literature discuss the effect of different funding mechanisms, the effect of mechanisms on performance is treated more indirectly. The literature discusses mainly four funding mechanisms: block grants, performance-based funding (PBF), private vs. public funding and industry funding.

Block grants

Collins and Gerber (2006) show that state-level institutional arrangements critically affect access to federal block grant funds when those funds are allocated through competitive grant contracting to local governments. The study point out the transaction costs embedded in competitive allocation of block grants.

Payne (2003) examines two politically motivated methods used in the US since 1980 to affect the distribution of funding on research activities, namely, congressional earmarks and set-aside programs. There has been a modest change in the distribution of research funding across research and doctoral universities, especially since 1990. Funding from earmarked appropriations has increased the quantity of academic publications but decreased the quality of these publications as measured by citations per publication.

At those universities that qualified for funding under the setaside programs, however the quality of publications has increased whereas the quantity of publications has decreased.

Performance-based funding

The literature on PBF highlights the reasons behind the establishment of this funding mechanism. Alexander (2000) discusses how performance-based accountability has emerged as a critical component of higher education funding and planning. Bovaird and Loffler (2003) consider how the measurement of good governance can be encouraged, e.g. through awards, inspections, setting funding conditions and empowering stakeholders to demand better evidence.

This strand of literature also emphasizes the problems embedded in performance-based funding. Heinrich (2007) point out that both the evidence-based policy and performance management movements aim to improve government effectiveness by developing and utilizing a more rigorous base of information and scientific evidence to guide decisions about program design, funding, implementation, and management. He asserts that differences and tensions between these movements-such as their methods and standards for assembling and analyzing data, and the strategic timing and use of this information to influence policy and hold public managers accountable for performance-could limit their success. The paper considers questions about what should count as evidence, how it should be communicated, who should judge the quality and reliability of evidence and performance information, and how to achieve a balance between processes that produce rigorous information for decision making and those that foster democratic governance and accountability.

Moynihan (2006) examines the Program Assessment Rating Tool (PART) in the federal budgeting process. The early evidence prompts the search for a theory of budgeting that accepts that performance information will influence decisions but will not be used in the same way from decision to decision, as the espoused theory of performance budgeting suggests.

Foley (1999) discuss 'challenge funds' which represent a further manifestation of the introduction of competition and 'market style' structures. Numerous benefits, such as cost savings and innovation, arising from the introduction of the funds have been put forward. Administrative and monitoring mechanisms are found to be centralizing control, despite assertions to the contrary. There is a growing concern that the level of information collection required is too arduous and it is used to control and regulate schemes rather than as a method of investigating where operations could be improved.

Mayhew et al. (2004) suggest that the incentive structures applied by the UK government may have made the different parts of the higher education sector more homogenous than is desirable. Stiles (2002) asserts that despite variations in allocations between regions and institutional types, HEFC funding methods reinforced research and teaching funding differences between institutions.

Some articles focus on performance-based funding of education. Colbeck (2002) analyzes implementation of mandate and inducement policies to improve undergraduate instruction. Ohio legislation mandated that faculty increase teaching time by ten percent. Tennessee's performance funding initiative provided incentives to institutions meeting state standards. He compares faculty and administrator responses to these policies at a research and a comprehensive university in each state. Hoyt (2001) discuss the effects of student motivation on the use of outcomes tests to measure institutional effectiveness. He finds that the use of the exams was problematic because students failed to give the assessments their best effort.

Conley and Picus (2003) discuss a funding model that attempts to connect the resources provided to schools with the student-learning outcomes that should result. Local school districts retain the ability to develop their own instructional programs but must be as effective as the prototype schools. He argues that the model illustrates how state and local control can be balanced within a framework that defines state responsibility to fund education adequately and local responsibility to deliver quality programs accordingly.

Several articles discuss performance-based research funding. Geuna (2001) discusses whether there are negative unintended consequences in the changing European research funding. He points out that problems arise due to amongst others increased concentration of resources; disproportionate incentives for short-term research; and conflicting incentive structures. Geuna and Martin (2003) point out that many countries have introduced evaluations of university research, reflecting global demands for greater accountability. The authors examine the advantages and disadvantages of performance-based funding in comparison with other approaches to funding. The analysis suggests that, while initial benefits may outweigh the costs, over time such a system seems to produce diminishing returns.

Layzell (1999) discusses the use of performance indicators and performance-based funding by states for their systems of higher education. He describes mechanisms for measuring institutional performance, experiences with performance indicators, including their pitfalls and limitations and report on some of the difficulties in implementing such funding models.

Goldfinch (2003) discuss implications of tertiary education funding in New Zealand progressively being directed towards rewarding research performance. He points out the some implications for the management of departments and the reorientation of the universities.

The RAE in UK receives considerable academic attention. Willmott (2003) point out that it is argued that the significance of the research assessment exercises (RAEs) does not reside primarily in their rationalization of resources for research or in securing improvements in accountability for their expenditure, but, rather, in their contribution to legitimizing the restructuring of higher education, which has included the withdrawal of research funding from an increasing proportion of academics and departments.

He asserts that through a selective application of peer review procedures, the exercises have facilitated a simultaneous expansion of higher education with a reduction in unit costs. The reductions have further stimulated pressures and competition to attract privately funded projects as a way of supporting or maintaining resource flows into universities. The article focuses upon the progressive tightening of the coupling between research activity and 'the needs of industry' and the use of a system that simulates peer review to legitimize this process.

Bernard (2000) asserts that selective funding of university departments of history especially awkward. Historians study as individuals and as specialists, not in departmental teams. Resources-especially time free from teaching and administrative burdens-have not been equally distributed between university departments, and in consequence RAEs in history are likely simply to confirm the wisdom of past funding decisions.

Bessant et al. (2003) review the state of the field of the sub-disciplines within UK management research. The paper offers observations on the UK model of the assessment of quality in, and funding of, research conducted in publicly funded higher education institutions.

Private vs. public funding

In this context one main issue is the impact of private educational providers on the efficiency of public providers. Adnett (2004) point out that inter-school competition is seen as a means of creating stronger incentives for state schools to raise measures of average pupil attainment. Privatization of educational providers generates efficiency gains and contracting is seen as a means to control the market failures. The author questions the tendency to separate government funding of schooling from its provision.

Salerno (2004) suggests that in HE systems with weak or newly emerging private sectors, unclear regulations and concerns about quality implies that public funding tends to be channeled into private institutions indirectly (e.g. through tax-abatements and student financial aid). He finds that in systems where private institutions play a more substantial role, public funding is channeled to privates using a mix of indirect and direct mechanisms.

Beadie (1999) discuss funding by voucher. In the New York academy system (from 1825 to 1870) independently chartered academies were subsidized by per-pupil funds that followed students. Academies had to meet charter criteria to be eligible for funds. He finds that during expansion of the system, competition among schools depressed income and led to a declining level of investment in teaching at most schools.

Ahier (2000) asserts that the promotion of privatization in education and of individual investment in human capital, fails to acknowledge the importance of collective private intergenerational transfers. It also increasingly depends upon the state and the financial services working in combination.

Industry funding

In what we can label the R&D literature the relationship between public R&D and its impact on the economy is discussed. David and Hall (2000) aim at closing the analytical gap in the extensive literature on the results of interactions between public and private R&D expenditures, and their joint effects on the economy. Some such structure is necessary, in view of the multiple channels through which public research can affect private R&D performance, especially as not all the effects flow in the same direction. A major cause of "inconsistencies" in the empirical literature is the failure to recognize key differences among the various policy "experiments" being considered - depending upon the economy in which they are embedded, and the type of public sector R&D spending that is contemplated. Within the context of their model it is possible to offer interpretations that shed light on recent cross-section and panel data findings at both high (i.e., national) and low (specific technology area) levels of aggregation.

Hyytinen and Toivanen (2005) assert that capital-market imperfections hold back innovation and growth, and that public policy can complement capital markets. They show that government funding disproportionately helps firms from industries that are dependent on external finance.

Ballesteros and Rico (2001) explore the financing of precompetitive research projects developed by firms in collaboration with universities and public research organisms. They suggest that the funding has not been awarded neither to reward those firms which most need it, nor to give incentive to high levels of cooperation.

Behrens and Gray (2001) explore the impact of industry sponsorship on climate for academic freedom and other graduate student outcome. They examine the impact of source of funding (industry, government and no external sponsor) and form of funding (single source, consortial, or unfunded) on a variety of research processes and outcomes for graduate students; involving also the development and evaluation of a measure of "climate for academic freedom". The results failed to support claims that sponsorship by industry negatively affects student experiences or outcomes.

Goldfarb (2008) point out that growing share of university research funded by industry has sparked concerns that academics will sacrifice traditional scholarly activities to pursue commercial goals. He finds that researchers who maintain a relationship with the directed sponsor experience a decrease in publications implying that academics' careers may be a function of the type of funding received, not only talent; academic merit does not necessarily serve as a funding criterion for sponsors; and citation and publication measures of academic output are often not useful proxies for short-term commercial or social value.

Gulbrandsen and Smeby (2005) find that there is a significant relationship between industry funding and research performance: professors with industrial funding describe their research as applied to a greater extent, they collaborate more with other researchers both in academia and in industry, and they report more scientific publications as well as more frequent entrepreneurial results.

There is neither a positive nor negative relationship between academic publishing and entrepreneurial outputs.

Schiller and Liefner (2007) presents empirical data based on an investigation into the cooperation activities of five Thai universities. University-industry relations are becoming more frequent and are promoted by university administrations. The financial benefits for the universities as well as the technological benefits for the cooperating companies are very limited.

Louis et al. (2007) suggest that the presence of industrial funding enhances productivity of PhD students and does not detract from their willingness to share knowledge. Billings et al. (2004) explore the effects of funding source and management ownership on the productivity of R&D. The implication is that firms with high manager-owner content are less productive with government-sponsored R&D than with company-financed R&D. Childs and Triantis (1999) show how a firm can forecast expected R&D spending through time for an optimally executed R&D program. Czarnitzki (2006) presents microeconometric evidence on financing constraints for research and development activities in German small- and medium-sized firms (SME). Dai et al. (2005) and Darby et al. (2004) discuss patenting and funding measures. Feldman and Kelley (2006) find that receipt of a government R&D subsidy increased the funding from other sources when compared to firms that were not awarded funding.

The effect on different groups

Another perspective on funding focuses directly on the impacts of funding. In the what-are-the-impacts-of-money perspective a broad range of themes is discussed. Impacts of funding policies on specific groups of students are discussed regarding 'gifted students'. Baker and Friedman-Nimz (2004) analyze the availability of and participation rates in programs for gifted and talented students. They suggest that program mandates and funding may be effective tools for increasing the distribution of opportunities for gifted children.

Baker (2001) found continued vast inequities across school districts in the availability of resources and unacceptable correlations between student population characteristics, community wealth, and the availability of opportunity (in the state of Texas).

The impacts of tuition fees are discussed in a number of articles. Callender and Jackson (2005) examine the relationship between prospective HE students' attitudes to debt, and their decisions about whether or not to enter HE. Their study shows how those from low social classes are more debt averse than those from other social classes, and are far more likely to be deterred from going to university because of their fear of debt, even after controlling for a wide range of other factors. The article concludes that the student funding policies are in danger of deterring the widening participation policies.

Lowry (2001) finds that the price of attending college thus depends in part on whether the relevant decision makers are state government officials or university administrators.

Thompson and Zumeta (2001) examine the relationship between key state policy variables - relative (private-public) tuition prices, state student-aid funding, and public institution density - and the competitive position of private colleges and universities is examined. They suggest that state policies in this era of strong demand for higher education and constrained public sector capacity should use price signals (student aid and public institution pricing) to encourage students to consider seriously whether private higher education might serve their needs as well as or better than public institutions.

Some articles discuss the impact of changing funding systems on the academic profession. Shain and Gleeson (1999) examine the impact of recent changes in the structure and funding of Further Education in UK on conditions of academic work for lecturers in the sector. They suggest patterns of deprofessionalization go hand in hand with patterns of professional reconstruction.

The effect in context

Performance measurement of public policy is another major topic. Hall (2008) asserts government capacity helps explain variance in public sector organizations' performance, and measuring capacity helps identify deficiencies that may be addressed in order to improve the efficiency and effectiveness of these organizations. His results suggest that similarity in the purpose and structure of regional economic development districts within a state are not enough; we need to better understand the resources within the organization and the mission that determines how those resources are applied.

A few articles discuss internal resource allocation models. Liefner (2003) analyzes forms of resource allocation in university systems and their effects on performance in institutions of higher education. He analyzes how various forms of funding and resource allocation affect universities at the macro-level and individual behavior at the micro-level. He shows that changes in resource allocation have an impact on the level and type of activity academics concentrate on but not on the long-term success of universities.

Casper and Henry (2001) examine methodologies for allocating instructional resources within a large, public university. Models are developed for allocating equipment and current expense funding that incorporate objective or performance-oriented variables, as well as weighting variables that enable decision makers to quantify the more subjective elements of the allocation process.

Lopez (2006) discuss adjustments in budgeting strategies. He reveals the embryonic state in which Spanish universities are regarding a more strategic distribution of funds within institutions, although some universities demonstrated more innovative approaches to management.

Casu and Thanassoulis (2006) identify practices leading to cost-efficient central administrative services in UK universities. They demonstrate the problems in defining the unit of assessment and the relationship between the inputs and the outputs.

Stagnaro-Green et al. (2008) analyse mission-based funding at medical schools based on a model that included both quantity and quality in the education metric and that was departmentally based. Quality determinations were made by the educational leadership based on student evaluations and departmental compliance with educational administrative requirements. Evolution of the model has included the development of a faculty oversight committee and the integration of peer evaluation in the determination of educational quality. The model has been well accepted by chairs, educational leaders, and faculty and has been instrumental in enhancing the stature of education at the institution.

Some articles look into the internal efficiency of higher education institutions. Gawande and Wheeler (1999) assert that for organizations whose objective is not necessarily the maximization of a financial quantity, there is little written in the economics and management literature about methods that quantify their effectiveness. The authors construct measures of effectiveness that are indicators of efficiency, can be used as inputs into allocative decisions within the organization, can be applied to internal performance evaluation and provide the basis for better regulation by the government.

Gander (1999) indicates that public institutions use relatively less administrative resources compared to privates in seeking public and private sources of funding. Privates, on the other hand, use relatively less when seeking private funding, but they use relatively more when seeking public funding.

Groot and Garcia-Vaalderama (2006) analyze both bibliometric data and peer review assessments of research groups in economics. They aim at explaining differences in research output quality and productivity by organizational factors, like size of the research group, composition of staff, sources of research funding and academic discipline. The number of publications in international top journals is the best predictor of peer review assessment results. Size of the research group appears to be the only permanent characteristic associated with research quality and productivity. Size is positively related to research quality but negatively related to research productivity. Larger groups appear to have the potential to improve quality, but as groups become larger, they also experience problems in maintaining the research productivity of the research team's members. The remaining organizational characteristics appear to be temporarily related to research quality and productivity.

Other articles treat the quality of HEI performance. Kanji and Tambi (1999) assert that HEIs could benefit from a TQM process such as improved student performance, better services, reduced costs and customer satisfaction. It is found that the measurements of TQM principles and core concepts, which are critical success factors, reflect performance of institutions.

A solution-oriented perspective

In a what works perspective Barnow (2000) analyses a performance management system where units operating the program are accountable for meeting performance standards and rewarded or sanctioned depending on how well they perform. The aim of the paper is to determine how closely performance measured corresponds to program impact. The results indicate a weak correspondence between the two measures.

Callahan and Gilbert (2005) aim at providing a methodology for survey of public preferences that connects agency performance with public agency design by testing relations between organizational performance features and service satisfaction. The findings correlate user satisfaction with three design characteristics of public agencies: agency dependence on user satisfaction for future funding, a clearly identifiable end-user focus by the agency, and the ability of the user to exercise choice in her or his future use of the agency's services.

Mumper (2003) compares universal and targeted program designs in the federal and state programs to encourage participation in higher education. He compares the experiences of universally designed state policies (subsidies for low tuition) and targeted state policies (high-tuition/high-aid funding). He also compares the experience of a universally designed federal program (Pell Grants) with a targeted program (Stafford Loans). The analysis concludes that design had only a limited impact on program sustainability

Robins et al. (2000) propose a direct linkage between institutional funding to departments and the teaching effort of faculty in the departments, and sufficient, centralized funding to relieve pressure on faculty and to foster educational creativity. They maintain that this may be the most effective way to guarantee ongoing innovation, support interdisciplinary teaching, and subsequently move the curriculum and teachers completely away from content that is isolated within traditional department structures. At the same time they acknowledge that changing faculty attitudes presents a challenge.

Cherchye and Abeel (2005) investigate amongst others the impact of external funding and the size of research programs on academic research efficiency.

Nkrumah- Young et al. (2008) analyse the changes in the higher education funding policies and resource allocation models of the Jamaican government in the period 1962-2003.

The focus is on the impact of the models on the operation of the higher education institutions, access to higher education and equity and efficiency within the higher education system. The analysis reveals that each funding model has its advantages and downsides.

Coccia (2001) develops a mathematical model based on the measurement of R&D activities with k-indices. The method is an instrument of strategic planning and can be used for the improvement of individual activities and the overall performance of public R&D bodies.

A critical perspective

Some papers address less technical aspects of funding like the normative foundations. Benner and Sandstrøm (2000) assert that funding is a key mechanism of change in the norm system since its reward structure influences the performance and evaluation of research. The two dominant models of research funding, an intra-academic model and a top-down interventionist model, seem to be replaced partly with a catalytic one. Some research agencies still reproduce a model of reputational control and a collegial orientation among researchers. It is concluded that the forces of change and continuity are engaged in a process of negotiation about the normative regulation of academic research. In another paper Benner and Sørlin (2007) explore new approaches to the funding of 'strategic research', by examining three research foundations created in the late 1990s, and considers their ambitions, limitations, and achievements.

Funding mechanisms are also treated as 'rationalization' processes. Braun and Benninghoff (2003) analyze the processes that have contributed to the acceptance of the "National Centers of Competence in Research" (NCCR) in Switzerland. They suggest that there are contemporary efforts in research policy-making which endeavor to "rationalize" the process of decision-making in research policies.

Some articles critically assess the concept of performance. Chun and Rainey (2005) develop measures of four dimensions of goal ambiguity: mission comprehension ambiguity, directive goal ambiguity, evaluative goal ambiguity, and priority goal ambiguity. The latter three variables showed relations to such organizational characteristics as organizational age, financial publicness (proportion of funding from government allocations), and regulatory status. The article examines the relations between the goal ambiguity dimensions and indicators of organizational performance. The performance variables included managerial effectiveness, customer service orientation, productivity, and work quality. The results indicate that directive, evaluative, and priority goal ambiguity related negatively to managerial effectiveness. All four performance indicators showed significant negative relationships with evaluative goal ambiguity and directive goal ambiguity.

6 Some closing reflections

Although we do not claim that we have managed to cover the whole area of governance and funding reforms and performance, we do think that our study has revealed some general characteristics of this research area. First, our review has disclosed that this topic is studied by a number of different disciplines, theoretical perspectives and approaches. It is difficult to identify a dominant theoretical perspective, although it is easier to argue that disciplines such as political science, organisational theory, and economics are quite frequently involved in studies of governance, reform and performance. Second, it follows from this that some of the key concepts we are interested in are understood, interpreted and defined in many different ways in the literature making it difficult to compare studies and findings. Third, we would argue that most studies covered by this review tend to be rather descriptive, and that the links between governance and performance seldom are studied using a systematic empirical methodology. This is not to say that the contributions we have reviewed are not using empirical data. Our argument is that the data used are not always well suited to properly analyse the link between governance and performance. Forth, and related to the previous point, the studies that have been carried out share some characteristics as to their focus: in the literature covered, we tend to find various forms of case studies of a particular government initiative. Although some exceptions can be identified (e.g., Bovens et al 2001), the case-studies are rarely analysed in a comparative perspective (trying to find similar cases, measures, contexts or countries to compare with).

It follows from the above that the general characteristics of this research area makes it difficult to draw any firm conclusion on the exact relationship between governance arrangements, reform and performance. Some pointers should still be noted. One can notice a difference between studies of governance related to leadership, autonomy, alliances and networks on one side, and of studies on funding on the other. Studies of funding tend to be more focused on the “outcome” dimension than similar studies of the other governance measures. One explanation is undoubtedly related to the fact that funding reforms often are formulated as means to produce specific effects (“improve funding from private business”), while for example leadership reforms aiming at making institutions more “strategic” are more difficult to evaluate empirically. Hence, the available “evidence base” is of varying quality, opening up for different interpretations of the empirical studies undertaken. While some effects are portrayed as “successes”, others may see the same effects as “failures”. This situation is no doubt related to the distinction between what Bovens et al (2001) label as the programmatic vs the political effects of reform (see also table 3). For example, some governance reforms have underlying ideological and normative characteristics that make them successful politically even though they – programmatically – perhaps could be identified as failures, or at least having limited success.

This initial review will, hopefully, provide an interesting backdrop and be a source of potential comparative/contextual information for exploring the more programmatic effects of the many reforms undertaken.

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Governance and Funding Reform in the European Higher Education Area

National system analyses

National system analyses: Austria¹

1 Introduction

This report describes the main changes in governance and funding within the Austrian higher education (HE) system during the previous decade and analyses their effects on the functioning and overall performance of the system. It is based on desk research and a set of about 12 interviews with decision makers and key experts, partly made face to face and partly by phone (for the list of names see chapter 6). The interviewees were asked to give their view on the impact of the reforms in general and especially on the system performance. Furthermore they were asked to give estimates concerning the further development in governance and funding within the Austrian HE system.

2 Governance and funding reforms

General view on the current governance structures in the Austrian HE system

The Austrian HE system underwent radical and unprecedented changes. The Reforms restructured the entire HE system. As a result it has become much more diversified. Currently it consists of four types of HEI: 22 public universities and 20 *Fachhochschulen* (institutions offering vocational oriented study programmes / universities of applied sciences) as well as 11 private universities and 17 teacher training colleges (*Pädagogische Hochschulen*). Public universities present the largest sector (233,046 students), followed by the *Fachhochschulen* (31,046 students) and private universities (4,237 students) (Bundesministerium für Wissenschaft und Forschung 2008, p.31, 38, 43). In 2006, a new type of HEI was added: the merger of 51 post secondary colleges for teacher training resulted in 9 public-funded and 8 private teacher training colleges (Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien / Hochschulgesetz 2005). At winter term 2008 the *Pädagogischen Hochschulen* had in total 7, 928 students (Statistik Austria 2009). These colleges are intended to offer both scientific and vocational education for teaching professions, including teacher study programmes and further education training courses. Teacher training colleges are also expected to carry out research, but they have an extraordinary status: They are not governed by the

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Federal Ministry for Science and Research (BMWF) such as public and private universities and *Fachhochschulen*, but by the Federal Ministry for Teaching, Arts and Culture (BMUKK).

Accreditation of institutions and their study programmes was a key point from the outset of the foundation of the *Fachhochschulen* and private university sector. Quality assurance is an essential element of the two new types of HEI. Quality is monitored by two national agencies, namely the FH Council (*FHR*; *Fachhochschulrat*) for the *Fachhochschulen* sector and the accreditation council (*Österreichischer Akkreditierungsrat*) for the private university sector. Instead of compulsory accreditation of institutions or study programmes the public university sector is obliged to establish internal quality management systems. To support this process in 2004 the Austrian Agency for Quality Assurance (*AQA*; *Österreichische Qualitätssicherungsagentur*) was founded. The AQA is a non-profit organization run by four stakeholders: The Austrian ministry for science and research, Austrian conference of university rectors (*Österreichische Universitätenkonferenz*), Austrian conference of heads of *Fachhochschulen* (*Österreichische Fachhochschul Konferenz*) and the Austrian Students' Union (*Österreichische Hochschülerschaft*).

In the R&D sector exists two major advisory bodies: The Austrian Council for Research and Technology Development (*Rat für Forschung Technologieentwicklung*) advises the government in all matters related to research, technology and innovation. The Austrian Science Council (*Österreichischer Wissenschaftsrat*) is the main advisory body in all university-related matters. At the operational level, most of the funding for R&D and innovation is managed by three agencies on behalf of the ministries: the Austrian Science Fund (FWF) is the most important body for the funding of basic research, the Austrian Research Promotion Agency (FFG) funds applied research and development and the Austria Wirtschaftsservice (AWS) is specialised in funding start-ups and innovation projects in companies. In addition, the Climate Change and Energy Fund (KLIEN) was implemented in 2007. It provides funding, among other things, for R&D projects that develop sustainable energy technologies.

Three ministries are responsible for Austrian research and technology policy: the Federal Ministry of Science and Research for basic research, i.e. for universities, *Fachhochschulen* and for non-university research institutions such as the Austrian Academy of Sciences and the Ludwig Boltzmann Society. It is also responsible for the FWF. The Federal Ministry of Transport, Innovation and Technology (BMVIT) is in charge of the biggest public budget in applied research. It has a stake in the AWS and in the FFG, to which it contributes the majority of application-oriented research funding. It is the majority shareholder of the Austrian Research Centres (ARC). The Federal Ministry of Economy, Family and Youth (BMWA) is responsible for innovation support, technology transfer and the promotion of entrepreneurship; it holds the remaining 50% of the FFG and the AWS and it supports the Christian Doppler Research Association (CDG). The Federal Ministry of Finance (BMF) is not directly responsible for R&D policy but it governs the allocation of financial resources

and it directly handles the national institutional funding for some research institutions.

Main changes over the last decade

There are big differences between the governance reforms in traditional public universities and the development within the *Fachhochschulen*, which came into existence in the beginning 1990th and started from scratch as a reform model with an innovative governance regime. Public universities were subject to deregulation by implementing instruments and procedures of the New Public Management (NPM). These managerial mechanisms caused a trend of entrepreneurial orientation in organisational structures and management processes of universities. But in view of governmental higher education steering as well as internal university governance university reforms turned out to have many inconsistencies (Nickel et al. 2007). The university sector has developed strong structures over centuries and therefore built up massive resistance against changes. In contrast to that, *Fachhochschulen* are private enterprises with appropriate management structures and a strong market orientation. From the beginning of its implementation the Austrian *Fachhochschulen* sector was not steered by strong governmental regulation but equipped with self-governance mechanisms. *Fachhochschulen* are labelled “pioneers of managerialism” (Pechar 2003, p.82) since their internal modes of steering are closer to NPM compared to those of universities. With regard to these divergences the following sections analysis the changes in the two largest sectors of Austrian HE separately.

University sector

There were two waves of reform activities focussed on the reorganisation of public universities: First step was the university act passed 1993 and fully implemented in 1999 followed by the implementation of a new university act in 2002 and its amendment in June 2009.

The university organisation law 1993 (Bundesgesetz über die Organisation der Universitäten / UOG 1993) aimed at a more entrepreneurial and competitive university system by implementing management structures – particularly in the field of university management: target-oriented steering mechanisms, efficient and effective organisational structures as well as increased self-government. Although the government intended to restrict its action to strategic steering, the governmental steering practice hardly changed (Zechlin 2002) So for example there were neither a transparent, indicator-based financing system from the government, nor a strategic political objective which could serve as a basis for target and performance agreements between the Federal Ministry and the universities. The failings of the UOG 1993 reforms quickly led to functional impairment of universities. Both the government and the universities had really broken with bureaucratic traditions, which had increased administrative expenses for universities.

Therefore a second fundamental step towards more deregulation was necessary. In 2002 a new University Act was implemented (Bundesgesetz über die Organisation

ihrer Universitäten und ihrer Studien / Universitätsgesetz 2002). These regulations changed governance mechanisms in favour of institutional and financial autonomy, strong leadership and quality management.

- **Full legal autonomy** transformed universities into independent entities under public law. Similar to a broadcasting corporation a university is still subject to national supervision (limited to the question of legality of administrative activities), but is entitled to carry out business activities and is authorized to conclude contracts for its own benefit.
- **Organisational autonomy.** The organisational structure of universities is no longer determined by law, but has to be established by the institutions themselves on a statute.
- **University councils** were created as supervisory bodies for the rectorates. They are composed of members appointed by both the university and the government. Depending on the individual statute of each university the council consists of five to nine members. Half of the members are elected by the senate, the other half is appointed by Federal Government; an additional member is appointed by the members by mutual agreement. University councils represent comprehensive decision-making authorities. Among other duties, they select the rector, conclude the rectors' service agreement, and approve the strategic plan, the organisation plan and the draft performance contract between the university and the Federal Ministry.
- The degree of self-governance was increased as rectorates received more decision-making authority. The senate's sphere of competence was reduced from strategic to academic affairs. This increase of power comprises also the **employers' status** of the rectors (*Dienstherreneigenschaft*). After a transitional period (2001 - 2004) the status of academic and administrative staff changed to employees of the university. Since then appointed academic staff as well as newly employed administration staff are no longer public servants, but employees of the respective university. Austrian universities now possessed full autonomy in terms of staffing.
- The introduction of a comprehensive **financial autonomy** made universities creditworthy and gave them the right to have incomes and earn profits. The money still comes from the Federal government as lump sum budgeting but this is now split into 80% funding via contract management and 20% indicator based funding.

A performance contract is concluded for a period of three years. It is a contract in public law. The first contracts between state and universities are valid from 2007 to 2009. Currently negotiations concerning the forthcoming contracts are taking place. The money given on the basis of performance contracts is discussed without transparent criteria for the calculation of the amount of money but in a negotiation process between the Ministry and the universities. The Federal Ministry developed a model that defines eight fields of activities for which contractual management is applicable

(Bundesministerium für Bildung, Wissenschaft und Kultur, 2006a):

- human resources development
- research, development and appreciation of the arts
- study programmes
- continuing education
- social goals
- increased internationalisation and mobility
- inter-university co-operation
- specific fields

In addition to the performance contracts, 20% of the university budget are awarded in accordance with performance indicators (cf. Verordnung über das formelgebundene Budget der Universitäten/Formelbudget-Verordnung – FBV). The performance-oriented allocation of funds consists of three indicator groups:

- teaching
- research and development/ appreciation of the arts
- social goals

The amount is calculated via a complex formula that consists of three calculation factors: the first factor derives from value indicators that have been observed over a period of two years. These actual values are set against reference values from earlier periods. The first and the second value form a third factor that is linked to the size of the respective university and turned into a point-based value. This factor is used to calculate the total amount of the formula-based budget.

- An overall assessment of the universities' activities and of their impacts on their quality of performance is provided by an intellectual capital report (*Wissensbilanz*). This instrument is unique in European HEI system and covers comprehensive information on at least three fields of university activities (sec. 13 of the University Act of 2002):

- the university's activities, social goals and self-imposed objectives and strategies
- its intellectual capital, broken down into human, structural and relationship capital
- the processes set out in the performance agreement, including their outputs and impacts

The intellectual capital report consists of a wide-ranging set of key numbers, which refers to a maximum of 60 categories pointing out the impact of the human, structural and relationship capital of each university on the performance in teaching and research. It mainly serves the purpose to inform

the Ministry and the Parliament (cf. von Eckardstein/Güttel 2005, p. 401). At the same time, it operates as qualitative and quantitative basis for the compilation and conclusion of performance contracts (Verordnung über die Wissensbilanz, sec. 2). The intellectual capital report, the performance-oriented allocation of funds and the performance agreements are in force since 2007.

- On the basis of self-obligation universities are required to develop their own **quality management system**. This comprises the evaluation of the entire spectrum of performances in the fields of research and teaching.

In June 2009 the Austrian parliament passed the amendment of the university act 2002 passed the parliament. Crucial changes are among other things (cf. Bundesministerium für Wissenschaft und Forschung 2009a):

- The role of the university boards is strengthened. The boards now have the right to advertise the rector's position and to decide the filling of the post. Some of the board members will be appointed directly by the Minister for Science and Research.
- In addition to the contracts between state and universities a new instrument is implemented to enable the Minister to intervene at short notice. This instrument is called *Gestaltungsvereinbarung*, a kind of contract mainly determined by the Minister. To make the *Gestaltungsvereinbarung* effective the Minister is allowed to deduct 2% of the budget per year (roundabout 44 million euros per year) and to distribute this money for projects he considers important.
- In all university bodies and committees 40 % of the members have to be female.

In the nearer future it is planned to pass a law for giving the three bodies for quality assurance (*Österreichischer Akkreditierungsrat*, *AQA* *Österreichische Qualitätssicherungsagentur*, *FHR Fachhochschulrat*) a new structure. They should merge into one national agency (cf. Bundesministerium für Wissenschaft und Forschung 2009b).

Fachhochschulen sector

Austria has a federal political system consisting of 9 states (*Bundesländer*). Funding of the *Fachhochschulen* comes from three sources: own income, grants from the *Bundesland* and grants from the Federation. Decentralisation is a core governance principle of the Austrian *Fachhochschulen* sector. The *Fachhochschulen* are institutions under private law with the legal structure of a GmbH (limited company / Ltd.), association or private foundation. *Fachhochschulen* are run by a business management, and possess different controlling bodies depending on the type of legal structure. Often the local government of the respective *Bundesland* (where the *Fachhochschule* is situated) is represented in these supervisory boards. The legal basis is the *Fachhochschul-Studiengesetz* (FHStG) passed in 1993.

The main function of the Austrian *Fachhochschulen* is academic education of a specialised workforce for the regional economy (Lassnigg et al. 2003, p. 8). For this reason, study programmes at *Fachhochschulen* are closely interlinked with the demands of private business, and the content of study courses focuses on business administration and technologies. Although applied research and development – mainly in the field of technology – is part of the performance portfolio of the *Fachhochschulen*, it is of minor importance compared to universities. But *Fachhochschulen* are increasingly committing themselves to research and development and play a more important role within Austrian innovation politics (ibid., p. 123). The Austrian *Fachhochschulen* show – like similar HEI types in other European higher education systems – an ‘academic drift’. This means that *Fachhochschulen* are trying to bring themselves closer to universities by strengthening their research activities.

In contrast to the university sector access to study programmes at *Fachhochschulen* is restricted. In their admission procedures, *Fachhochschulen* examine not only the technical qualifications of the applicant, but also check if the prospective student matches the profile of the *Fachhochschule* and the study programme (cf. Messerer/Humpl 2003). Another striking difference between the FH and the university sector is that the state is responsible for overall planning in the *Fachhochschulen* sector on the system level. The Austrian Federation, *Bundesländer* and the *Fachhochschul* Council (a federal authority which is responsible for the admission of study programmes at *Fachhochschulen*) come together periodically in order to compile a development and funding plan for the entire Austrian *Fachhochschulen* sector. The current plan is valid for the period from 2005/2006 until 2009/2010 (Bundesministerium für Bildung, Wissenschaft und Kultur 2004, p. 22). Although the *Fachhochschulen* are private organisations, the Federation grants them study place funding. For instance together with the *Fachhochschulen* the Federal Ministry for Science and Research negotiate about a financial grant that depends on the number of study places. The budget covers a maximum of 90 percent of the standard cost per study place. The standard cost comprises the current cost (staff and operating expenses) per study place. Financial investments have to be made without state support by the operating company of the respective *Fachhochschule*.

Before study programmes of *Fachhochschulen* can be approved, the providers must undertake an analysis of the needs and possible acceptance of the planned programme concerning actual and possible job profiles in their region. On the basis of these results they are obliged to design didactic concepts for the planned study programmes. The government finances study places according to a maximum of 50 students per programme. A standard cost contribution, related to the estimated number of first year students of a certain programme is granted by the government per year.

In other words, the budget is continuously adjusted to the annually reported number of students. This creates a demand oriented market competition for students.

Accreditation of FH study programmes by the *Fachhochschul* Council is a prerequisite for a government grant. After successful accreditation and evaluation the study programme will be approved for a period of maximum 5 years (cf. Clementi et al. 2004). If the accreditation is successful, the study programme in question will be supported by the Federation.

3 Performance improvements in Austrian higher education

In the governance and funding reform project, the performance of national systems has been measured along eight indicators. According to our data, in Austria we find improved performance mainly in following areas:

- a) access
- b) graduation
- c) research output
- d) capacity to attract funds

Access

With an entry rate at tertiary level of 42 % Austria is below the OECD average with 56 % (OECD 2009, table A2.5). But a deeper look at the development between 1995 and 2007 shows an increase about 15 % during this period. The most dynamic sector was those of the *Fachhochschule*: Between summer term 2000 und the end of winter term 2008 the number of student enrolments nearly tripled from 4,217 to 11,674 (Bundesministerium für Wissenschaft und Forschung 2008, S. 10). In contrast to that the other HEI types showed only slight increases.

Concerning access Austrian public universities have to deal with a special problem: In contrast to the *Fachhochschulen* no restriction of access to study programmes exists. Instead, anyone holding a university entrance qualification could enter study programmes of his/her own choice, place, subject and duration. Open access is still considered a central social right that is granted by law (cf. Hödl 2002, p. 26ff.) and derives from the political consensus that education shall be available to everybody. The open access was not modified until a judgement of the European Court of Justice forced the Austrian state to make a change (Europäischer Gerichtshof 2005). The previous Austrian regulation intended to protect Austrian students from international competition. Non-Austrian students could not apply for a place at an Austrian university unless they held one in their home country. The European Court declared this practice to be unlawful. An immediate storm of applications, particular from Germany and especially for medicine followed. This problem continues and is still unsolved in bachelor study programmes whereas the amendment of university act in June 2009 gave universities the opportunity to restrict the access to Master- and PhD programmes by defining qualitative admission criteria.

On the bachelor level universities now have to implement a special starter programme at the beginning of each study programme. The starter programme could

last between a half term and two terms. Students have to complete the starter programme with a successful exam to be able to continue (cf. Bundesministerium für Wissenschaft und Forschung 2009a).

Graduation

The OECD statistics show a significant growth of tertiary graduation rates von 10 % for single year of age in 1995 to 22 % in 2007 (OECD 2009, table A3.2). The OECD average is 39 % in 2007. Also the Austrian statistics show between summer term 2000 and the end of winter term 2006 an increase of student graduations from 19,136 to 28,542. Similar to the development discovered in student access the most dynamic development concerning student graduation shows the *Fachhochschulen* sector. In contrast to that public universities cope with high dropout rates. In 2006 the average dropout rate in the Austrian university sector was 51.4 % (Bundesministerium für Wissenschaft und Forschung, p. 68). From the universities' perspective the main reason for this dramatic figure is the remaining open access, which causes capacity overload and makes it impossible for the staff to support the students sufficiently (Nickel et al. 2007).

Research output

During the last ten years Austria undertook lots of efforts in strengthening the R&D sector. In 2008, Austria's GERD was 2.63%. The growth rate of GERD in Austria between 2000 and 2008 was one of the highest in the EU and R&D expenditures grew faster than GDP at an average annual growth rate of 8.1% (European Commission 2009, p. 9). The largest share of institutional funding in the public sector goes to universities and to several public research institutes. Recent changes in governance, which involves a new-mode of performance-oriented institutional funding, is an important break with the past in the Austrian research system. With these changes, public research organisations are more exposed to competition.

In an comparison of world shares of scientific publications between 32 European countries in the year 2004 Austria reached the 13th position (European Commission 2007, figure II.3.1). Even better is its position in a comparison of patent applications per million population between 33 European countries for the year 2003. Here Austrian reached the 9th place (*ibid.*, figure II.4.1). Measures managed by the Austrian Science funds (FWF) account for much of the growth in public funding (Kratky 2009). Among these measures are the 'Clusters of Excellence' initiative and the reimbursement of overhead costs in other cases of project funding. Some instruments, such as the 'Special Research Programmes' and 'National Research Networks', provide substantial medium- to long-term funding for locally or nationally concentrated research efforts.

Capacity to attract funds

Austria's HEI have improved in gathering contributions by private households. One main reason was the introduction of tuition fees in 2001. The Austrian government

decided to impose a standard tuition fee amount of 363 euros per student. Foreign students paid twice as much than their Austrian colleagues. At the same time, the Federation created a differentiated system of student funding: Students receiving grants by the state for the financing of their tuition fees could apply for a partial or complete compensation of their fees. Students who are not entitled to receive a grant by the state can get a subsidised student loan at an Austrian bank for which the Federation will pay two percent of the interest over a maximum period of 14 semesters. According to the tuition fee regulation, all fees remained with the universities.

After a change of government in 2008 tuition fees were nearly abolished in the public university sector. To compensate the universities for the loss of money, the state decided in context of the amendment of the university act in June 2009 to provide 157 million euros per year between 2009 and 2013 (Bundesministerium für Wissenschaft und Forschung 2009a). The money will be divided up between the universities on the basis of the number of student enrolments. After the abolition of tuition fees universities realize currently an enormous increase of student enrolments. *Fachhochschulen* are free to take tuition fees from their students. Although most *Fachhochschulen* take tuition fees the demand for their study programmes is undiminished.

4 Effects of the reforms

Diversification of the HEI

The Austrian HE system experienced a fundamental reorganization. During the last decade three new types of HEI were established: *Fachhochschulen*, private universities and *Pädagogische Hochschulen*. This diversification was accompanied by a significant increase of student enrolments. Most interviewees emphasize the necessity for a better coordination of the Austrian HE system after this period of growth. A first step in this direction was made by the national Science Council by publishing a draft plan for the further development of the national HE area (Österreichischer Wissenschaftsrat 2008).

Fachhochschulen as a successful model for more HE permeability

The most dynamic and positive development concerning student enrolments was evident in the Austrian *Fachhochschulen* sector. In contrast to public universities *Fachhochschulen* are able to restrict the access to their study programmes, to select their students and most of them take tuition fees.

A serious number of interviewees plead for transferring these three mechanisms into the university sector but say at the same time, that they have not too much hope to gain political support for this idea. Furthermore the creation of the *Fachhochschulen* sector in Austria had a strongly positive effect on the permeability of the education system: students from strata of the population that are socially distant from

education can be noticeably better mobilised (Lassnigg et al. 2003, p. 83). In the university sector, children from these strata of society are underrepresented. That is why only 6% of first-year students in the winter semester 2004/2005 were children of parents with a low level of education. One third has one parent with a university degree and over eight percent has both parents with a university degree. In the *Fachhochschulen* sector, children of parents with a university degree are clearly less represented; while more often children of parents with professional training take up studies (Statistik Austria 2006, p. 17-18).

Growth of research productivity

Austria invested extensive shares of public budget in strengthening research activities and output. In both fields a remarkable growth is visible, which brings Austria in a clearly improved position in its competition with other European Countries. To support the upturn in the Austrian research area the National Council for Research and Technology Development, which advises the government, publishes regularly strategy concepts. The new one was released in August 2009. One recommendation is a better coordination of Austrian research sector which had experienced a considerable growth during the last decade (Rat für Forschung und Technologieentwicklung 2009, p. 5).

Enhanced Institutional Autonomy of Universities

Full legal entity of universities has not only increased institutional autonomy, but also produced external pressure on the institutions to develop quickly into a knowledge organisation, which is equipped with adequate management structures and acts economically and goal-oriented. However, the increased legal independence from the government demonstrates a positive impact on human resource management at universities. The fact that academic and administrative staff is no longer employed by the state but directly by the universities leads to a greater flexibility and results for example in an increased number of jobs for young scientists.

The Austrian case demonstrates the importance of designing the reform process in a style that makes university management feel at least responsible for it. One of the most significant differences between the two major university reforms in Austria is the process of professionalization that was carried out between the reform waves of 1993 and 2002. During this time manager-rectors and their partially full-time vice-rectors aimed at expanding their power in an increasingly autonomous institution. But it is still unclear whether the introduction of university councils has had positive or negative effects in this situation.

A number of the interviewees declare that there was no satisfying balance of power between the two management bodies. Maybe the new regulations in the amended university act will bring this situation further.

Danger of management overload

With the aim of deregulating governmental steering at Austrian universities a wide range of new management instruments was implemented (contract management, lump sum budgeting, performance-based allocation of funds, intellectual capital report etc.). At once universities had to deal with the implementation of this wide range of new steering mechanisms. In this view Austrian politics appear to have exposed universities to an “intervention staccato” (Pellert 2003). Most interviewees see currently a danger of a too extensive loss of energies in the ‘managerialisation’ of universities without achieving substantial results. Furthermore a lot of criticism came up from the interviewees with respect to the performance based budgeting in the university sector. The formula is considered as too abstract and complicated so that no direct effect is perceptible.

Enhanced importance of Quality Assurance

Quality Assurance has become a crucial factor in the Austrian HE Governance. All HE institutions invested a lot of personal and financial resources in establishing internal quality assurance instruments. Currently the trend switches to the implementation of institutional quality management systems. Three external bodies were established to support and control especially the quality of study programmes: One private agency for all HE institutions, one state office for *Fachhochschulen* and one for private universities. Long time these institutions worked separately. This caused a lot of additional work and ineffectiveness. Therefore the three bodies shall merge in 2010 into one body. All interviewees agreed that Austria doesn't need a strong system of national quality assurance or accreditation agencies. In their opinion HE institutions should be obliged to let their quality management being certified by an external body but this body doesn't have to be an Austrian agency. It is sufficient if the certifying body is member of the European Quality Assurance Register of Higher Education (EQAR).

Open access as an obstacle for high quality in study programmes

Open access to public universities has however not achieved its purpose of increasing the social permeability of education. Both the capacity overload at universities and the positive effects of restricted admission at FH support the argument to abolish open access at public universities. The example of the Austrian *Fachhochschulen* shows that it is possible to fix the costs per study place transparently. This calculation can serve as a basis for negotiations between the government and the universities about the number of funded study places. Consequently, universities would be able to influence the number of their study places.

5 Institutional case studies Austria

The *national system analysis* showed clearly that the Austrian higher education system has been implementing considerable governance reforms within the last

decade. Improvements have at the same time been identified in four performance sectors: *access, graduation, research output* and *the capacity to attract funds*. Two higher education institutions are analysed below to see whether and to what extent this development is reflected at the institutional level. The two institutions are the University of Vienna, by far the biggest and most research active university in Austria, and Fachhochschule Joanneum Graz, one of Austria's biggest and most research active universities of applied sciences.

University of Vienna

Brief overview of governance structures at University of Vienna
 Universität Wien was founded in 1365 and is thus the oldest university in the German-speaking world and the German cultural world.

More than 74,000 students are currently enrolled at the university on around 180 study programmes, among them 52 bachelor's, 108 master's and 10 doctoral degree programmes. The aim is for all study programmes to be adapted to the European study structure by the academic year 2010. Study programmes can comprise the following subjects: theology, law and economics, computer science, cultural studies, philosophy and educational science, psychology, social science, mathematics, physics, chemistry, earth science, geography, astronomy, life science, translation studies, sport science and molecular biology.

Of the 8,600 employees at Universität Wien, 6,500 are scientists and academics working in the 15 faculties and three centres². There are 35 study programme directors and the *Studienpräses* – the person in charge of the law regulating university studies – who are responsible for organising studies. Administration is divided up into four administrative departments, eight university offices and the Quality Assurance office.

University management is made up of the University Council, the Rectorate and the Senate. The University Council consists of a chairman, who is elected by its members, four members, who are elected by the Senate, and four other members, who are appointed by the Federal Government. The University Council's term of office is five years. The Rectorate consists of the Rector and four Vice-rectors. The Senate has 18 members – ten are university professors, two are university lecturers or academic and artistic staff (working in the fields of research, the arts or teaching), one is a member of the university's general staff and five are students. Each Senate's term of office lasts for three years.

Development of the number of first-year and graduate students

An average of between approximately 30% to 35% of all Austrian students were enrolled at Universität Wien over the past ten years. The number of applicants

2 In addition to research and teaching, the centres fulfil specific tasks for the university or serve principally either as research or teaching bodies.

corresponds essentially to the number of first-year students. Austria's "open university entrance" policy means that everybody holding a university entrance qualification may study at the university of his or her choice, i.e. Universität Wien is not allowed to decline applicants. Admission is possible in the winter as well as the summer semester. There are no fixed numbers of places for study programmes. The "open university entrance" regulation applied without restrictions until 2005, after which time individual study programmes introduced admission and selection procedures (e.g. for psychology at Universität Wien and for medicine, dentistry and veterinary medicine in Austria as a whole)³.

The figures in the following table show the number of regular first-year students (students of bachelor's, master's, diploma and doctoral studies), as well as other first-year students (guest students in individual lectures and those on university courses in the continuing education sector) (see Table 1).

	Winter semester						
	2003W	2004W	2005W	2006W	2007W	2008W	2009W
First-year students	10,405	10,186	11,022	11,809	11,692	12,295	14,360 ⁴
Summer semester							
	2004S	2005S	2006S	2007S	2008S	2009S	2010S
	2,363	2,219	2,363	2,603	2,631	3,773	
Academic year (respectively winter and summer semester)							
	12,768	12,405	13,385	14,412	14,323	16,068	14,360

Table 1: Development of the number of first-year students at Universität Wien for the academic years from 2003-2009

Source: University of Vienna

With the exception of the academic year 2001/02 (4,373 graduates), the number of graduates is more than 5,000 and reached 5,986 in the academic year 2007/2008. In relative terms, Universität Wien has an approximate share of between 24% and 31% of all graduates of Austrian universities (see Figure 1).

³ E-mail from Universität Wien from 30/11/2009

⁴ The admission deadline for the winter semester ends across Austria on 30 November, which is why the figures for the winter semester 2009 are not yet complete.

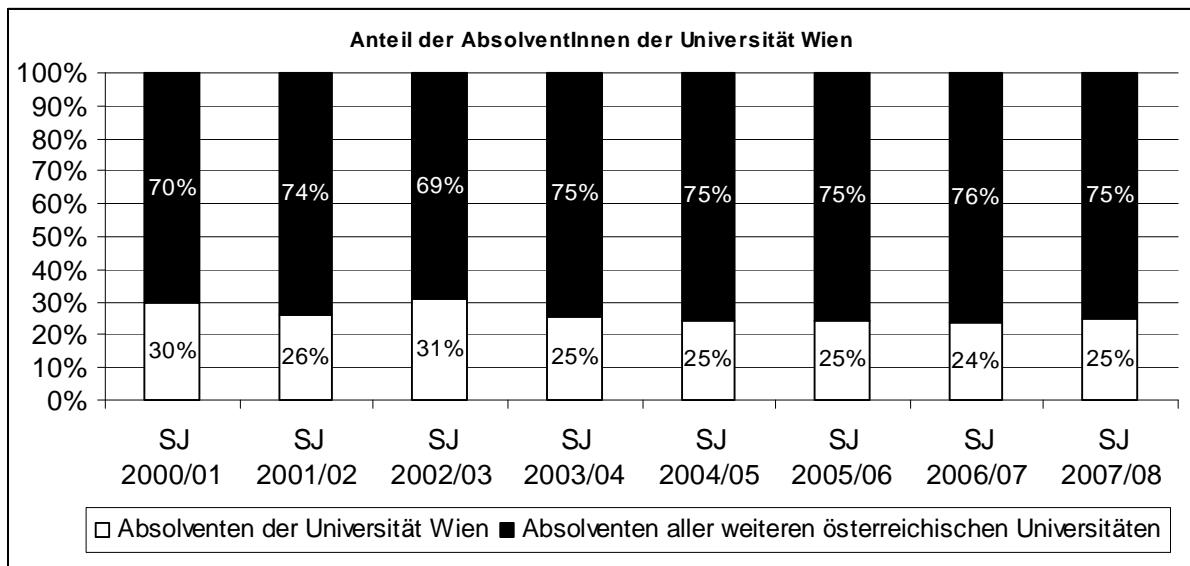


Figure 1: Share in % of graduates from Universität Wien and then all other Austrian universities (SJ = academic years 2000/01 to 2007/08)

Source: Federal Ministry of Science and Research (datawarehouse higher education sector)

The drop-out rates at University of Vienna are very high on average. According to the 2008 University report (p.213), it was between 54.4% in the 2000/2001 academic year and 46.6% in the 2006/2007 academic year based on all Austrian and international students at the university.

More than 900 people every year register in the university's continuing education programme which comprises offers from the fields of education and culture, health and social services, international affairs and politics, communication and media, management and economy or law. There are currently 29 mostly extra-occupational university courses that lead to the following degrees: Academic Expert, Master of Arts (MA), Master of Business Administration (MBA), Master of Laws (LL.M) or Master of Science (MSc), or Master of Advanced International Studies (M.A.I.S). University courses that were already established were examined against the Bologna guidelines as well as international comparability in 2008 and were given a new, modular ECTS structure.

The university also offers work-orientated additional qualifications such as University Meets Public (UMP), German language courses as well as other offers from the Universität Wien's Language Centre, the European Studies summer programme, University Courses Vienna (UKW) or offers from the Konfuzius institute. The Postgraduate Center was founded at the end of the year 2008 to bundle together the university's continuing education activities and to implement new offers together with faculties and co-operation partners (Universität Wien, University Report 2008, p.55f.).

Development of research

In addition to 100 key research topics in the faculties, Universität Wien also has five key cross-faculty research topics that have been established in the following fields:

- European integration and south-eastern/eastern Europe
- Ethic and social perspectives of aging
- Material science, functionalised materials and nanostructures
- Symbiosis research and molecular principles of recognition
- Computer-aided sciences

(University of Vienna, Development Plan 2009, p.44f.)

Third-party funded projects with a project volume of about €69 million were set up at Universität Wien in 2008. The biggest third-party funding body is the Austrian Science Fund (FWF), which enabled 179 projects to be started in 2008 with a total funding amount of more than €51 million. Universität Wien was also involved in more than 170 on-going EU projects in 2008, while individual projects received state funding (Universität Wien, University Report 2008, p.32).

Third-party funding increased in 2008: grants from § 27 projects⁵ increased by 5.7% to €21.9 million, while the reimbursement of costs in § 26 projects⁶ increased by 28.9% to €23.0 million. (ibid., p.104)

University revenue from research projects was between €15.7 million and €22.6 million annually from 2004 to 2008 (see Figure 2). Approximately two-thirds of the increase of €6.9 million from 2004 to 2005 can be attributed to revenue from FWF projects (Universität Wien, University Report 2005, p.103).

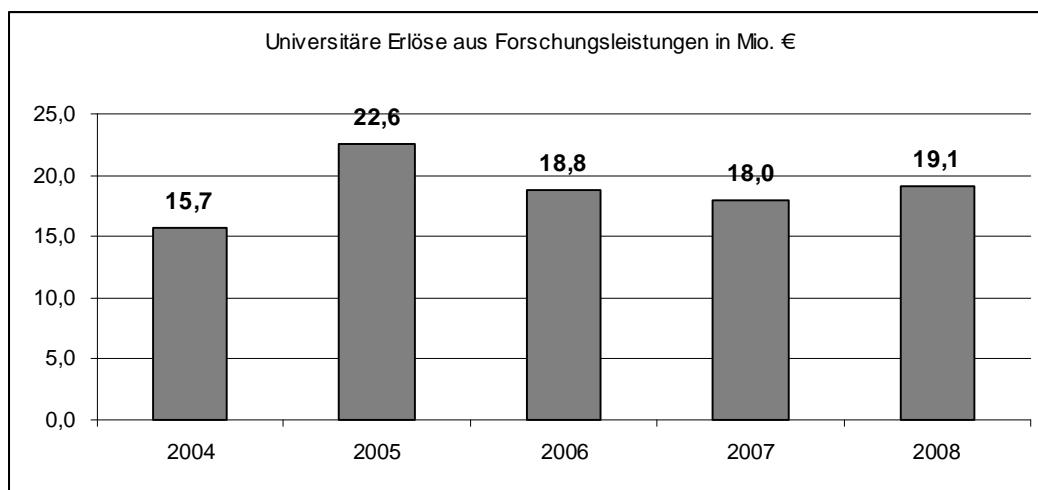


Figure 2: University revenue from research projects from 2004 to 2008

⁵ Third-party funding from activities in accordance with § 27 University Act 2002 (under which the university is the contract partner: "commissioned research")

⁶ § 26 University Act 2002 (1):" University scientific and artistic staff shall be entitled to undertake research or artistic projects, in their fields and at their universities, which are financed not from the university budget, but by third-party research contracts, research promotion or other allocations by third parties. Such projects shall be deemed to be university research."

Source: University of Vienna

General budget development

The University of Vienna had an overall budget of €451.1 million in 2008, made up from the global budget of the Federal Ministry of Education, Science and Culture of €338.2 million, €45.8 million from tuition fees and €67.0 million from other revenue e.g. from continuing education at the university and from research projects. Therefore, 75% of Universität Wien's funding comes from allocations from the global budget of the Federal Ministry of Education, Science and Culture and 10% from tuition fees⁷ (see Figure 3). As tuition fees were abolished by law in September 2008 and have been replaced by compensation payments from the Ministry of Science, there will be a respective shifting in the composition of the global budget in the next budget accounting (information via telephone from Universität Wien on 26 November 2009).⁸

In 2008, the share of the allocations from the global budget dropped slightly from 75.9% to 75.0%, while income from third-party funded research projects increased from 8.2% to 9.3%. The FWF is considered by the University of Vienna to be of key importance in terms of sustainable funding (University of Vienna University Report 2008, p.106).

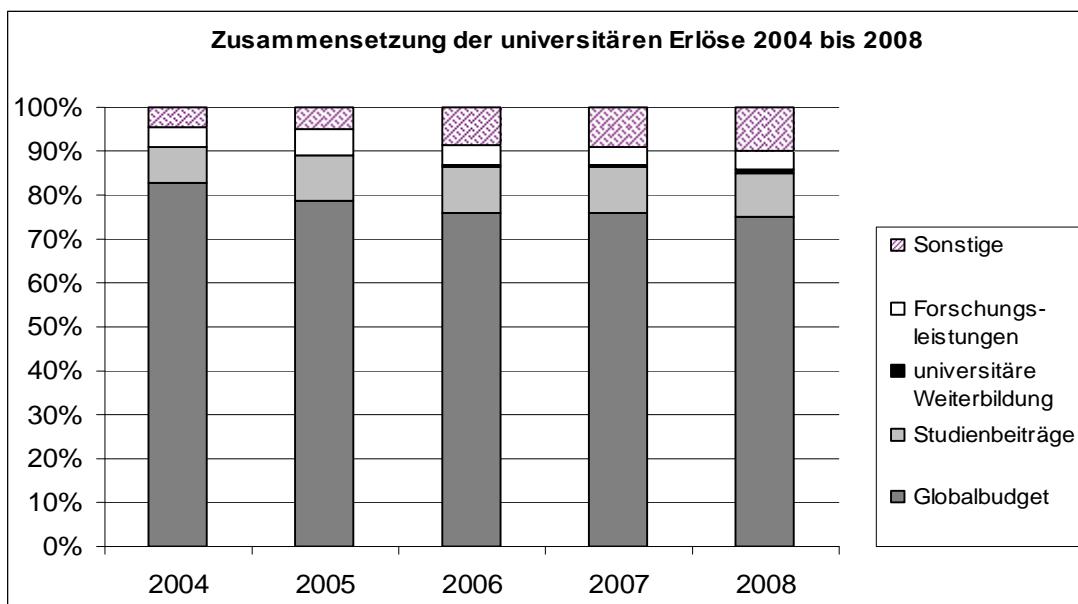


Figure 3: Breakdown of university income from 2004 to 2008 (Sonstige = other, Forschungsleistungen = research projects, universitäre Weiterbildung = continuing academic education, Studienbeiträge = tuition fees, Globalbudget = global budget)

Source: University of Vienna

⁷ The increase in tuition fees from 2004 to 2005 is due to the fact that tuition fees in 2004 started directly flowing into the budget of the university from the summer semester 2004 (Universität Wien, Performance Report 2005, p.102)

⁸ Until September 2008, Austrian students had to pay €363 per semester and students from non-EU countries €726 per semester. Students from non-EU countries now have to pay €363 per semester. Students who have exceeded the regular period of study and two tolerance semesters also have to pay tuition fees (information via telephone from Universität Wien on 26 November 2009).

Assessment of the effects of governance and funding reforms by internal stakeholders

According to the interviewees at the University of Vienna, the change of management structures on the one hand and the legal independence of the institutions on the other are the most significant governance reforms.

The introduction of the University Council and the shifting of decision-making power from the Senate to the Rectorate had the strongest effect at the management level. The creation of the University Council implemented a management body that is setting a major strategic course. Among other tasks, the Council appoints the rector, approves the development plan, the organisation plan and the draft performance agreement between Universität Wien and the Ministry of Science to which the budget allocations are linked. The Rectorate is accountable to the University Council. In comparison to before, i.e. before the reforms of 1999 and 2002, the Rectorate has equally increased its decision-making power, the main reason for this being its full organisational, staff and financial autonomy. The Rectorate is entitled to change the organisational structure of the university, to decide on how to use the allocation and even take out loans without state approval.

The Rector is the main employer of all university employees, including the professors, which means that the Rector acts rather as the "manager" of Universität Wien and not as the "*primus inter pares*". Strengthening the top of the organisation is not considered to be a negative development by either the chairman of the Senate or the deans. It is instead pointed out that that it is a matter of finding the right people for the top management jobs. These must offer an integrative and transparent approach to their work. And in this Universität Wien has succeeded.

The main reason for the obvious increase in research performance at Universität Wien is said to be the increase in institutional autonomy. The fact that the institution has to set its own targets in order to be successful in market has released a lot of energy and ideas to further develop and profile research activities. This in turn has had effects on staff management, which is now conducted in a more efficient manner. The state budgeting procedure has shown almost no effect on the behaviour of those involved internally at Universität Wien, however. This procedure has practically no incentive effect whatsoever as a result of its retrospective evaluation and complicated calculation formula.

There is a unanimously negative assessment of the unlimited admission of applicants to the university. According to those interviewed, the university would be unable to adequately handle the massive number of students, which is one of the main reasons for the high drop-out rate. They said it would be desirable to agree a fixed number of study places with the ministry and to limit access accordingly. The abolition of tuition fees is also seen as a negative step as, according to those asked, it has led to a major loss of income for Universität Wien. The ministry is compensating for this for the time being, but those interviewed are uncertain about how long these compensation payments will last.

6 Fachhochschule Joanneum Graz

Brief overview of the governance structures of *Fachhochschule* Joanneum Graz

Fachhochschule (FH) Joanneum was founded in 1995 in a *public private partnership scheme involving* the state of Styria as well as Joanneum Research Company GmbH and the Styrian Society for the Promotion of Trade and Industry mbH. The Fachhochschule is a limited company (GmbH) and has had the status of a higher education institution since July 2007. The three campuses in Graz, Kapfenberg und Bad Gleichenberg are the seats of learning for more than 3,300 students enrolled on 36 degree programmes in four faculties, namely International Business, Information, Design & Technologies, Life, Building, Environment, and Health Sciences. There were 474 employees, including 175 full-time teachers, working at the FH Joanneum's three sites in the 2007/2008 financial year. These full-time employees were supported by another 725 part-time teachers.

In addition to the study programmes and a number of centres for technology transfer, the FH Joanneum also has the Institutes for „[Technology & Society](#)“ and „Innovative Learning Scenarios“ at the Graz campus. There are also nine service points including the library and information centre as well as the Office for Quality Assurance and Management.

The operating company of the *Fachhochschule* is the FH Joanneum Gesellschaft mbH, a non-profit making organisation with a share capital of €4 million. The shareholders are the following:

State of Styria	€3,004,000
Joanneum Research Company mbH	€596,000
Styrian Society for the Promotion of Trade and Industry mbH	€400,000

The management and governing bodies of FH Joanneum GmbH consist of:

- Rector (FH) / Academic managing director
- Commercial managing director
- General Assembly
- Supervisory Board

The management consists of the Rector as the academic managing director and a commercial managing director. The management has central planning, administrative, controlling and computing functions. The FH Joanneum Gesellschaft mbH has had a Supervisory Board since May 2002. There is currently one chairman as well as two deputy vice-chairmen, seven other members and five representatives of FH staff.

There are also heads of the teaching and research staff (study programme directors) in the individual study programmes as well as the Teaching Board, which was established in 2007 and which is responsible for all procedural and organisational matters relating to teaching and examinations. The Teaching Board of FH Joanneum consists of the Rector (FH) as head of the Teaching Board, the Vice-Rector (FH) as deputy head of the Teaching Board, 25 heads of degree programmes, 12 representatives from the teaching and research staff and 13 student representatives. (FH Joanneum, Annual Report 2007/08, p.42 f.).

Development in the number of first-year students and graduates

The number of study programmes has significantly increased since the FH Joanneum was founded: from four in the 1995/1996 financial year to 30 in the 2007/2008 financial year. This dynamic growth is also reflected in student numbers. There were just 147 students in 1995, a number that has gradually increased to 3,383 in the winter semester 2008/09. FH Joanneum's share of all students at universities of applied sciences in Austria was between 10% and 10.5% in each the winter semesters from 2002/03 to 2008/09 (Federal Ministry of Science and Research, Datawarehouse higher education sector)

The number of applicants has increased strongly, particularly from 2005/06 to 2006/07, which is an increase of 193% (see Figure 4). There is a particularly high level of interest in the health study programmes with 10 to 15 people applying for each place. The highest level of interest is for the Midwifery study programme (15 study places), Logopaedics (12 study places) and Dietetics and Nutrition (15 study places). There are also 10 applicants per place in the Physiotherapy study programme, which has an overall number of 70 study places. The FH Joanneum's Design, Media and Economy study programmes were four- to eight-times overbooked on average in the data acquisition period. Taking all study programmes into account, there was an average of more than three candidates for each study place in the 2007/08 academic year (FH Joanneum, Intellectual Capital Report 2007/08, p.28).

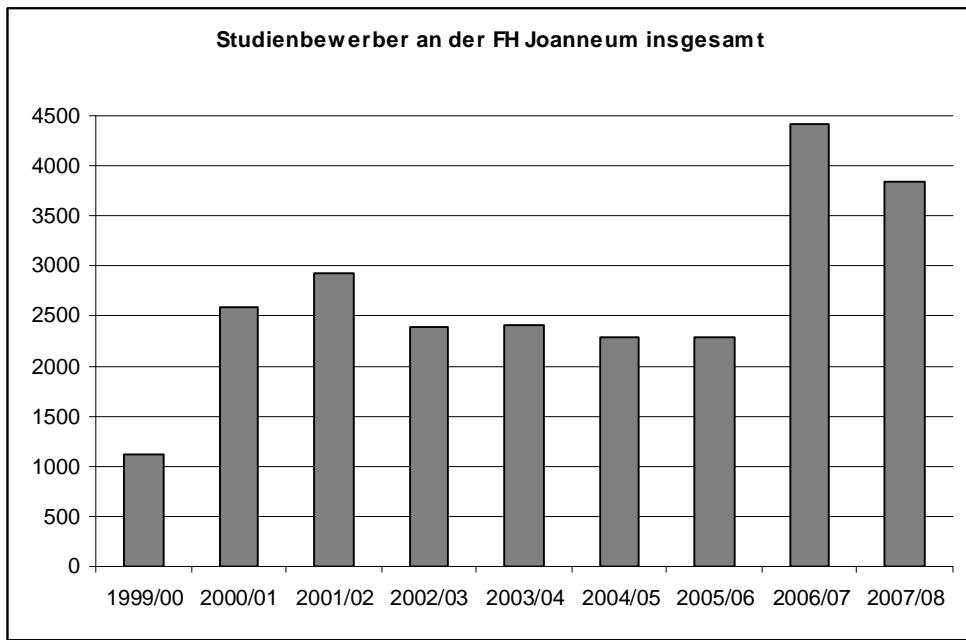


Figure 4: Total number of applicants at FH Joanneum from the academic year 1999/2000 to the academic year 2007/2008.

Source: Data of FH Joanneum from the Intellectual Capital Reports 2004/05 (p.38) and 2007/08 (p.26)

The number of graduates has increased substantially since 2004 as the result of the introduction of new study programmes (see Figure 5). The significant increase of graduate numbers from 2004 to 2005 is due in particular to five study programmes that started in 2001/02 and produced their first graduates in 2005 (FH Joanneum, Intellectual Capital Report 2004/05, p.38).

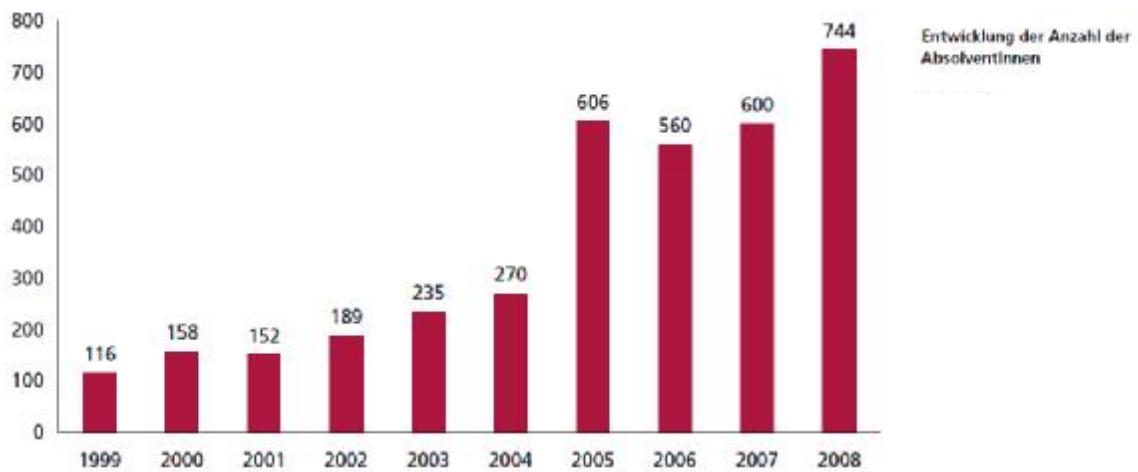


Figure 5: Development in the number of graduates at FH Joanneum Graz from 1999 – 2008.

Source: FH Joanneum

Since the academic year 2003/04, the number of drop-outs has increased from 159 to 235, with the drop-out rate remaining constant at 7% in the academic years 2005/06

to 2007/08 (FH Joanneum, Intellectual Capital Reports 2005/06, p.47 and 2007/08, p. 26).

The continuing education offer of FH Joanneum includes e-learning courses, university courses, lecture series, symposiums, workshops and seminars, such as:

- Summer Business School
- ZML – Innovative Learning Scenarios, which offers multimedia training courses
- The extra-occupational postgraduate course “MSc Supply Management”
- KnowledgefactoryIWI is a series of short seminars / workshops on issues of management, social skills, applied IT & technology
- Lecture series: Architecture and Construction Engineering; Innovations in Vehicle Technology; Special Media Lectures; Business Management in Practice; Graz Finance Talks; Aviation Community; Logopaedics

Development of research

FH Joanneum has identified the following ten key research topics that are being addressed by the corresponding centres for research and development in an interdisciplinary approach:

Life, Building and Environment:

- Sustainable management
- Mobility management and intelligent transport systems
- Impacts of societal changes on economic and social systems

International Business:

- Companies in international competition
- Global markets

Information, Design and Technologies:

- Mobility technologies in the automotive and aviation industries
- Technologies for the information society
- Multidisciplinary learning

Health Sciences:

- Health and prevention
- Process design in health care

In the 2007/08 reporting period, a total of 406 research and development projects were carried out at FH Joanneum. Total revenue of some €4 million was generated from R&D with 38 employees (full-time equivalent) funded by third parties. (see Figure 6)

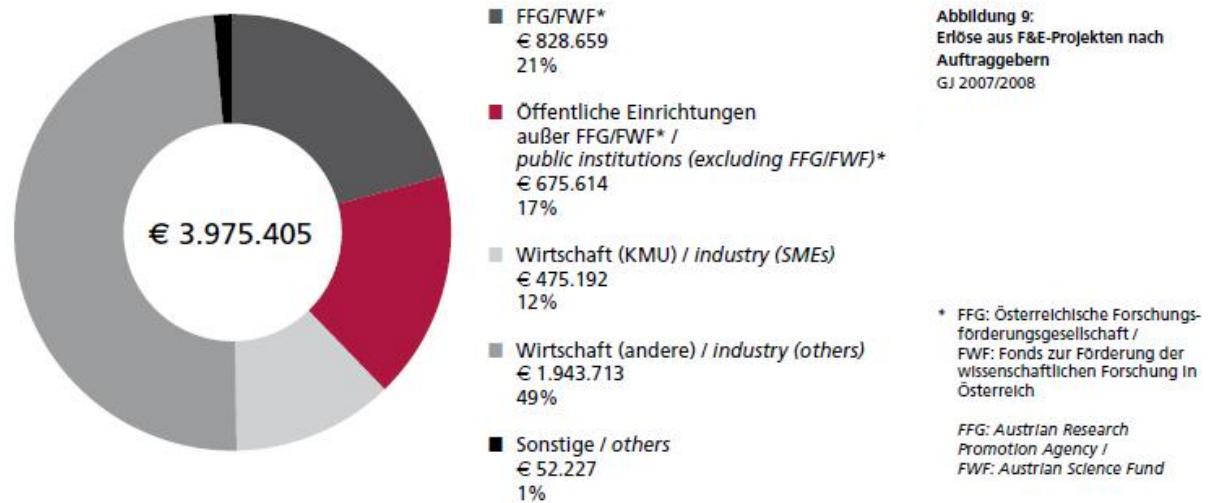


Figure 6: Revenue from R&D projects per client in the 2007/08 financial year

Source: FH Joanneum

When looking at the growth in revenue since the academic year 2003/04, the amounts vary between almost €3 million and €8.8 million in 2005/06 (see Figure 7). Noteworthy in this particular financial year is that about €5.9 million was made from R&D in the financial year 2005/06. The difference of approximately €2.9 million corresponds to services invoiced in previous years. In the past four financial years, the biggest share of R&D revenue (between 58% and 89%) was generated mainly from projects from the industrial sector. In 2006/07, but only in this year, the share of R&D income from projects from the public sector (national and international) was 64%. (FH Joanneum, Annual Reports and Intellectual Capital Reports from the respective financial years).

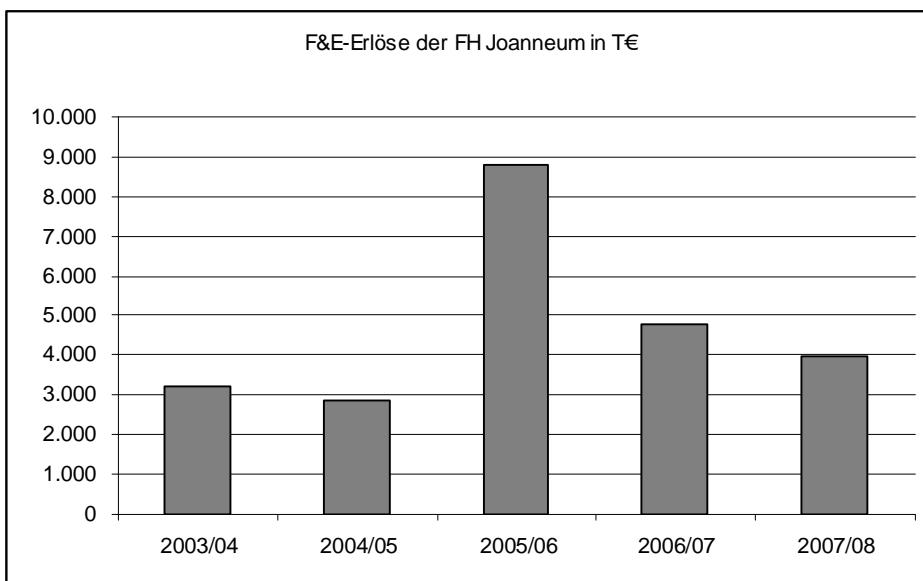


Figure 7: R&D revenue of FH Joanneum from 2003/04 to 2007/08

Source: FH Joanneum

General budget development

In addition to income from R&D projects, FH Joanneum is mainly funded by subsidies and project promotions, finance that is provided to a large extent by the Federal Ministry of Education, Science and Culture and to a smaller extent by the State of Styria. The sums amount to between €14 million and almost €21 million (see Table 1) in the period considered. As a rule, no tuition fees are paid at FH Joanneum.

Academic year	Grants from subsidies and project promotions (in thousands of euros)
2002/03	14,295.8
2003/04	17,973.9
2004/05	20,930.3
2005/06	15,937.8
2006/07	16,954.2
2007/08	17,767.0

Table 2: Grants from subsidies and project promotions at FH Joanneum

Source: FH Joanneum

Assessment of the effects of governance and financing reforms by internal stakeholders

FH Joanneum Graz has developed very dynamically as regards teaching and research within a short period of time. This strong growth is considered a positive development within the university as it proves the efficiency of the private sector company. The task of promoting the regional economy by offering suitable study programmes and conducting application-orientated research co-operations was successfully fulfilled. The owners (the government of the State of Styria, the Styrian Society for the Promotion of Trade and Industry, and Joanneum Research Company GmbH) are also satisfied with this. Co-operation between the owners and management of FH Joanneum Graz is said on both sides to be “good”.

As far as the Rector and the professors are concerned, the biggest reform step of recent years was the transformation of FH Joanneum Graz in 2007 from a top-down run company to a “real” higher education institution, during which time various autonomous bodies like the Senate and budget committee were established anew. Above all, the relationship between commercial management and the Rectorate had to be re-determined. The Rector considers himself as the academic head that manages the institution jointly with the commercial managing director. The professors, most of whom have experience of industrial companies, are slightly sceptical towards the new self-governing structure. They are afraid of long committee sessions that prolong decision-making processes and lead to inefficiency.

Lists of interviewees

University of Vienna

1	Dorothea Sturn	University of Vienna; Head of Quality Management
2	Claudia Kögler	University of Vienna; Head of Rector's Office
3	Arthur Mettinger	University of Vienna; Vice Rector
4	Max Kothbauer	University Board of University of Vienna, Head
5	Georg Pflug	Faculty of Economics University of Vienna; Dean
6	Helmut Fuchs	University of Vienna; Head of Senate

Fachhochschule Joanneum Graz

1	Friedrich Möstl	FH JOANNEUM University of Applied Sciences ; Head of Supervisory Board
2	Ingrid Gehrke	FH JOANNEUM University of Applied Sciences; Head of International Office
3	Doris Kindl-Wendner	FH JOANNEUM University of Applied Sciences; Vice Rector
4	Bruno Wiesler	FH JOANNEUM University of Applied Sciences; Head of degree programme Aviation
5	Sabina Paschek	FH JOANNEUM University of Applied Sciences; Managing Director

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Lists of interviewees

1	Heribert Wulz	Universities Austria (Conference of university rectors / <i>Österreichische Universitätenkonferenz</i>); Secretary General
2	Kurt Koleznik	Austrian Association of Universities of Applied Sciences (Conference of <i>Fachhochschulen</i> rectors / <i>Österreichische Fachhochschul Konferenz</i>); Secretary General
3	Friedrich Faulhammer	Austrian Federal Ministry of Science and Research (<i>Ministerium für Wissenschaft und Forschung</i>); Chief of the section for Universities and <i>Fachhochschulen</i>
4	Samir Al-Mobayyed	Austrian Students' Union (<i>Österreichische Hochschülerschaft</i>); Head
5	Elisabeth Fiorioli	Austrian Accreditation Council for Private Universities (<i>Österreichischer Akkreditierungsrat</i>); Secretary General
6	Dr. Kurt Sohm	FH Council (<i>FHR Fachhochschulrat</i>); Secretary General
7	Julia Prikoszovits	Austrian Science Board (<i>Österreichischer Wissenschaftsrat</i>); Secretary General
8	Rainer Stowasser	Austrian Science Board (<i>Österreichischer Wissenschaftsrat</i>)
9	Alexander Kohler	Austrian Agency for Quality Assurance (<i>AQA Österreichische Qualitätssicherungsagentur</i>); Head
10	Dr. Ludovit Garzik	Austrian Council for Research and Technology Development (<i>Rat für Forschung und Technologieentwicklung</i>); Secretary General
11	Dr. Ulrike Unterer	Federal Ministry of Economy, Family and Youth (<i>Bundesministerium für Wirtschaft, Familie und Jugend</i>); Center 1: Economic Policies, Innovation and Technology
12	Prof. Dr. Christoph Kratky	Austrian Science Fund (<i>FWF Der Wissenschaftsfonds</i>); President

Governance and Funding Reform in the European Higher Education Area

National system analysis: Belgium (Flanders)¹

1 Introduction

Belgium is a federal state and this federalism has consequences for higher education. There are, in several respects, differences between higher education in the Dutch-speaking north (Flanders) and the French-speaking south (Wallonia). Since 1989, Flanders and Wallonia are responsible for their own higher education systems. For Flanders, this means it is fully responsible for the Dutch-speaking area and partly for the area of Brussels (i.e. for Dutch-speaking higher education in Brussels). The only responsibilities of the federal (i.e. Belgian) government are: deciding on the pensions of the staff members of educational institutions, laying down the length of compulsory school attendance, and determining the levels of education and the minimum length of studies required to obtain a degree at each level.

This report focuses on the main structures and changes in governance and funding of the Flemish higher education system over the last ten years, as well as on the impact of the reforms on the functioning and overall performance of the system.

This report is based on existing literature on Flemish higher education as well as on a set of 9 face-to-face interviews with 12 decision-makers in Flemish higher education (the names of the interviewed people can be found at the end of this document). The interviewees were asked to provide their view on the major reforms in higher education and the impact of the reforms on system performance.

The report is divided into four main sections. Section 2 presents a summary overview of reforms in Flemish higher education governance and funding. Section 3 analyses the available indicators on system performance and qualifies them based on in-depth knowledge of the system. Section 4 examines the main impacts of the reforms and the extent to which these have contributed to changes in performance. Section 5 summarizes the findings and draws a final assessment by the authors of this report.

2 Reforms in governance and funding over the last ten years

The Flemish higher education system is a *binary system* with a university sector and a non-university sector (*hogescholen* or university colleges). The non-university sector can award both academic, that is university-level degrees, and vocational

¹ Kurt De Wit, Office for Education Policy, K.U.Leuven, and Harry de Boer, CHEPS, University of Twente.

degrees.

As will be explained in more detail below, there are also Associations of universities and university colleges. These Associations are structural co-operations between one university and several colleges. One of the goals is to 'upgrade' the academic degrees of the non-university sector. University colleges can, via the Association, offer academic bachelors and masters, and these will be turned into university degrees by 2012.

The six universities offer three-year academic bachelors, one- or two-year masters (and one-year subsequent masters, that is, master programmes for which you can only enrol when you have already obtained a masters' degree), and PhD programmes. The 22 university colleges offer three-year vocational bachelors, three-year academic bachelors (in the framework of the Associations), one-year subsequent bachelors (that is, bachelor programmes for which you can only enrol when you have already obtained a bachelors' degree), and one- or two-year masters (in the framework of the Associations). Universities enrol about 38% of bachelor and master students, university colleges 62%.

To complete the picture, we should mention that there are also two theological institutions, four postgraduate training institutions, five non-statutory registered institutions, and one transnational university.

High accessibility is one of the key features of Flemish HE. Anyone who has completed higher secondary education is allowed to choose any institution and almost any course; entry restrictions are limited. Tuition fees are low and account for about 7% of the block grant allocated to university colleges and 4% in the case of universities.

Having a 'free access' system means that the freedom of Flemish institutions is somewhat constrained: they have to accept all qualified students, with the exception of the study areas of medicine, dentistry, visual and audiovisual arts, and music and performing arts. This 'free access' is seen as one of the reasons why graduation rates are low. Since the academic year 2008-09 higher education institutions can refuse to take students that have not shown significant study progress.

After the state restructuring in 1989, Flanders has changed its higher education system significantly. New concepts such as quality assessment and accreditation were introduced, the organizational structure changed, the role of academic staff changed and curricula were rewritten and restructured. The main general principles of the post-1989 changes were: deregulation, autonomy of the HEIs and quality of education.

For a long time the system was 'streamed': each programme consisted of relatively fixed curricula, which were clearly spread over several academic years, with study progression measured by passing or failing the exams of each study year. The Structure Decree of 2003 and the Flexibility decree of 2004 made more flexibility possible. The Structure Decree regulated the gradual year by year introduction of programmes in the bachelor master structure from 2004-2005 onwards. The

Flexibility Decree introduced a more flexible organisation of higher education, by laying down the basic rules to obtain credits, to receive an attestation for competences and qualifications obtained outside formal education structures, and to guarantee study progression whilst abolishing the study year system.

The Decree on the *non-university sector* of 1994 had a serious impact on the university colleges. It merged the 164 colleges into 29 (nowadays 22) colleges, creating much larger units with more steering capacity and financing them on a lump-sum basis. Moreover, it put emphasis on other functions of the non-university sector such as research and community service. New concepts for quality assurance were introduced and the role of staff was re-modelled. With this and subsequent reforms, the legal regulations on university colleges were more and more brought in accordance with the legal regulations on universities.

Flemish *universities* enjoy a considerable amount of freedom in their institutional decision making. The three publicly funded *private* universities can decide themselves upon their internal governance structure; the three *public* universities, defined under public law, have only restricted leeway in this realm – their internal governance structure is largely prescribed by the ministry (the situation in the non-university sector is comparable). Universities have far-reaching financial discretion. They can freely decide on the internal allocation of their public (mainly lump-sum) and private funds. The public operational grant can be used in a flexible way. Moreover, they can borrow money on the capital market and are free to build up reserves. Universities are free to enter partnerships with HEIs and other organizations but specific regulations for partnerships must be taken into account. Examples of partnerships with other organizations are for instance spin-off companies; examples of inter-university partnerships include joint teaching programmes. A special kind of collaboration are the Associations – a network of one university with several university colleges that are meant among other things to academically upgrade ('academize') the academic programmes of the colleges and to somewhat 'close the gap' between the academic programmes of the two higher education sectors. Flemish universities have considerable freedom to appoint their staff. They are free to determine how many and which type of senior academic posts they want to have and they are free to appoint persons of their choice to these positions. There is one restriction: the proportion of the operating grant that can be spent on wages can not exceed 80%. They are not free to determine the salaries of academic staff; these are set by national authorities. Universities are required to report on the activities and performances in the sense that they have to publish an annual report (for the ministry) and an audited financial statement. Moreover, the universities are obliged to provide data and information for national databases. Universities are not formally obliged to produce a strategic plan; this is up to them. For Associations the situation is different: they have to publish a long term plan for educational development and improvement, for research and service provision as well as for investments and infrastructure.

Reforms in higher education governance

The first crucial change for higher education governance and funding in Flanders was the change in state structure in 1989. Not the Belgian government, but the regional governments became responsible for (higher) education. From that moment, the Flemish government decides to radically change policy towards higher education. In Flanders, the view took hold that Flanders could 'do differently and better'. Subsequently, several decrees were issued, with autonomy, responsibility, and scaling-up being the leading ideas. The policy change was enacted with decrees (i.e. Flemish laws), in 1991 for the universities and in 1991 and especially 1994 for the university colleges. With these decrees the government took an important step towards achieving far-reaching autonomy for all institutions. The decrees imposed only formal requirements (length of the course, division in cycles, ability to abridge the course duration, and so on); the content of education (the course programme) could be decided by the institutions themselves. Apart from more autonomy for the HE institutions, these decrees resulted among other things in lump-sum financing for the university colleges, partially lump-sum / partially student number financing for universities, and mergers of university colleges. Granting autonomy to all HEIs was based on the view that autonomous institutions will develop modern, dynamic, and professional management, and therefore will be more able to adapt dynamically to changing demand and European initiatives. To verify the effects of autonomy on the quality of education, the ministry imposed the development of a quality assurance system. Following international standards, the quality assurance system in higher education consists of three steps: an internal review, an external review, and a public report.

The second major change was the introduction of the bachelor master system, together with a greater flexibility of study provisions. This has been codified in the decrees of 2003 (restructuring of HE) and 2004 (flexible organisation of HE). These decrees brought the Flemish higher education structure in line with the Bologna principles, i.e. the three-cycle structure of bachelors, masters, and doctorate programmes. The bachelor master system was introduced gradually for all programmes from the academic year 2004-2005 onwards.

The "Bologna reforms", including the subsequent decrees, not just meant a change in degree-structure, but also fuelled other changes. The first one, already mentioned in the introduction, concerns the establishment of Associations in 2004. An Association is an inter-institutional form of co-operation between one university and one or more university colleges. The universities and university colleges could freely decide which associations would be formed and in which association they would participate.

Currently there are five associations, centred around the universities of Leuven, Ghent, Brussels, Antwerp, and Hasselt. The role of the associations is, among other things, to develop a strategic plan on its supply of programmes (which should be a rational supply without overlap etc.), to improve student guidance, and to enhance

the research capacity of the university colleges. Apart from these aspects of the role of Associations, which were considered by the government to be underdeveloped in the institutions themselves, one of the main rationales behind the Associations was the so-called ‘academisation’.

The second consequence of implementing the Bologna principles concerns exactly this ‘academisation’ of certain study programmes of university colleges, i.e. turning them into university programmes, that is, putting a stronger emphasis on the ‘academic’ instead of the vocational content of the bachelor and master programmes. University colleges nowadays are allowed to organise professional bachelor programmes and, if they participate in an association, also academic bachelor and master programmes (like the traditional universities) – but cannot award the doctorate. It is intended that these academic programmes offered by university colleges in the cooperation framework of the associations, become full-blown university programmes by 2012. The Flemish government has provided a (small) earmarked budget for this ‘academisation’.

The potential impact of this reform becomes clear if we look at the student numbers in each sector of higher education. As mentioned earlier, enrolments in universities for academic bachelor and master programmes amount to 38% of total enrolments, whereas enrolments in university colleges for both the vocational and the academic programmes amount to 62%. But broken down further, we see that professional bachelors make up 47,5% and academic bachelors and masters 14,5%. When this last group of programmes becomes university programmes, the university sector will suddenly be the largest sector and no longer the university college sector.

The third reform that coincides with the introduction of the Bologna principles concerns the establishment of an accreditation system, together with the Netherlands. After the state restructuring in 1989, quality assurance became one of the key issues in Flemish higher education, as a counterpart to the increase in autonomy of the HEIs. In the decrees of 1991 and 1994 quality assurance systems were introduced. Teaching quality evaluation systems became mandatory for all Flemish universities. The process was prescribed by the ministry. (Groups of) study programmes draw up self evaluation reports that are subsequently assessed by an external peer review committee. This committee produces a public report.

On top of the quality assurance system, in 2003 an accreditation system was installed. In cooperation with the Netherlands an independent Dutch-Flemish Accreditation Organisation (*Nederlands-Vlaamse Accreditatie Organisatie*, NVAO) was set up. Together with the stakeholders, the NVAO worked out a frame of reference to evaluate and accredit study programmes. Students are involved at every stage. Higher education programmes that have successfully gone through the external quality review can send the review report to the NVAO.

The NVAO then evaluates the thoroughness of the external assessment and accepts or rejects its findings. Accreditation is a prerequisite for awarding bachelor and master degrees, funding by the government for these programmes, and study

financing for students. This means that HEIs are free to develop their bachelor and master programmes but are subject to accreditation. Content and teaching methods of the bachelor programmes are determined completely by the university. Research programmes are determined within the university. It is entirely an internal matter, although national research plans and priorities may have some impact (in the sense that the government provides funding).

A fourth change concerns the establishment of a **Council for disputes about decisions on study progress** in 2004. This administrative legal board was set up to offer legal protection to students during exams. If a student has exhausted the internal appeal procedure against study progress decisions in the higher education institution, he can appeal to the Council. In this way the student knows at a suitable time whether, and under what conditions he can start the next year. This is one of the measures taken because of the abolishment of the study year system and that is intended to focus attention on study progression in the flexible system.

Reforms in the funding of higher education institutions

There have been a number of funding reforms in Flemish higher education. First, there has been a substantial increase in funding for research. The aforementioned state restructuring was important in this respect. Before that, there was no 'Flemish' research funding. But from the time that the Flemish government was able to pursue its own research policy, it considered innovation and internationalisation to be key to creating welfare, next to productivity, quality, and flexibility of the economy. Since the mid-1990s, therefore, additional funding channels have been developed, which for the universities meant a welcome addition to their basic (public) funding.

Examples of this second stream of public, but competitive funding include:

- university support centres ("steunpunten"), composed of one or more research groups of one or more universities, that offer scientific services to the government and the higher education institutions on topics defined by the government;
- special research funds ("BOF"), that is block grants allocated to the universities on the basis of for instance master and PhD degrees awarded and the number of publications and citations, for basic research projects that they can select themselves;
- industrial research funds ("IOF"), that is block grants allocated to the universities (but university colleges can participate) on the basis of among other things the number of patents and spin-offs, to stimulate them to cooperate with business and industry and to foster innovation;
- the Odysseus programme, a targeted allocation supporting the appointment of top researchers from outside Flanders (brain gain);
- the Methusalem programme, a targeted allocation supporting successful and internationally visible scientists in Flanders with a long-term grant;

- the Hercules programme to fund large research infrastructure.

This increase in research funding was seen as necessary because Flanders internationally was lagging behind with regard to research funding. The ambition of the Flemish government, together with the social partners, is to become one of the top European regions by 2020. The idea behind this is, that welfare in Flanders is largely dependant (as it lacks other resources) on the knowledge and talent of its inhabitants. Therefore, to guarantee economic wealth and social welfare, investment in science, technology, and innovation is a necessity.

An ambitious project was launched in 2006 by the Flemish government, "Flanders in action" (*Vlaanderen In Actie*), to make Flanders a knowledge economy ready to meet the demographic, global, and environmental challenges of the future. Together with the socio-economic actors, it defined a number of goals to achieve excellence in a number of domains: economic, social, ecological, governmental, scientific, educational.

Most notably, the Barcelona norm of 3% of GDP that should be devoted to R&D is taken as the focal point in Flanders. Although several initiatives have been taken the Barcelona norm is not realized (yet). In terms of GDP Flemish R&D investment reached its peak in 2001 with 2,38%; after 2001 it started to decrease. The objective of the Flemish government and the major socio-economic actors is however to attain the 3% Barcelona norm by 2014.

A second funding reform, a new funding system, was recently introduced by the decree of 2008. This includes an increase of public funding for HE, the introduction of a learning account system for students and a new database with real time data exchange between the government and HE institutions.

- *A new funding system:* Formerly, the funding system consisted of a lump sum financing system for the university colleges and a partially lump sum, partially student number based system for the universities. The new funding model includes both input and output indicators and will provide, in principle, an open-ended funding envelope for the entire higher education sector. In the new funding model the government recognises the basic funding of the higher education institutions as a public duty, but limits this duty to the 'initial' level of qualification, that is, the master level. The new funding model stimulates the institutions to support student achievement and progression and to improve academic success (in terms of gaining credits and qualifications). It aims in particular at the academic success of students from under-represented socio-economic and ethnic groups, disabled students, and working students.

In the new funding system, the distribution of the public funds among the higher education institutions is done on the basis of an education part and, for the universities, a research part. Funding consists of three components:

1. A fixed amount depending on the size and the profile of the institutions;

2. A variable amount for teaching, depending on the number of students enrolled (input financing) and on the number of credits and degrees awarded (output financing);
 3. A variable amount for research (only for universities), depending on the number of masters degrees awarded in the association, the number of PhD degrees awarded and the number of academic publications and citations.
- *An increase of public funding:* The new funding system includes goals such as the academic success of under-represented student groups and ‘academisation’. To achieve these goals, the public funding for higher education will be increased with (an estimated) 9% of the current funds for higher education by the year 2012.
 - *A learning account system:* HE institutions are only funded for students that have a positive learning account. Each student receives 140 credits in his learning account. The number of credits for which a student is registered (in a bachelor or master programme) is subtracted. For one year of full-time studies, this is 60 credits. Generally speaking, you earn back the credits you pass, and lose those that you fail. The first 60 credits you pass are even earned back double. When the student obtains his master degree, 140 credits are subtracted. If credits remain in his learning account, the student can use these to enrol in another bachelor or master programme. If the learning account is empty but the student still wants to enrol, the institution can decide to refuse the student, or to enrol him but charge double tuition fee. As the failure rate in Flemish higher education is high, especially for secondary school leavers, the learning account system is meant to be an incentive for students to make a deliberate study choice, and for institutions to monitor and guide the students’ study progression.
 - *A new database:* To keep track of the number of credits in the learning account of each student, each HE institution has a real time connection with the Database Higher Education (“Databank Hoger Onderwijs”), in which the students’ programme, courses, and results are registered. The Database is used to calculate the funding of each HE institution.

Other reforms

In addition to the reforms mentioned above, two other important reforms or developments have been reported by the interviewees. The first one is the second wave of democratization. The second one concerns the internationalisation of university colleges.

The ‘second wave of democratization’ refers to the policy objective to widen access to, and success in higher education of underrepresented groups in higher education. Although participation in higher education in Flanders is already high, there still are groups (lower socio-economic groups, ethnic minorities) who participate less than others and who are more at risk of failing when they do enrol for a higher education programme. Since the social and economic development of Flanders requires that all

talent should be developed, this under representation is seen as a waste of talent, and it has negative implications for the individual's chances in life as well. This is why the new funding system includes additional funding for measures improving both participation and performance of underrepresented groups, why several kinds of bridging programmes are developed and supported, and why flexibility in and between the curricula has been improved. The government does not lay down the way in which institutions must reach this policy goal. Instead, it provides funding (both earmarked and as part of the lump sum basic funding) to encourage the HEIs to develop their own approaches, taking into account their own context.

The internationalisation of university colleges is an outcome of the amalgamation of the university colleges in the 1990s. Larger institutions were created, with more autonomy and (financial) possibilities. The university colleges have taken this opportunity, among other things, to increase their internationalisation activities (mobility of students, visibility of the institutions abroad, ...). As enlarged institutions, they were able to be better partners for foreign institutions. In the future, this could lead to transnational cooperation, also regarding applied research, e.g. between a university college and a company in another country.

3 Performance improvements in Flemish higher education

In the governance and funding reform project, the performance of national systems has been measured using uniform international indicators, in the following eight dimensions: access, lifelong learning, graduation, employability, mobility of students, research output, capacity to attract funds, and cost effectiveness.

According to these data, in Flanders, or rather Belgium, there is improved performance for:

- - Research output in the sense of increasing numbers of scientific articles;
- - Life long learning in the sense of increasing numbers of mature students.

Research output has indisputably increased considerably in Flanders. The increase in research funding has been very important in this respect, both regarding basic and (more recently) applied research. The level of research funding is now comparable to international standards. However, the increase in research funding has not yet brought Flanders to the international forefront. There is strong improvement but in absolute numbers some other countries are still performing better. Because research funding until the 1980s was low, Flanders had a lot of catching up to do. Several initiatives have been taken (see part 1). In the HE funding, approximately 105 million euro is allocated to the second stream of funding (research funding), and an additional 47 million euro for targeted funding, such as for instance the 'brain gain' programmes Odysseus and Methusalem. And the Fund for Scientific Research ("Fonds voor Wetenschappelijk Onderzoek", FWO) receives 183 million euro to provide funding for research projects, PhD grants and postdoctoral grants. The

minister for research and innovation provides 17 million euro for an innovation block grant to universities (IOF), and the IWT (an innovation fund for industry) also provides grants. For comparison, the teaching and research block grant (first stream of funding) for universities amounts to approximately 676 million euro and that for the colleges to 672 million euro. Nevertheless, the 3% Barcelona norm is not yet reached. The government and the socio-economic actors agreed in 2002 to reach the norm by 2010, but this commitment could not be fulfilled. The target however is still there, but now it should be realised at 2014.

The increase in research funding has clearly improved research output, most notably publications and citation scores, but for instance also the number of PhDs. The publication output is high, with 17,27 publications on 10.000 inhabitants which is among the highest in the EU, and is widely cited. This means that Flemish researchers have used the available means in an efficient way. Note that 70% of Belgian publications are, in fact, Flemish publications. One of the reasons for the high output is that output indicators are increasingly used as criteria to allocate funds and grant projects. Another reason is the international component of Flemish research, for instance its participation in international research institutions such as CERN or ESRF, and its participation in European Framework Programmes. A small country has a large exterior: if you want to cooperate in a specialised field you will quickly need to look abroad for partners.

For the interviewees, the improved performance in life long learning comes as a surprise, for two reasons. First, the figures are probably misleading because they are about Belgium and not Flanders. Because of historical reasons (the link with the former Belgian colonies) and language reasons (French is a more common language than Dutch, and is the language of the former colonies), HE in the French-speaking community enrolls a higher percentage of mature students than HE in Flanders.

Second, it can be argued that there is an improvement in Flanders regarding life long learning, but this improved performance can only be an improvement from 'very low' to 'a little less very low'. That is, it might be an increase, but only when compared to the past, not when compared to the performance of other countries.

Higher education in Flanders is very much geared towards first time entrants. The level of participation of young people is high and is still increasing; now reaching almost 60% of 18-year olds. Most of the students in Flemish HE are between 18 and 22-23 years. The level of participation in lifelong learning is about 8%, which is well below the European average.

Lifelong learning has been on the priority list of government policy issues in the last ten to fifteen years. But for the most part it has been a kind of (political) slogan, not a real issue. This is another reason why many interviewees were questioning the improved performance of Flemish higher education on life long learning. There have not been targeted initiatives, and no particular funding was made available. Given the high work loads of HE staff, it is not surprising that without extra money or incentives, little room is available to take initiatives aimed at a more mature student

public (e.g. evening classes, weekend classes). However, recently there are scattered initiatives taken by HE institutions, and in the new funding system there is a financial incentive for HE institutions that provide specific programmes for working students who have not yet obtained a master degree.

During the interviews, two more areas of good Flemish performance were mentioned. First, many interviewees refer to the high enrolment rate, which is the consequence of having the tradition of “open access”. Anyone who has obtained a higher secondary education degree can enrol in any bachelor programme in higher education. Higher education institutions have to accept all students that have such a degree (or equivalent, e.g. a foreign degree). The institutions are also allowed to admit persons who cannot meet the general admission requirement. Entry exams only exist for the study areas of dentistry, medicine, and fine arts. An academic bachelor degree gives direct access to at least one master programme, but often to more master programmes. However, entrance to a master programme can be restricted to academic bachelors who followed a particular specialisation in their academic bachelor programme. Students who do not have the academic bachelor degree which gives direct access, can enrol after completion of a preparatory programme. Professional bachelor degrees may give access to some master programmes after a bridging programme. Apart from the bridging programmes, the university can assess students for admission individually on the basis of their previous academic record and qualifications. For Dutch-language programmes and most other-language programmes, access is restricted for those students who have insufficient command of the language.

Another strong characteristic of Flemish higher education are the good employment figures of graduates. A Flemish high education degree is a good ticket for the labour market. Almost 80% of graduates have a job one year after graduating, and only 1,3% is still seeking a job after one year, without having any work experience.

Apart from these areas where the Flemish higher education system is performing well, there are also some issues that deserve attention. First, the interviewees indicated that the administrative burden of academic staff is high and is increasingly leading to complaints. Administrative tasks compete with time available for teaching and research, not in the least because . As the calls for high quality teaching and excellence in research are increasingly heard.

Secondly, some interviewees argued that the knowledge transfer from HEIs to society is hardly progressing; i.e. in the areas of commercialisation and knowledge valorisation. While cooperation with business and industry is increasing, HEIs should take more initiatives regarding the commercialisation of their research. Entrepreneurship, or the drive to turn innovations into practical applications, is lacking. This shows for instance in the low share of creative jobs, or the low number of patents. Thirdly, some interviewees mention that Flemish higher education has in general a high basic quality (as a consequence of democratic egalitarian values and policies), but that there are not a lot of (internationally recognised) “excellent”

teaching programmes. These interviewees would welcome more emphasis on excellence in teaching, also as part of the national agenda for higher education. Finally, it has been reported that the international mobility (incoming and outgoing student and staff mobility) is stagnating. In the Erasmus exchange programme, outgoing student mobility has grown about 10% over the last ten years and now consists of some 2900 students.

4 Effects of the reforms and other explanations of improved performance

The effects of the reforms in higher education are not easily measurable. The reforms follow each other quite rapidly and sometimes are adjusted even before they are fully operational. And only in recent years has systematic data collection and monitoring been taken really serious. Therefore, it is hard to talk about direct effects. The increased autonomy of the HE institutions and the lump-sum financing make that government policy has to try to achieve effects in more indirect ways. This can be done, for instance, by conferring with the institutions about the goals to be achieved, by searching for common goals on which the government, the institutions and the stakeholders can agree.

There seems to be one very simple direct effect: if the government provides funding, performance increases, and otherwise it does not (e.g. more research funding has led to more research output, but for lifelong learning no funding was available and there have not been many initiatives in that domain). The autonomy of the institutions seems to be more important (and that of the students, for instance their choice patterns, given the free access).

Nevertheless, in the last ten to fifteen years important developments have taken place and Flemish higher education has adapted to the international context. It seems that autonomous institutions are well capable, within the general framework drawn by the government, to adapt themselves significantly and successfully to the changing context (regional, national, European, or global).

The laws of 1991 and 1994 have resulted in more autonomy for the HE institutions in Flanders on the one hand, and more responsibility of the HE institutions on the other. While increasing the autonomy of institutions, the government still provided for a large part of their funding (lump sum financing). Higher education is considered to be a public good. The new funding mechanism however included provisions to favour larger institutions, resulting in a wave of mergers of the colleges of higher education. The merger of colleges has developed their managerial capacity and has made them more professionalised with regard to education. As an additional result, colleges have internationalized their education.

From these reforms in the 1990s onwards, a clear focus has been put on the quality of higher education and on quality assurance in higher education. The Bologna reforms have further strengthened the quality assurance system by including an accreditation mechanism in the QA system. HE institutions are autonomous

institutions, responsible for their own policies and quality control, but since the laws of 2003 and 2004 an independent accreditation organisation evaluates the quality of programmes on offer. The continuous high employment figures of higher education graduates are an indication of good performance in this respect.

The Bologna reforms also entailed the establishment of associations between universities and colleges. Through the cooperation between one university and one or more colleges, the barriers between universities and colleges - or at least the academic programmes of the colleges - have in part been taken away. There is clearly more and better cooperation between the institutions. Moreover, the process of 'academisation' will bring certain academic college education programmes up to the level of university programmes.

The bachelor master structure in itself as yet does not seem to have an effect on the graduates or the labour market. Professional bachelors (three year programmes) were already accepted by the labour market. And as yet, the academic bachelor is still seen as the logical stepping stone for entering the academic master, not the labour market. This view is held by the labour market, but certainly also by the institutions and the students themselves.

In the meantime, the education offer has become more flexible. Measures have been taken to monitor study progression of students in the flexible education system, but it is as yet unclear whether this will lead to better study choice decisions and will reduce the high level of failure in higher education, especially in the first year. But apart from the failure rate, participation in higher education in Flanders is high. For about two decades, there has been an increase in the number of enrolments, especially in the colleges.

The reasons for this increase are unclear. But it has led to a situation in which colleges are underfinanced (closed envelope but growing student numbers). In the last decade the number of enrolments in universities also grows, and increasingly students who want to study an academic programme choose for an academic programme at a university instead of an academic programme at a university college. Interestingly the increase in the share of students opting for a university coincides with the introduction of the bachelor master structure. However, if a causal relationship between the two can be established, is far from clear. Another remarkable finding is that generally speaking the number of students in science and technology study areas is decreasing, although both in Europe and in Flanders a need is felt for an increasing amount of graduates in these areas.

The increase of funding for research has brought this funding on levels comparable to the levels in other European countries. The Flemish government since the mid-1990s has tried to increase research funding because Flanders was lagging well behind and this was considered to be a severe problem in a knowledge intensive region which must rely heavily on knowledge production and processing to produce its wealth and welfare. The substantial increase of funding over the years evidently has increased research output. The number of researchers has increased considerably, as has

research activity both in the field of basic and the field of applied research. There is now research activity in diverse fields, a competitive attitude, investment in infrastructure, and a move towards fostering talent and excellence. Apart from R&D investment, the new funding model for higher education also introduces output funding as element of the basic funding of universities. We must note here that the humanities have expressed their concerns about the performance driven funding of research and that the government in response has decided to develop a Flemish Academic Bibliographic database for the Humanities and Social Sciences.

What still seems to be lacking in Flanders, however, is the translation of research into practice, into economic activity, i.e. there is still too little cooperation (notwithstanding some important counter-examples) between HE institutions and business with a view on innovation and the commercialisation of research results and innovations. Although the whole research chain has been strengthened, from basic to applied to strategically (economically) focused research, the valorisation of research is the weaker part of the innovation chain. Furthermore, a large number of funding streams has been created, but clustering of research funding and research capacity could further improve the research performance of Flanders.

5 Final discussion and appraisal

The reforms discussed above have thoroughly changed higher education in Flanders over the last ten to fifteen years: the introduction of bachelor and master degrees, the establishment of associations and the academisation of certain study programmes, the establishment of an accreditation system, a more flexible organisation of higher education, a new funding system for all higher education institutions.

The relationship between these reforms and the performance of higher education can not always be clearly pointed out. In any case, higher education in Flanders has kept its democratic nature as one of its main features, with open access and low costs for students. Nevertheless, equal opportunities in higher education, or a second wave of democratisation in order to reach the now still underrepresented groups in higher education, is a goal that will involve considerable effort to achieve.

A turn towards quality and quality assurance in education has clearly been made. Strengthened institutions, a flexible organisation of studies, a thorough quality assurance system, increasing attention for study progression are among the features that make this ambition to achieve an overall level of good quality education a reality. Unfortunately, initiatives to achieve a more rational and optimal course supply have as yet yielded little result. The new funding system includes incentives to arrive at a more rational supply of study programmes and to form centres of excellence in research. The institutions will have to submit rationalisation plans in the coming years.

This already indicates that, despite the many reforms already undertaken, higher education in Flanders is not facing a period without reforms. First of all, the new

funding system was introduced in 2008, but will only take its full effect in the years to come. Only in 2014 will it be fully operational. In the meantime, a gradual shift is realised between the old and the new funding system. It is, therefore, still early to take stock of the effects of this change.

Second, the goal of reaching the 3% norm will imply an increasing investment in higher education, and especially in research. But it remains to be seen whether this goal will be reached, and if so, when.

The academisation of certain bachelor and master programmes in university colleges, in cooperation with the universities, will remain an important challenge, especially because the process has to be completed in 2013. This reform has the potential to bring more focus in the binary system. If all academic programmes become university programmes, the focus of university colleges could be clearly vocational. This vocational profile of the colleges could be strengthened even further by the introduction of so-called higher vocational education (*"hoger beroepsonderwijs"*, HBO). From the academic year 2009-2010 the university colleges (Hogescholen) will be allowed to organise higher vocational education, that is, vocational study programmes at ISCED level 5 (associated degrees of 90 to 120 ECTS credits), in addition to the ISCED level 6B vocational bachelor degrees (academic bachelor and master degrees are at ISCED level 6A). Developed in close co-operation with the professional sectors, these programmes will focus on immediate employability on the labour market, but can also be a step towards a vocational bachelor degree.

Finally, we must note that a number of issues is not yet addressed properly in higher education (policy) in Flanders. A framework for lifelong learning is almost absent; the work load for academic staff is high; mobility of students and staff is not very high; transforming innovative knowledge in economic activity (entrepreneurship) is at a low level. On top of this, agreements in the context of the Bologna process will confront higher education institutions with new challenges. It remains to be seen what the impact will be, for instance, of the development of the European Qualification Framework and of evolutions with regard to the third cycle.

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List of interviewees

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Board member of the National Student Union of Flanders (VVS)

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Tom Demeyer

Board member of the National Student Union of Flanders (VVS)

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Sociaal Economische Raad van Vlaanderen (SERV)

Harry Martens

Chairman of the Council for Higher Education, Flemish Education Council (VLOR)
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Toon Martens

Chairman of the Flemish Council for Non-University Higher Education (VLHORA)
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Danielle Raspoet

Secretary of the Flemish Science Policy Council (VRWB)

Maarten Sileghem

Director Strategic Research of the Institute for the Promotion of Innovation by
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Noël Vercruyse

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Governance and Funding Reform in the European Higher Education Area

National system analysis: Bulgaria¹

1 Background information

The present analysis is based on desk research of policy documents and literature and data collected through interviews. 12 interviews were conducted with persons from the following institutions:

2 Main reforms in governance and funding

The most important system-level reforms in the governance of the Bulgarian higher education in the period after 1995 were:

- The establishment of the National Evaluation and Accreditation Agency in 1996. A special chapter on accreditation of HEIs was first developed within the Law of Higher Education passed at the end of 1995. According to the Law of Higher Education, the HEIs are subjected to institutional and programme accreditation which is carried out by the National Evaluation and Accreditation Agency. The Law prescribes in details the functions of the National Evaluation and Accreditation Agency and the accreditation process (Articles 75-88). In the period 1996-2004 the programme accreditation was carried out at the level of different subjects. In accordance with the Amendment to the Law of 2004 (Article 78), the programme accreditation is carried out at the level of professional fields.
- The introduction of the main principles of the Bologna process (ECST system, Bachelor's, Master's and PhD degrees, joint degrees, diploma supplement (through amendments in 1999 and 2004 to the Law of Higher Education).
- The amendment of 1999 to the Law of Higher Education (Article 6, (4)) which stipulates that the development of an internal quality evaluation system for teaching and academic staff is part of the very definition of a higher education institution.
- The amendments (passed in 2002, 2004 and 2007) to the Law of Higher Education, which stipulate that the Council of Ministers approves the total number of study places plus the number of study places by professional fields for each HEI in accordance with its institutional capacity. According to the amendment of 2007 the free capacity of the higher schools has to be filled in step by step – each year by a 25% increase in student enrolment.

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- The amendment of 2004 to the Law of Higher Education which stipulates that the Minister of Education keeps a Register of the higher education institutions, containing data about their academic staff and students.
- The approval of the List of the regulated professions.
- The discard of the "unified state requirements" in 2002.
- The amendment of 2007 to the Law of Higher Education (Article 35a), which stipulates that each higher school should put in place a Board of Trustees

The most important changes in the area of funding were:

- The introduction of the formula-based institutional funding (first adopted in 1995 and then amended in 1999 and 2007). This is the first step in overcoming the so-called "historical principle" of defining HEI subsidies in relying solely on the allocation in previous years without strategic planning and without taking into account any output or quality indicators. According to Article 91, (2), (3) of the Law of Higher Education (adopted in 1995 and then amended in 1999 and 2007) a special funding formula is applied to determine the study costs. The formula used to determine the study costs has the following components:
 1. differentiated normative per student, defined by professional fields;
 2. number of the subsidized students and PhD students;
 3. results from the institutional and programme accreditation of the given HEI.

The normative costs per student are regulated in accordance with Decree 162 of the Council of Ministers (2001). In 2001 the normative costs per students were determined separately for each HEI - the lowest costs were stated in those HEIs which offered programmes in economics; and the highest costs, in those that offered programmes in medicine and engineering. Later, basic normative costs per student were introduced. The normative costs for different fields of study are calculated by multiplying the basic normative costs by different coefficients.

- The introduction of tuition fees for all students in 1999 and the fact that the amounts of the fees are determined by the Council of Ministers.
- The increase in the budget for research allocated by the national Scientific Fund.

In the area of student support, a Law on Crediting Students was passed. This process, however, has not started yet, because contracts between the Ministry of Education and Science and the banks have not yet been signed.

3 Country performances and background variables

The positive changes in Bulgarian higher education are related to:

- Access to higher education;
- During the period 2002-2006 there was:
- a 10% increase in the net enrolment rate (percentage of students in the population aged 17-29).
- a 21% increase in net entrance rate (percentage of new students in the population aged 17-29)

Mobility:

During the period 2002-2006 there was:

- a 48% increase in the percentage of students (ISCED 5-6) studying in another EU-27, EEA or candidate country (percentage of outgoing students to other European countries)
- a 27% increase in the percentage of inflow of students (ISCED 5-6) from EU-27, EEA and candidate countries (percentage of incoming students from other European countries).

Lifelong learning:

During the period 2002-2006 there was:

- a 16% increase in the percentage of mature enrollment (ISCED 5) (the percentage of students aged 30 years and older out of the total enrolment);
- 16% increase in the percentage of mature enrollment (ISCED 5 6);
- 20% increase in mature entry for 5B (the ratio of entry rates of old (25-45) and young (17-25) new entrants at level 5B);
- 7% decrease in mature entry for 5A.

Contribution to HEIs by private households

In the materials prepared by CHEPS, data by this indicator for Bulgaria is missing. The data of the National Statistical Institute shows that in recent years there has been a permanent upward trend in Bulgarian higher education regarding the number of students enrolled in private higher schools: from 32 802 in the academic year 2003/2004 they increased to 54 966 in 2007/2008 (Education in the Republic of

Bulgaria, National Statistical Institute, Sofia, 2008). This increase of the absolute number of students in private higher schools, together with the increased tuition fees for those schools, has resulted in increased financial resources for higher education, generated by private households.

The negative changes in Bulgarian higher education are related to:
Graduation

During the period 2002-2006 there was:

- a 8% decrease in graduates per 1000 population aged 20-29.
- Capacity to attract funds
- During the period 2002-2006 there was:
 - a 29% decrease in the percentage of HE R&D from business and industry;
 - a 1% decrease in the percentage of HE R&D from international sources.

Cost effectiveness

During the period 2002-2006 there were contradictory changes in the performance on this indicator:

- on the one hand, there was a 13% decrease in the expenditure per HE student compared to GDP per capita;
- on the other, there was a 9% increase in expenditure per HE student in Euro PPS.

Research Output

During the period 2002-2006 there was:

- a 74% decrease in patents.

4 Effects of the reforms

In the last decade both positive and negative processes are observed in Bulgarian higher education. The negative trends can be seen in: a) the deteriorating quality of the training offered in some HEIs and specialties; b) the inefficient use of resources in some HEIs and in the higher education system as a whole; c) cases of corruption; d) deteriorating conditions for professional growth of teachers, and difficulties in providing the needed qualified academic staff; e) a lack of systematic and effective partnerships with users of specialists, and, consequently, education and qualifications that are not adequate to the requirements of the labour market in contemporary societies.

Along with this, a number of positive changes came about in Bulgarian higher education in the last decade, which contributed to the incorporation of higher education in the European area of higher education and, by some indicators, to the commensurability of Bulgarian higher education with the best traditions and practices of European higher education.

In general it is believed that reforms in governance and funding over the last decade have had positive effects on the functioning of the higher education institutions and have contributed to the improvement of performances mainly in two areas: access to higher education and lifelong learning.

The governance and funding reforms have stimulated access to higher education and lifelong learning by:

- a) ensuring greater autonomy of the HEIs with regard to their freedom to determine the number of study places;
- b) promoting an individual approach towards each higher education institution, whereby its specificity, way of functioning and results are taken into account;
- b) guaranteeing an increase in the budget of higher education institutions and their right to distribute this budget according to their internal rules;
- c) diversifying the educational degrees and creating possibilities for more flexible ways of studying.

The creation of the National Evaluation and Accreditation Agency is a very significant reform in Bulgarian higher education. It has contributed to affirming unified standards of quality in higher education. The National Evaluation and Accreditation Agency is an institution that can guarantee HEIs will function in accordance with these standards. The existence of this agency ensures for HEIs the freedom to develop activities they deem important and for which they have the capacity; in this way, at least minimal institutional guarantees are created for providing good quality higher education.

In recent years some positive changes were made in the functioning of the Agency and in its specific functions. Assessed to be particularly useful and appropriate are the changes whereby the Agency determines the institutional capacity of HEIs, and whereby the accreditation of the curriculum is done not by separate specialties but by professional fields. Positive results have also come about from the introduction of post-accreditation control, which permits timely control and correction of the way in which HEIs eliminate the shortcomings in their work found in the course of their work. Though not as unanimously, the inclusion of students at some stage of the accreditation process also finds support among the academic community. Along with this, the opinion is that the functioning of the National Evaluation and Accreditation Agency must continue to be perfected. Doubts exist among the academic community regarding the objectivity of expert commissions in conducting some of the accreditation procedures.

Important results for improving the quality of higher education have been obtained by the amendment to the Law of Higher Education, which sets up an internal system for quality assessment in each higher school. An important feature is that students are given a key role to play in this assessment of the quality of education. One of the elements of the internal assessment system is the created mechanisms for tracking the realization of graduates after the completion of their studies. This requires maintaining constant contacts between HEIs and users of specialists, which, in turn, affords the possibility for timely and adequate accommodating the training process to the needs of the labour market.

With the abrogation of the Law of University Autonomy and the enactment of the Law of Higher Education at the end of 1995, the state (through the Council of Ministers) assumed as one of its functions in the sphere of higher education the approval not only of the total number of the study places but also of the number of places for each discipline in each public HEIs. (Article 9 (3)). This article was amended in 2002, 2004 and 2007. At present it stipulates that the Council of Ministers approves the total number of study places plus the number of study places by professional fields for each HEI according to the school's institutional capacity. This change in the regulation of higher education has played an important role for affirming the autonomy of higher schools and for achieving a balance between the regulative functions of the state and the principle of institutional autonomy. According to previous normative rules, the state determines the number of students accepted in each specialty and thus greatly restricts the freedom of HEIs to conduct their own policies regarding access to higher education. A change evaluated as particularly positive is the normative amendment made in 2007 according to which the free capacity of the HEIs has to be filled up step by step, with a 25% annual increase in student enrollment. As a result of this, both in 2008 and in the new academic year 2009/2010, the number of enrolled students was increased considerably in nearly all HEIs.

The creation of the board of trustees guarantees the participation of businesspersons in the process of managing HEIs. The presence of "product consumers" of higher education in the managing body of HEIs is assessed positively, for in this way contacts and trust are created between business and HEIs, while opportunities are likewise opened for obtaining timely information regarding the expectations of employers as to the professional training of the students. In a considerable number of HEIs, however, the board of trustees institution is still not functioning effectively.

In the field of management of Bulgarian HEIs there is a sharply felt need for normative regulation of the professional growth of scholars. The law currently in force dates from 1972, and despite its numerous amendments, it has not created the necessary conditions for stimulating the development of the academic community in keeping with high scholarly criteria.

The introduction of the main principles of the Bologna process, more concretely of the ECST system, and the three educational degrees (bachelor's, master's and PhD), stimulates growth of the number of students and enhances opportunities for getting

an education. Particularly with the introduction of the bachelor's degree, many young people became motivated to pursue university studies, because this degree takes a shorter time to obtain while offering a wide-profile education and thus increasing the graduate's possibilities for professional accomplishment.

When granted the freedom to offer new specialties in the framework of the main professional fields for which they are accredited, HEIs become more open to the needs of the market and the demands of students; the number of enrollments also increases.

The active inclusion of Bulgarian HEIs in the European mobility programmes provided opportunities for a greater number of Bulgarian students to study abroad, for it eliminated (or reduced) financial obstacles. Another very important factor for increasing students' mobility was the introduction of the credits system, which makes it possible for students to have their periods of study in other countries acknowledged. The increase of mobility of Bulgarian students is assessed as very positive. Studying in foreign universities not only enriches the social experience of young people but enables them to gain familiarity with other educational systems and contributes to raising teaching standards in our country.

The Law of Higher Education from 1995 introduced the so-called "unified state requirements". The latter were developed by the Ministry of Education and Science, and were introduced for each academic discipline. They were actually not standards but curricula featuring obligatory academic courses. It took quite a long time before it was realized that such state interference in the educational process, rather than guarantee higher quality of education, actually limits the possibility for improvement.

The elimination of the "unified state requirements" in 2002, together with the introduction of the three degrees of higher education, enabled HEIs to respond with adequate timeliness and more flexibly to the changes in the social environment, and thus to stimulate interest in higher education. Particularly important in this connection is the increased number of elective disciplines. The introduced possibility for making a personal choice of some of the academic disciplines to be studied is a very important change in the organization of the teaching process in Bulgarian higher schools. This measure is a rejection of a practice dating back decades, whereby the curriculum comprises only obligatory disciplines; the convictions of a considerable part of the academic community had to be overcome: this group of teachers felt that reducing the number of obligatory courses would have a negative impact on the quality of education. The percentage of elective disciplines varies in the different HEIs and specialties: according to Ministry of Education and Science data, it is about 40% in a typical curriculum. It is a generally shared opinion today that, thanks to the greater freedom of universities in recent years to offer bachelor's and especially master's programmes, and due to the new possibility for students to take part in setting up their study plans, the Bulgarian HEIs have become better adapted to the needs of the labour market, the requirements of employers, and the expectations of students.

An important positive impact not only on their financial situation, but on how HEIs function in general, has come from the change in the model of funding higher education. The historical principle of funding did not stimulate development and innovations in higher education, because it functioned through inertia: every year HEIs received state subsidies in a similar amount as the previous year. The new formula for determining the state subsidy for HEIs made it possible to generate a greater financial resource for HEIs. This in turn created possibilities for their more stable functioning and for devising long-term development strategies. On the other hand, in giving up the historically established principle of funding, a more just form was put in its place, for the new funding model reflects more adequately the condition of each concrete HEI and ties the subsidy received to the teaching offered and to the number of students. In this way the new funding model stimulates the improvement of the quality of education offered and, in this respect, corresponds to good European practices. It is very important to stress that the rejection of the "historical principle" has mobilized HEIs to seek new sources of funding by initiating various activities and partnerships, for instance the creation of university networks, collaboration with business organizations, and more active international contacts.

The introduction of unified tuition fees is assessed as a just measure in the perspective of the interests of each student. In this way the principle of shared responsibility and shared expenses between the state and the students was implemented in Bulgarian higher education. The amount of the tuition is relatively low, so it may be said that it does not restrict access to higher education. But at the same time the low tuition fee has two negative consequences: 1) It implements the principle of shared responsibility somewhat formally and cannot guarantee students will be committed to the teaching process; 2)

This change of rules has had a rather negative impact on the financial condition of HEIs, because together with the introduction of the unified tuition, paid education was abolished, and the tuition fees of foreign students were made equal to those of Bulgarian students, which, as mentioned, are relatively low.

Something particularly important not only for the financial condition but for the entire future development of Bulgarian higher education is the objective to increase resources and stimulate scientific research in HEIs. Achieving this would enable them to grow into research centres in addition to being teaching centres. We should have in mind that, during the years of totalitarian socialism in Bulgaria, the development of scientific research was concentrated in the institutes of the Bulgarian Academy of Sciences, while in HEIs the conducting of research was left to the personal initiative of each teacher. The consolidation of research activity as part of the institutional strategies and policies of Bulgarian higher schools corresponds to the best and most prestigious models of higher education and will have a positive impact on the quality of teaching offered.

The adopted Law on Student Crediting was unquestionably a good idea. At the present stage, however, this law has practically no influence on the system of higher education. Firstly, due to the lack of agreements between the state (represented by

the Ministry of Education and Science and the Ministry of Finances) and the banks, the law has still not come into force. Given the financial crisis, the prospects of reaching such agreements are not favourable. Secondly, the law is limited in its very intention. It envisages for the state to assist students in the payment of tuition fees; but these fees are not very high to begin with, and, especially given the traditional prestige of education among Bulgarians, paying them is not a problem. The law would have a positive effect on access to education if it facilitated the obtaining of loans for living and study expenses.

5 Alternative interpretations of improved performances

There is a generally shared conviction that the observed positive results from the development of Bulgarian HEIs cannot be correctly explained only through the normative changes in the management and funding of HEIs, in other words, only on the basis of factors internal to the system of higher education. The impact of the social environment at large on the functioning of HEIs is particularly perceptible when radical social changes are occurring. This has precisely been the case of Bulgarian higher education, which, in the last two decades, has been developing in a country undergoing an unprecedented transition from totalitarian socialism to a democratic, market-oriented society.

More specifically, the following factors external to the system of higher education are assessed to be particularly important:

The overall democratization of Bulgarian society

The process of democratization of the country after 1989 was of key importance with regard to the way of functioning of the higher education system. The opening of Bulgaria to other countries and its accession to the European Union has had a positive impact on all performance dimensions. The rejection of totalitarian socialism, the development of the country as a democratic, market-oriented society, and especially its membership in the European Union, are defined as decisive factors for increased mobility of Bulgarian students. Together with this, the developing Bulgarian society is opening new fields for personal fulfillment for people of a more advanced age, and is thus stimulating lifelong learning.

The general characteristics of post-totalitarian economy and the rapidly changing demands of the globalizing market

The transition from a centralized, planned economy to a market-oriented one has been creating specific conditions for the development of Bulgarian enterprises; the effects of these conditions on company policies in the field of education are ambivalent. On the one hand, most enterprises have experienced periods of radical transformations, which has created real difficulties for them as regards elaborating development strategies and, respectively, longer-term policies in the field of human resource development. On the other hand, the successful functioning of Bulgarian enterprises in a social environment shaped by processes of globalization and

Europeanization requires that they stimulate the improved qualification of their employees. There are problems with regard to the labour market: there is a shortage of human resources with the necessary knowledge and competencies; people are not prepared to work in a highly competitive environment; there is an evident deficit in skills guaranteeing flexibility and adaptability to changing requirements for professionals, etc. All this is making education an unavoidable investment for every company that wants to be in a strong position and have lasting success.

Here we should also take into consideration the fact that, with the growing globalization and Europeanization of the Bulgarian economy, the needs of the labour market are changing quickly and, all too often, unpredictably. Meeting these needs is connected with higher requirements for the qualification of the work force. All this has stimulated the demand for higher education, which is being undertaken on a mass scale.

The improved performance in lifelong learning has been promoted by some reforms in public administration that make the acquisition of a master's degree a requirement for getting a job in the sphere of public administration.

The improved economic situation in the country

During the period 2004-2007 Bulgaria had a relatively stable economic development, which was reflected in an annual GDP growth of more than 6%. In 2007, for instance, the GDP grew by 6,2%.

In recent years a trend of reduced unemployment has distinctly emerged: unemployment has decreased from 17,7% in 2002 to 9,6% in 2006, 6,9% in 2007, and 5,8% in 2008. What is particularly important here is the permanent downward trend of unemployment among people with a higher education. In 2007 unemployed people with a higher education amounted to 6,3% of all registered unemployed; those with secondary education were 32%, and more than half of the unemployed had primary or less than primary education. (Updated Employment Strategy of the Republic of Bulgaria, Ministry of Labour and Social Policy, Sofia, 2008, www.mlsp.government.bg). In this context, public opinion increasingly has a permanent perception of higher education as a necessary and effective investment for personal growth and a successful professional career.

The improved economic situation in the country has stimulated interest in higher education among people of various ages. First of all, with the stabilization of economic development, the labour market is expanding and employers' demands are growing higher. This stimulates not only young people but older ones as well to seek ways to improve their training. In this respect the diversification of master's and PhD programmes and the introduction of more flexible forms for obtaining a higher education are particularly appropriate measures. In addition, the improved economic status of some families allows their children to study abroad – this too contributes to mobility.

However, the public expenditure on higher education as a percentage of GDP still remains too low. Bulgaria has a relatively low percentage of expenditure on tertiary education, and the values have fallen to below the average percentages of other countries.

The demographic situation in the country

Demographic trends in Bulgaria have a contradictory impact on the functioning of the system of higher education. On one hand, the ageing of the population has contributed to the improvement of lifelong learning. On the other hand, due to the low birthrate, the absolute number of people completing secondary education is decreasing, which implies a reduction in the number of potential students. Under such conditions the maintenance and especially the increased number of enrolled students will probably be accompanied by decreased criteria for acceptance, and, subsequently, decreased quality of teaching.

The European initiatives in the sphere of higher education

Bulgaria was among the first countries to sign the Bologna Declaration and it actively joined the Bologna process. Normative changes were passed in the regulation of higher education, which ensured the implementation of the three degrees of higher education, of the credit system, of the internal system for quality assessment, and of the European Diploma Supplement. It should be emphasized, however, that, especially in its first years, the development of Bulgarian higher education in accordance with the Bologna principles was accompanied by a number of difficulties which often led to formal or superficial changes that did not affect the very essence of the organization of higher education and of the curricula.

The active involvement of Bulgarian higher education institutions in the Erasmus, Socrates and Tempus programmes stimulates students' mobility. Despite certain problems (insufficient and not timely funding, the not high prestige of some foreign HEIs) the Erasmus programme provided a considerable number of Bulgarian students the possibility to study in foreign European HEIs.

The perceived insufficient quality of Bulgarian higher education

Public opinion regarding the quality of Bulgarian higher education is among the important factors determining attitudes of people towards higher education and their individual choices. A considerable part of the wider public feels that the training obtained in Bulgarian higher educational institutions is inferior in quality to that in most foreign universities. The perceived insufficient quality of Bulgarian higher education stimulates young people to go study abroad.

List of Interviewees

Ministry of Education and Science: Svetlomira Kaloyanova, Mimi Daneva

Ministry Labour and Social Policy: Stefka Limanska

Bulgarian National Agency for Accreditation and Evaluation: Prof. Rumyana

Radeva, Prof. Tanya Nedelcheva

National Scientific Fund: Prof. Anastas Gerdjikov

Council of Rectors: Assoc. Prof. Georgy Godinyachki, Assoc. Prof. Trayan Popkochev

Bulgarian Academy of Sciences: Assoc. Prof. Ivan Chalakov

National Representation of Students' Councils: Aneta Dimitrova, Iliya Gatovski

Bulgarian Industrial Association: Galya Bojanova

The analysis of Governance and Funding Reforms in Bulgaria was based on data

collected through 12 interviews with persons from the following institutions:

Ministry of Education and Science:

Svetlomira Kaloyanova – vice-director of the “Structural Funds and International Educational Programmes” Directorate

Mimi Daneva – expert in the “European Integration and International Cooperation” Directorate

Ministry of Labour and Social Policy:

Stefka Limanska – Head of the Office “Professional Qualification” at the “Policy of the Labour Market” Directorate

Bulgarian National Agency for Accreditation and Evaluation:

Prof. Rumyana Radeva – member of the Accreditation Council

Prof. Tanya Nedelcheva – member of the Standing Committee on Social Sciences, Law and National Security Studies

National Scientific Fund:

Prof. Anastas Gerdjikov – director of the National Scientific Fund

Council of Rectors:

Assoc. Prof. Georgy Godinyachki – rector of the Higher School of Civil Engineering “Lyuben Karavelov” – Sofia

Assoc. Prof. Trayan Popkochev – vice-rector of the South-West University “Neofit Rilski” – Blagoevgrad

Bulgarian Academy of Sciences:

Assoc. Prof. Ivan Chalakov – Institute of Sociology

National Representation of Students' Councils:

Iliya Gatovski – vice-president of the National Representation of Students' Councils

Aneta Dimitrova – member of the Executive Council of the National Representation of Students' Councils

Bulgarian Industrial Association:

Galya Bojanova – director of the “Vocational Training and Education” Directorate

Governance and Funding Reform in the European Higher Education Area

National system analysis: Croatia¹

1 Introduction

The Croatian higher education system comprises seven universities, with approximately eighty faculties, thirteen public polytechnics, three public schools of professional higher education, three private polytechnics and twenty-five private schools of professional higher education (MZOS 2009).

The mission of polytechnics and schools of professional higher education is professional higher education and artistic and professional activities in accordance with the needs of their local community. Schools of professional higher education are mostly teacher academies or institutions established in certain fields where the need or resources to establish a full polytechnic were lacking.

2 Reforms in governance and funding over the last ten years

Besides the Ministry for Science, Education and Sports other public bodies in the higher education system are:

The National Foundation for Science, Higher Education and Technological Development was established in 2001. It supports research and technological projects as well as international cooperation.

The Agency for Science and Higher Education was established by a governmental decree in 2004. It is an autonomous and independent body that professionally and administratively supports the work of the National Council for Science and the National Council for Higher Education. Its main task is to secure quality improvement in science and higher education.

The National Council for Science is a research policy advisory body responsible for research development and quality control of research at higher education institutions. The NCS is administered by the Ministry for Science, Education and Sports and the Agency for Science and Higher Education. Its tasks are defined by the Scientific Research Act.

¹ Akiiki Babyesiza and Robert Owino, International Center for Higher Education Research – Kassel, University of Kassel.

The NCS is not a funding organisation, but proposes criteria and propositions to the government for the distribution of budget resources for science and higher education and proposes the budget for science and higher education. The NCS along with the National Council for Higher Education submits the annual budget proposal. Members of the National Council for Science are university professors, distinguished scientists and representatives of the private sector who are all appointed by parliament.

The National Council for Higher Education was established in 1993 and is an advisory body to the Ministry of Science, Education and Sports and higher education institutions with respect to evaluation and quality assurance. As with the National Council for Science its members are appointed by parliament. The NCHE issues recommendations and guidelines concerning general higher education policy, the quality of institutions and study programmes, the establishment of new institutions and higher education regulations.

Reforms in higher education governance

The reform of higher education governance in funding in Croatia happened against the backdrop of Croatia's independence from the former Yugoslavia and its transition from a totalitarian system to a democracy. At the time of Croatia's independence its higher education system was signified by fragmented universities that were loose associations of faculties and independent research institutes, a separation of teaching and research, bureaucratization with a lack of autonomy and academic freedom (Sunjic 2002).

In 1993 the Law on Higher Education was passed. Its main objectives were the establishment of non-university professional education at colleges and polytechnics, the establishment of policymaking advisory bodies like the national councils for Higher Education and Scientific Research, the Higher Education Funding Council and the reintegration of research institutes into universities. Due to political resistance it didn't entail the legal integration of universities.

Further reforms in the 2000s were influenced by Croatia's attempt to become part of the European Higher Education Area by 2010 after the signing of the Bologna Declaration in 2001. The Act on Scientific Activity and Higher Education issued in 2003 was the legal framework for the reform of Croatian higher education along the lines of the Bologna-Declaration.

1. The law stipulated the change of the structure of study programmes to a three tiered system, the establishment of a quality assurance system of teaching and research supervised the Agency for Science and Higher Education and regulations concerning the recognition of foreign degrees.
2. Besides the law supported an arrangement where professional specialist education could be offered at polytechnics, schools of professional higher education and universities, while academic education was only to be offered at universities under the guideline that a binary system where

- professional studies would only be offered at polytechnics and schools of professional higher education and academic studies at universities had to be established by 2010. The law applies to private as well as public higher education institutions.
3. Another reform in governance was the inclusion of students in institutional decision making, establishing formal appeal mechanisms and carrying out mandatory student assessment as stipulated in the 2003 Act on Scientific Activity and Higher Education and the 2007 Act on Student Council and other Student Organizations.
 4. Through an amendment of the Act on Scientific Activity and Higher Education in 2007 new incentives for investment from enterprises were introduced. The definition of persons and legal entities who can apply for public funding of scientific projects was broadened and a system of tax reductions was introduced in which scientific research allows for reduction of tax obligations. The objective of those two amendments is to encourage higher education enterprise co operations, research commercialisation and private funding (BFUG 2008).
 5. Research and its commercialisation play a critical role in Croatian higher education policy. A Research Policy Action Plan 2007 – 2010 was passed with the aim of catching up to other European countries, integrating the Lisbon agenda goals into national science and technology policy and developing a national innovation system. In order to pursue that goal the Strategic Council for Science and Technology and the National Innovation System Council of the Ministry of Education, Science and Sports were established (BFUG 2008).
 6. Although the law stipulates the full legal integration of faculties and organisational integration universities by 2007 this reform is currently not implemented.

Reforms in the funding of higher education institutions

A major reform on funding based on the Scientific Activity and Higher Education Act of 2003 was the replacement of earmarked funding of universities by the Ministry of Science, Education and Sports with lump sum budgeting. This allowed the universities to make decisions on allocation of funds. However, currently this reform does not seem to be fully implemented.

Other sources of funding for higher education institutions are other public actors like counties, towns and districts and the National Foundation for Science, Higher Education and Technological Development that funds research and technological projects at higher education institutions (NTO 2005).

Furthermore universities are free to generate income from projects, publishing, own private companies and to receive direct investment from individuals and other private entities. The universities also own their buildings, can take loans and build

up reserves. Most of the institutions have been noted to have inadequate accounting systems and structures to optimally operationalise the reforms.

Further reforms empower university senates determine annual quotas of admitted students. Other students over the number of publicly funded places are charged tuition fees. The rectors' council in consultation with the ministry set the range of fees for Bachelor degree courses. All other categories of studies and students are not regulated. As a result there is a huge diversity and range of fees and no systematic monitoring.

On-going processes and new reforms envisaged

Additional reforms and changes in Croatian Higher education continue stemming from the main reforms already highlighted. This additional legislation are meant to streamline the operations within the country and to continue improving the link and integration between the national system and the emerging European higher education. In April of this year two new higher education laws were issued: the Act on the National Foundation for Science and Higher Education and the Act on Quality Assurance in Science and Higher Education. With the first act the authority for financing programmes in scientific and higher education institutions will be wholly transferred to the Foundation for Science and Higher Education and modelled on similar systems in Austria, Germany and Scandinavian countries (peer review). The objective of the new law is to strengthen project leader responsibility for programmatic funding, to separate institutional funding from programme funding and to prevent conflict of interest in the process which used to be a problem when the members of boards that awarded funding were also involved in research projects at higher education institutions.

The second act strengthens the autonomy of the Agency for Higher Education and Science, establishes an Accreditation Council which oversees the accreditation process for the establishment of new institutions and transfers the authority for the accreditation of new study programmes to the quality assurance units of higher education institutions. As a result higher education institutions are autonomous when it comes to developing new study programmes or changing them.

Since the guidelines for higher education policy has not firmed up yet, the ongoing reforms create dynamism within the higher education which makes implementation of reforms unpredictable. An example is the recent strike by students from several universities that demanded abolition of tuition fees. Such unpredictable external(out of the higher education system) actions disrupt the entire higher education system because of its fragility. Given the magnitude of the strike and the political interest it has attracted, there maybe further policy changes or reversals to address the concerns of the striking students.

3 Performance improvements in Croatian higher education

The performance data collected was based on eight dimensions of higher education performance at the system level operationalised in 19 indicators to capture performance. The eight performance dimensions and their underlying indicators are:

- Access: enrolment rate and net entry rate.
- Lifelong learning: mature enrolments and share of new entries above 25.
- Graduation: educational attainment of the population (25-34) and graduation rate.
- Employability: relative earnings and relative employment rate.
- Mobility of students: students from abroad and students studying in other countries.
- Research output: scientific articles and patents.
- Capacity to attract funds: HERD from private funds and from abroad and contributions from private households.
- Cost effectiveness: expenditures per students (in Euros and PPS).

The Croatian higher education system improved in the fields of research commercialisation and cost effectiveness: the number of patent applications to the EPO improved by 9%, while there were substantial improvements with respect to cost effectiveness in the sense of lower expenditure per student compared to GDP per capita (54%) and in Euro PPS (85%). Beyond these data there is no further information on performance dimensions in Croatia.

4 Effects of the reforms and other explanations of improved performance

In general most respondents don't seem to see linkages between reforms in the area of governance and funding or current governance and funding arrangements and performance improvement. The reforms dating back to 2003 and 2007 were not fully implemented, while the reforms of 2009 are not in effect yet. The effects of the changes in governance are yet to be documented. The changes on governance have created a demand for systems and structures at local and institutional level to accommodate the national changes.

There is concern that an irreversible trend of vertical differentiation is being established, which favours the institutions that currently have a high capacity to implement the changes. Similarly changes in funding policy have generated or pushed for further development of systems and structures to contextualize the national policies at institutional level.

General effects of the reforms

The foundation of governance reforms in Croatia has been the development of reforms that institute autonomy of institutions to determine their internal structures and objectives. While considering the reforms within the higher education system in

Croatia it is imperative to note that the genesis was and still remains to de-link the institutions from the central government. A number of reforms have since been put in place to establish autonomy from policy formulation, implementation and evaluation processes within the higher education system.

Since 2005 the universities are free to determine internal governance structure which created a demand for development of systems and ordinances at local and institutional level. This has led to further clarification and definition of functions within the higher education system. Presently at the initial stages of the reforms, problems of conflicting roles have been noted, yet those that have passed this stage appreciate the positive benefits of the reforms. This has given rise to specialised professionals.

The other major governance reform has been the introduction of state regulated standardized quality assessment. While this is more established in the teaching area compared to research, its effect on quality is observed in the whole higher education system. The ministry supervises the quality assessment process and has ensured a minimum standard of quality is maintained.

There have also been reforms aimed at increasing student participation in institutional decision making, formal appeal mechanisms and mandatory student assessment which have also contributed to improved performance. As much as it has attracted much debate on its effectiveness, the common agreement (by both students and administrators) is acceptance of the reforms potential benefits when they are fully implemented.

The provision for student participation has created space for their representatives' inclusion in decision making and assessment process within the institutions. However, the problem which remains is to motivate students to become active in using the formal channels that are at their disposal.

Part of reforms grant the universities freedom to determine study capacities, set entrance quotas and requirements. This contributes in two ways towards improved performance of the Higher Education system. First, the institutions have an opportunity in maintaining student numbers at the institutions optimal level thereby avoiding excess students which would compromise the quality of service if the facilities available are inadequate. Secondly, the universities have the opportunity to increase student enrolment as a means of increasing their funding.

The most outstanding funding reform in Croatia was the replacement of earmarked funding of universities by the ministry with lump sum budgeting. This allowed the universities to make decisions on allocation of funds which has in turn led to more accountability by the universities administration. The accountability by the institutions has made a demand for more efficient management of the resources allocated to them while maintaining relevance to the mission of the universities. Though not fully implemented to enable the institutions have total control of the

funds, the initial stages are bearing some positive results in developing systems and attitudes that are required to support the reform when fully implemented.

This effect of the reform is further established by the universities being able to generate income from projects, publishing and owning companies. The universities also own buildings and can take loans and build reserves. Coupled with this is the universities' opportunity to charge fees to private students and set the number of student enrolment. These have enabled universities control their budgets through finance generation and determine areas of investment.

As the reforms are adopted by the central government, there is need to contextualize and develop ordinances at institutional level and also increase the personnel's appreciation of opportunities provided by the reforms. It was indicated by the respondents that one of the changes to ensure autonomy and efficiency would be to have university employees be considered as university staff and not as ministry staff. Currently the rectors may be limited in attaining targets because they cannot intervene or manage employees more broadly through financial incentives.

Reforms and performance improvements

According to the respondents they do not explicitly observe a relationship between the reforms and improved performance within the indicators identified. With respect to expenditure per student compared to GDP per capita and the expenditure per student in Euro PPS, the respondents rejected the idea that this signifies cost effectiveness. The majority of respondents question the data since in their point of view data on the expenditure on specific items in higher education is impossible due to history based funding.

There is a consensus that the lower expenditure per student is a result of stagnating funds and an increase of student numbers. This is confirmed by the fact that 0,86% of the GDP is allocated to tertiary education and therefore below the European average and the higher education institutions' right to admit additional students that are charged tuition fees.

With respect to research commercialization in the sense of utilization of scientific knowledge (e.g. there are increased numbers of patent applications) the improvement in performance is acknowledged, while many respondents mention that Croatia was catching up from a low point and is still lagging behind. As a reason for improvements in research commercialisation many see the development of a new National Innovation System with an organizational infrastructure for technology transfer and regulation that facilitates research commercialization. There has also been the formation of the Business Innovation Centre for Croatia Ltd. (BICRO), an organisation charged with facilitating university participation in commercialization of research. Other reasons for improvements are government funded projects that specifically target applied research projects and an upsurge in application for European funds which served as a measure of quality control.

5 Final discussion and appraisal

The higher education system in Croatia compared to other European Union countries is in need of structuring in terms of institutions operational guidelines and human resource development. These should be done with a view to have a coordinated and properly documented national policy. Evaluation of reforms and development of the higher education system is compromised as a result of the seemingly disjointed approach taken by actors within the system. Indeed as observed by Vukasovic et al (2009) about efficiency of the cost of education, with percentage of the GDP taken as an indicator. "Due to limited data it is impossible to say whether investment in higher education increased or decreased over the past decade. It is even more difficult to say to what extent the GDP investments followed the growth of the education sector. Unavailability of such statistics poses a challenge to evaluation of higher education policy and higher education development strategy in those countries where such strategies exist". This further proves the need for rigorous and constant review and research of the Croatia higher education system in particular and the countries in transition in general.

The development of the Croatian higher education is a process that has been set in motion by the initial initiatives both internal and external like the change of the political dispensation and commitment to the European Union. The effects of these initiatives bind the system to continuous change. This is particular because of the unique background the country has of having separated from a former federal state with different political ideology and education policies. Whereas structures from external partners may not fit within this context they are helpful in giving the system possible direction in developing further.

The reforms are not immediately seen as the cause for improvement of the higher education system because the structures and systems may not have developed to reproduce data to measure the indicators. However the process must continue with the government increasing the amount of investment into higher education either directly or through partnership with other member states of the European Union or relevant supranational agencies.

A general overview indicates that governance reforms are the active change tool in the higher education system in Croatia. Most of the reforms are targeted towards institutions so as to enable them implement policies set at national level. This is because the approach taken for implementation is top down, and so the central or national agencies adopt a reform and as it trickles down the individual institutions have to adopt the reforms within their context. The legislation is meant to have the higher education system run in a more coordinated way.

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List of Interviewees

Hrvoje Meštrić, Head of Directorate for Science; Ministry of Science, Education and Sport

Gvozden Flego, Member of Parliamentary Board for Education, former Minister of Science and Technology, professor at the University of Zagreb

Mile Dželalija, President of Governing Board, Agency for Science and Higher Education, professor at the University of Split

Neven Budak, Member of National Council for Higher Education, professor at the University of Zagreb

Pero Lučin, Rector of the University of Rijeka, former President of the Governing Board of the National Foundation for Science, Technology and HE, professor at the University of Rijeka

Tomislav Čengić, President of the Croatian Student Council, student at the University of Rijeka

Vito Turšić, Head of Directorate for Higher Education, Ministry of science, education and sports

Vedran Mornar, President of the National Council for Higher Education, Dean of Faculty of Electrical Engineering and Computing of the University of Zagreb

Governance and Funding Reform in the European Higher Education Area

National system analysis: Cyprus¹

1 Introduction

Seeking to identify the existence of potential reforms in governance and funding in higher education in Cyprus over the period 1995 to 2007, one soon realises that there have not been any such major reforms as witnessed in other EU countries. In effect, the existence of tertiary education in Cyprus is itself relatively recent as the first University in the country, the University of Cyprus, was only established in 1989. Therefore, the very existence of tertiary education in Cyprus is perhaps too brief for any major reforms in governance and funding to have been required.

Of course this does not mean to say that no general changes have occurred in higher education in Cyprus over the past decade. On the contrary, major changes have occurred which stem from the establishment and operation of two new public universities, the Open University of Cyprus, as stated in the December 31rst, 2002 Law (234(I)/2002) regulating its establishment and operation, and the Cyprus University of Technology, as stated in the December 31rst, 2003 (implemented on 27 February 2004) Law (198(I)/2003) and Law 198(I) modal/2005, regulating its establishment and operation.

In addition to the operation of the two new public universities, three private Universities were also established based on the July 29th 2005 Law 109 (I) /2005 regulating the establishment, operation and control of Private Universities. The three new Private Universities are the: University of Nicosia, European University of Cyprus and Frederick University.

Although it is clear that there have not been any major reforms in the area of governance and funding, the establishment of these five Universities has had wide-spread implications on higher educational in Cyprus in general.

We will primarily give an overview of the governance structure of the Higher Educational Institutions in Cyprus and then provide an overview of the methods of funding of these institutions.

Governance

University of Cyprus

¹ Petros Pashiardis, Open University of Cyprus

Based on Law 144/1989-2006 by which the University of Cyprus was established, decisions are made by the Council of the University of Cyprus and the Senate as well as on the Board of each Faculty and on the Board of each Department.

The Council of the University of Cyprus is responsible for the management and control of the administrative and financial affairs of the University of Cyprus as well as its property and in particular, the annual budget, the level of salaries and other benefits of the staff of the University, and the distributing of financing for the building infrastructure of the University. In addition, it has the power and competence to ascertain the elections or promotions of the academic staff and to ratify the appointments and promotions of that staff, as well as the power and competence to ratify the appointments and promotions of the administrative staff of the University.

The Senate, the supreme academic body of the University, is responsible among others, for the academic work of the University, both in teaching and research. The Senate approves the decisions of the Rector regarding the academic programmes, the level of the entrance and sessional examinations, the marking or grading system, the promotions, and the award of diplomas and degrees, it determines the requirements of the University in building facilities and equipment, the apportionment of the budget and the relations of the University with other Universities and Educational Institutions, it recommends to the Council the establishment or abolition of Faculties or Departments and the number of students to be admitted to the University.

Each Faculty at the University of Cyprus has a Board which has in respect of the Faculty all the competences which the Senate shall have in respect of the University. It is noted, however, that the decisions of the Board of the Faculty are subject to the approval of the Senate.

The Board of the Department is responsible for the research and teaching work of the Department within the framework of the decisions of the Board of the Faculty. Each Department has a Board of Department which consists of the Professors, Associate Professors, Assistant Professors and Lecturers of the Department and a number of the students' representatives of the Department.

Open University of Cyprus

Based on the 234(I)/2002 Law stating the establishment of the Open University of Cyprus, the University is mainly governed by an Interim Governing Board.

The Interim Governing Board of the Open University of Cyprus is appointed by the Council of Ministers and consists of 3 to 7 members with an academic background, knowledge and experience in open and distance learning. The Council of Ministers also appoints the Committee's Chairperson and Vice-chairperson.

Its responsibilities include all the responsibilities of the Senate, the University Council, the Board of Faculty and the Educational Material and Educational Methodology Laboratory, until the University's autonomous operation. These

responsibilities, at the time being, include the management and control of the administrative and financial affairs of the University and its property and in particular, the annual budget, the level of salaries and other benefits of the staff of the University, and the sums for the building infrastructure of the University.

Cyprus University of Technology

Based on the 198(I)/2003-2005 Law stating the establishment of the Open University of Technology of Cyprus, the University is governed by an Interim Governing Board.

The Interim Governing Board of the University of Technology of Cyprus, consists of 7 to 11 members with academic background.

Its responsibilities include all the responsibilities of the Senate and the University Council until the University's autonomous operation. These responsibilities, at the time being, include the management and control of the administrative and financial affairs of the University and its property and in particular, the annual budget, the level of salaries and other benefits of the staff of the University, and the sums for the building infrastructure of the University.

State Institutions of Higher Education

The Law 67(I)/1996–2004 regulating the establishment and operation of Institutions of Higher Education provide for the establishment of a Council whose members are appointed by the Council of Ministers. Its mission is to advise the director of the institution on every matter concerning the operation of the institution and specifically on the educational programmes and specializations of the institution, on the budget of the institution etc. The Director of each public institution may attend the meetings of the council of the institution and participate in the discussion on every subject discussed in such meetings.

At the time being the strategic policy regarding higher education funding, is for the state to provide full economic support for public HEIs while the fees for undergraduate students are fully subsidized by the Government.

Private Universities

In all three of the private Universities, decisions are made by the Council, the Senate, the School of Councils and the Department Councils in accordance to the Law 109 (I) / 2005 regulating the establishment, operation and control of Private Universities.

The Council is the highest administrative body of the Universities and it is responsible for the administration of all matters that affect the Universities including financial matters, infrastructure, supervision and control of the administrative and other staff, the number of students for admission and student affairs. It confirms the hiring and promotion of the administrative staff and confirms that the proper processes and regulations were adhered to in the selection, election and promotion of academic staff.

The Senate is the highest academic body in the Universities and it is responsible for the academic work undertaken in terms of teaching and programs of study as well as the promotion of academic research and any other academic related activities.

The duties of the School Councils cover academic matters similar to those under the jurisdiction of the Senates and their decisions are subject to the Senates' approval.

In each Department of the Universities' Schools, there are Department Councils which cover academic matters similar to those under the jurisdiction of the Senate. Their decisions are subject to the Schools' approval.

Funding

Allocation of Public Funding

Each public institution of higher education prepares its annual budget which is processed by the relevant parties (i.e. University, Ministry of Education and Culture, Ministry of Finance, Planning Bureau etc) before it is submitted to the Council of Ministers for approval and to the House of Representatives for voting. Public funding is allocated to institutions in accordance with expenditure categories.

The criteria used to determine the amount of the grants allocated by the public authorities are input oriented and the following are taken into consideration: Enrolment data, Infrastructure (additional buildings, library, laboratories, etc) and establishment of new Faculties and introduction of new programmes of study

As regards to the annual budgets of the three state universities these are approved, and the relevant grants are awarded according to their needs on the basis of negotiation between the relevant public authorities and the governing bodies of the institutions.

The bodies responsible for the allocation of resources within the University of Cyprus are the University Council and the Senate. As regards to the non-university level state HEIs, the various Ministries under which they operate are responsible for their annual budgets.

There are no special rules regarding spending across budget lines and this may occur if it is deemed necessary provided that the relevant authorities give their approval. It should be noted however that even though the budget is prepared by the interested parties and approved in its totality, the Ministry of Education and Culture is responsible for the awarding of the funding which is done after the relevant application by the institution. There are no official regulations limiting the freedom of higher education institutions to spend funds allocated for research such as a requirement to submit research projects for prior government approval. Higher Education Institutions are not allowed to roll over unspent funds from one budget year to the next.

Contributions from students and their families

Public higher education institutions determine the amounts of contributions toward tuition costs, certification, and registration fees in collaboration with the relevant government authorities. In public institutions of higher education there are no variations paid by students towards tuition costs between faculties. Variation may occur between postgraduate programmes of study (i.e. the tuition charged for the MBA are higher than those charged for the MA).

For Private institutions of tertiary education, relevant legislation provides for the approval of tuition and other fees payable by the students in the institution, by the Minister of Education and Culture at least three months before the beginning of the academic year. No increase in the tuition fees and other burdens can be imposed before the lapse of two years from the last increase. In private institutions of higher education tuition may vary among programmes of study.

There are no official regulations governing the way in which higher education institutions should spent the above contributions. There are no external bodies to which institutions are accountable for their use of contributions from students or their families.

2 Performance improvements

When comparing the performance of tertiary education in Cyprus between the years 2002 and 2006, it is apparent that significant improvements have been made. Specifically, improvements have been observed in three domains: the access of students to tertiary education, the increase of university students over 30 years of age and the attraction of funds from international sources. However, there have been domains in which little or no improvement was made as well as domains in which a decrease in performance was observed.

Taking the case of the first domain in which Cyprus presented an improvement, we notice that the increase in the access of students to tertiary education was due to a 25% increase in the net enrolment rate of students aged 17 to 29 years of age and a 44% increase in the net entry rate of students again aged between 17 and 29 years of age. In effect, it can be suggested that the increase in the enrolment rate is perhaps an effect of the increase in the entry rate of new students. As new students have entered university education then consequently, as they progress to the following years of their degree, then the net enrolment rate of students will also increase.

The other domain in which Cyprus presented an improvement was life-long learning. Specifically, a 90% increase in the number of students aged 30 years and older as a percentage of the total enrolment of students was observed. The greatest increase however, was observed with respect to the percentage of mature entry where the ratio of entry rates of old (25 -45) and young (17– 25) new entrants increased by 293%. As in the case of the aforementioned increase in general student access, with respect to mature students, it can again be suggested that the increase in the enrolment rate of mature students is perhaps an effect of the increase in the entry

rate of new mature students. As new mature students have entered university education then consequently, as they progress to the following years of their education, then the net enrolment rate of mature students will also increase.

Improvement was also evident with respect to an aspect of the country's capacity to attract funds. Specifically, the expenditure on R & D from international sources as a percentage of total expenditure on R & D increased by 116%. On the contrary however, a decrease of 40% was observed in the expenditure on R & D from business and industry.

Moreover, with respect to student mobility, a relatively small increase of 18% was identified in the number of in-coming students from other EU-27, the EEA and Candidate countries as a percentage of all students in the country. However, the number of students sent abroad to study in other EU-27, the EEA and Candidate countries did not show any fluctuation.

The country performance in cost effectiveness was stable where no increase or decrease was observed between the years 2002 and 2006. Specifically, the annual expenditure on public HE institutions per student compared to GDP per capita did not change in any way nor did the annual expenditure on public HE institutions per student in EURO PPS.

Graduation levels did not present any changes either, as the number of graduates as a percentage of the population aged 20-29 did not demonstrate any significant fluctuations in number.

3 Effects of the Reforms

As previously described, tertiary education in Cyprus has indeed demonstrated significant improvement in the access of students to tertiary education and the number of university students over 30 years of age. Moreover, some improvement was also identified in the attraction of funds from international sources and in the number of in-coming students from other EU-27, the EEA and Candidate countries.

Since no specific governance and funding reforms have been implemented in Cyprus during the period 1995 to 2007, one cannot claim that these observed improvements in performance are due to specific and targeted reforms. However, the establishment and operation of two new public Universities and three private Universities as well as their implications on various domains of tertiary education in general cannot be ignored. On the contrary, the establishment and operation of the new Universities constitutes the greatest change in tertiary education in Cyprus since the foundation of the first University in the country, namely the University of Cyprus, in 1989. Undoubtedly, the implications have been great and wide-spread.

The first improvement observed in tertiary education is the increase in the access of students. Specifically, a 25% increase in the net enrolment rate of students aged 17 to 29 years of age and a 44% increase in the net entry rate of students again aged

between 17 and 29 years of age was detected. This improvement in the access of students to tertiary education can be effectively explained by the increase of recognized universities in Cyprus. Up until recently, only the University of Cyprus was in operation. The establishment and operation of only one University was not a result of a low demand in tertiary education. On the contrary, due to the lack of tertiary educational options in Cyprus, a large percentage of Cypriots turned to other countries, EU and non-EU, in order to satisfy their higher educational needs. However, after the foundation of the new Universities a large amount of the demand for tertiary education was absorbed and kept in the country thus raising the new student entry levels and the student enrolment levels.

The other domain in which Cyprus presented an improvement is life-long learning. Specifically, a 90% increase was observed in the number of students aged 30 years and older as a percentage of the total enrolment of students. The greatest increase however, was observed with respect to the percentage of mature entry where the ratio of entry rates of old (25 -45) and young (17– 25) new entrants increased by 293%. These improvements can undoubtedly be attributed to the formation of the Open University of Cyprus which offers a variety of flexible distance-learning courses aimed at mature students over 30 years of age. Before the formation of the Open University of Cyprus, there were no university level programs offering the flexibility required by mature students. Again the lack of flexible and distance-learning university level courses was not due to a small demand for such courses.

This is evident from the huge 293% increase in the number of mature students entering university education after the establishment and operation of the Open University of Cyprus.

Improvement in the performance of tertiary education in Cyprus was also evident with respect to an aspect of the country's capacity to attract funds. Specifically, the expenditure on R & D from international sources, as a percentage of total expenditure on R & D, increased by 116%. The improvement observed in the attraction of funds from international sources can also be attributed to the foundation of the new Universities. Since there are presently 6 Universities operating, compared to only 1 in 2002, there are consequently, more university teaching and research staff members who apply for research funding from international sources. In effect, more applications for research funding subsequently lead to relatively more funds attracted. The research and teaching staff members presently employed by the new Universities, in the past due to the lack of employment opportunities in Cyprus were mainly working either in university institutions in other countries, in colleges or in positions unrelated to tertiary education.

Some improvement was also observed in the mobility of students. Specifically, a relatively small increase of 18% was identified in the number of in-coming students from other EU-27, the EEA and Candidate countries as a percentage of all students in the country. The establishment of the private Universities is perhaps the reason for the small yet existent increase in in-coming students since the private

Universities, unlike the public Universities, offer most of their courses in English. Therefore, students from other countries now have the option of studying at university level in Cyprus without having to learn the Greek language. As opposed to private Universities, public Universities are permitted by law to offer courses in English only if the same course is also offered in Greek. To this effect, the University of Cyprus now offers two masters courses in English (namely MBA and Masters in Economics) in an attempt to attract English-speaking students. However, courses in English by public Universities may only be offered at Masters level as public Universities are by law restricted from offering undergraduate courses in any language other than Greek.

With respect to cost effectiveness, the country performance was stable where no increase or decrease was observed between the years 2002 and 2006. Specifically, the annual expenditure on public HE institutions per student compared to GDP per capita did not change in any way nor did the annual expenditure on public HE institutions per student in EURO PPS.

The performance of tertiary education in Cyprus regarding graduation levels was also stable where no increase or decrease was observed between the years 2002 and 2006. The number of graduates as a percentage of the population aged 20-29 did not demonstrate any significant fluctuations in number. The stable rate of student graduates may seem peculiar when one takes into account the great increase in general student access as well as the great increase in mature students' entry. However, this can be explained by the fact that the new Universities which account for the increase in general student access and mature student access began their operation only recently and thus not enough time has passed for a change in graduation levels to be detected.

b) Alternative interpretations of improved performances

Even though the improved performances can be adequately explained by the changes which have occurred in tertiary education in Cyprus over the past years, one cannot ignore other contextual factors which have also played a vital role and provide additional explanations to the reasons behind the observed improvements in performance.

Commenting on the improvement observed in the access of students to tertiary education it was previously supported that it is mainly due to the increase in the number of Universities in Cyprus. Up until recently only the University of Cyprus was in operation. As explained, the establishment and operation of only one University was not a result of a low demand in tertiary education. On the contrary, a large percentage of Cypriots turned to other countries in order to satisfy their higher educational needs. However, after their establishment and operation, the 5 new Universities in Cyprus absorbed a large amount of the demand for tertiary education thus raising the new student entry levels and the student enrolment levels. However, the high demand for tertiary education which has lead to the increase in the access of students to tertiary education has undoubtedly been influenced by the growing

demands of the present-day labour market. As in all countries of the EU, the labour market in Cyprus sets increasingly higher demands from prospective employees making the need for higher education and specialization essential for competitive job applicants. The growing rates of unemployment in conjunction with the growing cost of living further increase competition between prospective employees striving to obtain a position in the labour market. Therefore, in present-day Cyprus the need for tertiary education is considered an essential part of everyone's education.

The other domain in which Cyprus presented a great improvement is life-long learning. As previously explained, this improvement can undoubtedly be attributed to the formation of the Open University of Cyprus. Before the formation of the Open University of Cyprus, there were no university level programs offering the flexibility required by mature students. The lack of flexible and distance-learning university level courses did not reflect a lack in demand.

This is evident from the huge increase in the number of mature students entering university education after the establishment and operation of the Open University of Cyprus. As in the case of the aforementioned increase in the general access of students, the demand for life-long learning is intrinsically linked to broader socio-economic factors. Specifically, the growing needs of the labour market directly influence demands for tertiary education in mature students. The increasing need for specialized personnel and competition in the work-place drive employees to further education in order to secure their work position and advance professionally. The option of flexible distance-learning university level programs enables mature students to confront the ever-growing challenges faced in the work-place and adjust to the rapid advancements in technology and the sciences.

Improvement of higher education in Cyprus was also evident with respect to an aspect of the country's capacity to attract funds from international sources. As previously supported, the improvement observed in the attraction of funds from international sources can also be attributed to the foundation of the new Universities. Since there are presently 6 Universities, compared to only 1 in 2002, there are currently more university teaching and research staff members who apply for research funding from international sources. In effect, more applications for research funding subsequently lead to more funds attracted. Moreover, even though there is a large demand for tertiary education in Cyprus, the establishment and operation of the 5 new Universities has also increased competition in attracting prospective students. Presenting a good record in research by faculty members provides an additional asset to department and schools trying to attract new students. Another contextual factor which has undeniable influenced the improvement observed in the attraction of funds from international sources is the ascension of Cyprus into the EU in 2004. The ascension of Cyprus into the EU has provided research and university institutions with the opportunity to apply for funding from EU and international bodies from which it previously was restricted from receiving. Therefore, it seems that the improvement observed in the attraction of funds from international sources is a result of a two-fold effect by which on the one

hand the demand for attracting funds for research has increased as a result of the increase in the number and competition between the Universities and on the other hand the supply of research funding opportunities has also increased due to the entry of Cyprus into the EU.

Lastly, some improvement was observed in the number of in-coming students from other EU-27, the EEA and Candidate countries. As explained previously, the establishment of the private Universities is perhaps the main reason for this small increase. Private Universities, unlike the public Universities in Cyprus, offer most of their courses in English therefore, enabling students from other countries to study at university level in Cyprus without having to learn the Greek language. It is more than obvious however, that the increase in the number of in-coming students from other EU-27, the EEA and Candidate countries has also been affected by the ascension of Cyprus into the EU in 2004. Being a member of the EU, undoubtedly the mobility of students into Cyprus from other countries has been facilitated thus increasing the number of in-coming students.

List of interviewees

Efstathios Michael – Director Higher and Tertiary Education, Ministry of Education and

Despina Martidou Forcier – Chief Education Officer, Ministry of Education and Culture

Gregory Makrides – Director of Research and International Relations, Erasmus Institutional Coordinator, University of Cyprus

Elena Gregoriou – Director of International Relations, Research and European Programs, Open University of Cyprus

Andreas Papoulas – Senior Officer of Education, Department of Higher and Tertiary Education, Ministry of Education and Culture

Governance and Funding Reform in the European Higher Education Area

National system analysis: Czech Republic¹

1 Introduction

Changes in governance and funding of the higher education system in the Czech Republic during the last decade are the main focus of this report. At the same time, the impact of the changes in the above mentioned areas on the system performance is discussed. Furthermore, other developments in the Czech higher education are described to give an overall picture of the most important factors that have been influencing the system since 1990.

The report has been drafted on the basis of 13 mainly face-to-face interviews, existing literature on the Czech higher education system and available documents.

2 Developments in higher education over the last decade

According to the existing legislation, higher education institutions in the Czech Republic are either of a university or a non-university type. An institution of a non-university type usually provides mainly bachelor study programs. If accredited, it can also provide master study programs, but it is not entitled to provide doctoral study programs. A university type higher education institution is entitled to offer study programs leading to bachelor, master, as well as doctoral degrees. Both types of institutions, non-universities and universities, can be state, public or private. Apart from two institutions of strategic importance (Police Academy and the University of Defence), all former state institutions were transformed into public legal bodies in 1998.

In 2009 the Czech higher education system consisted of 2 state, 26 public, and 45 private higher education institutions. A remarkable development of private institutions took place during the last 10 years, as they were only officially allowed to operate since 1998. There were nine private institutions in 1999. This number increased to 14 in 2001, 27 in 2002, and finally 45 in 2009. However, despite the number of private providers, their students do not constitute a considerable share of the total higher education student body in the Czech Republic. In 2008/09 there were 328,341 students enrolled in public institutions, and 50,551 in private higher education institutions (MŠMT, 2009).

¹ Aleš Vlk, freelance consultant, external advisor to the Ministry of Education, Sports, and Youth, Czech Republic

Aside from the traditional higher education system, there is also a sector of higher professional schools, offering specialised diplomas in various fields. The system started in 1990, supported by experts from the Netherlands. In 2007 there were 28,774 students enrolled in higher professional schools, representing around eight percent of all students in the tertiary education sector (UIV, 2008). The term “tertiary education sector” includes both higher education institutions and higher professional schools.

Any reform in higher education can only be understood in the context of the radical changes which took place after 1990. The Czech Republic was one of the many Central, Eastern and South-Eastern European countries in which fundamental changes in higher education took place after the fall of communism 20 years ago: introducing basic principles of democracy and restoring institutional autonomy and academic freedom. Similar to other C&E European countries, Czech higher education institutions faced multiple challenges simultaneously: to change their governance and management structures; to modernize their curricula to match the transformation from socialist economies to market economies; to alter their missions from mainly teaching-oriented to incorporate research; and to compete with a new sector of private higher education institutions of varying kinds (Westerheijden & Sorensen, 1999, p. 13). The following paragraphs shortly describe the developments after 1990.

Full autonomy was returned to Czech universities within six months of the Velvet Revolution, when the new Higher Education Act was introduced in 1990. A system of academic self-governance was introduced; and the role of the state in steering the higher education system was limited to indirect methods. The clear political policy objective in 1990 was to restore freedom to the universities to enable academics and students to run their institutions without strict central government control. The new legislation re-introduced democratic principles, institutional autonomy and academic freedom. Elected, representative academic senates (at faculty and university levels) represented a major change in the governing structure of Czech higher education. The academic senates were granted extensive powers with respect to internal affairs including budgeting.

The Act also introduced the Higher Education Council to represent higher education institutions vis-à-vis the Ministry. The Council consisted of representatives delegated by university senates. The Council and the Czech Rectors Conference were given the statutory right to be consulted on the following issues: the establishment and composition of the Accreditation Commission, the budget for higher education institutions and fundamental proposals and measures affecting the higher education system.

The Accreditation Commission was also introduced by the Act. The Commission was established as an advisory body to the Government and was comprised of distinguished individuals from higher education institutions and specialized and scientific bodies. The Act furthermore prescribed the internal management structure

of universities and faculties – including the powers of the rectors and deans, as well as the university registrar and the faculty secretary.

With respect to the steering of the higher education system the Ministry of Education was assigned a limited role consisting of the following powers: creating favourable conditions for the development of HE institutions and higher education in general; coordinating the activities of HE institutions; allocating resources to HE institutions and controlling their spending; registering the statutes of HE institutions; establishing special institutions to achieve the goals of higher education after consulting the Higher Education Council; and upon a proposal of the Accreditation Commission, removing the right of a HE institution to carry out state exams, habilitation etc.

The resultant level of autonomy for Czech Universities exceeded that in most Western European countries. Over the past 20 years several attempts have been made to find a better balance between an acceptable level of institutional autonomy and the ability of the state to steer and co-ordinate the higher education system in line with broad national goals.

With respect to higher education governance and funding 3 changes were identified as having a significant impact during the last decade.

- 1998 Higher Education Act
- 2002 Research and Development Act and related R&D results evaluation
- 2002-2007 non-legislative changes related to the funding of HE institutions

Reforms in higher education governance

In 1995 a serious discussion began on the need for and characteristics of a new Higher Education Act to replace the one rather hastily developed and adopted in 1990. Potentially this could have entailed a second major post-communist higher education governance reform. Although many academics and students claimed that there was no urgent need for reform, a new framework was repeatedly called for which would reflect more adequately not only the changing environment within the Czech Republic but also European and international developments.

There were a number of key policy issues at stake. First, unlike many of its post-communist neighbours – notably Poland – the Czech Republic had not made legislative provision for private higher education. Second, while the higher education institutions managed their properties these were in fact still owned by the state.

The institutions favoured the transfer of the properties to the universities, so that they could maintain them more efficiently. Third, from the perspective of the higher education institutions themselves, the need was expressed to reform their internal organization and cohesion. Many of universities consisted traditionally of fairly

independent faculties with their own legal identity, so the power of the central university level was very weak. Rectors believed that changes should be made to consolidate the university as a single legal entity to enhance the authority of central university structures. Finally, from the perspective of the Ministry, the overall intention was to find a more acceptable balance between institutional autonomy and the ability of the state to steer the higher education system as a whole. In retrospect the powers attributed to the state in 1990 did not seem to be sufficient.

Once the new draft of the Act was discussed (which opened a discussion on changes in higher education more generally including its governance) other issues were put on the table as well such as the role and powers of academic senates, accreditation and the position of the Accreditation Commission, diversification of higher education institutions, study-related fees, etc. The Higher Education Act was adopted in 1998 and came into force starting 1999.

First of all, the new Act allowed the establishment of a private sector in higher education. This was the most important step with respect to the diversification of the whole system. However, with respect to the higher education governance, it cannot be considered of a great significance. Despite their increasing number, private higher education institutions still constitute a rather minor part of the Czech Higher education system with respect to student number, participation in R&D etc.

The following changes are important regarding higher education governance. The new Act strengthened the position of the central level of higher education institutions vis-à-vis their constituent faculties. Faculties had until then enjoyed a high level of independence which in many cases made university-level policy and decision-making a difficult undertaking. The Act also changed state institutions into public ones and transferred former state property to their ownership. Together with this new public status of universities it also introduced Boards of Trustees, new bodies composed of individuals drawn from outside higher education with specific powers particularly with respect to university property and strategic decisions.

The Accreditation Commission was granted new powers, with all study programs required to be accredited and periodically re-accredited.

Importantly, with respect to governmental steering, the Act introduced a new mechanism. The Ministry was required to publish “A Long-Term Plan of Educational and Scientific, Research, Developmental, Artistic and other Creative Activities in the Area of Higher Education” (Long-term plan of the Ministry). Higher Education institutions were in turn obliged to draft long-term institutional plans in line with the long-term plan of the Ministry and to negotiate these with the Ministry.

Although some fundamental changes were introduced by the 1998 Act, the steering capacity of the state vis-à-vis higher education institutions was not fundamentally changed – the existing 1990 instruments and processes were only slightly modified. However, the Act introduced two potentially important innovations. The Act made provision for external stakeholders to be involved in internal governance through a

new structure - the Board of Trustees, albeit with a limited mandate – and introduced a system of long-term planning at both the level of the system and public institutions.

Reforms in the funding of higher education institutions

With respect to the changes in the funding mechanism, there have been several developments that have changed the way institutions can obtain resources. Nevertheless, similarly to governance, in the last decade there has not been a major reform introduced that changed the funding system dramatically.

In general, teaching and research are the two main sources of HE institutions' funding. The main part of teaching funding is based on formula funding containing both the number of students and financial intensity of accredited programs. The mechanism and exact numbers are discussed between the Ministry and the HE representatives on a yearly basis. A minor part (5-7 %) is based on the "contractual principle". HE institutions submit every year projects that meet the priorities of the up-dated long term plan of the Ministry. With respect to R&D, HE institutions apply for various grants from the state budget on a competitive basis. In general, the percentage of private sources of funding in higher education institutions has steadily increased from 19,6% in 2002 to 24,0% in 2007 (MŠMT, 2009).

The new Act set up new financial rules to allow higher education institutions to diversify their resources including study-related fees (for those exceeding the minimum period of study or studying in more than one study program in parallel).

As already mentioned above, the long term plan of the Ministry and long term plan of HE institutions were introduced by the 1998 Higher Education Act. Since 2001 the Ministry was able to use its funding responsibilities to strengthen the long-term planning by allocating a proportion of public funding to institutional projects consistent with the long-term plans for the system. This can be seen as one important change in respect to funding, although not very significant in terms of financial volume. However, it is planned that the contractual part of institutional funding will increase in the future.

According to the Act a higher education institution may also as a part of its educational activities deliver, free of charge or for a fee, life-long learning programs designed either for occupational training or leisure activity. In 2001 the life-long learning section of the HE Act was modified in the following way.

In cases where participants in accredited life-long learning programs wish to become regular students, an institution may recognize the credits they have earned in life-long learning programs up to a maximum of 60 percent of the credits necessary to complete academic studies. Contrary to expectations, many faculties began to offer the same courses to both groups of participants, paying and non-paying.

During 2004-2007 several non-legislative changes were introduced that modified the funding system. For example in 2005 the number of graduates was added to the formula funding, so more focus could be paid to the outcomes of the system. At the same time, additional financial resources were channelled to higher education in general during this period.

Research and Development funding constitute a significant part of HE institutions income, especially those focused more on research rather than mainly on teaching. Therefore, any changes in the R&D funding have an impact on individual institutions and their behaviour.

In 2002 the Research & Development Act was introduced institutional and targeted support. An important role in the decision-making process and allocation of the funds to various areas is played by the Research and Development Council, and individual grants are distributed by individual ministries (22 state authorities distribute the R&D funding).

Starting in 2005, the assessment of R&D results was changed significantly, shifting the focus more into applied research (patents, prototypes etc.) and articles in international journals and publications. These changes have influenced various policies (evaluation, promotion, etc.) on the institutional level.

A contemporary discussion

In the past few years an intensive discussion has taken place about the changes that would need to be implemented in higher education. All the changes that have taken place in the past are regarded as positive; however, many stakeholders express the view that further changes are needed.

Issues such as management structures, the role of academic senates, students' position in academic self-governance, tuition fees, the third mission of universities, accountability, etc. have been discussed within academia as well as outside. One of the most important developments in that respect was the issuing of the Thematic Review of Tertiary Education (File et al, 2006). This project was undertaken by the OECD and published in November 2006. The OECD team emphasized a major need for reforms and outlined a number of systemic changes.

A comprehensive range of suggestions was made by the OECD team including changes in areas such as system structure, its diversification and the institutional landscape; system and institutional governance; resourcing, access and equity; connections to the labour market and many others. The review team specifically stated that "16 years after the post-Velvet Revolution Higher Education Act – higher education governance reform is needed ..."

The conclusions of the study were presented by selected members of the OECD team to the wider audience in the fall of 2006. The results of the study were very seriously received and considered by the then Minister and her deputy for Higher Education

and Science. It was decided that a strategic document should be drafted first, building on the conclusions of the OECD study and discussing potential scenarios for Czech tertiary education. A team was constituted, containing both ministerial as well as external members, which was assigned to draft the so called "White Book on Tertiary Education". After an intensive discussion, the document would serve as a main strategic guideline for drafting new tertiary education legislation. The first draft of the White Book was released in May 2008 (Matějů et al, 2008).

The White Book on Tertiary Education offered some alternatives to the existing system, trying to introduce some management changes and make it more open to those who have a "stake" in the institutions and in the system as a whole – employers, regions, graduates, etc. The document also touched upon the very complex issue of the system's structure. The existing system containing almost entirely institutions (in terms of student numbers) with the ambition to undertake research and have a high academic profile is not able to meet the increasingly diversified needs of the students on the one hand, and the labour market on the other. A more diversified system is suggested by the White Book and at the same time incorporating higher professional schools into a wider, more diversified tertiary education system consisting of institutions of various profiles and ambitions.

The White Book itself received very critical reactions, mainly from traditional universities. Other developments have also contributed to a rather volatile situation in higher education and Czech politics in general and could have partly caused the negative reactions to the document (during the period between 2006 and 2009 as many as five ministers and four deputy ministers for higher education and sciences changed).

At the same time, a rather significant financial allocation was planned to go to higher education and research through the European Union (EU) Structural Funds in the programming period 2007-2013. The subsidies are targeted at education and training as well as at research and development infrastructure. Due to the above-mentioned political developments, the Structural Funds agenda at the Ministry was delayed as well. This delay was partly the reason for a Minister, nominated by the Green Party, to resign from her ministerial position after staying for less than one year.

While waiting for the announced subsidy from Structural Funds, and not being able to see any major improvements, representatives of academia started to feel a certain time pressure. Instead of the first calls for the EU Structural Funds, the White Book was released and presented to academia. It was no wonder that academics focused on the document and partly transferred their "frustrations" to it. Many negative reactions arose from humanities and social sciences – the fields that were not busy preparing infrastructural projects. After the resignation of the coalition government (March 2009), the reform was halted by the then Minister Ondřej Liška.

Furthermore, the opposition against the White Book continued when the Charles University presented its own proposal on how to deal with higher education in

summer 2009. Briefly stated, no major reform is needed, the higher education system has been functioning rather well, and only minor adjustments are called for. This can be done simply by amending the existing legislation.

3 Performance improvements in Czech higher education

According to the data the Czech Republic has improved in the following areas:

- **Graduation**, percentage of the population aged 25-34 with tertiary qualification & total number of graduates as a percentage of population aged 20-29
- **Life long learning/mature students**, the number of students aged 30 years and older as a percentage of total enrolment & ratio of entry rates of old (25-45) and young (17-25) new entrants
- **Mobility**, mobile students incoming & mobile students sent out from/to EU-27, EEA and Candidate countries, both for whole degrees and part of a degree
- **The production of scientific articles** (per million of population)
- **The employability of graduates**

The improvement in **graduation rate** is seen as a consequence of continuous demand for higher education in the Czech society which has been steadily increasing since 1990. At the same time, as the number of students is still the most important part of the formula funding (explained above) – institutions were directly encouraged to admit as many students as possible. The implementation of the Bologna system, mainly the bachelor degree, could have had an impact on increasing the number of graduates from the system. As a bachelor degree is not well recognized either by the labour market or by the general public, many students continue to a masters. Two major issues have been raised with respect to the quantitative expansion of the Czech higher education systems. Firstly, the increase is said to take place at the expense of the professional tertiary education sector (constitutes only 10 % of the tertiary sector with respect to student numbers). Secondly, the quality of the system (both the incoming students as well as graduates) has been repeatedly questioned.

Despite the extensive growth of the higher education system (students numbers, number of faculties, new private HE institutions) there has been a strong demand for higher education from the **older (mature) population** which has not been fully met. At the same time, the number of students leaving secondary education has stagnated in the last few years, and the competition has increased. Therefore institutions have also been targeting “non-traditional” students and offering more part-time study modes. Furthermore, public institutions have been able to offer so called “life-long learning” modes to fee-paying students and eventually transfer them into regular courses and get most of their earned credits recognized (described above). Finally, a few occupations (for example in the health sector) required a higher education degree. Many people, often older, entered the system in order to meet the increasing requirements of their working positions. “Older” students constitute a significant part of private higher education. According to the data from the Ministry

in 2008/2009 36 % of the students in private institutions were aged 30 and older, whereas in public institutions this was only 14 %.

Increased mobility can be attributed to several factors, mainly reflecting the increased number of HE students. The Czech Republic's entrance into the EU played a role as well. This meant the abolition of some administrative barriers for Czech students going abroad and better perception of the Czech Republic in general as being part of the EU (upon EU accession the number of tourist also increased). At the same time the capacity of Czech HE institutions to offer courses in English has improved. Germany, France, Spain and Great Britain were the most important study destinations for the Czech students in 2006/07. France, Spain and Poland were the countries providing the highest number of incoming students in 2006/07. However, the fact that Slovak students (studying in the free courses delivered in the Czech language) are looked upon as foreign students must be taken into consideration. In 2007/2008 Slovak student constituted 60% of the total number of foreign students (31 559) studying in the Czech Republic.

The production of **scientific articles** seems a natural and logical development in the Czech research and development system of which Czech universities constitute a significant part. The principle "publish or perish" has gradually become standard in academia. At the same time, a published article was given significant value within the new evaluation of R&D results (discussed above). As a consequence, HE institutions have implemented this factor in their career development conditions (conditions for becoming an associate professor and a professor). Scientific disciplines, however, vary significantly with respect to the quality of scientific articles and their publishers (international journals, national journals, edited volumes, etc.).

The employability of graduates has been rather high during the last two decades in the Czech Republic. In the indicated period (between 2002 and 2006) the situation was further improved due to continuous economic growth and related demand for labour in general.

During that time the Czech Republic suffered from the lack of human resources including both high and low qualified labour. At the same time, however, there has been a shortage of various professions in certain periods (dentists, engineers, IT specialists, etc.). On the other hand, other graduates (agriculture, education for primary and secondary schools) have often found their jobs outside of their fields of study. The market has been able to absorb these discrepancies due to general shortage of human resources during the time of economic growth. Nevertheless, strong doubts have been expressed about the structure of graduates and the ability of HE institutions (mainly academically oriented) to meet the rapidly changing needs of the labour market. The efficiency of the whole HE system, the need for diversification and the accountability of individual institutions were elaborated by several interview participants.

4 Effects of the reforms and other explanations of improved performance

In general, the improvement of the country's performance cannot be seen as the direct consequence of the major changes in higher education at the national level. Some reforms could have contributed to improved performance; in other cases there have been many other factors that have been driving the changes. It is, however, very difficult to assess the extent to which improved results have been caused by various factors.

The Higher Education Act of 1998 could be seen as a major legislative change including a few major systemic changes in Czech higher education. The most significant change was the introduction of the private sector (which had an impact on the number of graduates as well as the number of mature students). Another link can be made between the R&D Act and related changes and the production of scientific articles.

None of the above mentioned changes (reforms) can be seen as dramatic changes in the composition and functioning of the whole system or as the main driving forces behind the improved performance. Some interviewees expressed the view that major reforms with a significant impact on both institutional as well as national levels are still needed in order to improve the overall performance of the Czech higher education system. Many of the interviewees also stated that the areas of improved performance are not the vital areas for the Czech higher education system as a whole.

5 Institutional case studies

Two institutions were selected as case studies. Jan Amos Komensky University is a private higher education institution located in Prague, and Masaryk University is the second biggest public university and is located in Brno.

Both institutions have improved in most of the above mentioned performance areas. It must be mentioned, however, that both institutions represent mainly social sciences and humanities, as technical fields have not experienced much growth as a result of the stagnation/decline of demand for technical programs from secondary school leavers.

The institutional cases are based on available information on the internet, annual reports and interviews with selected representatives.

Jan Amos Komensky University

Established in 2001, Jan Amos Komensky University (UJAK) offers study programs at all levels (bachelor, master, PhD) and has a continuously expanding student base. UJAK specializes in adult education, special education, social and mass communication, as well as European economic and public administration studies. It offers fully accredited higher education studies in the Czech language, degree courses

in English (European Economic and Public Administration, Adult Education) as well as certified life-long learning courses.

The orientation of UJAK has been designed in line with the need for the development of adult education and education for people with disabilities in the Czech Republic as well as the need for the preparation of successful specialists.

UJAK was the first private higher education institution to achieve a university type status in 2006. At the same time, it has also been granted a “research organisation” status according to the “Community Framework of State Aid for Research and Development”. Finally, UJAK is the first Czech private higher education institution to be admitted as a member of the European University Association (EUA).

UJAK has gradually attained a solid position within the tertiary education market as the largest private higher education institution. UJAK has witnessed a rapid growth of the number of students in the last few years – 4000 in 2005/06, 5300 in 2006/07, 7200 in 2007/08 and 8500 in 2008/09. The main seat of UJAK is in Prague, however, it has 4 other places of delivery in the Czech Republic – mainly through distance/part-time modes of study.

With respect to governance, UJAK’s government structure differs from the general structure of a public higher education institution. Being a private institution, UJAK is run by the Assembly which is represented by the Executive Head. The Assembly appoints the Rector. There is no senate and no other representative body in the institutional structure. On the other hand, the management structure of the institution is more similar to the public HE institutions. Two of the more important bodies are the rector and the rector’s collegium – rector, 3 vice-rectors and bursar. The university is not subdivided into faculties; the basic organizational units are five departments.

With respect to funding, financial management at UJAK is centralized. The departments do not have their own budgets. Performance is rewarded on the basis of:

- individual and/or departmental success in attracting research money and other financial resources
- individual teaching performance
- individual or team work on research, development and innovation projects

There are several facts that must be mentioned with respect to the ability of UJAK to improve its performance. First of all, the existence of the HE Act of 1998 was vital for any private institution in higher education.

Secondly, UJAK was not established out of the blue. It was based on the Komensky Academy (a non-governmental, not-for-profit organization involved in the education of adults and those with specific needs). The Komensky Academy was one of the largest Czech institutes in the field of adult education. Besides practical instruction,

in the 1990's the Academy also pursued research and conceptual issues concerning the development of Adult Education and further education policies.

Thirdly, the field of studies which is being offered by UJAK is very important. Higher education in social sciences and humanities has been constantly demanded by both secondary school leavers as well as mature students. UJAK has been able to offer both full-time as well as part-time study programs ensuring that this demand is met as far as is possible.

Fourthly, UJAK has been able to use the advantage of a more flexible management structure at the institutional level. Most of the decisions are made by the rector without the need for the involvement of either a senate or supervisory board.

Finally, UJAK from the very beginning deliberately focused on research and development as an important area also with respect to financial resources. To achieve relevant R&D results seems to be relatively easier in social sciences (have been suppressed before 1990) compared to technical, natural sciences or medicine where huge investments in research infrastructure are often required.

Masaryk University

Masaryk University (MU) is located in Brno and is the second-largest public university in the Czech Republic. It comprises nine faculties with more than 200 departments, institutes and clinics.

Masaryk University offers degrees in a wide spectrum of traditional as well as newly-emerging disciplines and is one of the fastest growing higher education institutions in Europe. In recent years it has consistently attracted the largest number of applicants for studies of any Czech university, which allows it to remain highly selective when admitting students. Masaryk University was one of the first to introduce a three-tier structure of studies based on the ECTS system for the transfer and accumulation of credits. The university is heavily involved in the mobility activities and research programmes of the European Union and other countries.

With respect to number of applicants and number of admitted students, MU is still the most selective university in the Czech Republic. In 2008 there were 65 153 applicants for studies in all fields of which 24 206 were admitted. As of 31 October 2008 there were 41 052 students enrolled in regular degree programs. At the same time 19 140 students took part in 452 lifelong learning programs.

The number of students going abroad in the academic year 2007/2008 was 846; the number of incoming students in the same academic year was 734. There were 6 997 graduates in regular studies in 2008: 3 642 in Bachelor's programs, 1 349 in long-cycle Master's programs, 1 716 in Master's programs and 290 in doctoral programs. At the same time, MU graduates are very successful on the labour market.

MU has witnessed major changes in the last decade. The number of students grew nearly three times (from about 15 000 in 1998 to almost 41 000 in 2008). The university is still undergoing an extremely rapid development program (more than €200 million already spent on construction with further projects in progress).

It seems that MU is rather unique with its elaborate system of programs and procedures that allow the students to move across faculties and enjoy multidisciplinary education. This is supported by an award-winning interactive web-based information system that provides an efficient environment for interaction between the teachers, administrators, and the students. All regulations governing study programmes are centralized and compatible across the entire university. Also internal budgeting fosters collaboration between the faculties and departments and follows mainly the value of credits taught.

The internal allocation system is based exclusively on performance. The centralized part of the budget is collected from the revenues of the faculties following a rational scheme with several “cost” drivers, while the rest flows directly to the faculties based directly on performance. The budget allocated to the university per student is allocated mainly following the credits taught in the courses, with only a minor part distributed per student. These changes were introduced nearly a decade ago and form a quite stable system nowadays. The smaller (homogeneous) faculties distribute their budget further mainly based on discussion and an assessment of needs and achievements, while larger more structured faculties have their own internal systems, also mainly based on performance.

A number of important points were mentioned during the interviews with MU representatives. First of all, the centralized information system has since its introduction almost 10 years offered many benefits – centralized agenda, user-friendly communication tool, study materials, etc. In 2005 Masaryk University's information system received the prestigious EUNIS Elite Award in recognition of the university's leading position in the use of information technology within the university community.

Second, the creation of new faculties has not been allowed as long as it does not seem vital and necessary. As a result, most of the faculties are rather strong, able to compete for students as well as for R&D funding. This is not the case in many other Czech universities. Very often internal disputes within the academic community are solved by the creation of a new faculty.

Third, despite a rapid growth of students, MU has been so far able to negotiate with the Ministry an appropriate level of funding. Most of the admitted students were financed by the state budget. At the same time, MU has expanded its life-long learning modes of delivery – constituting an additional source of income.

Fourth, the financial remuneration of academic staff has risen significantly – MU has the highest academic salaries in the Czech Republic at the university level. This means that the most of academics are not forced to search for additional sources of

income (for example teaching at private universities which are not able to guarantee the quality of offered study programs without academics with scientific degrees from public institutions) and can fully focus on teaching and research.

Finally, an interesting remark was made with respect to university management. Historically, the university senate which elects the rector as one of its main competencies has favoured young academics. As a result, the MU management has been relatively young and flexible. In general, interviewees feel that Masaryk University has been rather lucky in choosing its management – both in the time of expansion and in the time of current consolidation.

6 Final discussion and appraisal

No major failure on either institutional or national level has appeared in the Czech higher education system within the last 20 years. However, the overall efficiency of the system can be questioned. It seems that the state has missed many key instruments to steer the system effectively. Many suggestions in this direction, including the issues of systemic diversity, were made in the OECD Tertiary Review in 2006 and the White Book on Tertiary Education which followed in 2008.

As a result of overall political instability, influencing to a large extent the position of the Ministry of Education, the intended tertiary education reform has not been implemented. It is more than clear that any major change in tertiary education requires a stable political environment and a strong political commitment, which at the time of writing seems far from being the case in the Czech Republic.

As a result, contemporary Czech higher education can be seen in the following way. The Ministry of Education is trying to stabilize and keep the major tasks running until the expected reshuffle comes as a result of new Parliamentary elections in summer 2010. The institutions with at least some research potential are preoccupied to unprecedented levels by preparing major infrastructural projects by the end of 2009. Most of the institutions are also working on project proposals for education and training for submission to the European Social Funds. Some of the rest – those excluded geographically (Prague to a great extent is not eligible for European Structural Funding), or with respect to their research agenda (humanities, social sciences) – focus on strategic discussions, such as the one concerning the White Book.

A number of points were stressed during several interviews that were not directly linked to the questions. First of all in terms of institutional autonomy it is generally accepted that higher education institutions are very independent compared to institutions in other countries, in relations with the Ministry as well as with other external stakeholders. This leads to rigidity and lower levels of accountability. On the other hand, institutions with a high level of autonomy are less vulnerable to external factors such as political or business interests. This dimension can be very useful especially in times of political instability or economic down-turn as has been the case in the Czech Republic at least during the last 2 years.

Secondly, in terms of the expansion of the system in general, the ambitions are high – it is a matter of prestige for every small city to want to host a university and at the same time every university longs to be active in research and development. It is a shared opinion that the expansion of the private sector has been too extensive, and soon there will come the time for mergers and closures. This is especially the case when taking the demographic situation into account – the smallest age cohorts are about to leave secondary schools in the next years.

Finally, an important question arises as to whether a country can face the challenges of modern society based on knowledge and innovation without reforming its tertiary education system. Can any country claim its readiness to innovate, to minimize the barriers in trade and business, to encourage entrepreneurship, and at the same time allow academia almost to steer tertiary education itself? Can a country support concepts based on academic freedom and self-governance rather than on accountability, effectiveness or efficiency? Is there a third way to find a compromise?

Another important issue is the timing of any reforms. It is clear that reforms are not as controversial in times of economic growth and political stability when the level of public satisfaction is rather high. At a time of crisis people become more sensitive and are more likely to support or vote for those who offer shelter before the rain and the time of prosperity. For countries where major reforms have not yet taken place (including the Czech Republic), the question arises of whether such changes are politically feasible during the current economic decline.

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- Vladimír Haasz, Czech Technical University in Prague, Head of the Higher Education Council
- Ladislav Janíček, Masaryk University, Bursar
- Petr Kolář, Jan Amos Komensky University, former Deputy Minister for Higher Education and Research
- Jana Kolářová, Jan Amos Komensky University, Bursar
- Filip Křepelka, Masaryk University, Chair of the University Senate
- Jan Marek, Head of the Department of International Cooperation in Research and Development, Ministry of Education, Youth and Sports
- Bohuslav Mužík, Czech Industry Confederation
- Eva Münsterová, Brno Technical University, Member of the Higher Education Council
- Jiří Nantl, Masaryk University, former member of the Higher Education Council, Student Chamber
- Karel Rais, Brno Technical University, Member of the Rector's Conference
- Vlastimil Růžička, Deputy Minister for Higher Education and Research, Ministry of Education, Youth and Sports
- Jan Slovák, Masaryk University, former dean of the Faculty of Science and vice-rector for development
- Jiří Smrčka, Secretary to the Accreditation Commission, Ministry of Education, Youth and Sports
- Zdeněk Strakoš, Academy of Sciences of the Czech Republic, Member of the Accreditation Commission
- David Václavík, Masaryk University, Head of the Higher Education Reform project at the Ministry of Education
- Václav Vinš, Head of the Higher Education Department, Ministry of Education, Youth and Sports
- Zdeněk Vršník, Chamber of Commerce
- Jiří Zlatuška, Masaryk University, dean of the Faculty of Informatics, former rector

Governance and Funding Reform in the European Higher Education Area

National system analysis: Denmark¹

1 Introduction

We present the essential governance and funding reforms in Danish higher education, concentrating the analysis mainly on the last decade. We also present data on the overall performance of the Danish higher education system and we seek to draw conclusions on how the governance and funding reforms are linked to the observed improved performance.

We base our analysis on recent literature on Danish higher education, written documentation, (questionnaire) data from a survey to national experts on higher education and data on higher education system performance in Denmark compiled by CHEPS, and a number of key contacts with informants in Danish higher education including two case institutions (consult the list of informants at the end of the paper). Not all of the persons we approached did have the opportunity to share their opinions on the subject.

The report is divided into 7 sections. Section 2 provides an overview of the Danish higher education institutions. Section 3 presents the essential governance and funding policies and reforms of the last decade. Section 4 looks into the performance indicators and discusses the point of view on the improved performance gathered from the qualitative data. Section 5 discusses the point of views on the reasons to the improved performance and view on the impacts of the reforms. Section 6 presents the two case studies and the final section 7 provides a conclusion on the findings.

2 The Danish higher education system

The structure and governance of the higher education system in Denmark is comparably diverse and complicated. The Danish higher education system compromises a university sector and a college sector (professionally oriented higher education sector) (Eurydice 2006: 1).

Within this higher education landscape there are four main types of higher education institutions, within the responsibility of three different Ministries (SiD 2008; Eurydice 2006; Schmidt et al. 2007b):

¹ Nicoline Frølich, NIFU STEP.

- Since the merger of institutions in 2007/8 there are eight universities in Denmark which conduct research and offer research-based undergraduate and postgraduate programmes (Bachelor, Master and PhD).
- The University College sector consists of 8 university colleges (centres for higher education) offering undergraduate programmes (Professional Bachelor and Diploma programmes). In 2012, there will be only 7 University Colleges.
- Since the beginning of 2009 there are 10 Academies of Professional Higher Education (erhvervsakademier) offering academy profession programmes usually of 2 years duration.
- The Royal Academy of Fine Arts, the Music Academies, and the Schools of Architecture and Librarianship, all in all 20 institutions.

Three ministries share the responsibility for these institutions. The Ministry of Science, Technology and Innovation is responsible amongst others for research and university programmes, that is long-cycle, research based higher education following the 2+3 Bologna structure (Eurydice 2006: 2), there are also other types of educational programs like 'kandidatuddannelse' with a slightly different structure. The Ministry handles tasks related to policies, administration, operation, coordination and interaction etc. in and between these areas (VTU 2009c).

The Ministry of Education is responsible for the university colleges and the academies of professional higher education (UVM 2009). The teaching of these centres of higher education is research affiliated. The Ministry of Education grants subsidies to this research affiliation based on a framework laid down in the annual budget/finance bill (Eurydice 2006: 2).

Moreover, The Ministry of Culture has the responsibility for the Royal Academy of Fine Arts, the Music Academies, and the Schools of Architecture and Librarianship. The number of students is small compared to the overall field of Danish higher education and the conditions of the institutions are highly diversified (Eurydice 2006: 2).

The focus of this report is on governance and funding of the Danish universities. In comparison with several other countries, the Danish university sector is the larger sector of higher education. In 2006 there were about 114.000 students at the bachelor and master level at Danish universities. The number of students has increased with 18 per cent from 1999 to 2006 (VTU 2009d: 29). The number of researchers at the Danish universities improved from 2003 to 2006, in 2006 more than 6.800 researchers were employed at the Danish universities (VTU 2009d: 21).

3 Reforms in higher education governance and funding

Danish higher education experiences essential transformations. The main governance and funding system level reforms in the higher education system over the past decade include:

- The merger of institutions of higher education (and research institutes) in 2007/8 of which the following elements are of importance:
- Creation of large and multi-campus universities
- The introduction of a new independent QA agency (ACE) responsible for accrediting study programmes in higher education
- Continuation/reform of the Taximeter funding system
- In 2003 a new university management system was introduced. The main change was the establishment of a board with an external majority and the appointment of the rector by the board of the institution
- The new University Act from 2003 making universities “self-governing” institutions.

Our informants describe the 2003 and 2007/8 reforms as two distinct peaks in broad research and higher education reform policies that aim at improving Danish research and higher education.

Danish higher education governance reforms

In Denmark governance and funding reforms in higher education are closely interrelated, consequently the distinction between governance and funding reforms we make is not as analytically clear-cut as we could wish for.

According to the above mentioned list of reforms, among the essential higher education governance reforms the last decades in Denmark are the merger of institutions, the introduction of an independent quality assurance body (the ACE Denmark) and reforms of the institutional management system replacing elected academic leaders with appointed academic leaders.

Our informants agree that the above-mentioned list of essential reforms is comprehensive and covers the most important reforms. However, in addition to the above-mentioned important reforms our informants also refer to the influence of the Danish “Globalisation Strategy” which the Danish Government presented in 2006.

An OECD study headed by the IMHE – Institutional Management in Higher Education - published in 2007 refers to the Globalisation Strategy as a comprehensive strategy dealing with the challenges of globalization (Schmidt et al. 2007b). According to the strategy, Denmark had to develop (1) a world class educational system, (2) strong and innovative research, (3) more entrepreneurs and (4) more innovation and change. According to the authors the funding of higher education was also given high priority in the new strategy.

Among the most important initiatives in this respect are proposals of a higher proportion of university funding in the future to be allocated through competition, and that the allocation of basic grants is to be linked to performance. Furthermore, the Government intended to simplify the taximeter system and hence the funding of education as well as to strengthen the financial incentives directed at the institutions

in order to reduce drop-out rates and shorten long completion times (Schmidt et al. 2007b).

Our informants point out that the government's globalisation strategy includes a broad range of measures aiming at improving research and higher education. In the view of our informants the most important aims of the strategy are improved graduation rates, reduced drop-out rates and allocation of research funding increasingly on a competitive basis.

As a consequence of the Globalisation Strategy, a merging of universities and government research institutes was implemented (VTU 2009b). The main aim of the mergers was to strengthen education and research, sharpen the profile, and improve the competitive edge of Danish universities (VTU 2009f). The result of the mergers is currently evaluated and the evaluation report is due in 2009 (VTU 2009e). According to our informants, the merger of institutions of higher education (and research institutes) in 2007/8 was based primarily on academic reasons. They point out that there is scarce evidence that governance conditions improve as a consequence of the size of the institutions itself, hence the mergers have to be legitimated on academic reasons (Schmidt 2008).

The University Act of 2003 specifies the decision-making power of the universities. Each Danish university is run by a rector in collaboration with a certain number of collegiate bodies. The board of directors is the highest authority of the university and its main task is to represent and manage the university's interests as an educational and research institution. The board sets up guidelines for the university as an organisation and defines its long-term activities and strategies. The board manages the university funds and enters into a development contract with the Ministry of Science, Technology and Innovation. The board approves the university's budget and employs and dismisses the rector. On the recommendation of the rector, the board employs and dismisses also the university's executive management (Deans, Heads of Department and Directors of Studies) (Eurydice 2006: 2-3).

The board has a majority of external members and includes representatives from the academic staff, PhD students with university contracts and technical and administrative staff (Eurydice 2006: 3).

The University Act from 2003 is considered by the informants as an essential governance reform which aims to further increase the universities' autonomy and self-governance; most notably by the introduction of a board with an external majority as the superior authority of a university, employed academic leaders instead of elected academic leaders, and an explicit demand for improved interaction with the society at large (Schmidt et al. 2007b). In the view of the informants, this reform contributes to professionalization of the management of the higher education institutions and improves the conditions for committing to long term strategies. Also the new boards which have a majority of external members facilitate society's contact with the higher education institutions.

The Act granted partial independent legal status to universities. The OECD point out that the law offered self-governance to the universities by recognizing them as special administrative entities in public law (OECD 2008: 91). The universities were offered scope for enhancing their private funding without risking public funding. The main tools for budgetary allocation became development contracts and other supplementary contracts. The law offered more autonomy in areas such as the approval of new academic programs and the number of staff. However the universities were not given the right to own and manage their estates and do not have the facility to borrow from the private sector (OECD 2008: 91).

Schmidt et al. (2007b) point out that this reform has not directly targeted the funding of HEIs, but according to the authors the changes would definitely impact funding decisions as the Act emphasizes that the universities' new management should make strategic selections of research and educational areas and give high priority to these areas.

As part of the Danish Globalisation Strategy from 2006, which puts great attention to build up a higher education of high international standards, and following the merger process, a new independent QA agency (ACE Denmark) responsible for accrediting study programmes in higher education was introduced in 2008. In Denmark quality assurance is also run by EVA (Danish Evaluation Institute), with ACE Denmark all educational programs are subject to evaluations. Our informants point out that the introduction of ACE Denmark was more related to the Danish Bologna adaptation than to the merger of universities, hence the implementation of ACE Denmark is viewed in connection to both national and European governance of higher education.

According to ACE Denmark's own website, ACE intends to contribute to ensuring the quality and relevance of higher education in Denmark. Their accreditation work is based on national and international quality assurance standards. According to the mission statement of ACE, ACE Denmark aims at generating knowledge on the quality of higher education through a dialogue with the educational institutions and other relevant interested parties (ACE 2008).

Danish higher education funding reforms

The essential governance and funding reforms in Denmark includes also reforms of the performance-based system for allocation of funding for education (the taximeter system). However, the taximeter model has functioned the last two decades, and several of the informants point out that the recent revision of the model hardly can be characterised as a *reform*.

Denmark operates with a performance-based type of funding of education, which implies that HEIs receive funding from the Ministry of Education based on a "taximeter" system, linking funding for education directly to the number of students passing their exams (Frølich et al. 2010). Our informants point out that performance-based funding has a long tradition in Denmark. Contract steering was introduced as

early as in 1999, and the taximeter system has been continuously reformed over the last decades.

Schmidt et al (2007a) point out that the university development contracts that the universities sign with the Ministry of Science, Technology and Innovation are not legally binding documents. These contracts differ from development contract in the classical sense, since there are no direct links between the funding system and the grants awarded. However, according to the Globalisation Strategy, the basic funding resources for universities will be allocated following an overall assessment of the actual results and objectives relating to the quality of research, teaching and knowledge dissemination. Funding of universities will be based on evaluations of the institutions' ability to reach objectives defined in a development contract. The quality of university research will be evaluated by international independent expert panels and a "quality barometer" for research based on internationally acknowledged indicators will be established. Funding will be based on outcome and quality of research. More funding will be allocated to strategic research of importance for the development of society.

With regard to the taximeter system, until recently the taximeter varied substantially between different fields of study and tariffs were predominantly historically determined (Frølich et al. 2010). A comparative study run in 2005 pointed out that the latest developments showed a move toward a supply-driven and student-oriented approach with regard to education (Frølich et al. 2010). Now as part of the 2007 reform of Danish higher education the taximeter system was simplified from a large variety of rates to three overall rates.

There is reason to assume that this reform is well approved in Danish higher education. A survey run in 2005 among stakeholders in Danish higher education demonstrates that for the majority of the Danish stakeholders, including the academic staff, the taximeter scheme functioned rather well (Frølich et al. 2010). However, at the time the academic staff disagreed on the use of the scheme as a general norm for overall resource allocations to HEIs.

According to the interviewees in the study, the taximeter had clear advantages because it stipulated direct requirements for quantity and indirect requirements for quality, and despite its shortcomings it was pointed out that a better system had yet to be presented. Nevertheless, at the time of the study the majority of stakeholders admitted that there was room for improvement. The actual taximeter rates were viewed as a particular problem. Firstly, the rates had been cut during the last decade (although a certain amount of the funding has been returned to the universities as another form of revenue), and secondly, the system was been criticised for lack of balance and clear rationale in the allocation of resources among the universities and educational areas (Frølich et al. 2010).

Danish higher education institutions are also funded by basic grants. The basic grants were, in the survey mentioned above, perceived by the stakeholders as vital for the functioning of the institutions. According to them, basic grants provide budget

security and enable long-term planning. In addition, they are important for successfully implementing structural change and giving HEIs the flexibility to adapt to changing socio-economic conditions. Finally, they are considered essential to the quality and outcome of basic research. Frølich et al. (2010) note that not surprisingly, the faculty would like to see a larger share of basic grants allocated to HEIs, compared to other stakeholders.

The survey run in 2005 also indicates that some Danish stakeholders point to problems with the existing method of allocating basic grants. They emphasise that the lack of performance parameters weakens incentive mechanisms and quality assurance. Another important unintended impact mentioned at the time by stakeholders, such as the Danish Rectors Conference and the Danish Advisory Council, is that an apparently large share of basic grants is tied to co-financing of external projects. The actual amount of funding that HEIs can use freely is smaller than generally assumed. Stakeholders who are not HEI staff defend that there ought to be a stronger link between both scientific production and funding, and achieving university development contract objectives and funding (Frølich et al. 2010).

With regard to research funding, Denmark has a two-tier system for resource allocation. The first tier comprises the basic grants from the Financial Act allocated directly to the institutions. The distribution of research grants among the universities is based on historical aspects. As shown in the 2005 IMHE-OECD study a portion of the grants has been made activity-dependent and additional grants have been distributed based on researcher recruitment and the ability to attract external funding (Frølich et al. 2010). Basic research grants are allocated as a lump sum to institutions. The second tier comprises funding allocated partly by the research councils, strategic research programmes, the EU, ministry R&D funds and private foundations, and partly in the form of operating income obtained in return for services HEIs have sold on market terms. Nowadays the system is becoming more competitive and market-oriented (Frølich et al. 2010).

Finally, with regard to external research grants in Denmark the stakeholders in the 2005 survey generally acknowledge that competition boosts quality and enhances applicability and collaboration, particularly when sizeable grants are allocated to research areas with a broad scope. There were at the time of the study consensus among the stakeholders about the advantages of longer-term grants, and they emphasised that competition-based grants are all too often allocated to fields that are too narrow in scope (Frølich et al. 2010).

According to the study (Frølich et al. 2010), the Danish stakeholders also claim that in many cases external grants do not promote originality and creativity and that an increased proportion of competition-based grants (expected in the near future) will limit the HEIs' ability for long-term planning, forcing them to focus on areas where funding is available rather than on areas where the institutions possess expertise. A potential side effect might be that strategic management of universities will be transferred from university leaders to funding agencies. However, this may not come

to pass as the Danish system of HE is in transition and major changes such as mergers are being implemented.

Schmidt et al. (2007b: 18) point out that an important issue in Denmark has been the overall level of funding of higher education. According to the authors in particular the Barcelona objective of spending 3 pct. of GDP (1 percent coming from public funds) on research and development by 2010 has been the subject of intense discussion in Denmark. A number of key stakeholders had expressed strong dissatisfaction with the level as well as the rate of funding for the coming years. Among others the Confederation of Danish Industries and the Coordination Committee, which represents all key actors of the public Danish research system, have issued a strong critique of the progress towards the objective of the Barcelona declaration. However, the Government on April 4, 2006 with its "Welfare Initiative" (Velfaerdsudspil) presented a funding plan which satisfied most of the critics. The Minister of Science, Technology and Innovation promised DKK 10.9 billion (1.5 billion EUR) to R&D for the period of 2007 to 2010. However, in order to reach the 1 percent objective of public R&D spending, Denmark must be able to gain more out of the EU R&D funding (Schmidt 2007; Schmidt and Langberg 2007-8).

4 Performance improvements in Danish higher education

The data extracted from international databases indicate that Denmark improves its performance with regard to:

- a) expenditure on R&D from Business and Industry
- b) percentage of incoming students from other European countries;
- c) contribution to HEI by private households;
- d) percentage of the population aged 25-34 with tertiary qualification
- e) mature enrolment (students aged 30 years and older)

According to our informants there are other indicators of improved performance that add to this picture of improved performance in Danish higher education. In addition to the above extracted indicators of improved performance, the informants mention the importance of the improved ranking of Danish higher education institutions on international university ranking lists, improved number of years to graduation and improved drop-out rates as essential indicators of improved performance in higher education in Denmark.

5 Effects of the reforms and other explanations of improved performance

In general, the 2003 and the 2007 reforms aim at improving Danish higher education and research. With regard to the governance reforms, the informants point out that the higher education institutions act increasingly as more coherent institutions, to a lesser extent they behave as a loosely configurations of educations and research groups. The institutions develop more powerful strategies and prioritise among internal tasks more prominently than previously. The informants point out that from

2010 a system for performance based research funding based on the number of research publication will be implemented (consult also VTU 2009a).

With regard to the impact and consequences of the set up of ACE Denmark, in the view of the informants, the effect of the establishment of ACE Denmark is probably double: there is the effect on quality of higher education stemming from the accreditation process itself, and there is the indirect effect on the quality of the provision stemming from the measures the institutions put in place since they know they have to apply for accreditation.

According to our informants (at the national level), the taximeter funding model is a highly powerful measure. In the 2003 reform the number of taxes was reduced to three. The reform aims at simplifying the model, improving the output based aspect of the model and enhancing the fairness and comparability of the system. Previously there were an almost infinite number of historically defined taxes; also similar educations had different taxes. In the 2003 reform three groups of educations were defined (the humanities and the social sciences form part of the lowest taximeter level, while science receives the highest taxes) (see also VTU 2009d). The output based funding of education increases as the taxes now include also expenditure for maintenance of buildings.

Our informants also point out that The Globalisation Strategy includes improved funding for higher education institutions. The improved funding is seen as contributing to the improved performance.

However, with regard to the Danish case it is interesting to note that to a large extent the informants point to other explanations of improved performance than the main governance and funding reforms of the last decade.

The interviewees perceive the general economic development the last couple of years (until the financial crisis) a main driver of the improved performance (as measured in the five indicators above).

The 2003 and 2007/8 funding and governance reforms are recent reforms. According to the informants evidently the reform of 2007/8 cannot have produced any impacts between 2002 and 2006. Some of the informants explain that it is also too early to observe any direct impacts of the 2003 reform. Reforms of higher education develop slowly, the improved patterns of performance we observe today is an effect of the previous general economic and societal developments. Hence, higher education policies influence on the development, but there are few direct links between the 2003 reform and the 2007/8 reform and the improvement of these five indicators; rather the improvement stems from more general higher education policies. The informants point out that the improved performance is probably an effect of a long range of smaller measures. Some of the main points the informants communicate with regard to this point is spelled out in the following:

The informants explain that the Danish business and industry has performed well the last couple of years with high levels of employment and investment. These features of the economy potentially contribute to improve the expenditure on R&D from business and industry. In additions measures have been put in place to improve business and industry's expenditure on R&D and to improve the relationships between universities and business and industry. These measures include amongst others PhDs that are funded by business and industry. The number of PhDs funded by business and industry has improved over the last couples of years.

The percentage of incoming students from other European countries is increasing, while the number of Danish students that go abroad does not change. With regard to this the informants point out that Denmark receives a number of students from the other Scandinavian countries. Similar languages promote inter-Scandinavian mobility. A recent report indicated an increase in the number of students from France and Spain. The informants point out that CIRIUS's (CIRIUS is an authority within the Danish Ministry of Science, Technology and Innovation responsible for supporting the internationalisation of education and training in Denmark) mobility statistics for 2006/2007 show that 81 per cent of the international students in Denmark travel from other European countries and the number of international students in Denmark has increased substantially from 2003 to 2007. According to CIRIUS the majority of students that come to Denmark travel via the Erasmus program, part of the mobility stems form the Nordic co-operation program Nordplus. All in all 79 precent of student mobility to Denmark stems from these two programs. According to one of the informants probably the reason that the number of incoming students improve lays more in improved conditions for student mobility in those countries, than in Danish policies. Another informant pointsout that the Danish higher education institutions to a larger extent offer degrees and courses in English compared to the situation some years ago. Evidently teaching in English enhances the conditions for foreign students to study in Denmark. The informant pointsout that improved internationalisation of higher education has also been on the policy agenda for several years in Denmark, amongst others a new steering body focusing on internationalisation, CIRIUS, has been established. An unintended side-effect of the increasing number of international students is that some study programmes in practise are duplicated. The same programme can be given in both Danish and English. In this way, increased internationalisation is not always resulting in an integrated international study environment.

Denmark has no overall tuition fees. The informants struggle a bit to explain the fact that Denmark improves its performance with regard to the contribution to higher education institutions by private households. One of the informants point out that the improved performance regarding contribution to higher education institutions by private households probably relates to increased demand for continuing education. As a consequence of the fact that the Danish business and industry performed well (before the financial crisis), their demand for continuing education courses increases. This increased demand could be one explanation to the fact that the contribution to

higher education institutions by private households' increases as employees in terms of private persons pays for continuing education (funded by their employer).

Improved access to higher education has been a general Danish policy goal for several years. Also the population's demand for higher education has extended. The HEIs have increased their educational offer and more regionally based educational offers have been established. According to the informants, the improved percentage of the population aged 25-34 with tertiary qualification is probably a consequence of these broad developments in Danish higher education.

Improved demands for continuing education and improved access to higher education contribute to the increase in mature enrolment (students aged 30 years and older). However, as one informant points out, the main political attention has been directed at lowering the age of entry in higher education. In Denmark there has been an established tradition to take 'a year off after secondary education before entering higher education. This tradition contributes to increasing the age of the students at the point they enroll in higher education.

6 Institutional case studies

Case one: Copenhagen Business School

Copenhagen Business School (CBS) is one of the largest business schools in Europe with about 16000 students and a staff of about 2300. CBS is organized in 14 departments and in a number of research centres. In relation to the current study CBS has been selected as a case because of the strong profile of the institution in attracting international students, the ability to attract mature students (30+) (including the ability to attract contributions from private households), and because of the initiatives to link with business and industry (12 percent of the income of CBS stems from external funding).

CBS has a high international profile and attracts a high number of foreign students. In 2008 almost 3000 of the 16000 students at CBS were international, with well over 2000 of these from Europe. One third of the international students were on a formal exchange programme. Currently, almost 40 percent of the study programmes offered are given in English. By the informants, the factors mentioned as key drivers are first, the distinctive profile of CBS as a business school. The argument is that the multi-disciplinary profile of CBS distinguishes it from other institutions. Another argument is that internationalization is seen as an important part of the academic profile of the institution – as formulated by some informants: modern business education needs to be internationally oriented. Hence, the current situation is a result of a long-term strategy with the institutional leadership as key actors.

CBS has been very active in establishing links with industry and business, and have developed a partnership model with a number of commercial companies with the aim of creating collaborative projects in both education and research. This has also been

an important platform for developing various continuing education and life-long learning schemes. The number of course offered in executive education has risen from 35 to 58 in the period from 2005 – 2008, and the number of students participating in these and related programmes represent about 20 percent of all students enrolled at CBS. The income from these activities reached 14 percent of the total external income in 2008. It is argued by the informants that the set-up of new programmes and courses based on modularization (and based on the European Qualification Framework) has been a key factor for the success enabling more flexibility as seen both from the CBS side, and from the individual student.

6.1.1 The importance of institutional strategic choices

Going more in to details gathered through the interviews, the informants point out that the success of CBS stems from the strategic choices taken by the institution the last couple of years. CBS has given essential focus to three strategic goals: internationalisation, partnerships with business and industry and “the learning university”. In addition the educational offers of the institution have been extended to a large extent, quality in the sense of explicit learning goals and systematic development of new educational programs has been high on the institutional agenda.

Internationalisation at CBS means that more than 50 per cent of the educational programs are offered in English, which also attracts a great deal of Danish students. According to our informants CBS has the best student exchange program in Denmark with more than 360 international partners as well as an increasing number of double degrees in cooperation with world ranking universities and business schools, amongst others including membership in CEMS (The Global Alliance in Management Education²). In CEMS CBS offers a joint education in cooperation with a wide range of the best schools of Europe.

According to the informants partnership with business and industry means that CBS has a reputation

n of developing practice-based competences that improves the graduates' chances of entering the labour market, enhancing interesting carriers and well paid jobs.

The strategic vision of “the learning university” means that CBS focuses on teaching methods that motivate the students including a wide range of projects and cases that the students are involved in during their educational process. The informants assert that CBS offers the students good opportunities to personal development and a good student social life. In addition the business administration disciplines enjoy in general a renewed interest among young people. As one of the informants put it – once again it is cool to study at CBS and business in general. Finally CBS enjoys a central location in Copenhagen (“Down-town Scandinavia!”).

² http://www.cems.org/general/about/strategic_alliance.php

With regard to the research function of CBS, the top management of CBS has during the last 15 years persistently underlined the importance of publishing research conducted at CBS in international journals of top quality. In addition to international research publication, the importance of external funding of research has been stressed both by the EU and the Danish political leadership. According to the informants to CBS the recruitment of talented researchers is a condition for enhanced research publication. CBS has put a lot of effort in recruiting researchers internationally, currently 22 per cent of the researchers at CBS come from other countries than Denmark and 89 per cent of the CBS researchers have obtained their PhD.

6.1.2 Institutional governance and funding structures

Regarding governance structure, CBS is managed by a board of eleven persons. The majority of the board members (six members) come from business and industry. The board is the employer of the rector of the business school who again is the employer of the deans and the administration of the school. The top management of CBS consists of rector, dean of the educations, dean of research and the university director.

Eighty per cent of CBS' funding stems from the Danish state. These funds include funding based on the taximenter funding of education and research funding. The annual internal allocation of the funds is based on the foreseen activities of CBS and previous budgets. The funds are allocated to education, research, the library, the central administration of CBS. In the next round, the funds for each activity are allocated further down to departments, educational programs and subordinated units of CBS.

6.1.3 Changes of institutional governance and funding structures linked to performance

In the point of view of the informants, CBS has experienced essential changes the last decade. Shortly these changes include an increased number of educational programs, students and staff members, improved research publication, an increased number of PhDs and continuing educational programs.

The informants point out that CBS has been accredited by EQUIS (the European Quality Improvement System³) since 2000, from AMBA (the Association of MBAs⁴) since 2007 and is currently under accreditation by AACBS (The Association to Advance Collegiate Schools of Business⁵). CBS has been included in ESMU (European Centre for Strategic Management of Universities⁶) benchmarking since 2001.

³ <http://www.efmd.org/index.php/component/efmd/?cmsid=040929rpku>

⁴ <http://www.mba-world.com/>

⁵ <http://www.aacsb.edu/aboutus.asp>

⁶ http://www.esmu.be/index.php?option=com_content&view=article&id=20&Itemid=132

More over CBS has implemented a new management structure including a board with the majority of external board members and appointed rector, department heads and heads of the educational programs. Two faculties have been merged into one.

According to the informants, the success of CBS stems from the strategic choices CBS is committed to (see above). In the view of the informants the impact of the newly established management structure is not that essential to the improved performance of CBS.

With regard to the impact of the national reforms, the informants point of that the impact that stem from these reforms are comparably small. Several of the intentions of the national reforms like improved professionalization of management, improved focus on quality and documentation of results were introduced at CBS earlier than they were at the national level.

In the view of the informants at CBS, there has not really been any major funding reform in Denmark lately. Indeed the taximeter model has been modified including a premium attached to completed bachelor degrees which has induced CBS to speed up graduation rates. The informants also point out that from 2010 a system for performance based research funding based on the number of research publication will be implemented. The informants expect this reform to impact on research publication in the sense that a strengthened attention will be directed at publishing in journals that give credits in the reward system.

Case two: Technical University of Denmark

The Technical University of Denmark (DTU) DTU is a specialized technical university with about 6000 students and more than 700 PhD-students. DTU merged with 5 large research institutes in 2007, and is currently organized in 19 departments. DTU has been selected as a case because of the ability to attract R&D income from business and industry, the ability to attract international students from other European countries, and because of the ability to enrol older students (30 +).

DTU is today a very international university. It offers more than 24 master programmes in English, and attracts more than 700 international students each year of which about 560 are exchange students. Currently, about one third of all PhD-students are international. Informants agree that difficulties in attracting domestic students in some subject areas are part of the reason for the number of international students coming to Denmark. DTU has as a consequence been very active in student recruitment activities abroad, and have as part of this process tried to establish study programmes being attractive to foreign students. Informants believe the existence of long-term planning (expressed through "institutional policy papers") and strong leadership support are important factors for changes in this area. Organisationally, internationalisation issues are integrated – meaning that no separate units for internationalization exist.

With respect to the ability to attract funding from business and industry, DTU has managed to double the income from external funding the last couple of years (part of the explanation is related to the merger with the five research institutes mentioned above). Informants tend to explain this increase by an active approach for linking business to ongoing research projects, and the advantages of geographical location (the establishment of a science park and institutional closeness to Copenhagen).

Institutional governance and funding structures

DTU's strategic plan spell out the governance structure of the university (DTU 2008): DTU is governed by a 'board of governors'. There is also an 'academic council' which decides certain academic matters. The rector is appointed by the 'board of governors' and is responsible for the daily management of the university. DTU is organized as a corporate entity with an 'executive board' comprising the president (rector), provost (vice-rector), university director (CFO) and a number of deans. The 'board of governors' appoints the vice-rector and the university director based on the recommendation of the rector. The rector appoints the remaining staff of the executive board.

Also the funding strategy of DTU is laid down in the strategic plan of the university. According to the strategic plan DTU aim at transparent finances that demonstrate correspondence between the resources used and the results obtained. DTU intends to maximize the funding of the academic activities with a particular focus on competitive research grants, professional fundraising, continuing and further education, commercialization of intellectual property rights and innovative expertise, an active dialogue that supports the political allocation of public funds through earmarked programs, special allocations, contracts and basic allocations, and finally on international outreach activities, including lobbying and creating alliances.

Strategic objectives and performance

In the documentation retrieved from DTU some links between the national governance and funding reforms are commented. In a report from DTU to the Danish University and Property Agency it is pointed out that DTU is the Danish university with the longest experience in working under the new structure for managing universities in Denmark. The Act on the Technical University of Denmark of 2000 has created the basis for the subsequent acts related to universities in Denmark (DTU 2009b). DTU enjoys the new framework for management of universities. According to DTU it enables productivity to be increased at Danish universities. DTU also point out some issues regarding the university autonomy that could be further improved to enhance the autonomy of DTU. In a communication from DTU to the Danish University and Property Agency DTU point to some consequences of the University Act that could be further developed (DTU 2009a). Amongst others in the view of DTU the research grant policy should be changed such that both public and non-public research grants are unconditionally recognized as belonging to the institution and not individuals. DTU also point out that the sole

authority of ACE Denmark to approve new degree programs can limit universities' autonomy and ability to innovate.

DTU has been selected as one of our cases based on the university's performance regarding in particular internationalization and external relations. DTU's strategic plan spell out the university's intended strategy, amongst others the plan focus on issues of governance, internationalization and external relations (DTU 2008). According to the plan DTU will maintain its polytechnic, single-faculty nature but also collaborate with other universities and research institutions in Denmark with the aim of taking advantage of complementary fields of excellence (DTU 2008). With regard to internationalisation DTU aim to establish mutually binding international alliances with leading technical universities and research institutions with the aim of creating synergy and effectiveness. Also DTU promotes internationalization through a culturally inclusive, secular and cosmopolitan campus life. Regarding education DTU will structure its degree programs and degrees in accordance with the Bologna Declaration on the European space for higher education, such that the students obtain optimal opportunities to compose degree programs, including master programs, in an international network of leading universities. In research DTU will systematically develop its experimental facilities as a parameter in international competition. Also according to the strategic plan DTU will ensure a broad foundation for research, which is imperative given the University's role as a national centre for knowledge and as an international node within the technical and natural sciences and on the requirements posed by research-based teaching.

The strategy also spells out DTUs plans regarding improvement of the external relations of the university. The university intends to enter into binding agreements with research-driven companies to exchange knowledge and create value. Regarding external relations it is emphasised in the strategic plan that DTU is a reliable partner in its external agreements, partners should confidently expect the university to deliver what it has promised. Also with regard to education, the external relationships with society and business are emphasised. DTU aims at offering degree programs in engineering that meet the future-oriented needs of business for proficient university-educated employees and otherwise offer education in fields in which society requires DTU's competencies. Regarding research, the plan point out that DTU will promote promising fields of research within the technical and natural sciences, especially based on usefulness to society, relevance to business and sustainability. Also DTU will further develop its capacity for transferring technology through agreements with companies, for patenting and licensing activities, for starting up companies and for expanding activities related to science parks. Moreover DTU will engage in active mutual dialogue with business at all levels. Finally the strategic plan point out that DTU will market seminar, conference, course and program activities related to continuing and further education in which the competencies of DTU meet the needs of society.

7 Concluding remarks

In order to assess the Danish governance and funding reforms, including their potential impacts, we have to establish a benchmark. A forthcoming study (Frølich et al. 2010) compares Denmark to Norway and Portugal with regard to the newly introduced changes in national funding systems for higher education. Based on this study and the data culled here, we suggest describing Denmark as a special case with regard to governance and funding reforms in higher education.

Compared to for example Norway, Denmark has a long tradition for performance-based funding of education; the taxameter system has operated in several years. Both Denmark and Norway employ an output-based funding system, which seems to stimulate strategies to increase student numbers in order to gain resources attached to the credits (Frølich et al. 2010). There is, however in Denmark, no direct link between subsidies and consumption. Due to the principles of lump-sum allocation and the self-governing nature of the institutions, the universities are free to move their funds between education, research and joint expenses. Frølich et al. (2010) point out that the principles and incentives of the taximeter scheme are thus reflected to varying degrees. Although consecutive evaluations of the educational programmes at HEIs are performed, negative evaluations do not have direct financial consequences for the institution; however, the responsible Minister has the right to intervene if performance does not improve (Frølich et al. 2010).

In Denmark, the main topic of discussion concerning output-based funding of education has until recently been the quality and rate of production of graduates. However, the outcome of the provided education in terms of efficiency has taken a more prominent place on the agenda. In Norway, the objective of the funding reform has been to increase quality in HE; however, an increased focus on efficiency is being observed (Frølich et al. 2010).

With regard to the data culled here, it is interesting to note that informants at the institutional level and the national level have diverging views on the importance of the national level reforms. The informants also point out that the reforms are recent and hence their impacts difficult to assess. More over in the Danish case, the improved performance the quantitative indicators show are more in line with general higher education policies than the specific reforms highlighted as the most essential ones in Denmark. The observations are in line with the conclusion of a forthcoming study on Danish higher education funding policies (Frølich et al. 2010). Here it is noted that funding systems and their impacts "do not come in neat packages". The studied systems demonstrate a mixed pattern of strengths and weaknesses. The impacts of the funding systems may converge, even when different mechanisms are employed. There are no clear cut differences in the perceived strengths, weaknesses and impacts with regard to two internationally main funding systems for higher education (input based and output based funding).

List of interviewees

Wilbert van der Meer, Deputy Secretary General, Universities Denmark
Hanne Foss Hansen, Professor, University of Copenhagen
Evanthia Kalpazidou Schmidt, Associate professor, The Danish Centre for Studies in Research and Research Policy, University of Aarhus
Rudolf Straarup, Chief Adviser, Ministry of Science, Technology and Innovation
Vibeke Fahlén, ACE Denmark
Birgit Bangskjær, The Danish Confederation of Professional Associations
Nikolaj Helm-Petersen, Special Adviser, Danish Agency for Science, Technology and Innovation
Jens Storm, Chief executive of analyses and studies, Danish University and Property Agency
Jacob Fuchs, Head of Division, Chief Adviser, Danish University and Property Agency
Mads Eriksen, Political Advisor, Confederation of Danish Industry
Birgitte Lund Christiansen, Head, Learning Lab, DTU
Jacob Fritz-Hansen, Department for Public Sector Consultancy, DTU
Dan Jensen, Head, Department of Policy and Communication, DTU
Bente Kristensen, professor, Quality Adviser, CBS Learning Lab, Copenhagen Business School
Tue Vinther-Jørgensen, Dep.director, The Danish Evaluation Institute
Signe Ploug Hansen, Head of section, The Danish Evaluation Institute
Nils Wiese, National Union of Students in Denmark
Anette Dørge Jessen, Dep. Director, Danish Agency for Science, Technology and Innovation
Ole Stenvinkel Nilsson, Director of Accreditation and Quality Assurance, Copenhagen Business School on behalf of:
Thomas Werner Hansen, Senior Adviser, The Dean's Office, Copenhagen Business School
Ib Andersen, Managing Director, CBS Learning Lab, Copenhagen Business School

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Governance and Funding Reform in the European Higher Education Area

National system analysis: Estonia¹

1 Introduction

This analysis gives an overview of the most important changes in the governance and funding of higher education system in Estonia from the mid-1990s. The effects of these changes to system performance are studied based on eleven interviews including with representatives of the Ministry of Education and Research, higher education institutions, higher education agencies, advisory bodies and representative organisations. In addition two case-studies are presented to further analyse factors behind improved performances concerning research output, the ability to attract international research funding and mobility.

2 Reforms in governance and funding over the last ten years

There are 34 higher education institutions (HEIs) in Estonia – six public universities (catering for 66% of students enrolled in higher education), four private universities (6% of students), ten public professional higher education institutions (14% of students) and 11 private professional higher education institutions (12% of students). In addition two public and one private vocational education schools provide higher education for 2% of students enrolled in higher education.

Public universities in Estonia are legal persons in public law with a very high degree of autonomy regarding their academic, governing and economic decisions, whereas public institutions of professional higher education are state agencies administered by (with a few exemptions) the Ministry of Education and Research (MoER) and in consequence less autonomy mainly regarding the economic aspects of their activities. Overall MoER has a key role in developing and coordinating higher education policy in Estonia. MoER is also responsible for distributing state commissioned study places and funding across HEIs and for the preparation and implementation of national education development programmes. There are several advisory councils and organisations assisting MoER with its competences - The Estonian Research and Development Council, Research Competency Council, The Archimedes Foundation, and the Estonian Higher Education Quality Agency. The discourse between the MoER and HEIs is based both on the communication and negotiation with individual institutions as well as increasingly on the joint positions of the sector developed within three rectors' conferences. (In Estonia there are separate rectors' conferences

¹ Hanna Kanep, Estonian Rectors' Conference

for public universities, private universities and professional higher education institutions.)

Only universities have the right to award PhDs and professional higher education institutions have the right to provide master level programmes only in cooperation with universities (with very few exceptions). However, the diploma of professional higher education institutions allows access to university master studies.

Universities with their research institutes are the most important research performers in Estonia. In 2005 universities attracted 77% and 54% of overall institutional and project based funding available for R&D respectively (Masso, Ukrainski 2008). While R&D funding is of considerable importance for some universities, there are also less research intensive universities the budgets of which are depending primarily on funds available for teaching activities. Public funding for teaching is channelled to both types of HEIs mainly through state commissioned education. At the same time this state commissioned education does not limit the autonomy of HEIs to create additional fee-charging study places in order to meet the demand for higher education beyond the needs defined by the government and thereby to attract private funding. The range of possibilities to raise private funds is limited for professional HEIs compared to those of a university as they do not own their assets such as land and buildings and are not able to establish their own private companies. Having all of their costs and revenues as part of the state budget introduces yet another difficulty for the long-term financial management of professional higher education institutions as they are not allowed automatically to build up reserves and carry over surpluses.

The organisation of HEIs in terms of structural units is institution specific with academic units within universities having a high degree of autonomy in terms of academic as well as economic decisions. The organisation of governance has however several similar features and is in very broad terms determined by the Universities Act, the Institutions of Professional Higher Education Act and The Private Schools Act. For both types of HEIs the two most important bodies are the rector (elected for a given time-period), the highest authority, and the council, the highest collegial decision making body. Council includes the rector (chairman), vice-rectors, deans of faculties, and representatives of students and staff. In the case of universities council establishes different committees, e.g. Academic Committee, Budget Committee, Committee for R&D, etc, responsible for the development of different strategic documents and advising on relevant matters. University Government is also an important body having mostly consultative role.

Reforms in higher education governance

Estonia is a small transition country still experiencing changes in most of the areas of economic and social life since the late 1980s. Reorganisation of the higher education and R&D system began in the early 1990s and considering the speed of economic and demographic changes as well as their effect on labour market conditions and the expectations of the society in general, the process of transition and

continuing changes in the system are inevitable. While numerous small changes are being prepared and implemented regularly, major reforms in the organisation, legislation, governance and funding of higher education were introduced in the early 1990s followed by another round of profound changes in the late 1990s. For example, the high degree of autonomy of universities regarding academic policy, internal management of salaries, human resources and fiscal affairs dates back to the period leading to the Universities Act in 1995.

In 1997 the Academy of Sciences was reorganised to become an honorary society. The research institutes that were formerly parts of the Academy were successfully integrated into universities and other independent research centres were created. (Estonian Ministry of Education and Research, 2006)

The following division represents four important movements rather than specific reforms for it is hard to assess the importance of individual changes which address the same aspects of the education system. Another important note is that the emphasis here is on the changes of governance concerning education as opposed to the R&D side of the sector. The latter changes are not discussed unless it is of utmost importance when it comes to explaining performance improvements in section 3 of this report.

a) The development of and changes in the quality assurance framework. "Universities Act" in 1995 introduced the formal bases of *institutional and program accreditation*. Enforcement of the standards described was gradual as the bodies responsible for accreditation, their statutes and the requirements and procedures were being developed at the time. Accreditations of curricula started on a pilot basis in 1996 and became regular practice in 1997. As an important landmark in 2003 six public universities signed a *Quality Assurance Agreement* according to which regular evaluations of quality have been carried out by the Quality Assurance Committee formed under the auspices of the Estonian Rectors' Conference. Some of the requirements set out in the agreement were formalized and a dual quality assessment system was introduced in 2008 with an amendment of the Universities Act.

The material amendments concerning quality assurance were the formation of *Higher Education Quality Agency* for independent and internationally accepted external quality evaluation; requirements for the development of more formal *institutional internal quality evaluation* systems; separation of the recognition of diplomas from the accreditation results; homogenization of the requirements and procedures for acquiring the permission to provide higher education as well as for quality assurance for all types of HEIs. During 2009-2012 all the HEIs (private and public) will have to (re)apply for the licence to provide education at the level of higher education. Compliance with the requirements set in the *Standard of Higher Education* is evaluated and coordinated by the MER and has to be approved by the Government. In the future this process will also be obligatory for all new institutions.

b) Diversification of the provision of higher education. The period since the mid-1990s saw three distinctive developments in the provision of higher education in Estonia – the development of *professional higher education* with the Institutions of Professional Higher Education Act passed in 1998; the development of regulations for *private higher education* with the Private Schools Act passed in 1998; and the expansion of *fee-charging education* in public universities.

The branch of professional higher education developed gradually from former tertiary education with a professional orientation and higher vocational education. The goal was to better regulate the system of HEIs and to create a fuller understanding of tertiary education with distinctive mandates for both academic and professional HEIs. During this process institutions formerly called “institutions of higher education” became institutions of professional higher education as did several vocational education schools previously offering higher vocational educational programmes. This transformation brought about a series of mergers between existing institutions as well as the creation of new ones. These mergers were initiated from within the sector with MoER playing only a limited role in the process. The changes promulgated through the Universities Act in 2008 aim to further clarify the mission and functions of both types of institutions, with a special focus on enhancing specialisation and cooperation and reducing overlaps and unnecessary competition for resources.

The evolution and development of private education institutions started in 1988, but the formal basis for the operation of private institutions was specified and more strictly regulated with the Private Schools Act of 2003, amended in the following year to achieve more transparent requirements for running private institutions (including establishing the minimum amount of the share capital).

Although universities were able to charge fees for the provision of education already at the beginning of 1990s, the significance of fee-charging education as a means for obtaining tertiary education as well as a way for attracting private funds increased more than five-fold in terms of student numbers from 1997 to 2007. It coincided also with the development of more flexible programs in the area of adult education.

c) Adoption of two main cycles according to the Bologna declaration. The new bachelor-master structure was first applied in the academic year 2002/03 after the amendments were made to the relevant acts in 2002. The system introduced new bachelors' studies prevalently with a nominal length of three years leading to a qualification which did not previously exist in the academic degree structure. The duration of bachelor's programmes in the previous system was four years in most fields of study which allowed access to the labour market as a specialist. According to the new system acquiring the in depth knowledge and skills in the area of speciality is the purpose of the second stage of higher education – the master's studies, whereas “old master studies” involved a high level of research activities leading in most cases to an academic (research) degree. The nominal length of master's studies is 1-2 years and in case of single long cycle programmes not less than five years.

d) Changes in the admission procedures of HEIs. Since 1997 HEIs have dropped most of the admission examinations originally carried out at the higher educational institutions and have started to use the results of relevant national examinations (on completion of secondary education) for the selection of students. This process has been driven by institutions as the admission conditions and procedures are set by the councils of individual institutions, but in general, the variations between institutions and different fields concern the number of national examinations taken into account and the subjects of national examinations considered to be relevant for particular study programmes.

Reforms in the funding of higher education institutions

Reforming the financing policies of universities in the early 1990s involved mainly the following changes: from detailed input line-item budget controls by the Ministry to providing lump-sum allocations to universities; and explicit recognition of both the teaching and research missions. (Estonian Ministry of Education and Research, 2006)

State commissioned education is the most significant instrument of public funding of higher education representing more than 86% of the total funds directed to HEIs for education through the MoER in 2008 (calculation based on Tina, A., 2008). The total number of state-commissioned study places (and thereby public funds for HEIs in the first cycle) is determined on the basis of an estimated share of persons who will acquire general secondary education (currently 50%) and secondary vocational education (10%). Both public and private institutions are eligible for state commissioned study places and funding but in practice less than 2% of funds available through state commission were directed to private providers in 2008 (Riigikontroll, 2008).

In parallel to state commissioned education HEIs are active in the market of fee-based formal education, Open University activities in the field of adult education and in-service training. With the expansion of fee-based education in public HEIs, the importance of private funds has also increased. In 2006, the income from fees was on average 13% of the total income (including research) generated by public universities. Since individual institutions have the autonomy to specify the rate of tuition fees for fee-based study places as well as to decide upon the number of such study places, the relevance of these funds for different institutions varies significantly – from 9% to 27%.

The question about changing the overall funding system of tertiary education has been raised from time to time in different instances and strategic documents. However, the possibilities, consequences and potential gains of entirely publicly funded higher education or different tuition-fee systems have not been comprehensively analysed and discussed, although the need for change has been recognised.

- a) The most important system-level change in the area of funding has been the introduction of a *performance component into state commissioned education*. Until 2002 the contracts between the MoER and the universities as well as institutions of professional higher education for state commissioned education were based on the number of study places at the program level. From 2002 onwards the new funding formula for institutions concentrates on financing the output (the number of graduates from Master's and PhD programmes) and has abandoned controlling numbers on a programme level, instead focusing on broader study fields (Estonian Ministry of Education and Research, 2006). Starting from the academic year 2009/10 three-year performance contracts have been introduced, which add several additional criteria to the existing model and make the contract slightly less dependent on the number of graduates.
- b) *The basic cost of the study place was increased* by 30% in 2007. This basic cost is one of the components of the funding formula for state commissioned education.
- c) In the area of student support *the introduction of the doctoral allowance* (conditional on progress) in 2003 can be seen as the major reform. The Study Allowances and Study Loans Act from 2003 reorganised the support scheme for students to study in Estonian and foreign HEIs plus created an additional instrument for state co-funding for student participation in international mobility programmes like Erasmus. Since 2003, both short and long-term mobility opportunities are funded from the state budget mostly for Master's and PhD students but also for academic staff. (Estonian Ministry of Education and Research, 2006)
- d) *The introduction of base-line funding* in 2005 for financing of research and development in order to attain the strategic development objectives of research and development institutions, particularly to co-finance foreign and national projects and to open new research directions. (Organisation of Research and Development Act)

3 Performance improvements in Estonian higher education

One of the important developments which enables better steering and analysis of higher education as well as international comparison has been the creation and development of the Estonian Education Information System in 2004. This database incorporates student and institution level data for all the levels of education providing the necessary base for analyses of performance in the sector. In cases where the availability of detailed historic data about Estonian education system in international databases was limited, nationally available data are used to discuss the performance changes in Estonian higher education along the dimensions used in this governance and funding report.

Access

Participation in higher education has increased. The number of students in tertiary education level was 68 399 in 2008, which is 2.7 times more than in 1993. The

expansion of the sector was boosted over the period 1996-2002 when the maximum yearly growth rates exceeded 20% for both students enrolled and students admitted. Most of the increase in student numbers has been a result of the expansion of fee-based education, and the creation of professional higher education. As discussed in the previous section, access in terms of flexible forms of learning also improved considerably during this period. The changes since 2002 have been much smaller. Participation rates in tertiary education of those aged 18-39 are well above the EU-27 average.

Lifelong learning

Improvement in the number of students aged 30 years and older as a percentage of total enrolment has been reached through the development of open universities and distance learning opportunities

Employability:

The earnings of individuals holding tertiary education qualifications are higher than those with upper secondary and post-secondary non-tertiary education. The comparative advantage has slightly diminished in recent years (the change in the indicator compared to 2002 was 0.91 in 2006). This is quite an anticipated development considering the rapid expansion of tertiary education sector. The relative employment rate of tertiary education degree holders, however, has increased over the period of 2002-2006. Unemployment among individuals with higher education increased less than among others during 2008-2009.

Mobility of students

Both of the indicators of mobility (inflow of students as well as proportion of students studying abroad) displayed huge improvements over the given period of time. One of the reasons identified by interviewees is that the initial levels of mobility in both directions were low to begin with. Nevertheless, interviewees agreed that the MoER and the sector have contributed considerably to this improved performance through actions such as:

- Estonia was amongst the first countries to ratify the Lisbon Convention and related acts after that leading to the recognition of qualifications;
- Developing national mobility schemes, including state commissioned education at PhD level to study abroad and complementary funding through the ERASMUS program;
- Developing curricula in English, especially at master level;
- Creating and widening the network for dissemination of information and building up a strong centre for administrating different EU mobility schemes and other EU funds directed to mobility (also for academic staff)

It is difficult, however, to estimate the importance of these factors as one of the biggest factors affecting mobility has been the enlargement of the EU (this is discussed in more detail in section 4.3).

Research output

The number of scientific articles has shown a steady growth of approximately 10% each year from 2002 to 2006. But perhaps even more importantly, the citation of the articles has increased, too. Throughout the years 1997-2007, Estonia has on average 7.87 citations per article, the 50th position in the world and the first among the former 10 CEE countries. According to the interviewees the factors which might explain these developments include: increased participation in international research projects, changes in the criteria for major funding streams in Estonia as well as the introduction of the base-line research funding instrument, the application of the quality agreement's requirements concerning PhD theses and the selection of professors.

Capacity to attract funds

The biggest performance improvement within the context of this report has been achieved in the capacity to attract funds for R&D from international sources. According to the interviewees this increase can be explained by several factors:

- the priority for investment in HERD has increased, especially when it comes to EU structural funds, and the increased amount of structural funds available for such investments;
- success in the Framework Programs – the results of both the 5th and 6th FP show that scientists in Estonia received more than 2.5 times the amount spent by the state to participate in these programs. The data about the 7th FP look even more promising

4 Effects of the reforms and other explanations of improved performance

The development of and changes in the quality assurance framework

The interviewees stressed that the implementation of the accreditation system and the current developments in the area of quality assurance have had a multifaceted effect on the system of higher education in Estonia. The most straightforward one is the linkage between the accreditation system and the decrease in the number of HEIs operating in the market. The results of accreditation involving international experts were recognised by the MoER leading to several quality-driven closure decisions within the sector. This effect is expected to increase following the changes in the quality assurance principles adopted at the beginning of 2009. All the institutions currently providing higher education have to request an education licence from the Government of the Republic in order to be able to conduct studies and issue recognised diplomas. In addition external evaluations will be carried out regularly by an independent accreditation agency – the Estonian Higher Education Quality Agency (or a recognised foreign quality assessment agency) for accreditation of the institution as a whole and for accreditation of study programme groups.

The second positive effect observed was initiated through the Quality Assurance Agreement between public universities and concerns uniform requirements for awarding PhD degrees, appointing professors and other issues. It introduced a new form of accountability into the system – universities committed themselves to report

and compare their results annually in all of the aspects addressed in the agreement. As the requirements became more generally accepted, the agreement was amended and some of these requirements have made their way into the new Universities Act. The potential gains in terms of quality steering are inherent in such a sector-driven benchmarking exercise as long as the universities are committed to the process and the requirements are gradually upgraded. It was also mentioned by the interviewees that the process in itself has had a very positive outcome in terms of promoting cooperation between the universities. The network pattern created for that purpose has also proven to be effective in other areas of common interest.

Diversification of the provision of higher education

It was acknowledged by all the interviewees that the opening up of the tertiary education sector to more flexible forms of education provision and the growth of higher education in volume has been inevitable. It has contributed to greater access to tertiary education in general as well as to the development of the system of lifelong learning. It was also agreed that the system had needed a clearer conception and division of tasks in the provision of higher education. The opinions of the interviewees diverged, however, when it came to evaluating other effects of the changes in the system.

Some of the interviewees find that the changes regarding professional higher education and the respective legislation together with the private institutions act made the sector better structured in terms of professional and academic tracks and institutional division. It is evident that the period has brought significant administrative changes and more autonomy for professional higher education institutions, but some of the interviewees are concerned that the reorganisation of the professional track has stayed rather formal not quite achieving clarity at a substantial level where the understanding of stakeholders and the general public are concerned.

Most of the interviewees agree that when it comes to the better utilisation of human (professors and students) and financial resources of a small country, there are still steps needed in order to reduce overlaps in the provision of same level education, increase specialisation within both types of institutions, better conceptualise the mission and boundaries of the academic and professional tracks and build up interdisciplinary cooperation. There have been several sector initiatives for joint activities and programs and as of 2008 joint curricula have been given a legislative base, but as in other countries, the development of procedures, accreditation and funding principles is still in progress.

Some of the interviewees expressed their concern over the pressure that this expansion of tertiary education participation has exerted on quality and the concept of tertiary level education. The concept has clearly widened from being more narrowly academically and research oriented towards becoming more labour market, social inclusion and regional development oriented. But the issue of whether the increased number of different institutions and modes of delivery serve the best goals of higher education calls for a much clearer statement and dissemination of expected

outcomes for each and every one of these goals. In terms of labour market performance, for example, it was argued that under the current economic conditions HEIs have “done their job” well in terms of unemployment among individuals with tertiary level education staying lower and increasing less than among individuals with lower levels of education. There is also evidence of improved performance in terms of the percentage of the population with tertiary qualification.

Adoption of two main cycles according to the Bologna declaration

All the interviewees agreed that the implementation of the new degree structure according to the Bologna declaration was a necessary step to enhance the internationalisation of higher education. In addition to that, it allows students to shift their domain of study as well as institution within and outside Estonia between bachelor and master, creating also additional opportunities for combining curricula and receiving more specific qualifications. All the interviewees emphasise, however, that the practical implementation created several tensions within the sector and in society in general. It was argued that majority if not all of these tensions resulted simply from a rapid pace of change with too few opportunities for in depth discussions.

The most fundamental tension emerged between the perceptions of the meaning of the “old and new” bachelors and the “old and new” masters. In the context of the “old system” professors, employers and students had a general understanding that a bachelors’ degree obtained after 4-5 years of studies is a specialist degree allowing entry to jobs which require a high level of qualification. Master studies were chosen in order to pursue an academic career and proceed to PhD studies or to qualify for more leading jobs, for example in the public sector. The same expectations were carried over to the new degree system not realising that the “new” master is a specialist degree now. The “midway point” after completing the first cycle was intended to enlarge students’ options in continuing their education (plus allowing labour market entry on a small-scale) rather than being labour market oriented. This false perception was encouraged also by the economic and labour market conditions at the time where many students were active in the labour market while studying. It is now obvious that the new two-cycle concept was not communicated well enough and the dissemination process should have been more effective.

The chosen speed of transformation was even more complex for the institutions. Not only did it require the development of new curricula for first two cycles but it affected PhD-level studies as one year less of pre PhD studies meant less research experience for PhD entrants. It is too early to estimate the potential effect this may have on the average duration of PhD studies.

A positive effect was seen again in terms of enhancing cooperation within the sector. The current process in the context of learning outcomes enables institutions to review and continue to improve the curricula. There is also a general impression that the implementation of the two-cycle system (together with supportive activities such as comparison of qualifications, diploma supplement, ECTS credit point system) has contributed to the performance improvement in the internationalisation process.

Changes in the admission procedures of HEIs

National examinations were introduced into secondary level education in order to conduct external evaluation. In order to acquire the secondary level qualification, national examinations in some of the subjects are compulsory and voluntary in others. This has provided HEIs with the opportunity to use these results as (a part of) admission criteria for selecting students. This particular change has been quite controversial including the use of the results for admission purposes. This was reflected in the difference of opinions among our interviewees.

While some of the interviewees argued that using these results was a more efficient use of resources given the expansion of higher education and the increasing workload of professors and that this benefits young people in terms of them taking fewer examinations, others felt that it represented more of a shift in workload rather than a saving. It was also mentioned that the general trend of girls receiving higher scores in these exams leads to more female students in tertiary level education in general.

These and other more content related issues of national examinations together with the important issue of drop-out rates and the motivation to study illustrate the tight relation of all levels of education and the fact that some of the performance improvements discussed in the context of higher education (such as the proportion of the population with tertiary qualification) are also affected by the changes in the pre-tertiary education system.

Effects of the reforms in higher education funding

Introduction of a performance component into state commissioned education

The general opinion of the interviewees was that the transformation from input based towards output and performance guided state commissioned education has been a positive development overall. However it was also recognised that so far the expected gains in terms of efficiency have been modest at best. The results in doctoral studies have been more apparent (especially in the first years after the implementation of the new system) than in the first two cycles of higher education. Such results were explained by the incentives created by allocating part of the public funding to doctoral level studies only after graduation. The extent to which this has created financial incentives to faculties and supervisors to foster graduation depends on the internal resource allocation procedures of individual institutions.

One of the positive features mentioned was that introducing target numbers of graduates into the contracts between HEIs and the ministry has brought a longer run perspective into the system by providing HEIs with better information regarding the state's priorities among different fields of study. So far there have been no financial or other consequences if the number of graduates is not reached by the institution partly because the system has been already modified and the process is still in a stage of learning from experience.

The introduction of the doctoral allowance

All the interviewees agreed that the introduction of a monthly doctoral allowance in 2003 at the level of the average salary in Estonia at the time was a very positive and important development. Doctoral studies and careers in science became more attractive and feasible for young people. The interviewees also stated that the impact of this instrument has diminished as it has not kept pace with inflation. It was also argued that in order to enable doctoral students to focus on their studies and research requires additional measures addressing social guarantees as well as the revision of research remuneration policies.

The introduction of a research base-line funding instrument

In general it is believed that introduction of base-line funding has enabled universities to provide co-funding for more national as well as international programs thus affecting positively the overall performance of universities in terms of attracting external funding for research.

It was also argued that the instrument is of strategic importance (as the rest of public research funding is highly targeted to scientific topics or research groups and is project-related) allowing universities to carry out their long-term science policies – to support the development of new fields of research and to foster interdisciplinary research for example. Considering the high degree of discretion universities have in their allocation decisions, it is hard to measure the overall impact this instrument has had on the improved performances in terms of research output (e.g. number of publications) and the ability to attract external funding. The example of the University of Tartu (see the case study in section 5) demonstrates clearly the existence of such a linkage. Base-line funding is conditional on a positive evaluation of the university's scientific activities and is distributed based on output (high level publications, monographs and patents), income from R&D activities and completed PhD dissertations which provides additional motivation for performance improvement.

Other factors of influence

Estonia joining the EU in 2004 and the different changes and processes related to this were identified by interviewees as the most important factors outside the education system that have had a positive effect on the mobility of students and academic staff, the capacity to attract international funds and increased research output. As far as mobility is concerned, the transition towards an open society and then joining the EU opened up a whole new range of opportunities in terms of networks, target countries, scholarship schemes and other resources and removed barriers such as visa obligations. Although some EU research programs were accessible before 2004, the number of programs and their levels of funding have grown considerably since. Without the performance of the researchers and the efforts of the sector and government to develop the necessary networks and support structures this on its own would not have resulted in such performance improvements. Nevertheless, joining the EU has provided Estonian universities and researchers with the comparable conditions to compete for international research funding.

As mentioned above the priorities of the government and other important institutions are of great importance as well. The strategic choices made in the allocation of structural funds affect both the infrastructure and human resources available for research activities. The gradual change in these priorities in the past few years towards higher education and research was recognised by all the interviewees.

Economic growth over the period was also identified as an important factor behind increasing mobility as increased resources made funding studies and living costs in other countries feasible for more families.

5 Institutional case studies

University of Tartu

Key Figures:

- Founded in 1632 by King Gustavus Adolphus of Sweden
- The first university to teach in Estonian since 1919
- 10 faculties and 5 colleges
- 70 bachelor studies programmes, 70 master studies and 35 doctoral studies programmes
- 16,000 students (including close to 650 international students)
- More than 1250 doctoral students and more than 80 doctoral defences a year
- 3500 employees, including 1700 academic employees (180 professors)
- 46 partner universities in 18 countries
- Over 2700 research publications (including 650 in the ISI Web of Science)
- Nobel Prize in 1909 (Wilhelm Ostwald, founder of physical chemistry)
- Budget volume of 1.7 billion Estonian kroons

Governance structure

Within very broad terms the governing structure of the university is laid out in the Universities Act and University of Tartu Act. There are two governing bodies with decision making powers at the central level – rector, the head of the institution, and the University Council, the highest collegial decision making body chaired by the rector. University Council consists of the rector, vice rectors, deans, the academic secretary, the director of the University Library and the president of the Student Council as well as elected representatives of the faculties and the student body. The

representatives of students form one fifth of the university council as well as of the councils of all faculties. The rector has the highest administrative and disciplinary authority and is responsible for the general condition and development of the university. The specific tasks and responsibilities are defined in the Statute adopted by the Council. The rector also decides upon the number and mandate of vice-rectors. Over the years the University of Tartu has always had two vice-rectors – one for academic affairs and one for research.

A third vice-rector position has been established at times when some specific area of interest needed high level coordination, for example, for the development of the Open University (with a lifelong learning mandate).

In order to have a linkage between society, state and the university there is an Advisory Board with representatives of external stakeholders appointed by the Government of the Republic. The advisory board has not proven to be effective enough in its tasks to mediate the interests, expectations and feedback of the society as well as to be a means for influencing contractual or other relations of the university and the state. Developing measures to increase the role of this body is one of the challenges in progress today.

The latest strategic plan (for the years 2009-2015) was adopted by the Council of the University in December 2008. A detailed operational programme for one year and a broader programme for the following three years are developed annually in order to meet the objectives of the strategy.

Funding principles and internal resource allocation

A very important milestone for the development of the current funding principles of the university was the University of Tartu Act, passed in 1995 in the Riigikogu (Parliament), which gave the university remarkable decision making powers and autonomy in financial matters, ownership of property, human resources, day-to-day management matters and its internal organisation. The autonomy granted by this Act is somewhat greater than that granted to other universities in Estonia and considerably larger than many European universities had at that time, including the freedom to buy and sell property and borrow funds from the capital market and to develop partnerships and cooperation of any kind. Decisions of this nature are in the competence of the council. The Act gave recognised the significance of the university at national level, defining it as an important public institution – the national university of the Republic of Estonia. From this point forward the university was no longer treated as a state agency but as a contractual partner in terms of financial matters. Contracts for state commissioned education and research contracts were developed stating also the accountability and responsibility of the university within these contracts. On one hand this added to reporting and formal obligations but on the other hand, and most importantly, it enabled the university to determine its own goals and to decide how to achieve these goals. In the period 1995-2000 all of the state funds allocated to the university were changed to this contractual basis. This has made accounting within the university much simpler – a clear structure of the institution's income, costs, assets, liabilities. From 2000 and onwards the state has

started to move towards funding the results of activities. This is seen as both a welcome and necessary process and is currently still work in progress. Overall these developments have also contributed to the capacity to attract international funding.

The internal resource allocation system of the UT is decentralised according to the structure of the university. There are academic units – faculties and institutions of the university – and non-academic units. Institutions of the university include colleges (situated in different regions in Estonia in terms of the university's regional policy), library, museums, botanical gardens, the Gifted and Talented Development Centre. The division of administrative and support structures is based on the functions established by a decree of the rector (offices for academic affairs, research and institutional development, international relations, personnel, finance, communications, IT, estates, management unit, administration, open university and Student Council). In addition the University of Tartu Consolidation Group includes both for-profit and non-profit corporate entities. A strategic decision was made to reorganise a number of structural units (activities) of the university which should not be funded centrally from the budget of the university (such as accommodation of students, sales of pharmaceuticals as well as books, publishing and estates management) to operate as corporate bodies. Student sports and student activity clubs, which are supported financially from the budget of the university, also operate as non-profit corporate entities to provide a clearer structure and stronger financial discipline.

Centrally, the university follows the aims and terms of the contracts in its internal allocation mechanisms. For example, the funds for state commissioned education are calculated on the basis of the basic cost of a student place and factors (differentiated by field of study) for broad groups of study. The same structure is used to allocate funds across faculties and colleges. Major national research funding instruments are competitive using quantitative indicators (publications, PhD degrees awarded, etc) and in most cases are allocated to the universities by different scientific topics – the same indicators are then used within the institution to allocate these funds between faculties. The base-line funding of research is exceptional in the sense that the purpose of the funding stream is to support the strategic development objectives of research and development institutions. At the UT half of the base-line funds are allocated to research topics/groups by decision of the council based on the overall and specific strategic aims of the university. The other half is allocated to faculties based on the results of their R&D activities to support their long-term plans and co-funding of European research projects. Heads of faculties (deans), colleges and institutes and their respective councils have the freedom and responsibility to manage the funds allocated to their structural unit.

Such an allocation policy has both strengths and limitations. It is positive in terms of financial discipline and motivation – faculties are expected to stay within the limits of their budgets and avoid overspending and at the same time are encouraged to find additional funding for their research and teaching activities (funds generated by the faculty are subject to a central overhead contribution but are otherwise theirs to

spend). The other side of this allocation mechanism is that there is less funding available for the university as a whole at central level.

The funding of administrative and support structures are based on the overhead policy. The share of the overhead varies between contracts as not all contracts allow charging for indirect costs. Currently two patterns can be highlighted in this respect. First, since the university is not yet able to receive full coverage of indirect costs from non-public contracts, the share of indirect costs covered from public contracts is higher. Secondly and similarly, the share is bigger in case of teaching contracts than in case of research contracts. The issue of research grants not covering the full costs of carrying out the research does not only concern international and private funding. Competitive public grants in Estonia sometimes include overhead costs, sometimes fund these separately and sometimes do not fund overhead costs at all. Therefore no common overhead policy can be applied within the university. This is an important issue of discussion between the UT and other universities in Estonia with the ministries which offer such competitive research grants.

Research funding structure and increased performance in the capacity to attract funds

The income of the UT from research activities increased almost nine fold between 1997 and 2008 in nominal terms. Funds per researcher have also more than doubled. By far the greatest part of the research budget depends on the success of scientific theme/project applications made to different national and international funding agencies. The most significant funding instrument for the UT is national targeted science funding, which accounts for about one third of the overall research budget. These funds are allocated to scientific topics on the basis of applications evaluated by a panel of experts, including international specialists, for different fields of science. The main criteria include the relevance of the topic and the qualifications and performance of researchers. In 1997, funds from the two major national funding instruments formed almost 70% of the UT's total research income. By 2008 this percentage had fallen to 41% although both of these instruments have increased considerably in volume. The funding of research has become more diversified, additional funding opportunities have been developed and with this the reliance on one single income stream has been reduced.

From 1997 to 2008, the share of international funds increased from more than 8% to almost 13% of total research income. In terms of volume this shift represents more than a 13-fold increase. These indicators of international funding include participation in FPs as well as other international research contracts. They do not, however, include financing from structural funds, which has also grown over the years. Structural funds are of an international nature for the most part (except national co-funding) meaning that the increase of funds of international origin is even larger, especially in 2005-2007.

Research output

According to the Thomson Reuters Web of Science database, the number of Estonian publications more than doubled between the years 2000-2007, from 370 in 2000 to

792 in 2007. Throughout all these years the UT was responsible for 50% or more of these publications.

In addition to the research output indicators studied within the context of this project, an important indicator of the relevance of research output is information about citations. In this respect the UT performs even better within Estonia being responsible for more than two thirds of all the citations of Estonian authors. According to Essential Science Indicators there were twelve scientists at the UT (as of September 2009) who belong to the top one percent most cited authors in their respective fields.

The reforms and other factors driving the increase in research funding and the improvement of research output

The UT has an *institutional human resources policy* concerning research performance. The requirements for eligibility to stand as a candidate for a professor, for example, include requirements for research performance at an international level, international citations and active research projects. Candidates are also expected to be successfully able to apply for research grants and other research funding. The basic requirements were set in 1995 and have been amended several times since. In addition to formal requirements, the strategic aim has been to provide incentives and co-funding in order to bring strong scientists and researchers to work at the UT. A very important part of this strategy is to find ways to bring back Estonian researchers with international experience. Different national, international and institutional funding mechanisms have been used for this purpose and it has already contributed to increased research output as well as to the capacity to attract both national and international funding.

The most important *reform in higher education governance* concerning research in the higher education sector was the reorganisation of the Academy of Sciences in 1997. The government stated that for a small country like Estonia, it is not possible to maintain a strong research active higher education system as well as a strong separate research system. The integration of scientific research staff into the universities changed mainly teaching universities into research active universities. The overall process was difficult for all the institutions involved, including the UT, but it has proven to be a success far beyond its initial goal of consolidating financial resources. One of the advantages of this integration is that it is easier to identify promising young researchers while they are still studying. The problem of ensuring the sustainability of human resources is a challenge for universities but even more so in those research institutes which are not attached to a university.

Although only one complete research institute (Institute of Physics) was integrated into the UT, the UT employed almost a hundred new researchers within the first year of the reorganisation. Starting from less than 200 researchers in 1997, steady growth throughout the years has led to more than 700 researchers and senior researchers working at the university in 2008, which has had a major impact on research output and the capacity to attract external funding. Though the change in the overall number of teaching staff has been relatively smaller, the increased

requirements for research activities for professors and other teaching staff have also contributed to these improvements.

An important *national funding instrument* (base-line funding of research) was introduced in 2005 enabling the university to better participate in international research projects and support its strategic initiatives in research. It has been used to open and advance scientific fields and to provide co-funding options for research groups able to apply for additional funding from other sources. The results of the projects carried out so far have been in general successful in the number and level of scientific publications as well as in attracting additional funding from international sources (e.g. Wellcome Trust), from structural funds and from national research funds. Base-line funding has also been used to establish a development fund to support strategic initiatives and to fund research themes which have the potential to become international centres of excellence.

The other national research funding instruments are more scientific topic and/or research group oriented but also implicitly targeted towards more research output as award criteria include indicators about publications as well as the capacity to attract external funding. Both of these indicators are also central in the process of evaluation of R&D, which in turn is a prerequisite for being able to provide PhD level education as well as receive base-line funding.

Though it is evident that all of the above mentioned factors have had an impact on the research output and increased international and other research funding, it is hard to estimate the relevance of each of these changes and establish a quantifiable linkage with improved performance.

There are also *other significant factors* involved. For example, when it comes to international research funding, the main driver behind the increase was Estonia joining the EU and the increased funding opportunities this brought with it. The financial relations between the UT and Europe developed in accordance with the transition of Estonia; starting from no financial relations with Europe in the 1980's, through limited resources and possibilities in the early 1990's to a period of growth starting in the late 1990's. At that point there were already scientists at the UT able to attract international funds. Prior to joining the EU, some financing instruments were made available for Estonia, for example the pre-accession programme, Phare, which was targeted mainly at the development of infrastructure – an important prerequisite for later developments. The UT participated successfully in this programme.

The conditions of the 5th and 6th Framework Programmes favoured projects involving a university from Eastern Europe as a partner and the UT was very motivated to participate in such transnational projects. UT researchers found partners mainly from Scandinavia, but also from Germany and England.

Estonian Academy of Music and Theatre

Key figures

- Founded in 1919
- 706 students (487 in Bachelor Studies, 181 in Master Studies, and 38 in Doctoral Studies), including 85 international students
- 29 students of the Academy are studying in different European higher education institutions in music within the framework of the LLP ERASMUS student exchange programme. 5 students are doing their internship in Austria, Italy, Finland, Scotland and Sweden (2009/2010).
- In 2009, 130 students graduated from the Academy and 205 student candidates were admitted
- The Estonian Academy of Music and Theatre includes a teaching staff of 263, of which 116 are engaged on a contractual (hourly) basis; there are also 14 emeritus professors and 10 emeritus associate professors. Many professors are employed part-time. The total number of full-time academic positions is 93.25. The Academy also employs 22 piano accompanists and 8 researchers.
- There are 92 administrative workers and support personnel

Governance structure and internal resource allocation system

According to the Universities Act the highest collegial decision-making body of the Estonian Academy of Music and Theatre (EAMT) is the academic council. The members and specific tasks of the council are stated in the Statute of the Academy. The council is chaired by the rector and includes the vice-rectors, managing director, head of registry and student affairs department, chief accountant, chairman or co-chairmen of the doctoral committee, heads of the principal academic units, representatives of students, including a postgraduate student and representatives of academic instructors and researchers. Authorised representatives of the board of trustees, the headmaster of the Tallinn Music High School and, if necessary, other persons appointed by the rector, participate in the work of the council.

The principal academic units are departments, institutes and centres. Departments may include studios and, as subdivisions, lectorates. The academic council may also establish centres under the departments in order to develop creative and/or research activities. These centres operate under their own names and on the basis of bylaws approved by the council.

The everyday educational, creative, research and administrative activities of the EAMT are managed by the Rector's Office, which consists of the rector, who is the highest official responsible for the general condition and development of the academy and the lawful and rational utilisation of its funds, and vice-rectors. The managing director is responsible for the administrative activities of the EAMT. For the

development of mobility and international relations EAMT has an International Relations Department and vice rector for international relations.

EAMT and the community are connected by a board of trustees which is an advisory board whose members are nominated by the Government of the Republic after hearing the views of the university.

The administrative and support structure of EAMT operates at the central level with only study programme registrar positions in each department. Heads of department are leading professors recognised in their fields of activity. Internal management of resources is also rather centralised. Each department receives a relatively small budget for their activities based on their student numbers. This budget is also used for purchasing smaller equipment and instruments. Purchases of more expensive instruments as well as decisions on larger investments are made by the academic council. Administrative and support units also receive an operational budget each year.

The costs of the International Relations Department are covered mainly from different project funds. Most participation in international programmes and projects is developed and coordinated centrally. No overhead policy applies to this project income. Such an approach requires very close and well managed cooperation between the international relations department and academic units. Maintaining and developing clear and open communication channels and linkages between academic and administrative units is an active and deliberate process of the academy. Central participation in international programmes allows the academy to better manage its strategic goals in terms of international relations, including mobility.

The principles of international relations and increased performance in mobility Mobility as discussed within the framework of the performance indicators in this study is only one part of international relations. In case of EAMT the goals in terms of mobility of students are always addressed within the wider context of the goals in international relations in general. This approach is also used in the following sections to better understand the activities currently carried out in the academy and the progress achieved so far.

International relations is an area where the achievement of goals is very time consuming and where both possible positive and negative effects become evident gradually over the years. This in turn makes the management and coordination of the development of international relations in a consistent manner very important. The EAMT international and public relations strategy for the years 2007–2012 promotes this consistency and the importance of international relations for the academy.

International relations are developed in the academy according to two key principles: to increase the international dimension in the development of study programs and to provide an international study environment for the students. It has been the priority of the academy to bring international experience and expertise into the process of

curricula development since the beginning of the 1990's. Music is one of the fields with highly internationalised labour market possibilities, even within Europe, where all the different languages and cultures complicate internationalisation in many other fields of activities. Therefore the study programmes must be at a high international level to provide the students with international level qualifications and work opportunities. Only a few funding programmes enable the development of complete solutions – infrastructure, equipment, instruments, academic competence, curriculum, professors-instructors, databases, other teaching materials etc. Therefore in practice different national, European and other funding options are combined.

One of the most recent examples is the development of Cultural Management master level program, where with the assistance of UNESCO, the Fulbright programme and later on structural funds, academic knowledge was first brought in from the Sibelius Academy in 2000 and the program has remained international since. Subjects related to the local environment were developed in cooperation with the University of Tartu. While culture has been a vivid, dynamic and fast growing area in Estonia, there was a lack of academic competence in the management of culture and cultural policy. There are two ways to fill that gap: the first option is to enable students to study the speciality in question abroad and the second option is to build up this specific competence in Estonia. Both of these approaches have been used in EAMT, but in case of culture management EAMT has decided to choose the second, more complex and more sustainable approach. For a small institution in a small country to build up a new study programme is possible only through international cooperation and only with the help of external funding. The department of international relations has had a central role and responsibility throughout this entire process by being the place where the ideas and proposals of academic units and different funding options and possible partner institutions are matched. There are several similar examples and the development of innovative joint study programmes, including interdisciplinary study programmes, is one of the main objectives of the strategy.

The second key principle - to provide an international study environment for the students – includes the mobility of students and staff. Mobility is promoted according to six pillars.

1. Opportunities for mobility should be provided *for every member* of the institution – students and staff. Mobility is seen as a tool for individual and professional development. Staff exchange does not include only academic staff, possibilities for administrative and support personnel exchange are also looked for. The mobility of students and academic staff is somewhat different in the case of music. The individual approach to students and studies affects both students and instructors when studying abroad is considered. Common practice in this field is that the exchange of the instructor during which general and specific conditions are examined and contacts established is necessary before student exchange is possible. Only after that the decision of student exchange is made and students can participate in an open international competition (usually through sending their audio recordings)

not based only on the agreements between the institutions. In many cases these exchanges are collaborations at academic department or even instructor level. Such an individual approach makes the work of international relations rather substantial and requires the development of the capability of the administrative structures to operate in an international working and language environment.

2. Mobility should be integrated into studies in *different forms*. EAMT started to participate in the ERASMUS programme in 1999/2000 with seven students. Currently the academy has 86 partner contracts in the framework of the LLP ERASMUS project and the number of students studying abroad peaked at 40 in 2007/2008. In 2008 the academy joined the Nordplus programme, which is focused on different forms of mobility – intensive courses, networking for innovative projects, joint study programmes and mobility grants – for students, academic instructors and administrators. EAMT is engaged in five different Nordplus networks. Students are also encouraged to participate in different forms of practical training (as instrument soloists and in ensembles and orchestras) and different kinds of exchange concerts are organised.
3. For a successful mobility experience, students from other countries have to be *integrated into the academy's activities* beyond their own study process. EAMT has a large range of cultural activities, including its own festivals, which allow, for example, musicians to play in the orchestra and composers to have their work presented during the academy's autumn festival. On the other hand academic instructors invited to the academy to teach courses within some curricula are often engaged also in lifelong learning programmes and specific courses are prepared for operators of cultural affairs with an important social effect.
4. A *sustainable mode of mobility* is particularly encouraged to contribute to the development and internationalisation of the institution. Several students conducting (parts of) their studies abroad have came back to EAMT to work as teachers and participate in the process of curricula development.
5. *Balance of mobility* is important for being able to provide international students at EAMT a similar international study environment as EAMT students experience in other countries. At first both the mobility of students and teachers were out of balance. While throughout the 1990s there were more possibilities for foreign teachers to carry out studies at EAMT than there were invitations for the academy's employees to work abroad, the mobility in both directions has grown and balance has been achieved.
6. A *multinational study environment* is the objective rather than increasing mobility from particular European or other countries. To have as great as possible cultural mix in the student body as well as in the teaching staff enables better preparation for the international labour market. International level contacts at different levels - national, non-profit sector, institutional and individual - as well as experience in international competitions increases the viability of the academy.

Reforms and other factors driving the increase in mobility

There have been several institutional and system level changes as well as funding related changes that have influenced performance improvements in mobility and international relations in general. These factors are very much interrelated. The choice of the institution to prioritise international relations is probably the most significant. *Institutional changes* started in 1992, when the commitment was made at the rector and leadership level to support strongly the development of international relations. At first, the post of assistant to the rector responsible for international relations was created. A year later the post was changed to become Vice Rector for International Relations. In 1996 an additional post – assistant to the vice rector – was established and after a while a special structural unit was formed and more people were employed as the number of international projects and the mobility of the members of the academy increased. Today, the department includes the coordinator of international relations, including the ERASMUS programme, and project managers. In addition, a collegial body that meets three times a year and consists of representatives of academic instructors, students and administration has been formed to discuss current activities and new perspectives in terms of international relations. The work format of the committee on international relations is often brainstorming to create new ideas with the help of the members of the academy with prior experience in mobility and international relations. Ideas generated are then discussed at the department and then presented as proposals to the academic council.

In order to build a foundation for the development of international relations not only in music education but in the field of music in Estonia in general, EAMT joined different international organisations, including The European Association of Conservatoires, European League of Institutes of the Arts and various professional associations. At the same time priority was given to the integration process into European programmes.

Throughout the period 1994-2002 EAMT was successful in several TEMPUS programme projects both as coordinator as well as a partner to strong European and other academies. The advantage of TEMPUS programme is that it supports comprehensive development – curricula, teaching materials, administration, mobility of students and academic instructors, infrastructure and equipment. These projects played an important role in building strong and up to date structures and study programmes at the academy, including upgrading the library and electronic databases, administration strategies, development of international and public relations as well as fundraising. Participation in these projects was challenging at first for EAMT, a small institution with no prior experience, but institutional commitment and strong partners facilitated the changes.

In 1998 EAMT joined the ERASMUS programme. In order to balance the mobility through this exchange opportunity different measures were taken to introduce the academy internationally and to increase its attractiveness among foreign students and academic instructors. A balance of mobility has been achieved and an optimal level of student mobility in terms of volume has been reached.

The *changes in higher education governance* which have contributed to the mobility of students include the development of the Estonian ENIC/NARIC, the Centre for Educational Programmes and the general development of administrative and support structures to better coordinate and mediate international mobility programmes. The overall higher education policy has also favoured internationalisation through the Strategy for the internationalisation of Estonian higher education and different mobility funding opportunities based on the structural funds.

An important *change in funding* affecting mobility was the decision to provide complementary financing to Erasmus scholarships effective from 2003 in order to enable Estonian students to better participate in the programme. In case of EAMT, national funding accompanying Erasmus scholarships come through two different sources – the Ministry of Education and Research and the Cultural Endowment of Estonia. Such national financial support is of high importance first and foremost purely for subsistence related reasons but it also contributes to building trust and students' knowledge that their country supports their studies abroad.

6 Final discussion and appraisal

In Estonia, like in other countries which were in transition throughout the 1990s, it is extremely complex to make a distinction between the impact of specific reforms and the impact of the overall development and expansion of opportunities. On one hand all the interviewees agree that with respect to several performance improvements joining the EU and the funding possibilities available through EU have had a significant role. On the other hand, opportunities alone do not guarantee success and it is the degree of utilisation of these opportunities that leads to improvements. The case of Estonia is an example of a situation where with limited resources available for the higher education system progress is possible only in those areas which are clearly prioritised and where joint efforts are made. According to the interviewees when it comes to different European funds Estonia has become more and more successful in identifying key priorities in higher education and research and channelling funds to these areas. However, the process of prioritizing higher education and research in terms of important national institutions and strategic policy choices is still complex and remains work in progress.

The mix of the autonomy and accountability of universities and the perceptions of where the primary responsibility for the development of higher education should lie as well as the question of the possible benefits for individuals, the economy and society as a whole have gradually changed over the period that is the focus of this study. Starting from the need to rebuild the entire legislative and administrative structures and capacity of the country, the choice to trust already functioning structures by granting the universities a very high degree of autonomy was progressive in some senses. On the other hand it also entailed shifting some of the core responsibilities for managing and developing higher education and research from the state to the universities. With administrative capability as well as expectations of the society and the state increasing over time, the development of

accountability measures in higher education started with performance based funding arrangements and contracts. This process is far from being complete and can be characterised as learning by doing. The first results have led to an understanding that in order to further improve the performance of the sector the issues of the student support system; social guarantees for PhD students; the balance of cooperation and competition; as well as funding principles will all have to be dealt with in the near future.

In case of research the performance based competition for finances has been common practice for a much longer period of time. The general assessment is that such a system was indeed motivating and contributed to the performance improvement of research output as well as to a growing capacity to attract external funding. At the same time the need to increase the share of more stable funding instruments, unrelated to specific scientific fields and research groups, has been identified as this would enable the universities to make better long term decisions and (re)shape their research profiles.

Such conclusions suggest that the specifics of governing and funding systems need to be constantly reviewed and adapted in the light of general developments and objectives.

The case of Estonia also shows that the implementation process of different reforms is crucial for their success. While a small higher education sector provides several advantages, such as flexibility, better mobilizing possibilities, easier to manage cooperation and the inclusion of all interested parties, it has also inherent limitations such as limited resources available for the in-depth preparation, design and implementation of these changes. The trade-off between the speed of change and sufficient preparation time is clearly evident in the case of small countries.

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List of interviewees

Tiina Annus, Head of Analysis Department, Ministry of Education and Research
Heli Aru, Adviser, Ministry of Education and Research
**Anneli Kannus, Chairman of the Board, Rectors Council of Applied Universities,
Rector of Tartu Health Care College**
**Prof. Alar Karis, Chairman of the Board, Estonian Rectors' Conference, Rector of the
University of Tartu**
**Katrin Kiisler, Head of Centre for Higher Education Development, Archimedes
Foundation**
Mart Laidmets, Secretary General, Estonian Rectors' Conference
**Prof. Marje Lohuaru, Vice Rector for International Relations, Estonian Academy of
Music and Theatre**
Heli Mattisen, Director, Estonian Higher Education Quality Agency
Taimo Saan, Head of Finance, University of Tartu
**Mr. Madis Saluveer, PhD, Head of Administration Unit of the Estonian Research
Council**
**Annika Tina, Deputy Head of Higher Education Department, Ministry of Education
and Research**

Governance and Funding Reform in the European Higher Education Area

National system analysis: Finland¹

1 Introduction

This report gives an overview of higher education governance and funding reforms in Finland within the last ten years and the impact of those reforms on the performance of the whole system. The report is based on document analysis and interviews with key stakeholders in Finland.

2 Reforms in governance and funding over the last ten years

The Finnish higher education system comprises of two parallel sectors; universities and polytechnics. The two tertiary sectors are fundamentally different in that the mission of the universities is more academic with theoretical and research orientation. The polytechnics prepare students for practical work.

There are two parliamentary legislations that govern the higher education system, the Universities Act 1997 and the Polytechnics Act 2003. Education is the responsibility of the Ministry of Education. The Finnish National Board of Education (FNBE) works with the Ministry to develop educational aims, content and methods.

The universities have the ministry of education as the regulating and supervising authority and the polytechnics have in addition to the ministry the maintaining as supervising authority. The maintaining agency can either be a local authority, a joint municipal body or a limited liability company. The polytechnics and professionally oriented higher education institutions are mostly municipal or private. Universities are maintained by the state and enjoy extensive autonomy. Both the polytechnics and universities are responsible for the evaluation of their own operations and outcomes in conjunction with the Higher Education Evaluation Council. It is worth noting that polytechnics are fairly new in the Finnish higher education system having only started in 1991 on a trial basis and the practice became permanent by 1996.

Higher education institutions develop their curriculum independently or in cooperation with other institutions without the involvement of education authorities.

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The Finnish matriculation examination provides general eligibility for higher education. In addition, those with a Finnish polytechnic degree, a post-secondary level vocational qualification or at least a three year vocational qualification also have general eligibility for university education. Universities may also admit applicants who have completed Open University studies required by the relevant university or who are otherwise considered by the university to have the necessary skills and knowledge to complete the studies.

Reforms in higher education governance

Binary System: One of the major reforms in the last ten years was the establishment of a non-university sector. Polytechnics were first established 1991 out of trades and vocational colleges. In 2003 the Polytechnics Act passed. Based on this act polytechnics are non-research institutions offering four or five year degree courses that are to serve regional development. There are currently twenty-six polytechnics. Six are run by local authorities, seven by municipal education consortia and thirteen are run by private organisations.

Staffing Issues & Salary: Until 1998 professors were appointed by the head of state. This responsibility has shifted now to the university leadership. This has shortened the appointment of professors and increased the role of peer review in the appointment process. The flexibility has opened up possibilities for appointment of part-time professors and efficient links between industry and universities. In 2006, a new salary system based on work load and performance was adopted instead of the seniority based salary. The universities have the authority to decide on the implementation and application of the system at the institutional level. Different models of salary systems are applied in the polytechnics depending on the legal status of the maintaining organisation.

Quality Assurance: Since 1997 and 2003, universities and polytechnics respectively have been responsible for the evaluation of the quality of their activities. Both of the Acts, state that the institutions are responsible for the evaluation of the quality of their activities. The national quality assurance system is coordinated by the Finnish Education Evaluation Council, FINHEEC which is an independent body assisting universities, polytechnics and the Ministry of Education in evaluation.

Reforms in the funding of higher education institutions

The steering of higher education has been developed towards management by results since the late 1980s. Budgeting based on operational expenditure and performance agreements was adopted in 1994. The principle underlying management by results is that the objectives set for institutional activities and the resources needed for their implementation are determined in negotiations between the ministry and each university.

The most notable reform in funding was the shift from line item budgeting to lump sum budgeting. It was the cornerstone leading to increased financial autonomy, it is hoped that it will make financial administration more compatible with financial structures of companies. The reforms are supposed to make it possible for

universities by 2010 to accumulate private funds, borrow money and make investments in the markets. For the polytechnic sector further legislation is still awaited to streamline lump sum budgeting, mainly because of their ownership structure. The extension of the maintaining agency's financial regulations make a strong point for transformation of polytechnics to a company.

Since 2006, universities have been allowed to establish university companies which promote direct interaction with society with a view of generating private funds. There has also been the establishment of the national and regional innovation systems in the forms of policies, organization structures and funding programmes meant to increase creation of infrastructure for partnership.

On-going processes and new reforms envisaged

a) Higher Education Legislation

Currently there are no radical reforms under discussion concerning polytechnics. With respect to universities in August 2009 new legislation was expected to pass parliament substituting the current Universities Act of 1997. The new law comes into effect in January 2010. Changes in the new law concern the legal status of universities, institutional governance arrangements and the ownership of university buildings.

The autonomy of universities is being strengthened by making changes in the legal status of universities. They will become independent legal entities, either in the form of institutions under public law or foundations under private law. In this capacity they will be able to raise private funds easily and are free to decide how to use capital income and to manage their assets. University staff will no longer be employees of government, but of the respective institution that can then follow its own staffing policies.

Currently universities rent their buildings from government. According to the new law three new regional companies will be established that will be owned by the universities (67%) and the Finnish government (33%). Universities can use their share of the companies as collateral loans.

The role of external stakeholders in the 6 to 14 member university boards is not enhanced. In institutions under public law its members will still be appointed by the senate. The university board is to appoint the rector of the institution.

b) University mergers

Besides the new law other strategies discussed right now are mergers of universities and alliances between universities and polytechnics in order to consolidate the Finnish higher education system. As a result of the mergers the current number of institutions of twenty universities and twenty-six polytechnics will be reduced to fifteen universities and eighteen polytechnics. It is also a goal to establish four alliances between universities and polytechnics by 2020.

The network of universities and polytechnics will be developed so that overlaps in programmes are reduced and administrative and support services are brought together. This will be done through merging universities and polytechnics, intensifying cooperation in teaching, research and shared equipment. In the polytechnic sector already three remarkable mergers have been carried out and the regional network has been made more compact and a service centre for universities has been established.

The Ministry of Education will prepare a detailed action plan for the structural development of higher education by 2010. The profiles of each university and polytechnic will reflect the local and regional development in terms of teaching, research and cooperation with the world of work. One of the most remarkable developments will be the new Innovation University that will be operational 1 August 2009. The new university will comprise the present Helsinki University of Technology, Helsinki School of Economics and University of Art and Design Helsinki. Other major mergers are the joint consortium of the University of Turku and the Turku School of Economics which will be operational in 2011. The University of Eastern Finland formed from the Universities of Kuopio and Joensuu will start operations in 2010 at the latest.

c) Tuition fees

Finnish legislation does not allow for tuition fees from degree students, but this year a new reform passed that introduces fees on a trial basis until 2014 for students from outside the European Union and the European Economic Area coming to study in specialised master's programmes.

d) Performance based funding

The funding of the polytechnics will be developed into a more performance-based direction so that the level of funding will be, more than presently, defined according to the number of graduates and the quality of education. In addition to the structures and funding, the focus of the development of education and research until 2012 will be on internationalization and increased attention to the quality of higher education and research.

e) Admission process

The development of the joint application system developed for the student selection of universities will be operational in its first stage in the academic year 2008-2009. The full joint application system will be operational starting from the selections of 2010-2011. The utilization of matriculation examination grades will be increased in student selections. Universities will also increase their reporting of student selections to secondary level institutions. (Eurybase2007/08)

3 Performance improvements in Finnish higher education

In the governance and funding reform project, the performance of national systems has been measured along the following dimensions and using the uniform international indicators (see technical file for the precise definitions):

- **Access:** enrolment rate and net entry rate.
- **Lifelong learning:** mature enrolments and share of new entries above 25.
- **Graduation:** educational attainment of the population (25-34) and graduation rate.
- **Employability:** relative earnings and relative employment rate.
- **Mobility of students:** students from abroad and students studying in other countries.
- **Research output:** scientific articles and patents.
- **Capacity to attract funds:** HERD from private funds and from abroad and contributions from private households.
- **Cost effectiveness:** expenditures per students (in Euros and PPPS).

According to our data, in Finland we see improved performance when it comes to the capacity to attract external funds with improvements with respect to the percentage of higher education research and development revenue from international sources (+56%) and significant improvements with respect to the percentage of higher education research and development revenue from business and industry (39%) and contributions to higher education institutions by private households (38%).

There are also improvements in the field of international mobility, with significant improvements (22%) with respect to the percentage of incoming students, but no changes concerning the percentage of students going abroad.

Concerning research output the number of patent applications to the EPO and the number of scientific articles per million inhabitants did not improve or change significantly.

There were slight improvements with respect to cost effectiveness in the sense of lower expenditure per student in Euro PPS (7%) and compared to GDP per capita (-2%).

With respect to access and lifelong learning the net enrolment rate improved 6% and the net entry rate 5%, while the percentage of mature enrolment did not change at all and the percentage of mature entry only improved by 4%.

Concerning employability the relative unemployment rate of tertiary education degree holders improved by 11%, while the relative earnings of the tertiary education graduates did not change.

Generally the Finnish higher education has observed a steady improvement of quality on most of the indicators chosen to determine performance. The second

highest improvement was in the level of research and development investments from business sector. Recently, government has had a programme for improvement of research infrastructure at universities making them more attractive partners to other actors of the innovation system. Funding from the National Technology Development Agency (TEKES) requires that a university is cooperating with a company in a subsidized research project.

There has also been an increase in students coming to the Finnish higher education institutions from other countries. This has been attributed to conscious decision by the Ministry of education to increase mobility through initiatives like the European Level Exchange Programme. The Finnish ICT branch makes studying and working in Finland attractive (Nokia-effect). The government's agreement to the Bologna and the Schengen Agreements also aided the increased mobility. A concern was however raised that Finnish students are less willing to move elsewhere to study.

The number of scientific articles published per million inhabitants within the Finnish higher education also increased. In 1998 the ratio was 1597 articles per million inhabitants and in 2008 there were 2359 articles per million inhabitants. The other improvements noted though at low rates are increase enrolment for students aged between 17 – 25, reduction in cost of education of a student compared to the European aggregate and improved employability of graduates.

Background variables:

2% of the Finnish GDP is spent on tertiary education, which is higher than average. The percentage of GDP spent on tertiary education from 2002 to 2005 increased less than average.

The unemployment rate of 6,9% in Finland in 2007 was higher than average while the unemployment rate grew less than average.

In 2008 Finland ranked 6th in the Global Competitive Index, but has fallen back since 2001.

The population of 18 year olds has grown stronger than average and will likely grow stronger than average in the next ten years.

4 Effects of the reforms and other explanations of improved performance

Generally governance and funding reforms are said to have led to the improvement of effectiveness, efficiency and quality of education and research. Current reforms have increased the power of middle management and the university leadership and new and more flexible appointment procedures facilitated the appointment of part-time professors and links between universities and industry.

Funding reforms increased financial autonomy and therefore are widely believed to have led to improved overall performance. Further reforms have made the financial

administration of higher education institutions more compatible with the financial structure of companies.

Government investments in research and development have increased more rapidly in Finland than in most other OECD countries, and a target level has been set to four percent of the GDP. In 2006 3.4% of GDP was allocated to GERD. The rate was relatively high in comparison to other countries, but it has grown less than average from 2002 to 2006. The development of research has taken place within the framework of national and regional innovation systems and research programmes. Companies have therefore considered Finnish higher education institutes as attractive partners for cooperation.

The lump sum funding model has been further developed to two components within Finnish higher education. The programme funding, through which part funding of large national programmes is allocated through the university budget. Some of the projects supported through programme funding include the information society programme and improvement of teacher education programmes which are often cross-sectoral. The universities have criticized this development by arguing that the earmarking of funds is decreasing their financial autonomy. A projected solution to this is to include the goals but let the institution earmark the allocated fund to the specific goals agreed upon. The other component that has developed is the transfer to four year performance contracts include budget frames for the current yearly negotiation, which has been the case despite an agreed frame of three years being in existence

The distinction of objectives of both the universities and polytechnics has created a balancing effect between the supply and demand for professionals in the labour market. It has ensured that the specific needs of the nation in research and regional needs of experts are met through horizontal differentiation of the higher education institutes.

Other factors of influence

With respect of the percentage of higher education research and development funding from international sources and business and industry alike, this seems to be a result of strategic national and European research programmes as well as governmental funds targeting university-business cooperation.

With respect to the percentage of incoming mobile students respondents name the ERASMUS-programme, increased funding through the Centre for International Mobility (CIMO), but also institutional governmental internationalization strategies like an increase in English-taught study programmes and targeted government funding to encourage internationalisation.

The improvement with respect to scientific articles per million inhabitants many respondents state that Finland is merely catching up from a very low starting

point. Respondents named the growth of the number of university researchers during the 2000s as one reason for improved research commercialisation.

5 Final discussion and appraisal

The transformation of the Finnish higher education has been quite comprehensive within the last fifteen years. There are no major contradicting opinions about the direction and priorities among the stakeholders of the higher education system. The coordination and commitment indicates the shared opinion that the integration of the higher education policy with those of social and economic goals has been the right policy.

The government through the ministry has identified areas that they need to work to improve the higher education system. The first was to increase investment in higher education; particularly in research. In order to achieve this they sought to introduce reforms that would attract investment to higher education. The system of performance negotiations and contracting has shown to be effective for the implementation of the reforms. The partners within the agreements exhibit confidence in the negotiation process that is characterized by trust through an open dialogue. The Finnish government's ability to provide the funds as and when needed and to commit to mid-and-long term plans has created an almost seamless process. Further governance and funding reforms that promoted the inclusion of the business sector ensured corporation between higher education institutions and industry.

It can also be said that Finnish universities took the internationalization challenge very seriously and were very active in the utilization of opportunities provided by European Mobility Programme. The process has been strongly stimulated by support of the Center for International Mobility (CIMO) of to the Ministry of Education. The establishment of the English language programmes at universities and polytechnics have supported and encouraged the internationalization process.

List of people interviewed

Jorma Karhu

Councillor, Ministry of Education

Timo Luopajarvi

Secretary General, Rectors' Conference of Finnish Universities of Applied Sciences

Ulla Mäkeläinen

Councillor, Ministry of Education

Simo Pöyhönen

Confederation of Unions for Professional and Managerial Staff in Finland (Akava)

Liisa Savunen

Secretary General, Finnish Council of University Rectors

Leena Treuthardt

Planning Manager, Academy of Finland

Dr. Janica Ylikarjula

Confederation of Finnish Industries

Governance and Funding Reform in the European Higher Education Area

National system analysis: France¹

1 Introduction

This report discusses the main reforms in governance and funding in the French Higher Education System of the past ten years. The overview of the reforms will help to assess their impact on the functioning and performance of this system.

The report is based on the literature review of the French HE system as well as insights gained from a set of interviews. We have interviewed decision-makers, students and members of academic staff in different institutions. These included ministry officials, student union representatives and academic staff union representatives to ensure a variety of views are taken into consideration on the HE reforms in France.

2 Reform in governance and funding over the last ten years

There are different HE institutions in France: Universities, Grande Ecoles, Technical institutes, and Specialised Schools. The universities have an open access policy while other institutions have a selection procedure.

The difference between these institutions resides in the historical evolution of the HE system. Universities in their current form have been restored in 1968. Faculties were the base of the universities which has contributed to differentiation between hard science and social sciences oriented universities. The Grande Ecoles have the function to provide professional education as they are more linked to industry, while universities have the function to teach and to research. Research is also performed in research centres such as INRA (National institute for agronomic research), INRIA (national institute for research in informatics) and CNRS.

According to the development of the HE in France, the main function of universities has been to provide mass education while the function of Grandes Ecoles has been to educate the elite of the country. On the research side, it has been the role of the research centres to conduct research. Increasingly, a large share of researchers work at universities (Paradeise and Lichtenberger, 2009). Educational programmes at universities have been far from meeting the labour market needs. Universities were the weak actors in the French HE system (Musselin, 2003).

¹ Grazia Cecere, Patrixck Eparvier Technopolis group

In total there are 86 universities in France.. Universities are composed from disciplinary oriented faculties. Faculties are called units of teaching and research (UFR) because they link research laboratories with education programmes. The units were initially created in 1968, defined as UFR by the Safari Law in 1984. The objective of this reform was to redefine the role of members of academic staff in universities vis-a-vis the role of researchers in research centres. Hence, this law has also redefined the status of the university academic staff which since then is called "teachers researchers". This status has been reformed again in 2009.

Reforms in higher education governance

During the last years, the HE system in France has been characterised by the numerous reforms which aim at improving university education and research. To understand the reforms, it is necessary to consider the historical evolution of the universities in France.

The reforms in the HE have started in the late 80s with the four year contracts between the ministry and the institutions. The contractual arrangements have gradually increased the administrative autonomy of the universities even though at the outset, the four year contracts dealt with the 5% of university budgets. As a result, universities started to develop their institutional policies. The ministry changed the perception of universities which previously had been seen as a collection of disciplines rather than distinct institutions (Musselin, 2003). Then, the Innovation Act of 1999 introduced more changes in university governance and accelerated the HE reform.. The Law on Research passed in 2006 and the Law on the Responsibility and Autonomy of Universities, the so called LRU passed in 2007 constitute the major leap in the HE reform in France. If universities are given autonomous status under the LRU, they can determine their own mission, aims and objectives. The reform aims to improve the HE system creating more competitive universities at national and international level. It is claimed that it will radically change the universities in France (Neyrat, 2008).

- The Innovation Act passed in France in 1999 has allowed the mobility of the researchers and professors, they can create companies, be consultants, members of the boards in the private sector, as well as earn royalties gained from their patents.
- The introduction of the three tier structure, namely, the Bachelor degree-(Licence)- Master and Doctoral degree in 2002 was a part of the Bologna process implementation in France. It determined the structure of the university education by which the amount of credits given to different discipline is regulated.

The ministry has planned to reform the Bachelor of Science degrees during the period 2008-2012 and allocated € 730 million in 2009 for this purpose. These funds are allocated to improve the orientation of first year university students. The issue at stake is that 50% of the students in the first and second years at university do not

succeed. The orientation programme is envisaged to help students from quitting university. The three tier structure change as well as the proposed plan to change the Bachelor of Science provide students with more flexibility. They help the students who do not succeed to change their study programmes. These changes also help the students who want to steer their carrier differently (Neyrat, 2008). On the other hand, these changes do not change the situation where only a few professors teach first year students, as they prefer to teach at the master's students. The envisaged orientation programme could require that professors teach first year students as well.

- The Pact of Research (2005) has initiated a deep process of change in the organisation of research in France. The Pact paved the way for the Law for Research passed in 2006. This Pact had the ambition to increase the excellence and visibility of research and education in France. One of the main objectives was to create clusters or networks of higher education institutes and research institutes. Four instruments have been designed to promote excellence in the education and research activities:
 - The Clusters for Education and Research (PRES)
 - The Campus programme (Infrastructure-based research clusters)
 - The Advanced Research Thematic Networks and the Thematic Research
 - The Healthcare Centres.
- The Law for Research amended in 2006 was designed to transform the Pact of Research into a Law. It aims to enforce strategic orientation capabilities by creating the High Council for Science and Technology. The role of the National Agency of Research (ANR) has been also reinforced as a funding agency for research activities (Erawatch report, 2008). The Law for Research defines the concept of Cluster for Education and Research (PRES). The idea is that each cluster regroups different research performers. PRES aims to increase research cooperation using common infrastructure with the idea that it will attract international researchers and research teams. The clusters can apply for additional funding from European, international and regional donors. The PRES objective is to provide the instruments to bring the cooperation within and between public and private institutions forward in order to set up attractive research centres. Besides the PRES instrument, the Law for Research designed the Campus programme which also should favour the interdisciplinary research and cooperation; it disposes the budget of € 475 million. The Campus aims to coordinate the activities of different institutions within the same infrastructure.
- The LRU has enabled universities to choose for more autonomy which has both governance and funding consequences. The university governance in France was previously defined in 1960s. The LRU aims to change the status of universities away from how it was postulated in the Safari Law in 1984 which defined the current status of the universities. The reform process was

marked by tensions. Although all the involved parties were in agreement about the need to reform university status and organisation, there was no consensus on the direction of the reform. As a matter of fact, many tensions have emerged. According to the new Law, universities are autonomous in organizing their academic and administrative staff. Autonomous universities can also manage their estates, resources and organise their activities according to their needs. They can receive funds from private companies and foundations. In 2009, there were 20 autonomous universities (out of about 85 Universities) in France which employed 32 000 members of academic and administrative staff and had € 1.8 billion of remuneration funds.. It is foreseen that all French universities should become "autonomous" within the next five years.

- The Law on changing the status of academic staff was amended in 2009. It introduced an individual evaluation of the academic staff activities every four years by the National Council of University (CNU). The two thirds of the CNU members are elected by the academic community and one third are appointed by the Ministry. CNU selects the eligible young researchers for a yearly competition of "teachers-researchers". After receiving the so-called CNU qualification, the researchers can apply to universities which have openings. According to the evaluation of the CNU, members of academic staff have to adjust their activities and they may receive bonuses and promotion. The foreseen four-year evaluations should become a basis for the allocation of bonuses and promotion and are expected to lead to negotiations between each university and each member of academic staff on the portfolio of his/her activities (e.g. more research versus more teaching).

Reforms in funding of higher education institutions

The Law for the Finances (LOLF) applied for the first time in 2006 aims to introduce a new management of public service. This was not a reform specific to universities but it influences the whole French public sector by introducing budgets based on objectives and evaluation. Universities have to comply with the LOLF and thus it can also be seen as a part of the funding and governance reform. Universities are obliged to link objectives to results. The objective of this Law is to increase efficiency of Universities' management of financial and human resources, to increase transparency and cost-effectiveness.

University financial resources are essentially ensured by the state subsidies and student fees. Funds allocated by the state to the universities are still not sufficient. During the 2009 fiscal year, the budget allocated to the higher education and research was about €27.6b.

The expenditure for educational institutions as a percentage of GDP was 1,1 % for the public sector and 0, 2% for the private sector. This includes the MIRES (Inter-ministerial Mission for Research and Higher Education) budget, the funding agencies, and also the estimated volume of fiscal measures.

The Law on the Responsibility and Autonomy of Universities of 2007 facilitates the possibility for universities to receive funds from private sector and private foundations. The LRU permits also the private investments in the universities but the private sector has not yet significantly increased its investment in public research. The universities which have chosen to become autonomous have received in total supplementary € 560 million in 2009. They have also received € 1, 05 million for the modernisation of the real estate. These funds should help university to begin the process of autonomy.

Paralleling, the “Research tax Credit” permits firms to invest in university research activities by reducing their amount of taxation. There are other instruments aimed at increasing private R&D expenditures managed either by the National Agency for Research (ANR) or the Ministry of Higher Education and Research, namely, Carnot institutes, incubators, the young innovative enterprises competition. The National Agency for research (ANR) was created in 2005. Its mission is twofold: fostering the production of new knowledge and promoting cooperation between public laboratories and industrial research centres. In 2009, the budget of the ANR was €819 million-€653 million where allocated through calls for proposals (CP).

Additionally, The ANR gives 11% of the total amount to the university or research institution managing the project. These 11% are not taken from the grant awarded to the research project but come on top of the awarded budget. In turn the autonomy guarantees the accountability and transparent principles in the management of funds which responds to the requirements of the EU and international research projects. In other words according to the Ministry, laboratories can have an easier management of the research project funds. The research projects are also financed in France by the ANR which has also indirect implication in the governance and finance of HE as the ANR decides which research themes to finance.

On-going processes and new reforms envisaged

The reform of the HE system is not yet finished as further improvements are needed to ensure the equilibrium between improving governance and efficiency and increasing cooperative decision process where academic staff can play a more important role. The reforms have introduced some tensions among the student and academic communities as they fear that changes might not improve the French HE system. A variety of tensions emerge from the reforms:

As concern related to the LRU reform is voiced by academic staff. They fear the lack of representation in the decision making process in universities. In their view, this can change their profession and obstruct their freedom. The President of a university has more power in the direction of the academic staff carriers which is not well accepted by the community. In parallel, the reform of the status of academic staff amended 2009 has not been well accepted by the academic community. The tension has been supported by a national movement started in 2003 with the beginning of the discussion of the reform process. Discussions and meetings organised from March to October 2004 culminated in the publication of a report aimed to present the

research community's point of view on research policies (Etats Généraux de la recherche, 2004). The movement is still active nowadays.

- Additional tensions rely on the fact that the President of a university has the power to withdraw research laboratories which do not perform well. Academic community is concerned about the freedom to pursue fundamental research problems. The nature of fundamental research has a low predictability of results and therefore, can be difficult to publish. However, fundamental research represents an important interest for the academic community and the advancement of science.
- Students have not been well represented in the university decision making processes. They also cannot evaluate the teaching of their teachers which could help in improve the teaching and learning. It should be underlined that the evaluation of teaching should have been institutionalized in French universities since 1997 but many universities did not implement it.
- The AERES does not publish the list of experts participating in the evaluation process. Academic staff claim that there is a lack of transparency in the evaluation process. Additionally, evaluation of research activities was also conducted by other institutions such as the CNRS which evaluates university laboratories attached to the CNRS, hence the evaluation of the AERES represents a double effort in the evaluation.
- According to some academic staff, the financial resources of the universities are low and cannot allow a competitive HE system at the OECD level.

The university includes three levels of interest namely (1) students, academic staff, (2) UFR and research laboratories and (3) central level. These three levels need to have advanced mechanisms of organisation and interaction; hence more efforts in terms of policies integrating these three levels should be brought forward. In other words, a better balance in the definition of the policy should be ensured as well as a better form of resolution of the internal conflicts. The LRU reinforces the role of the President of a university but does not modify other aspects of the internal governance of French universities. For instance, LRU does not modify the role and characteristics of the deans. There is furthermore a superposition of leaders (lab directors, deans, leader of the doctoral school, president, president of the PRES) with no functional links. So, there is still an open question about the real governance of the teaching and research activities.

3 Performance improvements in French Higher education

The governance and funding reform projects has been measured along different dimensions and using the uniform international indicators:

- Access: enrolment rate and net entry rate.
- Lifelong learning: mature enrolments and share of new entries above 25.
- Graduation: educational attainment of the population (25-34) and graduation rate.

- Employability: relative earnings and relative employment rate.
- Mobility of students: students from abroad and students studying in other countries.
- Research output: scientific articles and patents.
- Capacity to attract funds: HERD from private funds and from abroad and contributions from private households.
- Cost effectiveness: expenditures per students (in Euros and PPPS).

The indicators compared the average of the countries in the sample or the change in the indicator value between the years 1998, 2002 and 2006. These indicators provide a partial appraisal of the reforms undertaken in France; hence the major reforms have been edited *a posteriori*.

According to these indicators, the French system has excellent performance:

- Inflow of students from EU-27, EEA and Candidate countries – as percentage of all students in the country;
- French Students studying in another EU-27, EEA or Candidate countries - as percentage of all students;
- Percentage of mature enrolment namely the number of students aged 30 years and older as a percentage of total enrolment;
- Education attainment namely the percentage of the population aged 25-34 with tertiary education.

According to the interviewees, France should also enjoyed good performance as regards the other indicators. However, it should be underlined that these indicators cannot reflect yet the effect of the recent reforms. They reflect the past situation of the French HE system. Indicators should be not considered as objectives to pursue but they help to evaluate reforms and performance of the system.

During the period from 1998 to 2006, the number of EU students coming to study in France has increased about 71%; they represent 11.7 % of total student population (against 7.1% in 1998). The increased percentage of students' inflow is the sign of the increased competitiveness of the higher education system in France. It is extremely important as it reflects the attractiveness of the French HE system for students that have well developed HE systems in their home countries in addition to the students coming from the developing countries. However, universities have to do more to improve the accommodation for foreign students. The CAMPUS programme aiming to construct bigger and well furnished campus can increase the number of accommodation places for students.

The outward mobility also improved in 2008. The improved performance of this indicator might also result from the importance of the international experiences in the private sector. Hence, French students are encourage to study in EU and at the same time the LMD system has favoured the recognition of foreign diplomas.

The indicator measuring the rate of long life learning, the number of students aged 30 years and older as a percentage of total enrolment, shows an increased

performance of about 1,38 point in 2008 in comparison with 1995 which reflects the efforts dedicated to improve the life long learning. In parallel to life long learning, the system of Validation of Learning from Experience (VAE) has been created. The VAE process enables individual to get a certification based on his/her professional experience such as diploma, or professional qualification certificate. This system has favoured the process of life long learning according to the Bologna process.

An important indicator to monitor universities corresponds to the effort made for the orientation of the students. More funds are dedicated to orientation than in the past but further effort is needed. Today the orientation is ensured essentially by Law and economics and medicine faculties where students might need less orientation than in other disciplines. Universities should use a broader perspective to student orientation in order to avoid them from quitting studies without a diploma.

4 Effect of the reforms and other explanations of improved performance

The reform allows universities to manage their resources for improving their research and teaching activities. It encourages the institutions to build on their strengths and at the same time discourages the activities where the university cannot compete with other HE institutions. The Autonomy Law and the LOLF have paved the way for the improvement of public management services. Today it is still difficult to evaluate the effects of these reforms...

Additionally, the state has created an external evaluation body in 2007 called the Agency for the Evaluation of Research and Education (AERES). The AERES is dependent on the ministry. The AERES' role is to ensure the transparent and rigorous evaluation of research and education activities according to the priorities foreseen by the government.

These priorities are: (a) to favour the European and International cooperation; (b) to increase the quality of research activities, (c) to promote the research and education excellence. The Agency has cross disciplinary competencies. The Agency evaluates universities, laboratories and education and provides the open access evaluation reports on the AERES website. It guarantees an external evaluation which can moderate the power of the President of a university, as it has to consider the AERES evaluation in the governance of the research and teaching activities.

The AERES has been established to create a neutral evaluation body which separates policy makers from an evaluation body. The AERES is mainly the fusion of evaluations which were led before by different bodies: the evaluation of laboratories was led by the national research institutions and by the ministry for the non-CNRS laboratories (or INSERM etc.). The evaluation of teaching programmes was led by the academic experts appointed by the ministry and the evaluation of universities by the CNE. What changes is that the results of these evaluations are made public and that the AERES gives grades (A+, A, B or C). The research centres are evaluated

with mark A and A+ for the best research centres, B for the medium quality research activities and C for the lower quality.

Experts of the AERES are nominated which has raised some criticisms in the academic community which would prefer to be evaluated by elected pairs. Additionally criticisms have been manifested on the basis of the evaluation objectives of the AERES. Some unions propose that AERES have to offer an ex ante project support for defining the policy and strategies of a university. The AERES has also the responsibility for the evaluation of the student life on campus which is also part of the university quality and performance.

It should be noted that neither “teachers-researchers” nor professors are evaluated by students for their teaching, which is not the case in the ‘Grande Ecoles’ . This should be added in the further reforms in order to improve the teaching activities of university academic staff.

Creation of PRES

The creation of the PRES should in principle increase cooperation between universities, “Grandes Ecoles” and research institutions. These instruments are supposed to encourage the organisation of the activities. Participants in PRES Networks are provided with additional resources.

The PRES is an instrument of pooling the resources of what are currently often small higher education or research organisations. The aim is to increase the cooperation between different institutions located in the same geographical area. PRES can encourage also the cooperation between university and ‘Grande Ecoles’ which are traditionally separate. However, some PRES are formed only by universities. PRES gives the possibility to find out and share competencies among separate institutions. However, in certain cases, it may be a step towards a larger integration process between different institutions like a merger. For example, Aix-Marseille has created a PRES for merging the three institutions. The University of Strasbourg has been created by merging three Strasbourg universities in 2008 but without forming a PRES.

Changes in the governance and regulatory framework

The decree for modification of academic staff status edited in April 2009 allows to adjust the activities of “teachers-researchers” according to the evaluation results. In other words, teachers-researchers who do not perform well in research, will have to teach more. Academic community has expressed concerns that teaching may be seen as a punishment. Some promoters of the new regulation had this in mind, others saw this more as a way to recognize different trajectories and pathways of being an academic.

The changes in the status of the “teacher-researcher” has not been well received by the academic community as “teachers-researchers” claim that the level of their

remunerations as well as work conditions cannot allow to perform well in activities. They claim that researchers with a low research production will not be encouraged to continue their activities as the only indicators used to measured productivity is the number of publications. Criticisms have surfaced as in certain disciplines the production of publications takes a long time and fundamental research requires time to get results, which does not necessarily correspond with the performance evaluation time.

Increasing autonomy of HEIs

The autonomy of a university indicates the start of a process of self-regulation of the universities. This can be defined as a process as it is still not in evolving phase. This process has started in 1989 with the four-year contracts signed between the universities and the ministry. The organisation and governance of universities has been transformed from a discipline orientation towards the university orientation.

In the universities that have chosen autonomy, the President of the university has more power as regards the recruitment of teaching and research staff as well as regards the administrative staff. The university can improve their performance using the power in the management of financial, human and estate resources. The main criticism against the reform is related to the decreased level of collegiality of the decisions taken by the Presidents of the universities.

Universities can define their policy in line with their objectives and means.. As a result of the reform, all faculties and departments of universities have to follow institutional policies and objectives. In particular, research laboratories have to report their activities to the President of a university.

University can choose how to organise its human resources. For example the President can decide to change the post of a retired professor into a post of a researcher, teacher-researcher or administrative staff. Hence, the President could manage the resources according to the needs of the university giving more resources to promising research and academic activities. This implies that less performing activities could receive less resources or they can even disappear. The consequences are different. On the one hand, the universities can improve the activities where they perform well to be more competitive and, on the other hand, this system may mean the disappearance of certain research activities or teaching activities.

Academic staff and students are part of the National Council for the High Education and Research (CNESER) which is only a consultative role. The main criticisms of the reform are related to the lack of “teachers-researchers” involvement in the decision processes of universities. They are represented in the Council but they have less representatives than previously. Student representatives ask for better participation in the decision processes in universities even though student representatives are members of university councils as well as other councils.

Changes in funding systems

The higher education funding system is largely based on state funding and students' fees. It is often said that universities should improve their attractiveness for the private sector and their cooperation with public research organisations. The creation of the PRES is intended contribute to this process. However, there is also a large consensus about universities being not attractive for private sector because of the economic crisis. The traditional gap between firms and universities in France is seen as another obstacle since traditionally the university teaching programmes have been distant from the private sector world compared to those of the Grand Ecoles. However, some linkages between universities and firms exist in terms of research cooperation.

The increased efficiency in the administration of university resources corresponds to the requirements of the European and International research projects. Hence, French laboratories benefit since the research project management becomes easier due to the overall management improvement in universities.

The average financial resources per student are quite low compared to the 'Grandes Ecoles' in France. The reform wants to reduce the existing gap between the public funds granted by the state to the 'Grandes Ecoles' and the public budget allocated per each university's first year student. It was about € 8 080 in 2008 and the state has allocated more resources for the next year so in 2010 the average funds per student will be of about € 9 060.

Other factors of influence

The reform should be ascribed to the larger reform process in the French public service system. The reform of university reflects the social pressure for changes as in the past the HE was designed in a different social system with lower student numbers. Hence, the reforms respond to the emergence of new beliefs (Musselin, 2000). The reforms are also pushed by the Bologna process and general changes in the other EU states.

There is a pressure to change the institutions which are extremely different in respect to the other EU universities. For example, the contractual planning between a university and the ministry is the result of the French public service organisation. Universities are being transformed from the system based on disciplines to organizational entities (Musselin, 2000).

5 Institutional case studies

In the framework of French HE reforms, there are many universities that have improved their performance in terms of governance and visibility in the French HE system. In terms of effectiveness of governance and student attractiveness, there are some institutions which have well performed. According to some interviewed people,

the University of the Rochelle, a university created in 1993 is a good example. It has well performed in term of teaching and research activities, it has been attractive for students in the region.

We choose to analyse the two universities in Paris: Paris 6 University and the Paris 11 University. Both universities are recognised for their high research performance, and they are specialized in different sciences. Paris 6 University have voted to opt for an autonomous status in January 2009, it is essentially a science oriented university. The latter will became autonomous in January 2010 and it is a multi-disciplinary university. The analysis is based on the projects and recent programmes of these universities.

University of Paris 6

Paris 6 University has a science specialization. According to the Law on University responsibilities and freedom, Paris 6 University became autonomous and was allowed to control its own budget in January 2009. The number of members of the Board has been reduced. Additionally, the university has the possibility to increase its financial resources. The university policy is to create a close relationship between students and “teachers-researchers”.

- Regarding the funding, in 2008 the budget was about € 134 920 318 which came from different sources: 56% government, 15% research funds, 8% industry, 7% non-profit organisations, 1% foreign-EU/international institutions and finally roughly 18% was financed by own resources namely student fees.
- The university aims to be more attractive to industry, public institutions, non-profit organisations and international entities.
- The President of a University has more power than previously as he has the responsibility for the budget and the human resources. The university has reached cost effectiveness essentially due to the autonomous status according to the objectives that university wants to pursue.
- Regarding the performance of this university, we can underline the research output with 6000 publications per year and 700 theses defended each year.
- In terms of performance, according to the AERES evaluation, the institution aims to follow a process of self-evaluation in agreement with a parallel pursuit of excellence at every level. This implies that institutions seek to improve their performance which is easier with an autonomous status.
- The University aims to increase the number of CIFRE theses (Industrial Conventions for training through research).
- In terms of research performance, Paris 6 University wants to increase the number of patents and licences and to promote the production of prototypes as well as entrepreneurship projects conducted by researchers and students.
- The university is open to internalisation of their teaching and research activities which is easier to see as the website is in different language which allows foreign students to have easier access to information.

University of Paris 11

Paris 11 University is a multidisciplinary university which includes also SSH institutions. The university is especially recognised for the reputation of the scientific research as its member of academic staff has received a Nobel price. The University will be autonomous from the 1st January 2010. This confirms the willingness of the University Paris 11 to be the leader at the regional, national and European level. This university is organised and seen by students as a more classical university where the university has more a formal structure with faculties playing an important role in the university policy.

- Regarding the funding, the budget was about € 124 623 382 in 2008 which came from different sources: 36% government, 34% research funds, 26 % own recourses (mainly student fees), 12% foreign-EU/international organisations and 4% non-profit institutions.
- With the election of the new President, the Council of the University has identified major policy axes, namely, the necessity to manage the human resources, the information system and the estate of the university which counts 270 hectares.
- The university has conducted in the last years a policy aiming at listening and interpreting the anxiety of “teachers-researchers” due to the governmental reforms and at the same time the university wants to pursue the development of its projects taking into the account the assets of the university. The university has implemented several reforms: the status of its academic staff, restructuring of the Masters programmes, analysis of the SYMPA model for the allocation of resources and work, conditions for the validity of the diploma.
- The evaluation of the AERES has given the highest mark A+ to the Bachelor of Science and Masters Diploma as the diploma which is a result of a structured organisation in partnership with other institutions.
- The university wants to strengthen its partnerships with higher education institutions within the framework of the PRES UniverSud Paris and the research institutes such as the CNRS, INSERM, CEA, INRA.

6 Final discussion and appraisal

The process of HE reform is not yet accomplished; the government wants to answer the criticisms so as to continue the reform process in order to increase the performance of the French HE. The reforms are essentially based on revising the University status which was essentially based on disciplines rather than directly related to University as one institution. The changes involve both a public management service and at the same time a ‘self regulative state’ (Musselin, 2000: 28). The set of the reforms undertaken allows the continuation of the reform process of the HE system.

The reforms might have an impact on the other indicators of the HE but it is quite difficult at this moment to foresee the effect of the reforms. In terms of the evaluation system, it probably will influence the number of citations of French researchers. The additional funds dedicated to students can increase also the number of employability of students upon graduation from universities, because university students in France find it difficult to relate to the labour market compared to the students of Grand Ecoles.

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List of interviewees

Claire Bazy-Malaunie

The Financial courts

Jean-Richard Cytermann

General Inspector of the Administration of National Education and Research

Ministry of Education and Research

Prof. Chantal Damais

President of interdisciplinary Commission of the CNRS

Prof. Philippe Dulbecco

President of the University of Clermont-Ferand 1

Prof. Michel Eddi

General Direction of the INRA (National Institut for the Agronomic Research) and

Member of the CNRS Commission

Prof. Eric Espéret

President of the University President Conference

Francois Loic Pichard

Part of the FAGE (student trade union) and elected representative for the National

Council for the High Education and Research (Cneser)

Prof. Jean-Charles Pomerol

President of the University Paris 6

Prof. Tassel

Elected president of the SNESUP (Teacher-researcher trade union) and elected

representative for the National Council for the High Education and Research

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Governance and Funding Reform in the European Higher Education Area

National system analysis: Germany¹

1 Introduction

The following report is an analysis of the general as well as governance and funding reforms in German higher education in the last ten years and their impact on overall system performance. As a result of the last reform of federalism in Germany the federal government had to relinquish most of its powers to the respective Länder governments. Different Länder governments implemented different policies on governance and funding and are in different stages of reform. Due to this polymorphism we decided to focus our analysis on one Bundesland, in this case North Rhine-Westphalia (NRW) since its higher education reforms have been the most innovative and radical in Germany. It will provide first of all a summary of the most important recent reforms in Germany in general and more closely the reforms in NRW in the field of governance and funding followed by a summary of reforms currently under discussion and a possible way ahead. In the third chapter I will discuss the performance of the German higher education system based on the eight performance dimensions as well as Germany's overall performance in European perspective. Finally I will explore the nexus between governance and funding reforms and their link to areas of performance improvement and I will examine this nexus more closely with institutional case studies of two higher education institutions (one university of applied sciences and one technical university) in North Rhine-Westphalia, that are very successful in attracting external funds.

2 Reforms in governance and funding over the last ten years

As of April 2009 there are 349 higher education institutions of which there are 104 universities, 6 colleges of education, 14 colleges of theology, 51 colleges of art, 189 universities of applied sciences and 30 universities of applied sciences for public administration. Only 18% of German higher education institutions are private institutions (mainly institutions of the armed forces and the churches), but less than 2% of the total student body are enrolled in those institutions. In the past decades there has been an alignment between universities and universities of applied sciences especially facilitated through reforms of study programmes (Bologna) and research promotion, but there is no political will to unify the binary system for good.

After the reform of federalism in Germany higher education policy is the sole responsibility of the respective Länder governments. The only subjects of concurrent legislation are admission and academic degrees, while higher education construction

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ceased to be a common task of Bund and Land and became the sole financial responsibility of the Länder. In spite of a shift towards institutional autonomy during the last decade the Länder governments are still major actors in German higher education policy. Other important actors are: the German Rectors' Conference, representing the rectors and presidents of universities and universities of applied sciences alike, the German Research Foundation, a self-governing research funding organisation that promotes and funds research at universities, non-university research institutions and increasingly universities of applied sciences through competitive bidding and peer review, the German Council of Science and Humanities which is an advisory body to political decision-makers that issues recommendations and statements on science policy.

Generally higher education institutions in Germany are governed by a rector/president or a rector's/presidential body. Many Länder in addition to the leadership body and the senate, which was the most important collegial decision making body in higher education institutions, introduced a university or higher education council. In the majority of Länder at least half of the council's members need to be representatives of business and industry, unions, well renowned academics and other representatives of society. The council is mainly an advisory body. It is only in NRW that the council is a decision making body with substantial power. There has also been a gradual power shift from the senate to the institutional leadership in order to strengthen it and ensure a professionalisation of institutional management.

In the past decade there have been several gradual reforms in the field of funding, quality assurance and institutional autonomy. In some cases the development has yet to be concluded.

Quality assurance mechanisms: Before 2002 no formalised accreditation or evaluation of teaching and research existed. These days in all 16 Bundesländer the higher education laws oblige universities and universities of applied sciences to accredit their study programmes. This is coordinated by one of the currently seven accreditation agencies in Germany which are licensed by the national accreditation council. While the accreditation regulations only pertain to teaching and study programmes, research is only evaluated by peer review through competitive bidding. According to the 16 higher education laws higher education institutions are obliged to evaluate their research activities (research is not a core task of universities of applied sciences).

Funding:

- German higher education institutions have been given more autonomy with respect to their governance and funding. The old cameralist budgeting system is phased out slowly and replaced by commercial/private sector accounting. The significance of history based funding has decreased. Formula funding and contracts are now more important.

- Every state has introduced *performance related resource allocation systems* in order to encourage third party funding, increased output in terms of graduates, publications and the like.
- In 2005 the *remuneration of professors* was reformed. The old remuneration system that applied to all professors nationwide was based on seniority. With the new remuneration professors receive a basic salary which is substantially lower and performance related benefits for exceptional performance with respect to research, teaching, arts, continuing education and promotion of young researchers. The regulations can differ among Länder and even among institutions in one Bundesland.
- In 2005 the federal constitutional court abolished the ban on *tuition fees* laid down in the higher education framework act from 2002 since the federal government lacked legislative competence in this matter. Following the ruling the seven Länder Baden-Württemberg, Bavaria, Hamburg, Hesse, Lower Saxony, North Rhine-Westphalia and Saarland introduced tuition fees (Hesse later backtracked due to political circumstances). All Länder drew a limit of €500 per semester. There have been some modifications in the last two years to ensure social equity. According to the respective Länder higher education acts the revenue from tuition fees cannot be spent freely, but has to be invested into the improvement of the quality of teaching and study conditions.

The Reform of Federalism and Bund-Länder-relations: Due to the already mentioned reform of federalism in Germany 2006 the Länder took over full responsibility of higher education institutions and the higher education framework act was abolished in 2008. At the same time both levels of government have signed administrative agreements on special initiatives like the *excellence-initiative* (2006) and the *higher education pact* (2007).

- The *excellence initiative* is a programme aimed at rewarding excellence in research, internationalisation and commercialisation of research and promotion of young researchers in order to establish a number of internationally visible elite universities. Universities could also apply for funding of a comprehensive institutional strategy that ensured the scientific success of the institution. This programme has led to significant institutional governance and funding changes at the universities in question.
- The *higher education pact* (2007) is a programme that first of all ensures that higher education institutions receive additional funding in order to cope with the rising number of students that is expected to attend higher education institutions in the future and second, introduced the reimbursement of overhead costs for research projects funded by the German Science Foundation in order to secure the competitiveness of German research. The programme is to run until 2020, the first phase will end 2010 and the agreement for the second phase from 2011 to 2015 was signed in June 2009.

The outlined reforms in governance and funding also hold true for the development in North Rhine-Westphalia. Since the mid-1990s state governments in North Rhine-

Westphalia have steered higher education institutions towards more autonomy and financial responsibility through pilot projects and so called pacts/agreements with institutions.

Reforms in higher education governance in North Rhine-Westphalia

There are 14 public, 1 private and 1 clerical universities; 14 public, 12 private and 4 clerical universities of applied sciences and 7 public, 1 private and 1 clerical colleges of music/art in North Rhine Westphalia with a total of 462.784 students in winter term 2007/2008. The state governments of North Rhine-Westphalia went further in higher education governance and funding reforms than the governments of other German Länder over the last ten years starting with the amendment of the higher education act in 2000.

In 2005 the Hochschulreform-Weiterentwicklungsgesetz HRWG (Law on the Advancement of Higher Education Reform) was passed. This law also changed the state laws on gender equity and civil service. Based on the law institutions were allowed to decide on their internal structure with respect to the departments and to appoint professors independently. Furthermore, the role of further education was strengthened, internationalisation and the implementation of the Bologna-Process and the promotion of gender equity were part of the law as well.

In 2007 the higher education freedom act was passed. The main changes were:

- **Change of the legal status and more autonomy:** Higher education institutions became independent from the state government and can now decide independently on issues of finance, human resources and organisation with the exception of real estate. Higher education staff are no longer employees of the Land, but of the institution. The state government's influence has shifted from full supervision of higher education institutions to supervision limited to the question of legality of administrative activities.
- **Strengthening of the higher education leadership:** Institutions can now choose if they want to install a rector- or a chairmanship as executive body. It is up to the institution whether it bestows the rector/president with policy-making power or favours a model where the executive team functions as a collegial body. The rector/president and the chancellor/vice president of the institutions are full-time employees that are elected by the higher education council and approved by the senate. At least half of the higher education council members have to be external representatives of academia, business and industry, labour and society at large. Due to the act the councils are now the direct employer of the higher education institutions' leadership. This is a more extensive role than the state ministry used to have.
- The new relationship between state governments and higher education institutions is based on contract management, higher education controlling and finances. Financing of higher education remains the responsibility of the state government, but is now more based on the tasks, objectives and performance of institutions.

In order to tackle the shortage of graduates in engineering three new universities of applied sciences will be established and existing universities of applied sciences expanded.

Reforms in funding of higher education institutions in North Rhine-Westphalia

Financial Autonomy: The pilot project “higher education institutions and financial autonomy” started first at two universities in 1992, was expanded to two universities of applied sciences in 1994 and finally to all higher education institutions in NRW in 1996. Following an evaluation of the pilot project lump sum budgeting was introduced in NRW. The idea of financial autonomy was centred on four principles:

1. Higher education institutions got the right to keep the revenue they received through rent or tuition fees of extra-mural students and to decide on its use.
2. The opportunity for shared funding among staff and capital appropriations and tangible means was introduced so that savings in one field could be used as surplus in the remaining fields.
3. The budget for staff could be managed flexibly. Higher education institutions could expand their personnel by at most 5%, if they saved the equivalent in other budget fields. If staff was reduced on the other hand the equivalent could be used as surplus.
4. Higher education institutions could build reserves of up to 1% of the budget. The principle of annuity was partly abolished.

The lump sum budget was introduced to all higher education institutions of North Rhine-Westphalia in 2006. The change in budgeting is accompanied by the introduction of cost performance calculation, a reporting system and controlling. Furthermore the following requirements are in place:

- The institutions receive funds in order to manage them on their own.
- Third party funding is not part of the state budget and can be invested profitably.
- Revenue is not channelled into the state budget and can be directly disposed of by the institutions.
- Financial risks have to be met by the lump sum budget.

Since 2007 the state budgetary ordinance ceases to be valid for higher education institutions. Their financial management is now geared to the Hochschulwirtschaftsführungsverordnung (Ordinance on the Financial Management of Higher Education Institutions). With this new law institutions can be managed according to commercial principles and take out loans. In that case they are bound to the German Commercial Code. The financial management of higher education institutions is changed in the following areas: The institutions receive remittances to their own accounts which they can manage independently and generate interest. The funding

of higher education is now based on four elements: Basic funds paid bi-monthly in advance, project funds, earmarked tuition fees and third party funding.

Performance related funding: In 1993 NRW introduced performance and success related resource allocation. The system was constantly expanded and modified and introduced for all higher education institutions in 2004. The part of the public grant that was distributed on the basis of performance rose from 14% in 2004 to 17% in 2005 to 20% in 2006. The parameters are weighed differently for universities and universities of applied sciences. For universities of applied sciences the parameters that are measured are: the number of students completing their course of study within the regular duration of the programme, graduates based on number of semesters and gender equity, the number of professors based on gender equity and third party funding.

Tuition fees: In 2003 the Studienkonten- und finanzierungsgesetz was introduced to enable higher education institutions to charge tuition fees to students that took longer than the regular time to complete their studies, cross registered students and senior students. Half of the revenue of these fees was distributed to the individual institutions based on the proportional revenue (25%), the implementation of Bologna Reforms in the sense of the rate of Bachelor students (22%) and quality management in academic studies and teaching (53%). In 2006 this law was abolished and substituted by the Gesetz zur Sicherung der Finanzierungsgerechtigkeit (Law on Assurance of Financial Justice) that authorised higher education institutions to charge general tuition fees of at most € 500 per semester. The institutions were free to decide if they wanted to introduce tuition fees or not. Apart from one distance learning university and one university of applied sciences all institutions in North Rhine-Westphalia introduced tuition fees. The revenue of fees is considered as third party income and by law has to be invested in the improvement of the quality of teaching and study conditions.

On-going processes and new reforms envisaged

In 2007 the government enacted a pilot project on property management to further strengthen institutional autonomy. The project starts at one university and one university of applied sciences in order to improve the management and financing of planning projects, construction works and structural maintenance tasks.

In March of this year the ministry for innovation, science, research and technology of North Rhine-Westphalia published guidelines for a state scholarship programme to offer a third programme apart from BAföG (the federal training and assistance act) and the national scholarship programmes of the seven organisations for the promotion of young talent. The scholarships are targeting talented students coming from families with low income. The programme can also be used to raise the number of students in important fields of study, women studying in programmes they are underrepresented in or ethnic minorities. Under the new model higher education institutions have to raise funds from private foundations and business and industry (at least €150 per student) that are topped up by the state government (€150). The

institutions administer the programme, e.g. student selection, annual performance tests etc., themselves.

3 Performance improvements in German higher education

The performance data collected was based on eight dimensions of higher education performance at the system level operationalised in 19 indicators to capture performance. The eight performance dimensions and their underlying indicators are:

- Access: enrolment rate and net entry rate.
- Lifelong learning: mature enrolments and share of new entries above 25.
- Graduation: educational attainment of the population (25-34) and graduation rate.
- Employability: relative earnings and relative employment rate.
- Mobility of students: students from abroad and students studying in other countries.
- Research output: scientific articles and patents.
- Capacity to attract funds: HERD from private funds and from abroad and contributions from private households.
- Cost effectiveness: expenditures per students (in Euros and PPS).

According to our data, in Germany we see improved performance when it comes to the capacity to attract external funds with tremendous improvements with respect to the percentage of higher education research and development revenue from international sources (+144%) and significant improvements with respect to the percentage of higher education research and development revenue from business and industry and contributions to higher education institutions by private households.

There are also improvements in the field of international mobility, with significant improvements (47%) with respect to the percentage of students going abroad, but only slight improvements (2%) concerning the percentage of incoming students.

Concerning graduation the number of graduates per 1000 population aged 20-29 increased moderately, while the percentage of the population aged 25 to 34 with tertiary qualification only improved slightly (5%).

Concerning research output the German higher education system improved moderately namely the number of patent applications to the EPO and the number of scientific articles per million inhabitants.

There were moderate improvements with respect to cost effectiveness in the sense of lower expenditure per student compared to GDP per capita (2%) and in Euro PPS (12%).

With respect to access and lifelong learning the net enrolment rate improved by 11% with no data for the net entry rate, while the percentage of mature enrolment decreased and the percentage of mature entry only improved by 8%.

Background variables:

1,14% of the German GDP is spent on tertiary education, which is below average. The percentage of GDP spent on tertiary education from 2002 to 2005 increased less than average.

The unemployment rate of 8,5% in Germany in 2007 was higher than average as the growth of the unemployment rate was also higher than average.

In 2006 2,5% of GDP was allocated to GERD. The rate was relatively high in comparison to other countries, but it has grown less than average from 2002 to 2006.

4 Effects of the reforms and other explanations of improved performance

Generally the majority of reforms could be linked indirectly to the improved capacity to attract funds.

Specifically governance reforms were said to have enabled higher education institutions to develop the capacity to plan strategically; strengthened the institutional leadership and widened the scope of higher education institutions; facilitated strategic planning and the development of an institutional mission/profile. Another effect of the reforms is more market orientation and more competition in the higher education system. According to the respondents targeted funding programmes, like the excellence initiative, strengthened research capacity/output in Germany which is only moderately shown in the performance data.

Funding reforms in general strengthened higher education institutions' capacity to act and led to more responsibility and efficiency due to an increased output orientation and the introduction of performance-based funding in the higher education system. Especially the shift to more financial flexibility and autonomy enhanced international competitiveness. However, under-funding of the system also plays a big role. In that context performance-based funding has an even bigger impact.

Other factors of influence

With respect to the percentage of higher education research and development funds from international sources many respondents see the rise in the context of general trends of Europeanization and globalisation, but also as a result of the expansion of EU research funding combined with a national strategy of professionalisation of consultancy services for applications for EU funding programmes. But also stagnating public funds triggered intensified efforts by higher education institutions to attract external funds.

Intensified outgoing mobility is considered to be the result of more general trends towards mobility in the society at large, an increase in scholarship programmes of the federal government through foundations and DAAD, the ERASMUS-programme

and upsurge in international study programmes with mandatory study abroad periods and the portability and increase of student loans.

In 2008 Germany ranked 7th in the Global Competitive Index and has improved its position better than average from 2001 to 2008. The favourable economic development in Germany facilitated the rise in third-party funding from business and industry. Furthermore there seems to be a trend in the private sector to close research & development departments and to contract universities and research institutes instead. This is also followed by a rise in strategic partnerships.

Private contributions to higher education institutions improved substantially because tuition fees were introduced in six of the sixteen German Länder after the federal constitutional court affirmed the Länder's right to decide whether they introduce tuition fees or not.

The population of 18 year olds in Germany has grown stronger than the European average. This can partly explain the improved performance concerning graduation. Other explanations are programmes to increase access to higher education. Another explanation is the reform of study programmes in the context of the Bologna-Process, i.e. the introduction of a two-tiered study structure, which might have lowered the dropout rate. Furthermore the introduction of tuition fees for long-term students might have resulted in students studying more focused. Finally the introduction of performance-related funding based on indicators like third-party funding and the number of graduates is a key point.

5 Institutional Case Studies

The institutional case studies were the Rhenish-Westphalian technical university of Aachen (RWTH Aachen) and the University Of Applied Sciences Of Münster (FH Münster). Both higher education institutions are nationally two of the most successful institutions when it comes to attracting external funds from business and industry and from international sources. Both institutions were early participants of the North Rhine-Westphalian pilot projects on financial autonomy and gradually changed from cameralist budgeting to lump sum budgeting since 2003. They also have long ties with business and industry in their region.

RWTH Aachen

The RWTH Aachen is a technical university with a focus on engineering and natural sciences. It was established in 1870 as the Royal Rhenish-Westphalian Polytechnic School. It has 260 institutes in 9 faculties with currently 30.000 students enrolled in 108 study programmes. 400 Professors and 2.000 academic and administrative staff are currently working at the university. The budget is about 550 million € including 150 million € of third party funding. The university participated successfully in the competitive excellence initiative of the federal and state governments and now receives funding for three clusters of excellence, one graduate school and its

institutional strategy for the future entitled RWTH 2020: MEETING GLOBAL CHALLENGES.

The RWTH Aachen has a long tradition of attracting external funds due to its technically oriented profile. Half of the university's third party funds are raised by the faculty of mechanical engineering.

The university prides itself of a high-performance culture secured by benchmarking. Newly appointed professors are expected to sign performance contracts/agreements on the level of third party funding they will raise. They are then ranked and receive funds - and in the future a top-up to their salary - according to their performance.

There is a long tradition of good relations with business and industry for decades. Senior staff are preferably recruited from the private sector and can use their old ties and business relations as professors. The relations with business and industry are furthermore fostered by the position of vice-rector for business and industry in the university leadership

Institutional Governance Structures

The decision making bodies in the RWTH Aachen are the higher education council, the rector's body, a new strategy board, the senate, the commission for teaching, the commission for infrastructure and finance. The rector's body has six members: the rector, the chancellor (head of the administration) and vice-rectors for teaching, research, industry and human resources. It is the most important body consulting with the newly introduced higher education council. The role of the senate has changed due to the higher education freedom act and has therefore less decision making power. The strategy board was developed as part of the institutional strategy RWTH 2020: MEETING GLOBAL CHALLENGES which is funded by the excellence initiative. The board is an advisory body with ten members that are appointed due to their excellence in research and research management. They advise the rector's body and the faculties on subject related matters. The deans' conference is another new body that serves to foster coordination between the rector's body and the deans. The university also has powerful faculties that are governed by the dean, vice deans for teaching, institutional matters, budget and finances and an executive manager. Respondents repeatedly stressed that the RWTH Aachen still is a group university.

Financial management and resource allocation

The RWTH Aachen receives funds from four different sources: the public grant from the state government, competitive research grants from public actors like the federal and state governments, the German research foundation and private actors in business and industry. On every level funds are allocated on the basis of performance. The state government allocates 20% of the grant based on parameters like graduates and third party funding. For fifteen years the university leadership distributes funds for materials and investments to the faculties according to parameters like number of students, lectures, dissertations and third party funding according to institutional rankings that take the different academic cultures into account. This year a performance based funding system is introduced for staff

appropriations; 20% of funds are now also allocated based on parameters. The system of resource allocation on the faculty level is also based on performance. Every faculty is free to decide on its own system of resource allocation.

Recent Developments:

There have been many changes over the last ten years based on governance and funding reforms. With respect to funding new developments were the possibility to charge tuition fees, the reform of remuneration of professors, the introduction of commercial accounting and the new excellence initiative. Concerning governance the role of the senate was diminished, the university leadership strengthened and a higher education council introduced. Due to the Bologna-Process new Bachelor and Master Programmes were introduced. On the institutional level these challenges were met by empowering the leadership of faculties and an upgrading of the departments for strategic planning and finance of the university's administration and introducing performance agreements for professors. Furthermore a quality assurance mechanism for teaching including students' assessment was developed.

Institutional Strategy

The university leadership actively pursues and rewards an increase of third party funding with several strategies. On the administrative level the departments for EU funding and technology transfer were upgraded in order to look for tenders and to advise researchers. The university introduced a fund to support groups of researchers applying for third-party funding financially. In case of a successful application the research group is rewarded. In addition the university actively pursues strategic partnerships with private corporations and independent research institutes. Part of the institutional strategy to attract external funds is the above mentioned system of resource allocation. Based on that system each professor and his department are mainly funded according to their performance. The university also tries to step up its efforts to attract private donations.

Fachhochschule Münster

The Fachhochschule Münster is a university of applied sciences with 12 departments and currently 9.000 students studying in 50 study programmes. The FH Münster has strong links with business and industry since professors of FH are usually required to have five years of job experience in the private sector before they are appointed. The research tradition which is unusual for a university of applied sciences goes back the 1980s.

For ten years the institutional leadership pursued research and technology as part of the institutional profile. The first position for technology transfer was established as early as 1984. This was then pursued at the end of the 1990s and the beginning of the 2000s with a institutional research offensive and the establishment of the position vice-rector for coordination and partnerships. In 2005 the FH Münster then developed research guidelines.

The profile of a research oriented university of applied sciences was implemented in several ways: through a) an incentive scheme of subsidising third party funds and promotion of equipment, b) professionalisation of structures by establishing a division for technology transfer which was lately hived off as a private corporation, c) strategic partnerships and alliances with business and industry and d) a quality management system.

Institutional Governance Structures

There are three important decision making bodies beginning with the chairmanship of the university with vice-presidents for teaching, research and further education and for strategic planning. The vice-president of finance and human resource management (formerly the chancellor) is the head of the administration and the chairmanships commissioner for transfer and strategic partnerships is also the executive manager of the transfer agency. The other two important bodies are the departments' conference and the senate. The higher education council serves as a board of directors. The departments' conference which is a representation of the deans has now more decision making powers than before as opposed to the senate which is now bound to decisions on general matters and ordinances.

Financial management and resource allocation

As mentioned above the state government of North Rhine-Westphalia distributes 20% of its public grant based on parameters. In the FH Münster the departments receive basic funding and in addition funds based on parameters. The commission for teaching and research and the commission for planning and finance annually develop resource allocation system which is then approved by the chairmanship. The system is based on funding per Professor, student, graduate and third party funding. There is also a allotment system of rooms and plots due to the shortage of thereof. So departments and senior staff can receive subsidies or additional space for the third party funds they raised. Funds are distributed on the basis of input, operating expenses and outcome criteria.

Over the last ten years the role of input criteria like the number of students was diminished and the role of outcome criteria like the number of students who complete their studies in the regular time and third party funding. The university distributes public funds based on the number of graduates and third party funding to the respective departments. Each department is free to decide on its own resource allocation system. They can use the funds to fund specific projects or to distribute them among the department members.

Recent Developments:

As mentioned for above there were several governance and funding reforms over the last ten years that also affected FH Münster. According to the higher education freedom act higher education institutions were free to decide if they wanted to install a rector's body or a chairmanship at the leadership. The FH Münster decided to change from rector's body to a chairmanship. While there were no specific changes concerning structure and composition of the executive team and it stayed a collegial body, it now has more decision making power than before and is the most important

decision making body in the higher education institution. The same holds true for the departments' conference, while the decision making power of the senate was diminished. All of the decision making bodies are now overseen by the higher education council.

At the beginning of the year 2009 the FH Münster changed its financial management to commercial accounting. The newly introduced tuition fees are used to establish mid-level faculty that are not common in universities of applied sciences, but form the backbone of research in the universities.

The FH Münster professionalized cooperations with universities in order to offer cooperative doctorates since universities of applied sciences don't have the right to award doctoral degrees. Based on these agreements students at the FH Münster who want to pursue a doctoral degree can do so with a university professor as principal supervisor and a university of applied sciences professor as a second supervisor. The degree is then awarded by the university. Tuition fees are used to fund positions for doctoral students and mid-level faculty.

These developments were facilitated by the Bologna-Process and the introduction of Bachelor and Master Programmes. The cooperative doctoral degrees were introduced as the third cycle according to the Bologna-Reform. The introduction of the three-tiered system has been fruitful for the FH Münster's attempt to develop a profile as a research university of applied sciences, since students at the Master and doctoral level now support senior staff pursuing research.

For four years the FH Münster has been developing a widely honoured quality management system which is based on an academic supply chain ensuring a successful transition from school to higher education, high quality teaching at higher education and a successful transition from higher education into the labour market. It is planned to introduce an Academic-Score-Card.

Institutional Strategy

In order to foster research and technology transfer a vice-president for teaching and research was established. There is also an incentive scheme in place to encourage staff to pursue research and raise funds (performance based funding). Newly recruited professors are expected to commit themselves to research and therefore for research fundraising. Technology transfer and higher education industry cooperation were professionalized through the establishment of a transfer agency as a facilitator between the institution and the private sector. The transfer agency was then turned into a private corporation. Research and technology transfer are tied to the institutional leadership since the manager of the transfer agency is also a member of the chairmanship of the University of Applied Sciences.

Reforms and Performance

In North Rhine-Westphalia governance and funding reforms in the last ten years brought more freedom and autonomy to higher education institutions especially concerning staff recruitment and remuneration. Especially the introduction of

performance based funding on all levels (state, institution, faculty/department) based on third-party funding can be linked to the improved performance in attracting external funds. More autonomy also made it easier for the institutions to decide freely on which course to set and to cooperate with the private sector. But more significance is given to targeted funding by the federal government. In case of the university it was the excellence initiative which encouraged the university to alter its governance structure and sharpen its profile in order to be more competitive. In the case of the University of Applied Sciences the increase in research funding for universities of applied sciences in general was added to its success. But generally both institutions were also on a very competitive path and had already strategies in place before the reforms. The reforms facilitated already existing developments.

List of people interviewed

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Brigitte Göbbels-Dreyling

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Professor Axel Freimuth

**Chairman of the Board, State Rectors' Conference (Universities) of North Rhine-
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Peter Greisler

**Head of Subdivision "higher education institutions", Federal Ministry for Education
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Professor Beate Rennen Allhoff

**Chairwoman of the Board, State Rectors' Conference (Universities of Applied
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Anja Gadow

Member of the Board, Voluntary Association of Student Bodies

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Governance and Funding Reform in the European Higher Education Area

National system analysis: Greece¹

1 Description of the main reforms in governance

Over the last decade, the most important reforms have been:

- a) In 2001 Law 2916 was the most significant legislative act. It upgraded the TEIs to higher education institutions and formed a binary system of a university (AEIs) and of a technological sector (TEIs).
- b) In 2005 Law 3328 established a new agency for the recognition of degrees, the Hellenic National Academic Recognition and Information Centre (Hellenic NARIC).
- c) The same year, Law 3374 introduced Quality Assurance in higher education, ECTS and the Diploma Supplement. In addition, Law 3369 regulated issues on lifelong learning.
- d) In March 2007, the Greek parliament passed a new framework law on higher education that replaces the framework law 1268/1982 and its several amendments and revisions. The government announced that the law will become operative at the opening of the academic year 2007-2008. It re-introduces quality assurance systems, accountability, internal assessment procedures and autonomy. It is based on older laws and, to a significant extent, revises or abolishes their articles. And this fact distinctively differentiates the new law from the older framework law 1268/1982.
 - Article 1 of the law 3549/2007 adds new elements compared to the older framework law about the *mission of the HEIs* (AEIs and TEIs). The attainment of social cohesion for instance, or the collaboration with other HEIs and research centres in Greece or abroad and their contribution for equity between men and women are some of them.
 - The *binary system* is retained by Article 2 as well as the asylum, although this latter with a few amendments. It no longer called 'university asylum', but 'academic asylum' and it doesn't apply to the whole university grounds as was the case with the previous law, but only to the grounds where education and research are conducted. These grounds are defined by the Senate. Moreover, the new law replaces the three-member Committee for Asylum that was responsible for giving permission to public forces to enter the university ground, with the Rector's Council.
 - Article 4 is about internal operational regulations that were mentioned vaguely in law 1268/1982 and explicitly in law 2083/1992, without however coming into force. The article defines exactly the subject of these

¹ Ourania Filippakou, University of Nottingham

internal regulations and announces that the Ministry will present a model, which can be used by the HEIs until they conduct their own. This time, however, the law is threatened with ramifications that will paralyse the operational function of the HEI that will not comply.

- Institutional government is also affected as it introduces a slight change in the *voting procedure for the posts of the rector and vice-rectors* (Article 8). In this case the electoral body will consist of the total number of academic staff ($\Delta\text{ΕΠ}$), undergraduate and postgraduate students, Ε.Ε.ΔΙ.Π. and ΕΤΕΠ staff, as well as administrative staff. The final score for every candidate will be calculated multiplying a factor of gravity representing each group of the above academic community, namely 0.50 for the $\Delta\text{ΕΠ}$ group, 0.40 for the student group and 0.10 for the rest of staff altogether. The elections for the head of department will be conducted in a similar manner.
- In relation to student welfare it is expected that every department will establish an *office for student support and counselling* (Article 12).
- *Reciprocal scholarships and student loans* are introduced by Article 13.
- Article 14 defines the *maximum study duration* at $v + v$, where v equals the minimum number of semesters that are required in order to graduate. Only in extraordinary occasions the study duration could be extended for another year by a senate decision. After this period of time the student loses his student identity. In addition to the above, the law introduces the possibility to students to interrupt their studies up to v years. At the moment according to the older laws no maximum study duration exists, every student who is registered to a HEI and doesn't graduate holds his student identity forever.
- An *international-oriented regulation* is introduced by Article 17 that gives the choice to HEIs to organise partly or entirely their undergraduate and postgraduate programmes in a foreign language.
- Article 18 and 19 demand *transparency, publicity and social accountability*. The Greek HEIs will be obliged to keep a web-page providing information on: financial management, funding resources, decisions of the governing bodies, services, estates etc. Additionally, at faculty and departmental level they must provide information about their study programmes, they must publish the curricula vitae of all their teaching and research staff and all the information should be available at least in Greek and English. A brief comment in relation to these two articles: although they seem to cover a void in Greek legislation, they do not add anything significant in real terms, since the majority of AEIs and TEIs already keep a webpage in both English and Greek with the required information.
- Finally, the *social accountability* of HEIs will be examined every year in the Parliament, where a yearly report prepared by the Minister of Education about the overall situation in higher education and with recommendations for the future will be discussed. At this discussion representatives of the HEIs might take part (Article 19).

Funding

As mentioned above, in March 2007, the Greek parliament passed a new framework law on higher education that replaces the framework law 1268/1982 and its several amendments and revisions. Regarding funding:

- A *new allocation model of state funding* is described in article 5. The most significant aspect of this article is that the HEIs will be obliged to conduct a four-year development plan that will cover all the operational costs, academic and financial matters, suggestions for development and investments, as well as the planning to find sources of funding, other than the recurrent budget. Again the law is threatened with ramifications if the demands of article 5 are not met. The same article activates indirectly the *regulations on quality assurance* as described by the law 3375/2005, as it constitutes the compliance to the latter as a prerequisite for a positive judgement by the Ministry of the *institutional development plan*.
- Article 5 is supplemented by Article 7, where particular financial transactions are described as well as the creation of an *internal financial audit* system that will operate ex ante and ex post controls.
- Article 18 and 19 on *transparency, publicity and social accountability* (for more details please see the previous section)

2 Country performances and background variables

According to our data, in Greece we see improved performance when it comes to:

- a) Increase of scientific articles
- b) Capacity to attract funds

In addition, in Greece we see slightly improved performance in:

- Educational attainment on the percentage of population aged 25-34 with tertiary qualification
- Total number of graduates as a percentage of population
- Inflow of students from EU-27, EEA and candidate countries
- Expenditure on R&D from business and industry
- Annual expenditure on public HE institutions per student compared to GDP per capita (11%) – however, it is still lagging slightly behind the OECD average as a percentage of Gross Domestic Product (GDP).
- Annual expenditure on public HE institutions per student in Euro PPS

In Greece, we see decreased performance when it comes to:

- Mobile students sent out, i.e. students (ISCED 5-6) studying in another EU-27, EEA or Candidate country
- Relative unemployment rate of tertiary education degrees holders

- Patent application to the EPO
- Expenditure on R&D from international sources

We see no change on mature enrolment, i.e. the total number of students aged 30 years and older.

Finally, it seems that there is no data in areas such as:

- Net enrolment rate
- Net entry rate
- Mature entry; i.e. ration of entry rates of old (25-45) and young (17-25) new entrants
- Relative earnings of tertiary education graduates

3 Effects of the reforms

Funding

Except for the obvious increase in the amount of research conducted in Greek HEIs or the increase in the number of departments and study programmes, it is believed that funding reforms influenced the expectations and aspirations of the academic staff and introduced competitiveness and entrepreneurial thinking. More specifically, the activity of the Operational Programme for Education and Initial Vocational Training (EPEAEK), which is also co-financed by the 'European Social Fund' and the 'European Regional Development fund' along with national resources, had a deep impact on Greek higher education:

- it became the keystone for the establishment of new departments, postgraduate programmes and research projects and
- it gave the necessary impetus in financial but also in conceptual terms for significant changes at institutional level (new subjects of study and research, new curricula, additional staff etc). According to EPEAEK data, 753 research projects were conducted during the period 2002-2006 at Greek universities (ΕΠΕΑΕΚ, 2007a). The priority was placed on new technologies, environment, women participation and equity issues and with the ultimate aim to make Greek universities competitive at an international level by guaranteeing studies of high quality and in the long-term by providing the proper highly qualified teaching and research staff for higher education (ΕΠΕΑΕΚ, 2007a).
- With similar priorities 333 new undergraduate and 249 postgraduate programmes were initiated during 2003-2006 in higher education –both AEIs and TEIs (ΕΠΕΑΕΚ, 2007b). With the support of the Operational Programme 85 new departments at higher education level have been established during the period of 2000-2005 (ΕΠΕΑΕΚ, 2007b).
- European funding creates not only opportunities in research areas and overall improvement at institutional level but is also responsible for a new

culture among academics that encourages entrepreneurial mentality and activities.

- New offices were established at institutional level covering the increased demands in consultancy and interaction with the world of business (e.g. Liaison Offices, Careers Offices etc); these offices provide services and activities beyond the traditional role of the university and mirror precisely the European policy that promotes a greater interaction between the university and its region, employability issues, and market demands, although their influence upon the region is only to be seen to a small extent.

Governance

Important and with significant implications on governance and the overall university culture is also the shift towards more flexible governing bodies and the weakening of traditional governance models. This can be seen as a direct result of the need to manage effectively the new funding streams, to respond immediately to challenges and opportunities these entail.

- a) The competency of the rector's council has broadened significantly over the last decade, covering almost all issues of university life, including those that were once discussed solely in the senate.
- b) The role of the rector has also gained in significance during the last years and changed from that of a prestigious but rather honorary title of 'primus inter pares' to that of a most-desired executive post with sufficient authority and control over academic and financial issues.
- c) The post of the head of administration according to the laws 1268/1982, 1566/1985 and the Presidential Decree 388/83 must be filled after proclamation and can be occupied by candidates outside the civil service sector and the institutional hierarchy. The new law 3549/2007 abolishes this particular post and establishes the post of the Secretary with similar competences and similar appointment methods. The most obvious difference is that due to the new law the tenure will be four years instead of a three-year tenure that is now in effect.

Alternative interpretations of improved performances

It is widely believed that the Greek legislation in the 2000s is directly influenced by European policy. In the 1990s the influence came in the shape of significant funding, specifically I and II Community Support Framework. The need for proper financial and administrative management of this new source of funding forced the governments to adjust or introduce new national legislation. The role of the rector and the rector's council, as more flexible governing bodies was strengthened. Also the role of the Research Committees and Special Accounts once established to administer the scarce research funding was amplified by the inflow of the vast amount of European funds. The influence is expressed in particular by European directives

leading to EHEA and ERA, the ultimate goal of European higher education policy. For example, legislation about quality assurance, life-long learning, ECTS and Diploma Supplement is introduced in an attempt to infuse the Greek sector with European standards as well as an attempt to meet primarily the obligations of the state towards the Bologna and Lisbon processes.

According to the interviewees, other more random interpretations regarding improved performances might be:

- ICT and access to international electronic recourses. For example, the operation of the Heal-link facilitated the access of the Greek academic community to electronic journals, thereby making reading and research easier and faster;
- Increase of PhD holders in Greece;
- Individual efforts;
- International collaborations with other higher education institutions;
- Mobility;
- The establishment of new universities and new departments has as an effect the increase of Greeks with postgraduate qualifications but also to attract Greek academics who have worked abroad.

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Governance and Funding Reform in the European Higher Education Area

National system analysis: Hungary¹

1 Introduction

Hungary has a highly institutional diversified higher education system. There are eighteen state universities, seven non-state universities, 12 state colleges and thirty-four non-state colleges. In this report we deal with the state universities.

This report on Hungarian higher education is based on existing literature on Hungarian higher education as well as on a set of about fourteen face-to-face interviews with decision-makers in Hungarian higher education (names of the interviewed people can be found at the end of this document). The respondents were asked to provide their view on the impact of the reforms on system performance.

The report is divided into four main sections. Section 2 presents a summary overview of reforms in Flemish higher education governance and funding. Section 3 analyses the available indicators on system performance and qualifies them based on in-depth knowledge of the system. Section 4 examines the main impacts of the reforms and the extent to which these have contributed to changes in performance and section 5 draws a final assessment by the authors themselves.

2 Reforms in governance and funding over the last ten years

Hungary's higher education system comprises 71 institutions: 31 state-financed universities and colleges (86% of the students), 26 religious educational institutions (6%) and 14 colleges operated by foundations (8%). The total number of students in the higher education was about 400 000 in 2007/08 (the participation rate was close to 40%), compared to 100 000 in 1990/91. There are 16 state financed institutions with more than 10 thousand students, the other end is 31 small institutions with less than 1000 students. The so-called integration process in 2000 (mergers of institutions) decreased the number of state-owned institutions significantly. Most colleges and universities are located in Budapest, but high quality higher education is provided in other major towns (Szeged, Pécs, Debrecen, etc) as well.

Hungarian higher education has been working towards becoming part of the European Area of Higher Education for more than ten years. From the academic year 2005/06, all students entering higher education in Hungary have been studying in a 2-cycle system that consists of courses leading to a Bachelor (mainly 3 years) and

¹ Gergely Kováts and József Temesi

later on to a Master's degree (2 years). Universities have the right to operate doctoral schools and to award doctoral degrees.

The establishment and operation of higher education institutions are regulated by the 2005 Higher Education Act. A higher education institution may launch Bachelor and Master courses after having obtained the consent of the Hungarian Accreditation Committee, and following the central registration of the given course. Applicants' ranking in the first cycle is based on their secondary school grades and their secondary school leaving examination results. Only applicants with Master degree may be admitted to Doctorate courses.

The number of students admitted to higher education is limited. The Ministry of Education announces the number of state-financed places in each study field every year (all together it is about 60 000). Institutions can open further places according to their accredited capacity where the students pay the cost of the education. 53% of the students were state-financed in 2007/08, the number of state-financed full-time students was 76%.

Reforms in higher education governance

This section describes the main changes and policy initiatives in governance in the period 1995-2008.

Integration of HEIs in 2000

The structure of the public Hungarian higher education sector before the year 2000 was fragmented. There were many highly specialized institutions (i.e. most universities and colleges had only one discipline). The integration process was mainly legally imposed in a top-down way, applying administrative and bureaucratic tools. The aim of the integration process – based on the three principles of location, profile and size – was to achieve higher efficiency by merging institutions. Regional universities were created as well as some mergers took place in Budapest. As the result of this the number of state-owned institutions decreased significantly.

Increasing institutional freedom in setting their internal governance and management structure

The Higher Education Act 1993 prescribed in detail the internal structure of HEIs, including a long list of responsibilities assigned to each governing body. When the integration process took place, the internal governance structure of the universities was not legally modified: the Senate remains the main decision-making body and the powers of the executives – rector, dean – remains as they were before. However, in the period 1996–2005 the institutions have been trying to take innovative steps to modernize their management structure and interpreted legal regulations in a more flexible way (e.g. some institutions introduced directorates with professional staff instead of having a system of academics-led committees only). The Higher Education Act 2005 made a significant change in declaring that institutions can decide on their own governmental structure (within the guidelines of the Act). Some institutions are applying the new rules, but in general the old academic and decision-making

structures continue to characterize Hungarian higher education institutions. In the interviews only a few experts referred to these changes as being important ones in the sense that they may have an impact on HEIs' future. We decided not to further analyze its effects in later chapters. A new element in the HE Act 2005 concerns the introduction of a new body, the Financial Board (although this body shows resembles with the 'Social Council').

Foundation of Financial Boards in 2005.

The foundation of Financial Boards is obligatory for all state-owned institutions since 2006. The Financial Board consists of 7 or 9 members that represent different stakeholders. Initially the majority of the board members should be nominated by the Ministry. However, the institutions successfully disputed this proposal at the Constitutional Court, because according to their view it was considered as being in conflict with institutional autonomy. In the first proposal the major functions of the Board would be to provide strategic guidance and promote institutional economic efficiency, i.e. to some extent a decision making role. This concept has been quashed. The current Financial Boards do not have a decision-making mandate but an advisory one, which is obviously a less powerful position. In most institutions their role is rather weak in determining the financial and economic strategy of an institution (see also the case studies).

Reforms in the funding of higher education institutions

In this section we present the main changes and policy initiatives in funding in the period 1995-2008.

Introduction of formula funding in 1996.

Formula funding was introduced into the Hungarian higher education system in 1993, but it was only in 1996 when it was applied in practice and replaced the funding mechanism based on negotiations. The funding formula was based on several components and the number of components and funding categories changed significantly in about every two years.

However, it is (and was) mainly input-based and not performance-based (number of students, number of qualified teachers, number of PhD-students, resource intensity of the programs). In 2005 the system was adjusted to the Bologna-system, taking into account the level of the programs as well.

Tuition fees.

A long-lasting debate took place on another important feature of funding – full with political, ideological arguments. Tuition fees were introduced in 1995 and abolished in 1998. Student contributions were introduced in 2006 and abolished in 2008 (with a national referendum). Meanwhile the category of the status of "cost-covering" (self-financed) students appeared: students who were not funded by the state, but admitted to the system. They have to cover all the cost of their education. In 2007, the number of self-financed students reached 50% of all students studying in Hungarian higher education. The number of cost-covering students is limited by the

maximum capacity of the institution that is determined in a so-called "capacity accreditation" process. These full cost paying students can be found in all levels of higher education: from full-time Bachelor studies to MBA programmes. In practice however, price setting is taking into consideration a kind of "market value" of the programmes and not the real costs.

Introduction of the student loan system in 2001.

The number of students who are entitled to get a loan has been steadily increasing since the introduction of the loan system in 2001. In the beginning only Hungarian students studying in accredited Hungarian institutions were entitled; later Hungarian students studying abroad or foreign students studying in Hungary were also allowed to get a loan. In terms of access the system is performing remarkably well: 84,000 students were in the voluntary student loan system in 2001 (15 billion HUF), 250,000 students in 2007 (154 billion HUF). The loan is relatively low in comparison with both the international average and the tuition fees and living costs in the country. The interest of the loan is close to the market interest rate which makes the student loan system self-sustainable from a government perspective.

Changes in the admission and in the allocation of students among HEIs in 2005.

Simultaneously with the introduction of the two-cycle educational structure, the allocation of state-funded Bachelor students also changed. Instead of using a quota system in which the Ministry (influenced by negotiations with the HEIs) determines the number of students for each institution and subject area, quotas are set for major study fields. Students in study areas (engineering, business, liberal arts, etc) are ranked by their results achieved on the final exams in the secondary schools. Those who achieve results good enough to be within the quota in the subject area will be state-financed and the institutions to which they are admitted will receive the funding "attached" to the students. The idea behind the reform is to reduce the role of negotiations and to increase competition among institutions.

For students, the new allocation system seems to be more performance oriented (i.e. in the old system, places were allocated among institutions and all institutions got state-funded places. Weaker institutions were usually selected by less talented students. In the new system students with the best result select first and their choices determine the allocation of state-funded places.)

Increasing the financial autonomy of HEIs in 2005.

Before 2005 state-owned institutions had to operate as budgetary organizations, that is, they were restricted by the Annual Budget Law and the strict rules of public financing. The Higher Education Act 2005 did not change the general position of institutions (that is, in general they are still regulated by the rules of public financing: their autonomy in internal resource allocation increased, but it is far from total freedom), but empowered them to take financial decision easier. Nowadays institutions are allowed to retain and accumulate residual amounts, to keep their own income in a separate account, to pursue business activities without the obligation to pay any taxes and duties if certain conditions are met, to sell not state

owned properties, to launch limited liability companies, to take long term obligations within the PPP programmes, and to subscribe government securities.

Introduction of three year performance funding contracts in 2006.

In the contracts the Ministry guarantees an agreed and steady flow of funds for three years (the amount of money is agreed upon in negotiations between each institution and the Ministry). The HEIs take the responsibility to increase their performance in certain fields. Goal achievement and progress is monitored by performance indicators. The goals, performance indicators and milestones are selected by the HEIs and are approved by the Ministry.

3 Performance improvements in Hungarian higher education

The performance of the Hungarian higher education system can be analysed from two perspectives: its position compared to the international average and the direction of changes in the analysed period.

The Hungarian higher education system shows significant improvement in two performance dimensions: access and capacity to attract funds. Compared to the average performance of the sample countries, Hungary has also an above average position in these dimensions.

In other dimensions, however, the Hungarian higher education system has been stagnating. These dimensions include mobility (slight below average position), research output (with significant lag) and graduation (significant below average position). Some remarks can be added to these tendencies, using the components of the aggregated indicators. In the research output dimension the number of scientific articles showed considerable improvement between 2002 and 2006, but the number of patents dropped. As a result the research output stagnated. The below average position in graduation is due to the fact that the expansion period of the higher education system started later in Hungary than in most western countries. It can also be noted that both components for graduation increased between 2002 and 2006, but presumably these elements also improved in other countries, so the pace of growth does not exceed the growth of the sample average leading to an overall stagnation.

Employability and lifelong learning fluctuated between 1998 and 2006, but with different patterns. While employability first grew and then decreased, lifelong learning decreased in the first period and then started to grow. Both dimensions are in the above average position, but employability is strikingly higher than the international average.

The data for the comparison of the cost effectiveness of Hungarian higher education system to the international average is missing. The Hungarian data for the period of 2002-2006 shows that the expenditure per HE student compared to GDP per capita and in euro PPS decreased significantly. This can be explained as an improvement of cost effectiveness, but it should be also taken into consideration that the expenditure

on higher education also decreased in Hungary during this period (see background variables).

Summary of the tendencies can be seen in the table below:

Hungary's current position compared to the sample average	Relative tendency		
	Improving	Fluctuating	Stagnating
	Below average	Mobility	Research output
position compared to the sample average	Above average	Capacity to attract funds	Employability Access (LLL)
		Access	Graduation

* no data available about cost effectiveness

The overall situation is also influenced by the background indicators:

- *Change in 18 years olds in population:* there was a significant decrease of the 18-year old population in the last ten years, and it is expected that the situation will slightly deteriorate further in the future.
- *GCI rank score:* in 2001 Hungary was at the back among the countries in the survey of the Global Competitiveness Index and degraded its position.
- *GERD as % of GDP:* in 2006 R&D expenditure (as a percentage of GDP) was only 71% of the international average: Hungary spent relatively less than the peer countries. Spending on R&D stagnated in the analysed period (2002-2006). In the previous period (1998-2002), however, there was a significant increase.
- *Public expenditure on HE as % of GDP:* Hungary's expenditure on HE as percentage of the GDP was 83% of the international average in 2006, which shows that Hungary spends less than most other countries. Moreover, the expenditure decreased in the period of 2002-2006.
- *Disciplinary mix:* the proportion of science and engineering students decreased in the period of 1998-2006. Hungary was constantly below the sample average and the gap widened during the analysed period.
- *Unemployment rate:* the unemployment rate increased faster, and in 2007 it was about 1 % higher than the international average.

4 Effects of the reforms and other explanations of improved performance

Integration of HEIs in 2000

Although the integration took place in the early 2000s, opinions about the process and the results differ and give contradictory views. The sensitivity of the topic can be illustrated by the fact that there has not been any comprehensive political or scientific evaluation about the integration process.

In the late 1990s mergers of the HE institutions was a widely accepted concept on a system level – for instance political parties agreed upon its necessity as the higher education system was considered too fragmented. The integration process was based on three principles: location, disciplinary profile, size. The integration of institutions in large cities in the countryside (such as Debrecen or Szeged), and the integration of institutions located in the capital city that have similar disciplinary profiles (such as the predecessor institutions of Budapest Polytechnic or Budapest Business School) are usually considered as successful integrations (ie. institutions were able to utilize synergic effects stemming from the integration, and their economic efficiency increased).

The regional integrations of predecessor institutions located in different cities usually are the less successful examples. In these cases the rational of the integration (either centralization of financial and academic administration or the integration of overlapping educational activities) has not been realized successfully, mainly due to the opposition of the parties involved, and due to the weakness of the top management of the newly integrated institutions. The disintegration and rearrangement of certain new institutions started almost directly after 2000. Currently the position of these regionally integrated universities is quite weak, and usually they could not fulfill the regional role (attracting more students from the region, making regional business collaboration, links to the local governments) they are expected, therefore opinions about the success of these integration vary. One of the reasons of the failure to integrate these institutions is that the central governmental decision makers and the political parties of the local governments could not agree upon the selection of the institution that be leading in the integration. The interviews usually emphasized the negative consequences of the integration process, only few good effects have been mentioned.

The major problems mentioned are as follows:

- the integration transformed many previously existing and voluntary cooperative relationships into tensions, competition and fights for resources because cooperation was imposed;
- the internal competition for resources stressed the importance of faculties (deans), while central management has not been empowered with the adequate authorities to deal with this situation: as a result faculties dominate institutions, which does not advantage integration;

- academic and financial aspects of managing the institution have got mixed with each other, leading to confusion, and the academic dominance led to the reproduction of 'soft budget constraints'.

From a managerial point of view it would have been possible to run the institutions efficiently with a more centralised distribution of authority (i.e. without structural solutions), but it would have required the wisdom and cooperativeness of the staff - which was unlikely in the distrustful atmosphere created by the integration process. A structural solution to this problem could be to set up the Financial Boards – see later.

The growing importance of faculties fuelled the strive for creating new faculties. This has, to some opinions, a negative impact on the financial stability of institutions because small faculties can operate less economically.

One of the major arguments of the government to integrate the institutions was that the integration would make the rationalization of institutional operations possible (e.g. economies of scale by the reduction of administrative and maintenance costs). In practice the debates and fights between the faculties (mostly independent institutions formerly) make the exploration and exploitation of organizational slacks difficult (e.g. the elimination of parallel activities, setting strategic development priorities, etc.). The buildings and other physical resources have not been concentrated during the integration and this causes operational waste. As a result of these problems (and other, here not mentioned) the integration mostly remains formal and the efficiency gains of the process has been questioned.

On the other hand the growing size and the multi-campus operation of the existing integrated institutions require the development of systemic solutions even in those cases where the integration is seen as "unsuccessful". Working in a large-scale institution creates managers who in addition to their main academic interests, can represent the aspects of economic sustainability, which can be an important element in the development of institutional governance in the future.

An important lesson from the integration process is that a legally imposed and quick integration has a lot of drawbacks. Motivation and governmental initiatives are needed to ensure results of a slower, more evolutionary process. If the parties involved are able to trust each other, to make long-term compromises, and to find win-win solutions, then the integration could create a development potential to be materialized in the growing ability to attract funds and to better pursue their interests in negotiations.

Foundation of Financial Boards in 2005

The introduction of Financial Boards at the top level of the institution is an attempt to introduce board type management into institutional practice. In the original concept (early versions of the reform) the owner (the state) would delegate the majority of the members and the board would have significant decision-making authority in strategic questions, while the rector had the full responsibility for

realizing the strategy approved (and modified) by the Financial Board. The Senate consisting of the representatives of students and professors would be responsible only for academic affairs (i.e. curriculum). In the final text of the HE Act 2005, however, a less powerful Financial Board came into existence in which the representatives of the state are in a minority position and the Senate retained much of its original role and power.

As the interviews show, in its present form the Financial Board can be considered as the restoration of the 'Social Council' whose function was to provide guidance, raise new ideas and to voice opinions of academic and non-academic parties who are frequently underrepresented in academic decision making processes.

It is not just the lack of sufficient authorities that makes Financial Boards unsuitable to fulfill a controlling role in the institutions. Persons delegated by the Ministry are often not suitable, not responsible enough. Currently there are only a few members of the Boards who can convincingly represent a wider stakeholder's view on the strategy of the institutions and on institutional policy issues. Another problem that the Boards are facing is the lack of their own separate staff who can provide the Financial Board with management reports and information. Thus, externally delegated members remain outsiders without a realistic view about the institution. As problems are framed and decisions are prepared by the rector's staff, the academic management (rector, vice-rectors, i.e. all those leaders who represent academic staff rather than support and services) can make the Financial Board to declare (and therefore legitimate) their concepts and decisions. In addition, sharing information with the members of the Financial Board sometimes is in sharp contrast with the interests of the institution. In some cases the academic manager of an institution was delegated to the Financial Board of a competing institution.

The legislator does not provide strong powers to the Board, so its role and powers in practice depend on the institution itself. The impact of the Financial Board can be significant in those institutions where financial and strategic controlling units are missing. An effective role of the Board can be observed if the members of the Board have a (business) relationship with the institution before their appointment. In these cases the success of the institution is their interest, and they have the necessary local knowledge, too.

There are examples where the relationship between the Board and the institution is definitely conflicting. In these cases the Financial Board usually overestimates its own role and its members have no realistic knowledge about the peculiarity of higher education or the characteristics of its financial operation. The general pattern is, however, that there is a peaceful coexistence of the Financial Board and institutional management (rector and the administration).

In the opinion of the interviewees the appearance of the Financial Board has no real impact on the improving performance dimensions of the Hungarian higher education (i.e. no impact on improved access improved third party funding and improved research output in terms of articles produced).

Effects of funding reforms

Introduction of formula funding in 1996

Formula funding was introduced in 1996. Since then funding formula changed almost every two years and the result was an unpredictable funding context. The reason for the constant change was that the formula was not used (consciously) to influence admission policy, but only to redistribute funding. However, because the process contained negotiation elements and the determination of the parameters was not transparent, the formula funding just disguised the way how in fact the resources have been allocated.

Frequent changes in the formula and the low level of transparency led to a situation where negotiations between institutions and the Ministry continued to play an important role, and the financial position of institutions remained hardly predictable. Several experts argued in the interviews that in the Hungarian higher education a negotiated institutional funding system is effective in reality, but it is carried out by "formula funding", sustaining the image of an objective and predictable funding system.

It should be noted that it is not just the lack of a consistent and credible educational policy which makes the formula funding system working improperly. The proportion of the labour cost in an institutional budget is about 70-80% of the state funding. The staff of the institutions has a public servant status; therefore the funding amount cannot be decreased below that level. It has been argued that a fully functioning formula funding system would require the elimination of the public servant status in higher education. (As public servants, staff enjoy heavy protection, so institutions must have a very-very good reason to dismiss them. If the state would not provide enough money through the formula funding system, institutions could not pay the wages, but they could not dismiss the staff either which is a contradiction. If the state would provide money for wages in other channels, it would not be a fully functioning formula funding system.)

Nevertheless, the formula funding system of the 1990s and of the beginning of the 21st century have had a major impact on access to higher education and the expansion of the educational system in Hungary, because most institutional leaders assumed that funding is dependent on the number of students. Strategic decisions have been based on this assumption. Others were aware that institutional funding could not be increased by simply increasing the number of students, but they were convinced that stagnating or decreasing student numbers would have harmed their negotiation powers. Their negotiation position becomes weaker compared to those institutions (or faculties) where student numbers do increase. Increasing student numbers have not resulted in the direct increase of state funding. However, it proved to be an important argument in negotiations and an important means to maintain the actual level of state funding.

"Cost-covering fees"

Apart from the state-funded study places, institutions can enroll students that pay full cost for their education. The number of these students paying fees grew steadily between 1996 and 2005. Their proportion is the highest among part-time, distance learners and postgraduate students. The paid “cost-covering” fees are practically functioning as a regular tuition fee (representing the political hypocrisy: all the Hungarian political parties declare that they are against of the introduction of “tuition fee”, and in Hungary there is no tuition fee in the higher education officially).

The proportion of cost covering students in 2005 was about half of all students. This indicates that many students are willing to pay to gain social mobility. That underlines OECD calculations that show that the private rate of return of higher education is one of the highest in Hungary. This fact also questions arguments against a general introduction of tuition fees.

The status of a student (self-financed or state-supported) is determined in the enrolment procedure. Some research shows that social differences (e.g. a higher proportion of low-income families in the self-financed category) make the system unjust. The Higher Education Law 2005 gives (limited) possibility to transfer students from one category to the other, but the concept has controversial elements, and the algorithm has unclear factors: the impact of the new regulation is not clear.

It is surprising, however, that cost-covering students do not (or cannot) enforce higher quality in education, and what is more, cost-covering students (e.g. in Bachelor programmes) are usually treated as less-qualified students compared to full-time students.

The appearance of cost-covering students has two major effects on HEIs. On the one hand, it increases the flexibility of HEIs as the revenues generated from that source can be spent (almost) without restrictions. On the other hand, it increases the market-sensitivity of institutions: positive or negative impacts can be really seen in the nearest future when the number of potential students from the relevant age groups is likely to decline.

Introducing cost-covering funding plays an important role in the expansion of higher education. It has not simply created the possibility for students to learn but it also encouraged institutions to increase the number of cost-covering students to balance their budgets. This process, however, did not go together with the improvement of quality. On the contrary, the general opinion is that the average quality of the higher education graduates has been decreased as a consequence of the rapid expansion of Hungarian higher education.

Introduction of the student loan system in 2001

The student loan system supports students to cover living costs rather than the tuition fees, because the maximum loan is relatively low. Therefore, the existence of loan system does not explain the rapidly increased access to higher education.

The student loan system has two indirect effects. First, the loan is attached to the student, which raises the sense of responsibility and the general level of financial-economical culture. Students learn how to manage debts and risks. Another impact of the existence of the student loan system is that it has been used as an important argument in the debates about the general introduction of tuition fees (which was unsuccessful as we described in the introductory chapter).

Changes in the admission and in the allocation of students among HEIs in 2005
As we described in the first chapter, the aim of the reform in this area was to make the allocation of state-funded students more competitive by setting quotas for major study fields instead of negotiating with the institutions and with the representatives of the given areas. Institutions located (or having affiliations) in Budapest were the main beneficiaries of the new system. The position of the small countryside institutions worsened significantly with the decrease of state-funded students, and the decline could not be balanced by recruiting more cost-covering students. The strength of the institutional protests proved that the reform had a real impact, not just on the allocation of students but on the allocation of state funds as well.

There are some unintended consequences of the “competitive” system. Formula funding mainly based on the number of students and the reform in admission together made former colleges interested in building capacities on higher levels and trying to accredit and offer programmes in master and doctoral level. Another consequence is that the declared principles of capacity building in infrastructure are in contradiction with the results of the changes in admission: the EU resources are primarily available for the countryside institutions where the number of students is decreasing. And finally, as size of the 18-25 age group is declining, there is a competition for those students (young or mature) who normally do not think of studying in higher education: the reform contributes to the improvement of access indicators.

Increasing the financial autonomy of HEIs in 2005

Only a few experts mention that this reform element has had significant impact on the institutional practices. Those who referred to this reform usually emphasized the intended positive effects, that is, the growing institutional freedom in resource allocation and growing possibilities to develop real cooperation with business and governmental organisations.

These changes may significantly increase institutional capacities for capital attraction. However, for the moment only a few Hungarian institutions have the entrepreneurial spirit and managerial expertise to take advantage of the new measures. (It is also a question when the results of the changes will be seen in the institutional indicators.)

Introduction of three-year performance based funding contracts in 2006

Partly based on experiences of similar systems in other countries, three-year performance-based contracts were introduced into the Hungarian funding system in 2006. In exchange for a guaranteed and agreed flow of state funds for three years,

institutions took the responsibility to improve their performances. Goals and indicators for measurement of progress were selected by the institutions themselves from a list set in the amendment of the Law (and accepted by the Ministry). This methodology proved to be too permissive: as a result, some of the selected indicators will not show real progress in performance, and there are no real challenges for the institutional management.

It is not clear yet how institutions can be sanctioned if they fail to perform as agreed. Several institutions have not even presented the obligatory report to the Ministry, or if they have done it, the reports were not based on reliable facts. The Ministry also lacks the capacity (persons and statistical database) to control the performances of the institutions. In addition, rules of public finance do not support long term agreements or contracts and this further reduces the credibility of the long term contracts. As a result parties (especially HEIs) do not believe in long term solutions and the real value of the contract is perceived as low. The institutions optimize their short term activities.

Most interviewees said that the process of the introduction and freezing of the “guaranteed” money (as a consequence of the financial crisis) discredited the performance contracts. From an institutional perspective performance contracts can be considered more as a political declaration than as a legal document with clear implications for their functioning. At the moment three-year performance contracts do neither contribute to the improvement of the ability to attract capital, nor to the access of HE.

5 Other factors of influence (alternative interpretations for improved system performances)

Improvement in access

The expansion in the Hungarian higher education between 1995 and 2004 can be explained by a few additional factors: (1) the opening up of the higher education system, and (2) the increasing number of potential students from the 19-25 year old age-group. Both factors strengthened the belief that higher educational qualifications are a general expectation in society as a whole, which (3) attracted older age-groups without degree to higher education. This resulted in a further increase on the demand side. Higher education institutions have built their capacities according to an “ever-increasing” demand. However, from 2005, as a consequence of a declining demographic trend higher education capacity is higher than necessary, especially in the fields of teacher training, arts, law and economics/business.

Improvement in the capacity to attract funds

In spite of the increase of cost-covering students and the increase in the financial freedom of institutions, several experts find it hard to believe that institutional capacity to attract funds improved significantly. Many alternative explanations were provided during the interviews:

- Problems in calculation: while business and external sources remains stable during the analysed period, state funds decreased; this leads to improved values of the indicators.
- Lack of contextual knowledge: indicators in the analysis covered not just higher education institutions, but the research institution of the Hungarian Academy of Sciences as well. The contribution of the Hungarian Academy of Sciences and higher education institutions cannot be separated. It is assumed that higher education institutions perform worse.
- Abundance of resources: the dimension of “capacity to attract funds” has the implicit assumption that institutions play an active role in the process. It is also possible, however, that their abilities and sensitivity have not improved. Instead, it is the abundance of resources that is reflected in the improving indicators. For example, there are many tenders where the participation of a higher education institution in the consortia is compulsory or greatly improve the chances for success. Other examples are the funds generated from the companies’ balance sheets (before tax) to contribute to the development of higher education for certain purposes (e.g. innovative research, programmes for vocational studies) by the force of the law.
- A reason for the abundance of resources could be that the business sector recognized that investing into higher education is profitable. That might be the case for both small-scale (e.g. student services) and for large-scale business investments (e.g. PPPs).
- Low basis: the change in the capacity to attract capital seems significant because currently much potential is un(der)explored; therefore even small changes can lead to considerable increase.
- Other factors: there are corporate R&D activities deployed at universities (such as the Siemens and Bosch Departments at the Technical University of Budapest and the University of Miskolc), but it is the tradition of the institution, the social capital of some persons or the location of the university (and not necessarily its good services) that make the institution attractive.

The increase of the number of publications

One of the indicators of research output is the number of scientific publications. The increase can be explained as the indirect result of policy making. The restoration of PhD training at universities in 1993 and the continually growing expectations with regards of publication activities are likely to have an impact on the number of publications.

There are other factors and mechanisms which might play role in the improved statistics:

- One assumption is that the rearrangement of disciplines made teaching in sciences and technical disciplines undervalued, and the ‘free’ capacities in those disciplines are used for research and producing publications.
- In its tenders the National Office for Research and Technology prefers or requires medical and technological scientists to publish their results.

- The cooperation between authors leads to increasing number of articles with several authors. Joint tenders also strengthen this trend, because participants can be co-authors in articles, even if not all of them participated directly in the research led to the publication.
- Publications may increase as a result of the increase of international scholarships and exchange programs.

6 Final discussion and appraisal

The general outcome of the interviews is that there have been several reforms in Hungarian higher education, although most of them are not perceived as being 'radical'. The reforms have brought changes in the areas of governance and funding in the last decade. The institutional landscape changed through mergers, even though not all of them have been successful. Institutional autonomy has increased (more decision making freedom to shape internal governance structure and more financial discretion), but not in every respect. A new institutional governing body has been introduced – the Financial Board – but its impact on institutional decision making remains to be seen and differs from one institution to another. Tuition fees came and went. Three-year funding contract between the ministry and the individual universities were introduced, but their effectiveness is seriously questioned.

Hungarian higher education performed rather well in three areas: access, third party funding and number of scientific articles published. There are no clear indications – according to the respondents – that governance and funding reforms have contributed to these three areas. Changes in system performance of Hungarian higher education have been the consequence of other factors.

List of people interviewed

	Name	Position	Date	of the interview
1.	András DERÉNYI	Head of the National Credit Council Member of the National Bologna Committee	18 2009	May
2.	György FÁBRI	Director of the Hungarian Academy of Sciences, Communication Department	26 2009	May
3.	Attila KOTÁN	Head of Budget Department, Ministry of Justice	13 2009	May
4.	István Vilmos KOVÁCS	Former Deputy Director of Development Department, National Development Agency	20 2009	May
5.	Zoltán LOBODA	Head of the Department of European Union Relations, Ministry of Education	26 2009	May
6.	Norbert MISKOLCZI	President of the National Association of Higher Education Students Member of the National Bologna Committee	23 2009	June
7.	Dávid NAGY	Member of the executive board, National Association of Higher Education Students, Member of the National Bologna Committee	28 2009	May
8.	Zoltán PEREDY	Deputy Head of the Strategy Department, National Office for Research and Technology	19 2009	May
9.	János PAKUCS	President of the Hungarian Innovation Association	03 2009	June
10.	Béla PALÁSTI-KOVÁCS	Chair of the Non-university sector, Hungarian Rectors' Conference Dean of the Budapest Engineering School Member of the National Bologna Committee	18 2009	May
11.	Bálint SZABÓ	Hungarian Chamber of Commerce and Industry Vocational counsellor	1 2009	July

12.	Tibor SZÁNTÓ	Chief-secretary of the Hungarian Accreditation Committee	18	May 2009
13.	Pál VERES	Senior Advisor of the Department of Higher Education, Ministry of Education	26	May 2009
14.	József VÖRÖS	Chair of the Economic Advisory Board of the University Sector, Hungarian Rectors' Conference,	21	May 2009

Ex vice-rector of Pécs University

The interviews were conducted by Gergely Kováts

Summary of reform effects (based on the expert interviews)

Reform	Positive effects / Strengths	Negative effects / Weaknesses	Impact on performance dimensions
Integration (2000)	Increased efficiency Skilled managers	Contradictory introduction academic competition cooperation vs	? cost effectiveness ? capacity to attract funds
Financial Board (2005)	Stakeholders participation	Lack of decision-making power	No impact
Formula funding (since 1996)	Regulated economic environment	Lack of transparency Lack of stable and predictable system	++ access
"Cost-covering" fees (1996)	Sensitivity to the market needs Contribution the budget	Increased social inequality Principles vs practice	++ capacity to attract funds ++ access + cost effectiveness
Student loan system (2001)	Strengthened financial culture and sense of responsibility	Risk	+ access
Increasing financial autonomy (2005)	Cooperation between HEIs and business organisations	Contradictory regulation	+ capacity to attract funds
Admission and the allocation of students	Increased competition among institutions	Strategic development of the countryside vs student preferences	++ access

Reform	Positive effects / Strengths	Negative effects / Weaknesses	Impact on performance dimensions
(2005)			
Three-year performance based funding contracts (2006)	Performance indicators Medium term planning	Weak legal regulation Changing rules Lack of credibility of education policy	No impacts yet
	+ / - weak positive / negative impact		
	++ / -- strong positive / negative impact		
	? contradictory impacts		

7 Institutional case studies

Corvinus University of Budapest

The university as the result of an integration process

The Corvinus University of Budapest (CUB) was established in 2003 as the result of a long and exceptional integration process that contained both voluntary and forced elements. To understand the current governance structure of the university, it is worth to take a closer look at some of the details of the integration process.

The Budapest University of Economic Sciences (BUES; formerly Karl Marx University) has made a long-lasting transition from a social science institution representing the mainstream ideology of the ruling Socialist Party to an internationally competitive business and management school that has introduced standard curricula of the western world between 1986 and 1999. The role models were the Wirtschaftsuniversität Wien and the London Business School as elite institutions in the field producing the leaders of their country's administration and foreign relations and having a lot of financial and political autonomy. However, there was a pressure on the university management to find partners and to become a comprehensive, "real" university.

That was the background of the proposals of the Senate to merge with the Technical University of Budapest (in 1996) and with the Eötvös Loránd University of Liberal Arts (1999). The first one was preceded by an alliance among four higher education institutions in which participants successfully cooperated to win some infrastructure development tenders (World Bank initiative) between 1993 and 1996. However, the proposal to intensify the cooperation by integrating member institutions was rejected, which resulted in the end of the cooperation and the alliance. The

University Council of the Budapest University of Economic Sciences wrecked the second attempt as well: votes of the defenders of an independent elite school won again.

An amendment of the Higher Education Act on the integration of the Hungarian universities in 2000 created a situation where institutions with programmes in only one study area were required to accredit programmes in at least one other study area – for BUES the simplest solution was a merge with the College of Public Administration. As the result of that the Budapest University of Economic Sciences and Public Administration (BUESPA) was established.

At that time, due to its one-study profile, the University of Horticulture and Food Sciences also integrated into a new university, namely the Agricultural University of Gödöllő (located in Budapest region) by the Act of 2000. The reason was to create a regional university. Conflicts between the members of the constituent institutions were so intense, however, that the faculties of the University of Horticulture and Food Science started to lobby to stop the integration and they got a government permit to be integrated with BUESPA – if they would agree. After long discussions the Senate of BUESPA decided that the Horticulture and Food Science faculties could join and the new university – as Corvinus University of Budapest – was officially formed in the academic year 2003/2004. The seven faculties of the new university have teaching and research programmes in the fields of economics, business administration, public administration, social sciences, horticulture, food sciences and landscape architecture. This combination of disciplines is unique in the country.

The Corvinus University of Budapest has about 17,000 students (2007/08), which makes them the seventh largest university in the country (in terms of 2007/08 student numbers). Student numbers stagnated in the recent years. The boom in student numbers happened earlier, in the 1990s. About 46-49% of all students are cost covering (i.e. fee-paying) students between 2004 and 2007. The percentage of foreign students (excluding trans-border students with Hungarian nationality) compared to the number of full-time students fluctuates between 7 and 8 percent between 2004 and 2007.

Number of enrolled students							
	2001/2002*	2002/2003*	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Corvinus University of Budapest	15 543	16 212	17 243	17 342	17 322	17 879	17 708
Hungarian higher education	313 238	341 187	366 947	378 466	380 632	375 819	359 391

The university has 290 doctoral students on average (1,6% of all students); they study in one of the 8 doctoral school of CUB.

According to the statistics of the Ministry of Education and Culture the yearly average of income generated from contractual R&D activities is 307,9 million HUF: the fourth largest amount among Hungarian HEIs. The university was especially active in contractual R&D activities: in 2005 12% of all contractual revenues of Hungarian higher education institutions are generated by CUB. The university also established a project-company to act as an intermediary for business enterprises/agencies and the institution. The establishment of new spin-off companies is planned in the near future (to provide food and horticulture research).

As can be seen from this short description, Corvinus University of Budapest (and its predecessors) performed well in student and capital attraction compared to other Hungarian higher education institutions².

The structure of the university

The structure of the organisation and the management changed several times during the integration process. During the first years of the integration the then rector attempted to create a highly centralised structure in which the central administration was run by professional directors. The academic structure was also changed by eliminating some departments and merging others. In the second stage of the integration, a new rector was elected in 2003. He was committed to decentralisation, so he eliminated the directorates and restored the traditional governance and decision making structure.

As a result of that a high degree of faculty autonomy characterizes nowadays the decision-making mechanisms of the university. Only decisions primarily concerning university policy and financial and operational framework are centralized in an integrated university management system.

Faculties (1) are entitled to define their own organizational structure, internal rules and regulations. Therefore academic structures greatly vary across faculties and this leads to a lack of transparency. Some faculties have departments, others have institutes, and there are faculties having both. Faculties frequently establish centres, research centres and project organisations. At one of the faculties that has 81 full-time employees, there are four institutes, but 38 research centres as well.

Faculties (2) play an important role in defining the structure of the study programmes and in managing research activities. And (3) they are also responsible for most of the administration and services in relation to study programmes, and also for decision-making regarding especially but not exclusively student affairs. In

² See indicators in detail in the Hungarian System level report.

addition (4) faculties enjoy a high degree of autonomy concerning their own revenues. State funds are also allocated to faculties. Finally (5) in most cases deans rather than the rector are dealing with the employer's rights.

Faculties are governed by a dean and by Faculty Councils. Councils consist of representatives of departments and students to provide significant departmental influence on faculty issues.

Another distinctive feature of the university's governance system is the composition of the supreme decision-making body, the Senate. It has 38 voting members: 1/3 of them are students who have strong influence on university affairs. The other members are delegated by faculties or are ex-officio members. Although the size of faculties in term of student and staff numbers or budgets varies significantly (e.g. in 2007 the largest faculty had eight times more students than the smallest one), faculties are represented in the Senate by an equal number of staff members. This creates tensions among faculties and encourages the larger faculties to further decrease the significance of the central level.

In addition to the Senate, there are other institutional level bodies. The Rector's Cabinet is an operative body, where the agenda of the Senate is discussed with the deans. The Financial Board gives recommendations and voices its opinion on every financial issue. It has an indirect influence on university affairs and it can be considered mainly as a consultative body, although its consent is required for major financial decisions.

A rather new phenomenon in the development of the university structure is the appearance of a middle-management and governing layer between the central and faculty level, which is called the campus level. Its role is to coordinate issues regarding infrastructure maintenance and development, room allocation and timetable planning. It also serves as a place where faculties of the campus can harmonize their interests. This development is contradictory, however. Some consider it as an obstacle of completing the integration in the future because it re-creates and re-institutionalizes the three predecessor institutions. Others think that the campus level is a good way to increase resource allocation efficiency by some kind of centralisation without seriously harming the interests of faculties.

The central management of the university is led by the rector. The three vice-rectors are responsible for (1) educational and research affairs, (2) for international affairs and (3) for strategic issues. Vice-rectors supervise the central administrative offices (i.e. Central Academic and Information Technology Office, Quality Office, International Office, Communication Office, Corporate Partnership's Coordination) and support services (Career Office, Information Technology Service Centre, Central Library of the University). Since the integration of 2003 it has been common practice that each constituting institution delegates one vice-rector. Financial and maintenance affairs are fully centralised into the General Directorate for Finance and Technique.

Funding and resource allocation

The university is a state-owned higher education institution, i.e. a central budgetary organisation: expenditures of both state funding and own revenues are regulated by a special law, which decreases the resource allocation flexibility of the institution even though conditions improved as the result of the reforms in 2005.

In 2008 the income of the university was about 17,000 million forints. The average annual income growth rate between 2004 and 2008 was 11,5 per cent (5% in 2004 prices). On average 53 per cent of the total income came from state funding and the remaining 47 per cent was the university's own revenue (which is similar to the national average).

Revenues (in million forints)

	2004	2005	2006	2007	2008
State support	6 249,7	6 714,2	6 788,3	7 998,8	9 387,1
Own revenues	5 075,7	5 528,4	5 810,1	7 300,0	8 001,1
Total revenue	11 325,4	12 242,6	12 598,4	15 298,8	17 388,2

65–70 per cent of the state funding is the training and maintenance grant provided to cover the costs for personnel and the maintenance costs of teaching and research activities of the university. The rest of state funding is for strictly specified tasks, e.g. grants for student bursaries and for special programmes.

The major sources of the university's own revenues are fees from training and research programmes, tenders and applications, and the utilisation of university assets. 2007 and 2008 were outstanding years, as more than one billion forint was generated through the utilization of university assets. The vocational training contribution³ from companies has been continuously growing as well as the amount and the rate of revenue from tenders and innovations. These revenues provide a valuable source of investment in educational and information technology.

Concerning the breakdown of expenditure, wages and social security make up around 50% of total expenditure.

³ According to the Hungarian law, companies have to pay a vocational training contribution that can be given to educational institutions.

The internal allocation of resources reflects the decentralised nature of the institution. Revenues are transferred to those faculties (and then usually to departments) where they were produced. State funds are also allocated to faculties by using the formula applied by the government.

Central organizational units that provide support services (the Central Library and the Computer Service Centre) or fulfil administrative and executive roles are budget centres who are entitled to manage their finances independently. The budgets of the central organizational units are negotiated and agreed upon during budget planning. Currently about 80% of revenues are allocated to faculties, while the rest is transferred to central executive units, support and maintenance service units.

Incomes and expenditures are monitored and controlled by a budgetary management system. It is worth noting that in the last decade the central academic management attempted several times unsuccessfully to introduce a more transparent controlling and resource allocation system.

The effects of the integration on the university

Teaching

In the integration process institutions with rather different study fields have been merged. Therefore, possibilities for cooperation between these faculties in teaching are limited and remained unexploited. What is more, the strengthening of faculty autonomy weakened even those relationships which were lively before the integration. Some faculties tried to be self-supportive: they try to cover all the courses by its own faculty staff even if staff with better qualifications on other faculties is available. There are only a few cross-faculty joint educational programmes. Paradoxically these tendencies have been escalated by the Bologna process. For instance, shorter programmes (three-year BA/BSc and two-year MA/MSc programmes instead of five-year programmes) motivated faculties to (continue to) teach their own courses.

Research

Research has similar symptoms as teaching has. The predecessor institutions of the university have always played a decisive role in research (and in curriculum-development). The advantages of multi-disciplinarity have not really been utilized (yet). Although there are some co operations between faculties and research groups, which managed to attract considerable external funds, the general pattern is different. One of the exceptions is the Regional University Knowledge Centre, which intends to enhance the competitiveness of food chain enterprises and was founded by the Faculty of Food Science, the Faculty of Horticultural Science and the Faculty of Business Administration.

Research (and counselling) is individualized, especially in social and economic sciences where the growing need for consultative services after the 1990s also strengthened individualization and the foundation of private companies with university employees. Research on these fields does not require significant

investments in equipments. Therefore individualization is not limited by technological constraints. As a result, research activities are scattered in the university (individual and sometimes departmental projects are common), cross-departmental research projects are fairly rare. As for EU research applications, the university itself generally participates as a partner in different consortia (which is typical for the country as a whole), and only a limited number of research projects has been initiated from university organizational units so far.

Administration and services

A unified financing framework has been developed. Financing operations have also been standardized. Career services and computer services are centralised and information systems (such as student administration and budget control) are unified. There are some services which remained decentralised: quality management, language education, student administration and libraries are managed on campus/faculty level.

Summary: the impact of funding and governance reforms on the Corvinus University of Budapest

The predecessor institutions of the university differ in size, organizational culture, institutional profile and disciplinary environment. Harmonizing interest and building trust therefore requires time and integration is possible only gradually. That is especially true if we take into consideration all the experiences from in the 1990s, which made faculties very cautious in negotiations. The frequent ruptures (rejected integration requests, failed integration etc.) in the 1990s and the early 2000s made it virtually impossible to develop a stable vision and to realize a long term strategy and organisational development concept for the university. The institutions were in the state of constant change.

After 2003 a decentralized governance structure was adopted that seems to be stable, but the price paid is the lack of focus in research and education. The faculties are most of time unwilling to cooperate. Therefore, it is still difficult to realize an organisational-wide strategy, although reasons are different than they were in the previous period. Another consequence of the decentralised structure is that faculties can enforce their own interests, which are sometimes in contrast with institutional interests. It is an open question whether the introduction of campus-level management can improve the situation.

The formula funding system supports the faculty's autonomy well, because by using the formula the contribution of faculties to total revenues can be easily calculated. It is unfortunate that the distribution of costs is not as transparent as that of revenues. This is a constant source of tensions.

In a decentralised organisation, central administration cannot serve as a buffer in cases of governmental cutbacks and resource withdrawals, so these must be directly distributed among faculties and this leads to further tensions. Theoretically decentralisation encourages faculties to increase their revenues and to decrease their

costs. Cutbacks and redistribution among faculties (e.g. because of loss-making units) usually hit harder well managed faculties and departments, because they have the money to cover losses of other units. This has an opposite effect on their motivation.

The appearance of cost-covering students increased the institutional capacity to attract funds, especially in business and public administration, economics and social sciences, which became popular study fields in the 1990s. The good institutional reputation made student attraction easy. These disciplines attracted many international students as well. At the same time, the faculty of Horticulture and the Faculty of Food Science were successful in attracting research funds. These faculties are more entrepreneurial and try to use the university infrastructure and spin-off companies to attract more research funds. Staff in social science disciplines is also active in counselling, but this activity is less visible and much harder to channel into the university because it is highly individualized and it does not require special university equipment. Stronger performance control and more favourable funding environment should be created so that researchers in those fields bring their projects into the university.

The increased financial autonomy that was introduced in 2005 also played an important role in capital attraction, mainly because it made possible to concentrate buildings located in different parts of the city and to develop infrastructure. In addition to participate in state-supported PPPs (public-private partnership programmes), this is the only available source for infrastructure development. EU money is unavailable for institutions in the Budapest-region.

It is also worth mentioning that although student numbers stagnated in recent years, the attractiveness of the university among applicants has not changed much. Changes in the admission and in the allocation of students among HEIs in 2005 have not influenced significantly the leading position of the university in general (its impact on faculties varied, however).

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- Report of the European University Association, 2008**

List of interviewees

Ágoston HOSCHKE	Former Vice Rector for general and scientific affairs at the University of Horticulture and Food Sciences	28 July 2009
	Former Dean of the Faculty of Food Science	
Ildikó HRUBOS	Professor Emerita	15 July 2009
	Former Vice Rector for educational affairs at the Corvinus University of Budapest	
Norbert KIS	Vice rector for International Affairs	30 July 2009
István PERJÉS	Head of the Institute of Behavioural Sciences and Communication Theory, Faculty of Social Sciences	28 July 2009
József TEMESI	Head of Department, Former Vice Rector for Educational affairs at the Budapest University of Economic Sciences and Public Administration	21 July 2009

University of Debrecen1

The University of Debrecen as an integrated new university was established in 2000. The integration process had evolutionary elements. In 1991, as part of a World Bank development programme, the Debrecen Universitas Association was established. Its members were the Agricultural University of Debrecen, the Medical University of Debrecen, the Debrecen University of Calvinist Theology and the Kossuth Lajos University of Arts and Sciences. (Some of them had 600-year traditions). Later, other institutions joined the Association: an affiliation of the Ybl Miklós Technical College of Budapest, the Kölcsény Ferenc Calvinist College of Teacher Training, Wargha István Teachers' Training College in Hajdúszoboszló, and the Debrecen Conservatory of the Liszt Ferenc Music College. In 1996, a cross-institutional body was set up to prepare a joint development plan for the future. As part of the cooperation, joint educational programmes were launched (e.g. in economics and business, in law, in chemistry, and in molecular biology). The cooperation became even closer with the foundation of the Federation of Debrecen Universities in 1998, which was followed by the full integration in 2000.

Currently the university has 15 faculties in the areas of medicine, agriculture, arts, (natural) sciences, economics, law, informatics, engineering, teachers' training and music.

In the academic year 2007/2008 the university had 29,000 students, which makes the university the fourth largest institution in Hungary. 70% of the students study full-time and 37% of them are 'cost-covering' (i.e. fee paying) students. 5,6% of all students are international students. Between 2000 and 2008 the student numbers increased by 34% at the University of Debrecen, while on national level the expansion was 22%. The difference demonstrates the attractiveness of the university.

Number of enrolled students

	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
University of Debrecen	21 747	23 062	24 723	25 904	27 403	28 366	29 381	29 121
Hungarian higher education	295 040	313 238	341 187	366 947	378 466	380 632	375 819	359 391

Doctoral education can be followed in 25 doctoral schools. The Hungarian Academy of Sciences runs 19 external research groups at the university. Both data reflects the research potential of the university. According to the statistics of the Ministry of Culture and Education, in the period 2003-2005 the University of Debrecen received the second largest amount of funding from international and contractual tenders

¹ Written by Gergely Kováts, Institute of Management, Corvinus University of Budapest

among the Hungarian higher education institutions. In 2005, the University of Debrecen got 35% of all the revenues from international tenders.

The University of Debrecen is one of the most entrepreneurial universities in the country. In 2007, state-owned higher education institutions in Hungary were (joint) owners of 68 business ventures: the University of Debrecen participated in 1/3 of them.

Finally, it is worth noting that researchers of University of Debrecen play prominent roles in the most influential academic organisations in the country. The Hungarian Accreditation Committee (in 2007) and the Hungarian Academy of Sciences (in 2008) elected its Presidents from the University of Debrecen.

As can be seen from this short description, University of Debrecen performs excellently in the dimensions of access and capital attraction².

The structure of the university

After the integration, the number of faculties increased gradually. 8 new faculties have been established since 2000. Currently there are 15 faculties grouped into three centres, which have high management and financial autonomy. Two of them, the Medical and Health Science Center (MHSC) and the Center of Agricultural Sciences and Engineering (CASE) were set up in 2000 (simultaneously with the integration). This put the fields of arts and sciences in an asymmetrical position in institutional decision making. To counterbalance this situation, a new centre called Center of Arts, Humanities and Sciences (CAHS) was founded in 2004.

The centres do not just coordinate teaching and research activities of their faculties, but they pursue activities outside of the traditional higher educational fields. The MHSC provides for example health care services, the CASE runs experimental and model farms and provides agricultural counselling, and the CAHS runs teachers' training schools. It makes the funding more complex especially in the cases of MHSC and CASE, because their special activities are funded from specific (non-academic) sources (e.g. health care services provided by MHSC are funded by the National Health Insurance Fund Administration). These special activities can be efficiently carried out only if all the faculties in a given centre participate. As a consequence, it is the centre which is entitled for funding. The complexity in funding and the requirement of high level of cooperation within centres explain the high level of financing and management autonomy that they enjoy.

In addition to the centres, the central administration plays an important role in institutional decision making. First the central administration provides institutional level coordination and administration, i.e. it makes propositions as regards university level affairs and manages the negotiations on proposals that come from lower levels. Second it also runs central services.

² See indicators in detail in the Hungarian system level report.

The university and its central administration are led by the rector. The president of each Centre functions as vice-rector. Teaching, research and strategic matters have also their own vice-rectors.

Since 2004 the central administration has been reorganised: directorates have been established and are led by well-prepared and highly educated directors, who can assure continuity in task management. Directorates are supervised by the rector or one of the vice-rectors. Financial affairs are supervised by the General Directorate of Finance, but as a consequence of the decentralised structure, Centres have their own directorates (reporting to their Centre and to the General Directorate of Finance) that have significant responsibilities and powers.

Although Centres and Centre presidents working as vice rectors have substantial influence on matters of planning and administration, deans representing the faculties directly participate in university level decision making through the Dean Collegium and the Senate (the main decision making body). The Senate is organised on a faculty bases and represents all the interests groups proportionally. In addition to these governance bodies, the Rectorial Director Meeting, the Rector's Council and the Financial Board play role in decision making. Most issues are discussed in each body; therefore they are scheduled accordingly.

Of course, the influence of these bodies on final decisions is not equal. The Senate has 73 voting members, which makes long and profound discussions hardly possible. The Financial Board can be considered as a consultative body, even if the opinion declared by the Board is usually accepted by other decision making bodies and committees. The major role of the Financial Board is to discuss strategic questions and to firmly channel a business approach into the decision making processes.

Funding and resource allocation

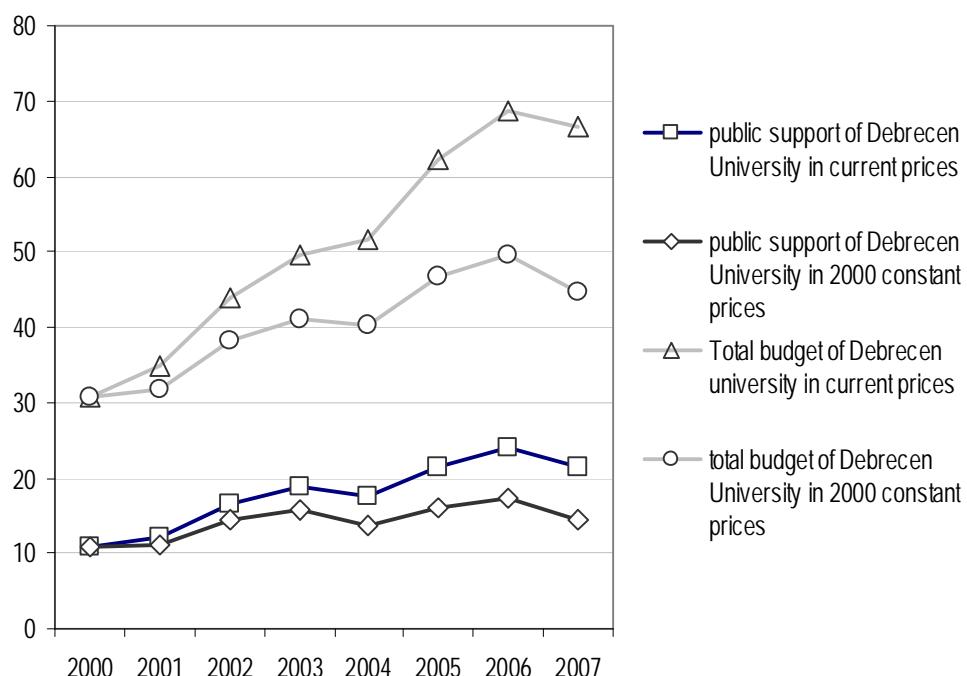
The budget of the University of Debrecen was 66,5 billion Forint (ca. 235 million Euro) in 2007, which exceeded the budget of the second largest city in the country (Debrecen). About one third of the revenues stems from health care services. The state support from the Ministry of Culture and Education amounts around one third of the total revenues (including students grants which have to be transferred to students). The university's own revenues (tenders, contractual research, etc) are around 10 billion Forint. Both the budget and the state support increased by 50% in real terms between 2000 and 2007 (this, however, included students' grants which also increased in that period).

Planning and financing is decentralised and occurs primarily on the Centre-level. Budget planning starts with the definition of general allocation principles, after which central management and Centres have to agree upon the main budget parameters. Centre budgets are redistributed among their faculties and departments. In practice the planning procedure is not so sequential: the final budget is the result of an iterative process in which all participants try to influence the main allocation principles, the amount and the direction of redistribution. It is noteworthy,

however, that in contrast to the general practice of Hungarian higher education, where budgets are finalised by May of the given year, the University of Debrecen can accomplish the process by February. This means that negotiations require much less time than in general. The SAP system implemented in 2006 might play an important role in that, because it provides current, transparent and unified budget control and monitoring.

Although it is possible for institutions to freely decide on their internal allocation mechanisms, this is not taking place at the University of Debrecen. The funding system that serves to allocate state funds *among* institutions is used as an allocation tool *within* the institution as well.

The budget and public support of Debrecen University in constant and current prices (in billion HUF)



- Source: data in current prices can be found in: Debrecen University Institutional Development Plan, 2008, p. 14. Data in real terms are the calculation of the author.

The faculties receive 80-85% of their shares, the rest covers the cost of central administration and services. Faculties have to cover all their operational expenditures, development costs and the expenditures of their centres. Loss-making faculties are stabilized by redistribution directed by the Centres and by cross-funding from other faculties. Solidarity currently works, but significant resource withdrawal can destabilize the balance within the institution.

Several factors make planning and resource allocation difficult:

- Some important data are only available late in the planning process (e.g. final student numbers are available only in October)
- Revenues can be roughly estimated, e.g. state funding depends on the number of enrolled student, but only the number of admitted students is known etc. Own revenues (tenders, contracts) can only be estimated.
- The funding environment is uncertain, exceptional cutbacks or the freezing of the savings took place occasionally.

Although the introduction of three-year funding contracts between the ministry and the university was perceived as a good initiative, it can only be applied to a small portion of the total budget (e.g. see the budget of the Medical Centre). In addition, cutbacks because of the crisis discredited the three-year funding contract.

While revenues can be planned only roughly, high proportion of expenditures is fixed (i.e. remuneration and maintenance costs). Development is possible by increasing operational efficiency (e.g. outsourcing) or by attracting additional private or public sources. The first solution is limited by the fact that the law restricts the resource allocation flexibility of institutions (e.g. staff must be employed as public servants). The university responds to these limitations explicitly and suggests policy changes in its Institutional Development Plan.

Universities are not allowed to raise credits for development purposes. PPP programmes and the establishment of spin-off and project companies (enabled by the 2005 Higher Education Act) remain as feasible solutions. However, most forms of capital attraction require the university to match the funds from its own sources. This is obviously very difficult when the university budget is subject to cutbacks. And it reduces the strategic room to manoeuvre.

The effect of the integration on the university

7.1.1 Teaching

The integration facilitated close cooperation of disciplines that complement each other well. Several faculties are built on the natural sciences. This is a great asset to start multidisciplinary programmes, but it also has the danger of redundancy in the academic structure and educational programmes. This redundancy cannot be fully eliminated because education is carried out in three cities and on several campuses. Such elimination is not necessarily desirable because each discipline applies different perspectives in teaching. Redundancy therefore is reduced only in courses providing general knowledge (basic language and computer skills), bachelor courses and within centres/campuses.

7.1.2 Research

Successful participation in large-scale, complex research projects is considered as one of the main achievements of the integration. These projects simultaneously

contribute to the integration of the university, because it requires the involvement of different centres/faculties. The largest international project is “Genomnanotech” that focuses on research in genomics, nanotechnology and biotechnology. The strength in research of the university is also symbolized by the fact that it competes to be the location of the European Spallation Source (and the odds look good).

The integration made the university not just the most comprehensive university in the country, but made it also more visible in the international arena. Accumulating research experiences in many fields makes the university a resourceful partner in university-industry cooperation, because it can successfully approach problems from several different perspectives.

7.1.3 Administration and services

The integration influenced the administration and services in two ways. First, institute level services (library, computer services, language centre, student information centre, etc.) were unified. Second, information systems that are required for administration and management, have been gradually developed and extended to the whole institution. This includes student administration (Neptun system), finance, maintenance and management information (SAP), human resource information systems and document management systems.

Summary: the impact of funding and governance reforms on the University of Debrecen

The integration has had a fundamental influence on how the governance and funding systems at the University of Debrecen work nowadays. The three centres reflect to the three dominant founder institutions (the University of Medicine, the University of Agriculture and the Kossuth Lajos University of Arts and Sciences) and managed to preserve much of their autonomy. Instead of radically changing the academic (micro) structure (e.g. by eliminating or merging faculties or departments), emphasis was put on the institutionalization and formal acknowledgement of existing co-operations that rooted in the 1990s. Co-operation and trust were further enhanced in the first four years of the integrated university, when it was a team of representatives of the major scientific fields who governed the university. Moreover, the rector position was fulfilled in a rotating system, while others in the team stayed in charge as vice-rectors (other positions in the organisation were more permanent).

The integration process was interpreted as finding and grabbing opportunities together and developing a viable academic structure in an organic rather than a forced way. There are signs of this path (e.g. doctoral schools are detached from faculties and merged into a graduate school which has its own financial and administrative responsibilities).

Co-operation is of course not without tensions, but the atmosphere is constructive due to the fact that the integration was not only imposed externally, but it was also driven internally. What is more, the governance structure described before was

developed against external pressures. Co-operation in the 1990s served as a solid foundation for trust, which made a conscious and gradual development of management and governance systems possible. The cooperative atmosphere has increased the ability of the university to develop attractive and recognized (joint) educational programmes, to attract private funds and, in general, to pursue its own interests more efficiently.

In the area of funding state support for the university has been favourably: it continuously increased since 2000. The internal funding allocation system used at the university copied the national formula, even though the governmental distribution system does not calculate per capita normative on cost basis.

Fee-paying students play an important role in the financial stability of the institution (e.g. 37% of all students were cost-covering student in 2007). The funding system clearly orientates faculties to increase student numbers until the limits set in the accreditation process and therefore it contributes to the improvement of the access indicators. At the same time, actual funding is still irregular (changeable, uncertain) and unpredictable and the introduction of three-year contracts has not improved this. It has no real effect on how the institution works.

The Higher Education Act of 2005 increased the financial autonomy of HEIs. The University of Debrecen managed to take the advantage of new possibilities by founding spin-off and project companies, which play an important role in its capital attraction. In general, the full exploitation of the growth potential of the university is seen to be prevented by inflexible resource allocation possibilities in employment and infrastructure.

The introduction of Financial Boards at the top level of the university was meant as a significant reform. At the University of Debrecen this Board is functioning as a consultative body that assists the decision makers in taking business/financial viewpoints into consideration. Therefore the Financial Board indirectly contributes to the capital attractiveness (and resource utilization) of the institution.

The University of Debrecen exemplifies the (near) maximum results within the current funding and governance policy framework.

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List of interviewees

Name	Position	Date of interview
László CSERNOCH	Dean, Faculty of Medicine	28 June 2009
Attila DEBRECZENI	Vice Rector for Scientific Affairs	17 June 2009
László FÉSÜS	Rector	17 June 2009
János KÁTAI	Dean, Faculty of Agriculture	28 June 2009
Zoltán MAG	General Director of Finance	17 June 2009

Governance and Funding Reform in the European Higher Education Area

National system analysis: Iceland¹

1 Introduction

This report summarizes the main changes in governance and funding in the Icelandic higher education system during the previous ten years, as well as their impact on the functioning and overall performance of the system.

It is based on existing literature on Icelandic higher education, analysis of policy related documents and initiatives, as well as on written and oral communication with key informants and policy-making actors and stakeholders in Icelandic higher education (names of the informants can be found at the end of this document), who were asked to provide their view on the impact of the reforms on system performance.

The report is divided into four main sections. Section 2 presents a summary overview of reforms in Icelandic higher education governance and funding, while section 3 analyses the available indicators on system performance and qualifies them based on in-depth knowledge of the system. Section 4 examines the main impacts of the reforms and the extent to which these have contributed to changes in performance, while section 5 offers some final reflections on the developments of higher education in Iceland.

2 Reforms in governance and funding over the last ten years

Historically higher education in Iceland is mainly a story about one single institution (Larussón 1998), but this has changed the last couple of decades where the country has witnessed both an ‘upgrading’ of vocational and other tertiary education institutions, and also the establishment of new institutions. Currently, the higher education landscape in Iceland includes both public and private providers in a variety of fields. The largest institution in the country is still the University of Iceland in Reykjavík, but there is also seven other universities of which some are more specialised (in business education, arts, agriculture), while others are more comprehensive.

As in other countries, reforms of the sector in Iceland has in general been targeted at increasing institutional autonomy – including the establishment of private providers, emphasise results, and to strengthen the relationship between

¹ Bjørn Stensaker, NIFU STEP, Oslo, Norway

performance and funding. Over the last decade, the most important reforms have been:

- The 1997 law on universities allowing different forms of ownership of higher education (opening up for a private educational sector).
- The 1998 funding system implying that funding should be based more on performance (i.e. exams and graduation).
- 2006 law of universities in Iceland making public and private universities equal of status.
- New law on public universities from 2008 stipulating that the majority of the Senate shall be external stakeholders

These reform initiatives are further described below.

Reforms in higher education governance

The 1997 law on universities can be considered as a turning point in the governance of higher education in Iceland. This was an act determining the general framework, but stipulated that each of the public universities should be governed by separate acts. The following elements can be identified as central in this Act (Jonasson 2004).

- **Changes in how the higher education landscape was defined.** Prior to the new Act, one could argue that Iceland had a binary system of both a university sector and a college sector. However, in the new act any institution was given the opportunity to label itself as a university even without having research as a central part of the activity. Hence, as a consequence, institutional differentiation may be said to have been of less political importance.
- **More institutional autonomy.** Another key element in the 1997 act was an increase in institutional autonomy of institutions allowing them to choose their own internal governance systems, pay systems, and administrative organisation. The key link between the Ministry of Education and the institutions, was that the Rector should still be appointed by the Ministry, which also appoints two members of the governing body.
- **Increasing external influence in the governing of institutions.** In the act, representation in various governing bodies were also changed – reducing the number of internal (academic) representatives at the institutional level, while increasing external representation.
- **The emergence of a private higher education sector.** Several of the current universities in Iceland are private and charge tuition fees (e.g., University of Reykjavik and Bifrost, with the Iceland Academy of the Arts being a self-governing institution), and the 1997 act can be considered as the opening up of a private higher education sector in the country. However, being a private institution does not allow private institutions to make a profit, and these institutions do also receive the same amount of funding for teaching from the state as the public institutions.

- **The introduction of more systematic external quality assurance.** In a number of countries, increased autonomy of higher education institutions is matched by the introduction of more systematic quality assurance. This was also the case in Iceland although the system cannot be said to be very similar to other European countries as the whole process of quality control was stipulated to be under the auspices of the Ministry of Education itself with rather limited resources available to perform evaluations.

These changes in the legal frameworks of higher education had considerable impact on the internal governance structure in Icelandic institutions, but mainly at the top echelon. While some institutions carried on with traditional governance arrangements based on more collegial decision-making, others adopted internal decision-making structure models more similar to those in the private sector (see also OECD 2006: 16). However, after the 1997 act, considerable tensions emerged between the public and the private sector in Icelandic higher education. These tensions related mostly to the degree of state support to the private institutions providing them with the same level of funding per student for teaching as the public, although the private institutions in addition were allowed to charge tuition fees (Jonasson 2004: 164). In addition, the expanding private sector also increased competition for students, staff and resources in Iceland, increasing tensions between the public and private sector even further.

In 2006, changes were made in the Act. This act was meant to facilitate the adoption of the Bologna process and to strengthen considerably the quality and accreditation mechanisms, but perhaps most importantly to ensure that both public and private institutions have a formally equal status in the higher education system. Two possible interpretations can be made of this development. First, one could argue that this change ensured a more fair competition in the sector. Second, one could also argue that the change has meant one further step of transformation in the public sector, making the institutions in the public sector more similar to those in the private, at least in terms of structural governance.

The latter explanation is supported by the fact that another change in the legal framework in 2008 meant that the Majority of the Senate of the institutions should be external stakeholders. Hence, the external influence in institutional decision-making within the public institutions seems to have been strengthened throughout the whole decade.

Reforms in the funding of higher education institutions

The 1997 act also resulted in a 1998 change in the funding system of higher education in Iceland implying that funding should be based more on performance than in the past (Hannibalsson 2000). Here, it should be mentioned that this change in the funding of higher education can be said to have started already in 1991 as block grants were introduced in the country (Jonasson 2004).

Related to the introduction of a more performance oriented system was also a general increase in the level of funding to the sector, and the introduction of three year performance contracts between the Ministry and the individual institution. These contracts were introduced in 2000, and have been developed for both public and private institutions. In general the contracts are structured by the following elements (OECD 2006: 18):

- how the total amount is to be arrived at
- the University's obligations in terms of quality, joint projects and international presence
- the distribution between enrolments on campus and in distance teaching mode, and between undergraduate and post-graduate level of study
- the obligations incumbent upon the university to report back and to be accountable to public authorities

However, the funding model also includes an annual process of determining funding per student and per discipline, and the total number of student places. There are also different price categories for different study field that may change independently. Although changes in these rates have not been radical in the last decade, this procedure can interfere with the agreements made in the three-year contracts. Even though several of these items are tied to funds in detail, many are not.

In addition to this, private higher education institutions may – and do – charge tuition for studies offered. This is not a possibility for public institutions (which can only charge registration fees, stipulated by parliament), although public universities may charge tuition for continuing education programmes.

Funding of research comes in four different streams. First, part of the duties of every university academic staff is research (typically, 40% of total time) which they get paid for, unconditionally, out of the state contribution to the public universities. Second resources for research are provided through the lump sum of money that is distributed in the three year contracts. These resources are made available on the condition that institutions are active in tendering for international funding, in pursuing EU funding, and other external funding. Third, Rannis – the Icelandic Centre for Research – is awarding national research funding based on competition. Forth, various state establishments, industry and firms may fund research independently.

On-going processes and new reforms envisaged

Icelandic higher education has during the last decade witnessed expansion both in student numbers and in the number of institutions. Although funding in general has increased considerably during this period, resourcing the sector is still a challenge. The increased competition between institutions has also resulted in an increasing interest for strategic cooperation and mergers in the sector. Several such merger have taken place (e.g., the 2005 merger of the Technical College of Iceland with

Reykjavik University and between the Iceland University of Education and the University of Iceland in 2008), and there are others are being discussed. Since a number of the higher education institutions in Iceland are quite small by international standards, the institutional leadership, but also the Ministry of Education, has launched initiatives to find ways to improve the total efficiency and effectiveness of the sector. This will most likely – at least according to our informants – result in larger and fewer higher education institutions in the future.

3 Performance improvements in higher education in Iceland

In the governance and funding reform project, the performance of national systems has been measured along the following dimensions and using the uniform international indicators (see technical file for the precise definitions):

- Access: enrolment rate and net entry rate.
- Lifelong learning: mature enrolments and share of new entries above 25.
- Graduation: educational attainment of the population (25-34) and graduation rate.
- Employability: relative earnings and relative employment rate.
- Mobility of students: students from abroad and students studying in other countries.
- Research output: scientific articles and patents.
- Capacity to attract funds: HERD from private funds and from abroad and contributions from private households.
- Cost effectiveness: expenditures per students (in Euros and PPPS).

Relevant indicators include the absolute value of the indicators, either compared to the average of the countries in the sample or the change in the indicator value between the years 1998, 2002 and 2006. Of course, these indicators provide only a partial view of system performance and, hence, we will comment on them below.

According to our data, in Iceland we see improved performance when it comes to:

- a) expenditure on R&D from business and industry
- b) contribution to HEI by private households;
- c) entry rates of older students (aged 25-45)
- d) graduation in the range between 20-29 years of age
- e) mature enrolment of students aged 30 and older as percentage of total enrolment

With respect to the increased expenditure on R&D from business and industry, an important contextual factor is here the political ambition of the Icelandic government to increase research capacity in general, and to stimulate innovation and renewal in industry and the service-sector. Hence, Iceland has a special Science and Technology Council chaired by the prime minister, and with several members of the government and key stakeholder groups represented. Hence, an additional purpose with this

council is also to improve public-private partnerships. To serve the council with key information, and to implement initiatives taken in the council, Iceland has created a special public research agency (RANNIS). Still, in absolute terms expenditure on R&D has increased most by public sources since 2000, and although the private contributions are growing it cannot match the rise in public funding.

Several other initiatives have also been taken during the last decade to stimulate cooperation between higher education and business and industry, not least the creation of several research parks, knowledge and innovation clusters and similar arrangement located close to the larger universities. There are, in addition, institutional incentive systems intended to stimulate staff to attract funding from private sources, and to improve the dissemination of research to the outside society. Hence, there are a number of important elements surrounding the growth in R&D expenditure from business to industry.

Three of the remaining four performance indicators are partly related, namely the contribution to higher education by private households, entry rates of older students, and mature enrolment as a percentage of total enrolment. During the last decade, Iceland has witnessed an impressing rise in the number of mature students (25 plus). In 2000 enrolments of students aged 24 and under accounted for 45 percent of the total number of students, while older students accounted for about 28 percent (OECD 2006: 23). Today, these two groups roughly account for a similar percentage of the total student number (about 40 percent). However, this statistics may also cover up for the fact that many older students are actually enrolled in continuing education programs – of which public universities can charge tuition. Hence, one could argue that there is a possible link between contribution by private households and the level of participation by mature and older students.

Concerning graduation rates, and the improvements in the number of students graduating – it needs to be mentioned that due to conditions in the student loan scheme, part-time students may not always be eligible for this support – something that may affect graduation rates in general. If part-time studies are difficult due to economic circumstances, students may have an incentive to complete studies on time.

4 Effects of the reforms and other explanations of improved performance

Why an increase in the expenditure on R&D from business and industry?

With respect to the increased expenditure on R&D from business and industry two explanations are dominant among the informants. First, it is believed that a booming economy in the last decade have had direct positive spin-off effects on R&D expenditure. Private companies have had more resources to spend on R&D although there are no significant incentives – or tax reductions for companies wanting to invest in R&D in the HE-sector. Among the informants there is also much consensus that the reforms implemented during the last decade has indirectly contributed to a more dynamic and competitive higher education system. Here, the expansion of the

private sector, and the increased competition between institutions is considered important. While the University of Iceland has been the historic stronghold with respect to research activity (and still is), the increased competition has stimulated institutions and staff to improve existing performance, and to search for funding also outside the public resources available through RANNIS. Hence, it should be underlined that the expenditure on R&D from business and industry to the higher education sector is unevenly distributed between institutions. This is a pattern recognisable also from other countries, not least the UK. A possible consequence that inter-university cooperation is suffering. Those universities that receives such third stream resources have few incentives to initiate cooperation with the rest of the higher education system.

Second, several informants also argue that the business sector has been transformed into a more knowledge-intensive industry which again has driven more resources into research. Examples mentioned are: genetics, software industry, biotechnology, and not least Decode). It is believed that companies and industries involved in these topics also have a high interest in investing in research. In these fields the role of the government should not be underestimated as a facilitator for investments also from the private sector. Several informants point out that the considerable growth in the public funding of research has contributed to improve the research infrastructure, including research equipment, and that this has also been an important reason why private business and industry are allocating resources to the higher education system. In this way, increased governmental funding has in general been a key stimulus also for private investments.

Contribution to HEIs by private households

Iceland has also improved the contributions to HEIs by private households and two factors are mentioned as possible explanations, again with some links to the reforms implemented. First, during the last decade private higher education has expanded in Iceland, and about 20 percent of all students are now enrolled in private HEIs – paying tuition fees. Iceland have no cap on the tuition institutions may charge students, and although the private sector is relatively small, the resources they can get from private households can still be substantial. However, it should also be mentioned that the establishment of a functioning private sector next to a public one without tuition is a challenging task. Here, the informants think that the private sector establishments have been clever in developing more specialised and targeted study programmes that have been successful in aiming at particular sectors or professions.

A second factor mentioned by the informants as a key to understand why private households has increased its contribution to private households, is that continuing education and life-long learning is an expanding area in Icelandic HE, and that even public institutions may charge tuition fees if the educational offer is classified as “continuing education/life-long learning schemes”. This has even led some institutions to redesign ordinary study programs into continuing education schemes.

However, there are also some contextual factors that need to be mentioned as part of the story. In general, the labour force participation rate in Iceland is very high, and has been so for a number of years (OECD 2006: 28). Some informants do think that a high participation rate in the labour force also stimulate continuing/life-long learning schemes in general. The argument is that scarcity of qualified labour due to a high participation rate trigger needs for more re-training and knowledge up-grading in the labour force.

Due to the geographical characteristics of Iceland, a considerable part of the continuing education schemes, in particular in the professional training of teachers and nurses, are also given as distance education programmes. The Iceland University of Education and the University of Akureyri, have had a very high rate of students that are enrolled in distance education programmes.

Improvements in entry rates of older students

Among the informants the improvement regarding entry rates of older students (aged 25-45) and the improvement in mature enrolment (students aged 30 +), is related to the new performance-based funding system introduced in 1998. The argument is that institutions as a result of the new funding system is interested in recruiting new students as they represent potential “future income” if they graduate. The formula funding scheme rewards “production” and it is believed that the institutions have expanded their educational offer to attract more students. Since Iceland already has a relatively high rate of younger cohorts entering higher education, the potential has been to tap into what in other countries may be considered the continuing/life-long learning market.

Indirectly the rise in the entry rates of older students may also be related to the system expansion in general. As pointed out in a recent OECD-evaluation of the tertiary education policy in Iceland (OECD 2006: 30), growth of the system both in the number of institutions and more specialised field of study has been an important reason why the number of students going abroad to study has been dramatically reduced. Iceland has a long history in sending their students abroad to study in area either without matching opportunities at home, or with a very limited enrolment.

Some informants also points to the importance of the booming economy as an explanation for improved entry rates of older students. With business and industry in need of a more qualified labour force, those without basic higher education qualifications, or with older qualifications may lag behind. In this way, the improvements of entry rates can be seen as a “push” and “pull” process of which both higher education institutions and the individual student had a interest.

Improvements in graduation

In a similar way, it is also believed that improvements in graduation are also related to the new funding scheme, and to the establishments of contracts stimulating the expected “targets” to be reached – not least with respect to education. Hence,

institutions have during the last decade had a strong incentive to produce "graduates", and it is argued that a number of initiatives have been taken at institutional level to support/assist students with the aim of making them complete their studies.

The private providers are again pointed to as innovators in stimulating to change in the student teacher relationship, and in how teaching and learning can be organised and conducted. Whether such innovations always improve quality is a more disputed issue.

However, many informants also argue that improved graduation may also be related to a booming economy and a very favourable labour market creating a separate incentive for students to graduate.

5 Final discussion and appraisal

As is the case in a number of European countries, Iceland has some specific characteristics that to a high extent influence both the higher education sector as such, and the reforms targeting this sector. A first issue here is the size of the country, and the traditional dominance of a single university in providing education and research. Several informants argue that this has led to a governance system based on very close connection between the Ministry of Education and the key institutions – especially the University of Iceland. This has undoubtedly had some advantages in terms of implementing various policy initiatives, but can also have a negative side relating to a system more focused on stability than change.

The reforms implemented during the last decade can be said to have contributed to break-up the close, and almost informal, relationship between the government and the institutions – not with respect to the intimate knowledge of each other, but on how the governance game should be played. The introduction of regulations stimulating the expansion of a private sector may not have had dramatic impact on the larger public institutions in real terms (e.g., in allocations to research etc.), but have brought a sense of unrest and competition into the system. Moreover, the introduction of contracts in which performance targets were set can be said to have formalised the government – university relationship. Along with changes in the internal governance structure of universities, one could claim that the higher education institutions have become more professional, or at least more strategic in the way they function, are organised and led. Although this development undoubtedly has caused tensions in the higher education system, the increase in the level of funding to higher education during the decade has on the other side been an important incentive to implement changes.

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List of interviewees

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Dep. Director Halldor Grönvold, Icelandic Confederation of Labor
Director Petur Reimarsson, SA-Conferederation of Icelandic Employers
Director Pall Hannesson, BSRB Federation of State and Municipal Employees
Senior advisor Svandis Ingimundardottir, the Association of Local Authorities in Iceland
Director Smari Haraldsson, JTJ Center for continuing education
Director Hallgrímur Jonasson, Rannis, The Icelandic Centre for Research
Managing director Sjofn Sigurgisladottir, Matís - Icelandic food research
Dep. Director Stefan Stefansson, Ministry of Education
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Dr. Gisli Fannberg, University of Iceland, independent expert

Governance and Funding Reform in the European Higher Education Area

National system analysis: Ireland¹

1 Governance and funding reforms

There have been a number of reforms in governance and funding of Higher Education in Ireland since 1995. This analysis investigates the nature of these reforms and examines any evidence linking the reforms with outcomes in higher education.

The Higher Education system in Ireland consists of 7 universities, and 14 Institutes of Technology forming a binary system. The Institutes of Technology, established from 1993, were formerly regional technical colleges. The Department for Education and Science is responsible for all levels of education in Ireland. Higher Education is governed by the Higher Education Authority (HEA), the statutory planning and development body for higher education and research in Ireland. The HEA has wide advisory powers throughout the whole of the third-level education sector. In addition it is the funding authority for the universities, institutes of technology and a number of designated higher education institutions. The HEA has an overseeing role with regard to strategic plans and quality assurance procedures. It also is responsible for the Management and disbursement of all recurrent and capital funds to the universities.

Core funding for the institution for teaching and research is allocated through a system of block grants. The funding allocation for universities is informed by a formula based unit cost system calculated. In addition, a grant is made in lieu of undergraduate tuition fees which is based on course fees multiplied by certified student enrolments. A similar system is being introduced for the institutes of technology, replacing a system based on a negotiation of programme budgets between the institutes of technology and Department of Education and Science, an incremental system based on historical attribution of funds.

Funding for research in higher education institutions in addition to funds provided through the block grants is allocated on a competitive basis through the research councils, the Irish Research Council for Science Engineering and Technology (IRCSET), the Irish Research Council for Humanities and Social Sciences (IRCHSS), a fund for researchers, the Programme for Research in Third Level Institutions (PRTLI), and fund provided by the foundation, Science Foundation Ireland.

¹ Madeleine Knight, Technopolis

Internal governance Irish higher education institutions

In Ireland the main governing bodies are: The senior decision making body, the committees of academic staff, an executive team and the deans. . The executive team was introduced into the majority of Irish universities in 2001. The senior decision making body of the University consists of a majority of external members. In the past, the rector took main responsibility for proposals on what the university should do. This is now in the hands of an 'executive team' headed by the rector. The senior decision making body approves all proposals on direction, strategy, capital, budget allocation and mergers. In the past this was mostly done by committee of academic staff. Decisions on new degree programmes and research priorities are mostly dealt with by the deans and approved by the academic committee. In the past new chairs and professorships, budget allocation and mergers (internal) were approved by the academic committee. They are now approved by the senior decision making body.

In the past rectors and deans were elected by the academic community and tended to be internal appointments. They are now appointed by another university body following an open international recruitment process.

Over the last decade, the most important reforms have been:

Governance reforms:

- The Universities Act 1997 was the first legislative act for universities in over 100 years. The Act laid out the remit of the universities, and allowed for greater academic freedom and autonomy of the universities, as well as introducing a requirement for internal quality assurance assessment for teaching and research.
- The National Framework of Qualifications introduced in 2003 maps the levels and requirements for all qualifications in Ireland on a graded system levels 1-10. The framework includes the learning outcomes and skills requirements at each level, and allows for transfer and progression between levels, and makes the qualification system clearer for students and employers to understand.
- The Institutes of Technology Act (2006), playing a similar role to the Universities Act, it establishes the remit of the Institutes of Technology and importantly brings the Institutes under the remit of the HEA, where previously they were directly accountable to the Department of Education, this was intended to allow the Institutes of Technology more autonomy as had been the case for universities.

Funding reforms:

- The abolition of tuition fees 1997, made university education free for all EU full-time undergraduate students.
- The 2006 Grant Allocation Model was introduced to establish a performance based element to the allocation of funds to institutions. This introduced a unit cost weighting system linking funds to the number of students and the

subject studied, subjects were categorised and given weighted costs. This replaced a previous historical funding mechanism, therefore is intended to relieve biases of the historical system, which older universities had gained from.

- Introduction of the PRTLI research funding scheme 1998, administered by the HEA, and introduced the first competitive excellence initiative
- A significant increase in research funding with a greater emphasis on competitive funds to raise standards, with the establishment of Science Foundation Ireland in 2003, and the research councils IRCSET and IRHSCL

2 Country performance

The two indicators which had significantly improved between 2002 and 2006 in Ireland were the number of scientific articles per million in habitants, and the mobility of students, particularly outward mobility of students to study in other EU 27 or EEA, or candidate countries. Other areas which also had an improved performance particularly related to the increase in student numbers, these included: the number of graduates per 1000 population aged 20 – 29 years, the percentage of people with tertiary qualifications aged 25 to 34 years, and the percentage of people enrolled in higher education aged 17 to 29 years. In addition, the relative earnings of graduates saw some improvement between 2002 and 2006, and the expenditure per student in GDP also increased during this period of time.

3 Effects of the reforms

Governance reforms

The Universities Act 1997

The Universities Act 1997 was the first legislative act for universities in over 100 years. The Act updated previous legislation, which had been established in 1908 and had become outdated. The Act laid out the remit of the universities, and allowed for greater academic freedom and autonomy of the universities, as well as introducing a requirement for internal quality assurance assessment for teaching and research.

The Universities Act 1997 has had very positive impacts, but now there is a trend to rein this in with increased pressures on the economy and a need to maximise the impact of public investments. Improvements in higher education today are placing an emphasis on coherence across the HE sector, and coverage between the Universities and the Institutes of Technology, with separate remits. Greater emphasis is being placed on the performance of the system as a whole, and establishing the individual roles of the universities and institutes of technology, in particular taking a regional approach to coverage of higher education available among education providers.

The Universities Act was seen as a significant development, institutions have moved on to look more at the requirements of education in their region, and produced dramatic changes in the operation of some of the governing authorities that have

become more effective in looking at issues facing them. Recent developments have brought about trends towards more scale and coherence in the national system, with a greater awareness among institutions to play to their individual strengths with greater collaboration between institutions.

The Universities Act clarified areas of confusion within the university sector. It specified the need for separate governing and academic councils, a split which is important for good governance and had a positive impact. The Universities Act also ensured student representation on both of these committees and other relevant committees. It developed a legal framework for all universities where previously legislation was fragmented, and clear procedures were formulated for establishing new institutions.

The National Framework of Qualifications

The National Framework of Qualifications introduced in 2003 maps the levels and requirements for all qualifications in Ireland on a graded system levels 1-10. The framework includes the learning outcomes and skills requirements at each level, and allows for transfer and progression between levels, and makes the qualification system clearer for students and employers to understand.

National Framework of Qualifications has built coherence and transferability, and simplifies the education system for learners and employers giving outcomes and core competences associated with each level of qualification. The framework has had significant impact on access to higher education through providing clarity of pathways and opening up opportunities for further study. It has also promoted a move to modular courses with an emphasis on progression and transfer. The framework may have contributed to mobility of students as it adheres closely to the Bologna framework. It has recently been announced that a quality assurance system will be formed around the framework, with consolidation of the quality assurance agencies into a single entity, and introduced external quality assessment in addition to the existing internal mechanisms.

Ireland is advanced among European member states in terms of having a National Framework of Qualifications, that covers the span of qualifications from primary to higher education levels and provides a coherent framework to facilitate transferability between institutions and qualifications. Placing an emphasis on access, transfer and progression. The framework is aligned to the European framework.

The future plans for a new quality assurance system will include the consolidation of the quality assurance and organisations that grant degrees: the Higher Education Training and Awards Council (HETAC), the Further Education Training and Awards Council (FETAC), the Irish Universities Quality Board (IUQB), and the National University of Ireland. This is an important step, due to the plethora of these agencies.

The National Framework of Qualifications addressed an issue that historically degrees had been well recognised, but qualifications from other institutions including the private sector, Institutes of Technology, and newer Universities were less well recognised and understood. The National Framework of Qualifications provides security to students that their qualifications are recognised in Ireland and in other countries by universities and employers.

Interviewees felt the National Framework of Qualifications has significantly improved access, transfer and progression between courses. The Framework also states what is required to achieve a qualification in terms of descriptors of learning outcomes that are generic to each qualification level. It is thought the Framework may be improving links with employers and helping them understand the levels of qualification and their requirements.

The Institutes of Technology Act (2006)

The Institutes of Technology Act, playing a similar role to the Universities Act, established the remit of the Institutes of Technology and importantly brought the Institutes under the remit of the HEA, where previously they were directly accountable to the Department of Education, this was intended to allow the Institutes of Technology more autonomy as had been the case for universities.

The Institutes of Technology came into place in the 1990s, they evolved from regional training colleges, with the idea that they would provide training in technological areas and meet the skills needs of the economy, and be responsive to the regional needs.

Institutes of Technology Act was implemented in 2007, and modernised many of the provisions in the 1992 regional technical colleges act. The Institutes of Technology Act defined the remit of Institute of Technology, in an attempt to create cohesion across the Higher Education sector, this has succeeded in establishing regional cohesion, and collaborations between universities and institutes of technology to cover the requirements for courses on a regional basis.

The Act is reflective of the recent move to improve the higher education system as a whole regarding coherence and quality, rather than prioritise pioneer institutions. Emphasis was placed in the Institutes of Technology Act to recognise the binary structure, ensuring there would not be drift between the two sectors, the institutes would retain the focus on science, technology, engineering, business and craft areas, retaining a close allegiance with the needs of the economy.

The Institutes of Technology Act brought the institutes of technology under the strategic and funding control of the HEA in order for the Institutes to receive a similar level of autonomy to the Universities. This has enabled forward looking institutions to establish themselves in areas of strength.

The Institutes of Technology Act has encouraged institutions to focus on the needs of the region and to collaborate with each other. For example, the Lionra initiative, a

network of the seven third level colleges in the Border Midlands and Western (BMW) Region of Ireland. The Lionra group has developed projects in the areas of: Cultural Enterprise Management, Post Graduate Research Skills, and Supporting Women's Education among others.

Like the Universities Act, the Institutes of Technology Act ensured that Institutes of Technology have a separate governing body and academic council, with guaranteed student representation. The greater academic freedom and institutional autonomy also gives institutions greater ability to attract funds for research, as well as create new programmes of study and attract students.

Every institution has undergone restructuring academically and administratively. The last institutional reviews (2004-2005) show that the institutions have generally slimmed to fewer faculties, and departments. In addition, power has been devolved to the faculties, which have been strengthened. This has been balanced by the creation of new central positions and many institutions have moved towards a semester model. These reforms were driven by the need for cost effectiveness, research excellence and ability to attract funds.

The abolition of tuition fees 1997

The abolition of tuition fees made university education free for all EU full-time undergraduate students. There continues to be a heated debate surrounding this policy in Ireland. It is thought to be difficult to reverse this move from an electoral point of view, although there is some popular will behind a change. There has been a significant increase in participation in higher education in Ireland, with currently almost 60% participation. However, much of this increase predates the abolition of tuition fees, a trend that began in the 1960s. The student population in 1980 was around 20% of the relevant age cohort, in 1995 participation was around 40% suggesting the overall increase in student numbers is likely to be due to other cultural, and economic factors rather than a direct result of the abolition of tuition fees.

There is not equal participation across socioeconomic groups, and it is thought that more advantaged groups are benefiting disproportionately from the policy. In addition, a student service charge is payable by students for each year of study in the form of an administration fee. When first introduced it started at around €90 in 1997 and has increased considerably, it will be around €1500 in 2009. The growth of this charge is considered to be an unintended action of the abolition of tuition fees. As part time students must pay their own tuition fees this has an adverse effect on the opportunities available for lifelong learning. There is still little flexible learning available at undergraduate level, and only 11% of undergraduate students are studying part-time, therefore the policy holds some implications for lifelong learning opportunities. This has resulted in impressive levels of education in younger cohorts, but still low levels in middle / older adults in the labour force. Ireland is unique in OECD countries in the trend towards less private finances contributing to university teaching.

Ireland is unusual among European member states for having abolished tuition fees in recent years where many countries have sought to implement or increase fees. One impact of this reform in discussion is the reliance of Irish higher education institutions on state funds for teaching and learning. This is a potential source for reducing the degree of institutional autonomy and is in contrast with many countries that are increasing the proportion of private funds available for teaching in higher education in the form of fees paid by students or employers.

Importantly, the free tuition for students may have contributed to the achievement of greater mobility among Irish students between the period from 1995 to 2008. Furthermore, with the enormous rise in student numbers in recent years, despite the fact that the student population may still not be fully representative of the population as a whole in socioeconomic status, the number of students from non-traditional backgrounds has grown. Some interviewees thought the general perception of attending university as an accessible option has effused to a broader range of the community

The effect of the tuition fee reform on potential lifelong learning is a particularly important issue for Ireland a country that is suffering major unemployment at mid and senior career level. Ireland does have Higher Education providers that operate in the Lifelong Learning market including an Open University, and prestigious executive institutions such as the Irish Management Institute, a private organisation, and Hibernia College an international third level online college offering. Changes have also been made in postgraduate education with greater awareness for the need for transferable skills. However, producing a more even approach to tuition fees that will remove a bias against lifelong learning is considered to be an important issue.

The Grant Allocation Model (2006)

The 2006 Grant Allocation Model was introduced to establish a performance based element to the allocation of funds to institutions. This introduced a unit cost weighting system that linking funds to the number of students and the subject studied, subjects were categorised and given weighted costs. This replaced a previous historical funding mechanism, therefore is intended to relieve biases of the historical system, which older universities had gained from.

The GAM was an important development in the governance of Higher Education in Ireland in terms of the improvements in transparency of how resources allocation decisions are made, and uncovered historical anomalies that were favouring older institutions.

The Grant Allocation Model currently applies to the Universities, and it is expected something similar will be introduced for the Institutes of Technology. Previously, the older universities were gaining from the historical system. Although it is early to see the impacts of this reform it is expected to improve access, which is considered a key issue in higher education in Ireland. The model has been implemented in stages, in

order to avoid any difficulty with a sudden change, where some institutions gain a portion of funding, and others see a reduction in their funding.

The advantages of the new system are increased emphasis on the reliability of funding, and transparency between institutions. Institutions have autonomy to allocate the funds once they have received them as they wish. A performance based element to the model is in the process of development.

The Grant Allocation Model is also a key component of policies relating to improved access to Higher Education, through more equal, and transparent distribution of funds. This is seen as an important instrument with which to guide institutions according to the national policy priorities of access, research and equality.

Programme for Research in Third Level Institutions (1998)

The PRTLI is a programme that provides integrated financial support for institutional strategies, programmes and infrastructure, that contributes to institutions' capacity and incentives to formulate and implement research strategies. Up to the end of 2006, €605 million had been allocated to third level institutions under the programme. Funding has been provided by private philanthropic sources who have supported the strategic focus and competitive basis of the programme. In comparison with the SFI funding the PRTLI programme has a greater emphasis on capital investments and infrastructure for equipment. The PRTLI has completed 4 cycles of programmes to date, the 5th cycle was announced in February, which fits into the wider Strategy for Science and Technology and has an international competition.

The introduction of the PRTLI research funding scheme in 1998, administered by the HEA, introduced the first competitive excellence initiative. This was followed by the establishment of the Science Foundation Ireland, in 2003, and the IRCSET and IRHS SCC research councils, which also fund tertiary research. Together these reforms have significantly increased the level of funding for research in higher education institutions in Ireland. This has developed the research sector from a very small sector to a thriving sector. This is evident in the increase in scientific articles, and citations of Irish articles, and is starting to see an increase in the production of invention disclosures. However, with the current pressure on public investments increased scrutiny is being placed on outcomes in this area. It is an important debate in Ireland as €2 billion a year of public funds goes into higher education.

The main aim of the strategy was to develop the capacity of the system and support an internationally competitive level of research, to deliver a sustainable research system. One purpose of the PRTLI was to bring institutions together in a collaborative approach, demonstrating a collaborative approach is one of the attributes judged in the scoring process. This was with the aim of developing critical mass, and avoiding duplication and weakening of resources.

Increased investment in scientific research by Science Foundation Ireland

The substantial increase in funding available for research has considerably raised the level of critical mass in key areas of research. An important aspect of this funding reform is the introduction of international peer review to the process, introducing competition for the first time, and ensuring excellence through this selection process. This was also important given that Ireland is a small country, the external influence from unbiased sources was thought to be a key improvement. The funds endowed by Science Foundation Ireland (SFI) have been made on an exclusively international competitive basis using international peer review.

The combination of PRTLI, and SFI investments over the last 10 years has represented the first serious investment in scientific research in the public system in Ireland, giving rise to the term "Celtic Tiger". These investments have resulted in radically improved research infrastructure in the 7 universities and the Institutes of Technology and have attracted world-class researchers to Ireland. Indicators show that the quantitative level of publishing has gone from well below the EU average to well above, and according to the Thompson ISI measurement for citations Ireland has gone from 27th of the EU 29 up to 17th place.

It is well recognised that the investments made in Higher Education have played an important role in Ireland's recent economic success. Despite the global economic downturn, the investment that has been made means impressive infrastructure for research is present. Higher Education continues to play a key role in the future recovery from the current financial circumstances with a view to upskilling the workforce. The number of PhD students has increased significantly. In the early 2000s had 5 PhDs per 1000 population, and the aim of the 2006-2013 science strategy is to double this number. IRCSET and IRCHSS established in 2000 provide funds mainly for early stage researchers undertaking PhD or postdoctorate positions.

The increased investments in scientific research are starting to demonstrate outcomes including increased numbers of invention disclosures, and patents awarded.

Alternative interpretations of improved performances

Of the two performance indicators that particularly improved in Ireland over the period 1995 to 2008, the increase in scientific articles and the increase in mobility of students, both appear to have some connection to the governance and funding reforms described above, as well as some influence from wider societal factors.

The increase in scientific articles was seen to be largely a result of the significant increase in the level of competitive funding for research, which has been made since the introduction of the PRTLI, and later through the Science Foundation Ireland. In addition, there has been a significant increase in the number of PhD graduates in recent years, which is also reflective of these funds. There was a targeted effort following the 2004 OECD review to increase the number of PhDs. The number has already increased significantly from around 600 PhD graduates in 2003 to almost 1000 PhD graduates in 2008.

However, there have been wide developments in the area of scientific research and significant restructuring of the government bodies responsible for this. These other developments in the region of science and technology research, show a much wider input than just the PRTLI and SFI funds; the Department for Enterprise Trade and Employment produced the Strategy for Science Technology and Innovation Strategy 2006-2013 that describes the development of new structures including the interdepartmental committee, an umbrella body of representatives from a number of government departments to coordinate the SSTI strategy, and the Higher Education Research Group (HERG) consisting of the Department for Education and Sciene, Department for Enterprise Trade and Employment, the HEA and Enterprise Ireland, and the Technology Ireland activities consisting of Department for Enterprise Trade and Employment, Forfas, Enterprise Ireland, the Industrial Development Agency, and SFI.

In addition, the Grant Allocation Model, and the Graduate Research Education Programme may have contributed to the greater numbers of postgraduate students and therefore to the research capacity. Finally, the growth of the Irish economy over this period and the investments in science, and the economy from the above agencies saw an increase in the number of researchers coming to Ireland from abroad, and the improvements in research capacity and infrastructure allowed the system to develop a critical mass and attract world class research, a system which it is hoped will endure the more difficult economic times.

The mobility of students was overall considered to be the result of more general social and economic factors, the ease and availability of travel, a culture of moving away, particularly to other English speaking countries, and the fact that free tuition fees can be taken abroad to other EU countries. The National Framework of Qualifications may have contributed to the mobility of students as it adheres closely to the Bologna framework. In addition, free tuition may have contributed to inward mobility of students from EU member states. However, some interviewees were surprised to hear that mobility had particularly improved, as this is an area of concern for higher education policy makers in Ireland, and is still a focus for improvement. It is thought that the level of mobility in Ireland is still quite low. The aim is to increase mobility, particularly within the European member states. The perception among some interviewees was that the majority of mobility had been inward, in particular in the area of scientific research.

Other factors that may have contributed to mobility include practical factors for example that Ireland participates in ERASMUS, and Marie Curie actions, and has other international graduate programmes running, and there is awareness of the need to introduce mobility. However, only 7% of Irish students partake in Erasmus, which is relatively low.

Wider factors contributing to mobility include the breaking down of barriers between counties for other reasons, for example the cost of travel, globalisation, increased communication and collaboration between universities abroad, bringing students into

contact with people in other universities. The overall increase in student numbers may also have contributed to some extent to greater mobility.

Interviewees

Bartley Rock- Union of Students in Ireland

Bryan Maguire - Higher Education and Training Awards Council

Graham Love - Science Foundation Ireland

Jerome Kelly - Department of Education and Science

Lewis Purser - Irish Universities Association - Director of Academic Affairs

Martin Hynes - IRCSET - Chief Executive - Research Council

Muiris O'Connor - Higher Education Authority HEA - Head of Policy and Planning

Padraig Walsh - Irish Universities Quality Board

Governance and Funding Reform in the European Higher Education Area

National system analysis: Italy¹

1 Introduction

This report summarizes the main changes in governance and funding in the Italian higher education system during the 1995-2008 period, as well as their impact on the functioning and overall performance of the system.

It is based on existing literature on Italian higher education and on documentary analysis, as well as on a set of 10 phone interviews to decision-makers in Italian higher education (names of the interviewed people can be found at the end of this document), who were asked to provide their view on the impact of the reforms on system performance.

The report is divided into six sections. Section 2 presents a summary overview of reforms in Italian higher education governance and funding, while section 3 analyses the available indicators on system performance and qualifies them based on in-depth knowledge of the system. Section 4 examines the main impacts of the reforms and the extent to which these have contributed to changes in performance, section 5 presents the results of the two case studies developed, and section 6 draws a final assessment by the authors themselves.

2 Reforms in governance and funding over the last ten years

In Italy there are 65 public universities and 15 private universities; all universities are involved both in teaching and research; among public universities there are 4 Polytechnics and 2 Universities for foreign students; 40 public universities were funded before 1980. The large majority of the HEIs is therefore public (in 2008 the 93% of the students), while private (6%) and telematic (1%) universities only have a marginal role (private are stable, telematic are growing).

Reforms in higher education governance

Italian HE system has been quite stable until the end of the eighties notwithstanding the large reform of 1980, which modified the internal organisation of universities (by creating Departments as a meso-level organisms dedicated to research activities

¹ Emanuela Reale, Institute for firms and development CERIS, National Research Council CNR, Rome, Italy. The author is grateful to Marco Seeber for his contribution to the interviews and final reporting.

with their own budget) and the careers of academics (which were articulated in three steps: researchers, associate professors and full professors).

Law 168/1989 introduced important structural change: the complete financial and scientific autonomy of universities and a wide organizational autonomy (the universities could also change their statutes but law specified some boundaries) and the establishment of the Ministry for University and Research (MIUR). Law 537 in 1993 and 'leggi finanziarie' in 1995 and 1996 completed the regulation of autonomy: universities became responsible for their financial situation and recruitment policies, the relationship between the State and universities had to be based on the accountability principle, a specific body was settled to evaluate research and teaching activity (*Osservatorio della ricerca*).

The 'Bassanini law' (59/1997) realized the decentralization of public administration and reaffirmed the concept of accountability in the relationships between public administration and citizens, as crucial to guarantee responsibility and transparency. Government did not promote for the time being other comprehensive reforms of the HE governance. Universities modified their statutes but the governing structure always sees: the key role of the Rector, two governing bodies, the senate and the *Consiglio di Amministrazione*-CdA, the former composed by representatives of the academics, the latter with a membership merging academics with a representative of students, stakeholders and regional government. It is a rule there are frequent overlap between functions of SA and CdA; a collegial governance mode at faculty and department level; a steering capability of Universities that hardly reaches the level of researchers.

As to other relevant reforms linked to the governance, it is important to describe the interventions in evaluation. In 1999 the *Osservatorio* became 'Comitato nazionale di Valutazione del Sistema Universitario' (CNVSU) and the decree 224/99 imposed that each university should establish an internal evaluation body (*nuclei interni di valutazione* – Nuv) responsible for internal evaluation processes and that should support CNVSU in external evaluation.

In 2004 the National Committee for the Evaluation of research-CIVR led the first national research evaluation process (VTR) focused on the 2001-2003 activity of the Universities and Public Research Organizations (PROs). The results of the process had a very small effect on the allocation of the government core funding, although it had a strong cultural impact, with the spreading of a new awareness about accountability principles within universities.

In 2005, law 43 compelled universities to write three-year development plans. The plan should be evaluated by government as a precondition for receiving basic funding and recruiting personnel. Until now government has not given any feedback; neither promoted any comparison or coordination among the plans.

Reforms in the funding of higher education institutions

In 1995 the government core funding to universities changed from a line-item to a lump sum allocation, *Fondo di Finanziamento Ordinario* (FFO). Universities became free to decide how to spend the FFO, but they still suffer severe boundaries on some crucial managerial issues, for instance: they can not differentiate salaries of professors and expenditure for personnel must not exceed 90% of the FFO. Nevertheless, some universities did not respect the aforementioned threshold; from 2009 a new government regulation wanted to assure the effectiveness of the aforementioned provision, setting that universities not complying with the constraint cannot hire new personnel in the forthcoming year.

Funding of research activities in the line item system (until early '90) consisted of two major allocations, mainly oriented towards fundamental research: a 60% share was distributed across projects promoted at university level, while 40% was distributed by MIUR to projects dealing with themes of national relevance, in different disciplinary areas. After the introduction of the FFO, the 60% was channeled in the FFO and each university began to earmark a given sum to fund fundamental research activity; usually, funding is allocated to departments, which decide how to distribute this sum to researchers. The 40% share was replaced by new procedures since late'90: Cofin-Prin² project allocation, through formalized and rigorous competition: peer review with external referees were introduced, as well as more transparent accounting procedures, and special incentives for collaborative and interdisciplinary projects.

The FFO governmental allocation to each university was first determined on incremental adjustment of the historic amount; in a second phase (1997-2002) it was gradually modified according to standard cost of students (*modello del riequilibrio*). Between 2005 and 2007 the historic allocation was granted while the incremental allocation was distributed according to a formula funding model³ developed by CNVSU and focused on teaching and research performance. The model allocates funding according to teaching demand (number of students weighted on the disciplinary specialization), teaching productivity (educational 'credits' and graduates) and research productivity (ex ante and ex post evaluations). In 2008 FFO has been computed on the base of the historic allocation. Since the academic year 1994/1995, student fees were introduced; revenues from fees have grown considerably throughout time and the government introduced a limit the total revenues from fees 20% of the FFO (DPR 306/97, art. 5, co. 1), but this limit has been sometime ignored.

As to government project funding to universities, until 2000 it was mainly managed by the National Research Council (CNR) through different instruments: contracts and grants, the so called 'Progetti Finalizzati' and the 'Strategic Projects'. From 2000 on, other funding instruments gradually replaced such projects, and CNR lost its

² Research Projects of National Interest (Progetti di ricerca di interesse nazionale)

function as a funding agency. The most important project funding sources were FIRB⁴, aimed at sustaining large basic-oriented collaborative research projects; applied research in collaboration with firms was funded through the Fund for Applied Research (FAR), whose importance grew up along the considered years thank to specific incentives introduced in the national regulations, aimed at favoring public-private partnerships in research.

3 Performance improvements in Italian higher education

In the governance and funding reform project, the performance of national systems has been measured along the following dimensions and using the uniform international indicators (see technical file for the precise definitions):

- **Access:** enrolment rate and net entry rate.
- **Lifelong learning:** mature enrolments and share of new entries above 25.
- **Graduation:** educational attainment of the population (25-34) and graduation rate.
- **Employability:** relative earnings and relative employment rate.
- **Mobility of students:** students from abroad and students studying in other countries.
- **Research output:** scientific articles and patents.
- **Capacity to attract funds:** HERD from private funds and from abroad and contributions from private households.
- **Cost effectiveness:** expenditures per students (in Euros and PPPS).

Data for Italy point out the indicators variation between 2002 and 2006. Not all indicators were available. According to the data, the Italian system shows improvements regarding:

- **Research outputs** (Scientific articles per million inhabitants)
- **Graduation** (Percentage of the population aged 25-34 with tertiary qualification and total number of graduates as a percentage of population aged 20-29 times 1000)
- **Contributions to HEIs by private households** (Expenditure on R&D from business and industry as percentage of total expenditure on R&D).

Rather stable performance emerged in employability, mobility, and cost effectiveness. Thus, we asked stakeholders⁵ why do they think Italy has improved on these issues. Answers show that the good performance is related to the reform of governance and funding only in part. Indicators show not significant improvements, and interviewees often confirm this picture and link it to the fragmentation and uncertainties of the reform process.

⁴ Funding for Basic Research (Finanziamenti alla Ricerca di Base)

⁵ Interviews carried out are described and commented in the paragraph 4

Increased research output has been considered as positively influenced by national funding instruments, such as FIRB and FAR, and European Framework Programs. Competitive funding programs gave large importance to the scientific productivity of the proponents, thus they increased the relevance of this issue throughout time. Internationalization of research activity (i.e. increased participation in EU FPs as well as increased mobility of Phd students) was also considered an important driver of change. Another factor that can explain performance in research outputs is the emergent role played by local governments (Regions) supplying funding for applied research, and by the Bank Foundations, playing a major role in certain local contexts as suppliers of funding for basic research.

The capability to attract external funds is only measured by the indicator 'Contributions to HEIs by private households'; the other two indicators are missing for Italy. Despite the lack of other indicators, the perceptions of the interviewees confirm this point. The academia shows increasing need of funds, because of the rising cost of research activities and personnel, while public allocation is stable or even decreasing. Private contributions by companies and non-profit institutions are getting more important in relative and absolute terms. The Italian industrial sector has traditionally been composed of small firms, mainly oriented to support problem-solving activities and to absorb innovation produced abroad, rather than on innovative and curiosity driven research. More firms were pushed to innovation by the introduction of the Euro: in previous times, frequent depreciations of the Lira gave companies an incentive to compete through low prices. The Euro interrupted this mechanism. Some academics complain that businesses influence may deprive fundamental research and that companies are not used to research; others are more optimistic and depict this phase of increasing cooperation between firms and universities as a first step to built a relationship, with future potential benefits even for innovative research.

Improved performance in graduation was unanimously attributed to the reform of curricula, with the introduction of the first level degree of three years and the second level degree of two years (the so called 3+2), instead of the previous single cycle degree. Though, many argue that enrolment is now decreasing to the pre-reform level. Such withdrawal may be explained for example, by higher fees, or by opportunistic behaviour of universities weakens the trust of society.

Though probably, the most important factor is that the market does not recognize the degree; many analyses show that despite all the rhetoric on the knowledge society, Italian companies mostly do not require high skills and specialization, being mainly small family owned companies. Moreover, the improvement in graduation may have been produced by non-virtuous behaviours of universities, namely less selectivity, in order to gain ministerial incentives to teaching productivity.

The interviewees often questioned the increased employability performance, mentioning recent studies underlying that most graduates do not work for what they studied, and they are less paid than most non-graduate peers. In some cases, the market hardly recognized the difference between first level and second level degree;

companies do not easily hire the former (exceptions can be highlighted for some professional courses, such as: nursing degrees, some courses in economics), while the latter is preferred, being the second level graduates very often paid the same as the first level ones.

4 Effects of the reforms and other explanations of improved performance

We carried out interviews, which included representatives of Ministries responsible for higher education, research, technology and innovation (Ministry of Education, Culture and Science and Ministry of Economic Affairs), HE Advisory Bodies (CNVSU, CIVR, CUN), and Representative Organizations such as CRUI, CONVUI, the National student union, Confindustria).⁶ Moreover we include also evidences derived from 2 case studies, selected according to the good performance of Italy in three performance dimensions (graduation, research outputs and contribution to HEIs by private stakeholders,).

Changes in the governance and regulatory framework

Stakeholders generally agreed that the aforementioned reforms have been the most important in Italy. All the interviews outlined that Italy did not have had a reform of governance in the considered years. The new statutes approved after introducing the autonomy are quite homogeneous; the space of manoeuvre left to universities beyond the legal constraints was not properly exploited in order to improve internal management. Thus, governance still remained mainly collegial even if the Rector's power increased due to the low capability of the institutions to cope with increasing complexity of management (a by-product of autonomy) and the strong competition for funding. The other two bodies of the central government of the HEIs (*Senato Accademico* – SA, and *Consiglio di Amministrazione* – CdA) are mainly expression of the collegial mode of governance: their duties and powers often overlap and are shared with other commissions and committees on more specific issues. Representatives of students and external stakeholders (firms, associations, local government, students) have been included in the CdA, but they play a minor role. No other major reforms on government have been developed in the considered period.

Increasing autonomy of HEI

Autonomy is generally conceived as an important achievement of the system: universities are free to set their priorities and there is more competition among them. Nevertheless, the lack of an incisive government steering prevents change to permeate beyond the university level and impedes to find a balance between centralisation and decentralisation, based on clear accountability bonds. Autonomy of universities was supposed to produce benefits for society, because universities would be competing for students and resources. Though, external stakeholders are still poorly represented in academic governing bodies, universities are not funded

⁶ We account for 10 interviews. See details in the appendix.

according to their productivity, students still suffer strong information asymmetry; these factors favoured opportunistic behaviour and misuse of autonomy, often favouring academic vested privileges.

The Bassanini Law (introducing accountability and decentralization principles in Italian public administration) has not been specified and adapted to the HE system and the results are very modest. Innovation on management and accounting techniques was poor.

In sum, the attribution of autonomy to the Universities and the lack of governance reform impacted the way in which autonomy was implemented. The attribution of new powers and spaces of manoeuvre to the HEIs did not go with the assumption of responsibilities for the efficient and effective use of the government resources. Many drawbacks derived, such as the enormous number of curricula and courses developed and the localism in the recruitment of professors, which did not allow strong improvements of the HEIs performance.

Changes in funding systems

As to funding, several stakeholders considered the importance of the Fund for Applied Research (FAR), which settled specific incentives for Universities that carry out research projects with firms (l. 297/99), and the investment of government in agreement with the Regions for the development of scientific districts (25 clusters high tech included in the National Plan for Research 2005-2007). Both these measures supplied a considerable amount of money for research activities in collaboration between universities and firms, and represented an important source with respect to the cutting of core funding.

Recent decrees of the Italian government introduced serious reductions in core funding (FFO), which will have an impact on Universities teaching and research activities. The possibility to use the resources made available through the turnover was reduced as well. A general reform of funding system is expected, but the design is not yet clear.

Elements put into evidence by the stakeholders commenting the reforms are:

- the general decrease of resources, which generated high uncertainty about the future,
- the low impact of evaluation on funding allocation and the absence of measures for quality assurance, which did not push the HEIs toward enhancing efficiency and effectiveness,
- the emergence of different reactions within universities, with clear competitive advantages of some institutions over others, due to both internal and external factors (location in a region characterized by a wealth economy, presence of external funders such as foundations able to compensate the cutting of government funds, level of internationalization, size)

- the limits imposed to universities on spending for personnel (that must not exceed 90% of the lump sum allocation) is perceived to be inappropriate because FFO has been stable or even decreasing in recent years, while salaries are fixed at government level and are automatically adjusted; moreover, the share of the FFO on total revenues of university is extremely variable from case to case, from over half to less than a third of the institution's revenues.

FFO reform impacted positively on Universities (more transparency and accountability on expenditures), but because it was applied to a limited amount of resources, changes were not really significant. The existing thresholds on personnel cost and tuition fees do not seem appropriate any more. Stakeholders consider project funding instruments (PRIN, FIRB and FAR) having positive effects, pushing researchers toward competition for funding and cooperation with external groups for research.

The Italian system still needs further reforms in order to evolve. Apart from governance, few people suggest the need to move from a system where many funding instruments are managed centrally by MIUR to a system where funding for research is managed by a specific funding Agency, as it was in many European countries and at the European level with the ERC. This reform is supposed to impede strict influence of the political power on funding allocation, which usually distorts competition based on quality.

Other factors of influence

All the interviewees underlined the importance of the teaching reform in the frame of the Bologna process agreements and the research evaluation process. The introduction of the two level degrees had several consequences for the HE system, not all positive. The goal of increasing the number of students was also pursued by introducing incentives in the funding mechanism (see CNVSU model), which stimulated the aforementioned opportunistic behaviour. New substantial changes impacting performance are also expected from a further reform on this side (law 270/2004), which established strict requisites for courses.

The national research evaluation increased attention on research productivity, but many complain that it has not been repeated yet.

5 Institutional case studies

Case studies have been selected according to the performance of Italy in the eight performance dimensions. Italy scores high in particular in the indicators: ARTICLE (research output dimension), PRIV_CONTR (capacity of attracting funding dimension), GRAD100, ATTAIN (graduation dimension). We focused on the research output productivity (University of Bologna) and on the capacity of attracting funding (case study in the University of Modena and Reggio Emilia). Both institutions are

located in the North-east of the country. UNIBO is the second largest university in Italy (86 thousands students), with a strong and old academic tradition and essentially covers all the disciplines. UNIMORE is representative of a diffused typology in the Italian HE context, since it is a middle size (18 thousands students) and generalist university.

University of Bologna

The University of Bologna (UNIBO) was founded in 1088. It is a generalist university with 3200 full professors, 73 departments and 23 faculties, 88.000 students.

UNIBO is highly productive in terms of research output. It is in 248th position in the Shanghai Ranking 2008, 102nd among European universities and sixth among Italian universities. If the only 'PUB' indicator is considered, UNIBO ranks 89th, the value is 49,3 (in 2003 the SCI indicator was 47,7). UNIBO is in 95th world position (first Italian) in the Webometrics Ranking of World's Universities (WR), and it is 192nd world position (first Italian) in the THES ranking.

The selected interviewees are: Rector, Dean of the Science faculty, Director of the Management department, Director of Physics department, Head of the Administrative sector, Head of the evaluation body (Nuv), Head of the Research Commission, Head of the Departments' council.

The improved research performance of the University is linked to an increased attention on research activity by the central administration. The present Rector, who is in charge since 2000, has given a central role to research, that

"has become the main axis of development of all the university, it gives a meaning to all the other activities..... research decides what should be the teaching: if we are strong in a given scientific sector, why should we deal with a sector in which we are not strong? We concentrate resources where we are strong".

Much attention has been given to efficient allocation of funding and on internationalizations of research outputs, cooperation and funding. All factors which led to increased focus on the international scientific context and journals.

The institutional support to research activities reinforced research groups that already used to publish in international journals and to promote training period abroad of doctoral students, which gained more chances to be recruited.

Governance

Government policies in governance and funding did have a role in the increased performance of the University, and partially reformed both the internal governance and the funding allocation system.

The main academic bodies in the Italian system traditionally are the senate (Senato Accademico - SA), the administration council (Consiglio di Amministrazione - CdA); and the Rector, who leads both senate and administration council. The Rector is

elected among the professors; the SA and CdA compositions represent the different categories operating within the university, professors, students, administrative staff, and a few members come from the external environment. Formally, the Senate deals with teaching and research activities and the CdA focuses on real estate management and financial issues; though, in reality their functions often overlap. The members of SA and CdA are numerous, and professors represent the majority. The high number of members and the heterogeneous composition correspond to a shared governance rationale; the decision process often proved to be slow and not efficient.

From 2000, UNIBO slowly changed the functions of the governing bodies, in order to smooth the decision process. Changes aimed at producing decision faster, by creating a university committee that defines the final proposals to the academic bodies. The Committee is articulated in small commissions, with expertises on specific issues. The roles of the commissions and of the university committee have been gradually strengthened. Members of SA and CdA are represented in the commissions.

The committee is composed by 5-6 members, it works together with the Rector and has frequent interaction with the commissions. The Rector overviews every phase of the decision process: he appoints the committee members, and proposes to SA and CdA the commissions' members, he frequently talks with the presidents of the commissions, he controls the proposals developed by the commissions and, together with the committee, he can even modify the proposals before submitting them to the SA and CdA. Nevertheless, the Rector has not a complete control on the decision process; rather, he has to seek a consensus between the different academic groups. Commissions and committee permit a faster and more efficient dialogue between the groups within the university, by maintaining at the same time the collegiality in the internal decision making.

Thus, formally, UNIBO has an 'horizontal' government, but praxis and small changes gradually generated an other 'vertical' government that shapes the university's main decisions.

In sum, the role of the Rector has increased and the apex of the University has acquired more steering capability regarding research policy. The main lever of the research policy are:

- The reorganisation of the research area office (ARIC) and of the informatics office, aiming at increasing attraction of funds from the European Union and at optimising resources management;
- Allocation of the core fund for research on the basis of scientific merit;
- Supporting interdisciplinary research and young researchers through strategic projects;
- More attention to the socio-economic impact of research.

The university did not make a choice of concentrating resources on some disciplines or research areas; it only focused on improving management, allocation and attraction of resource.

Funding

Funding is a lever used by the university to enhance the research output productivity. The core funding is distributed across 14 scientific areas, according to: a disciplinary weight, the number of professors and the results of the department quality. For each discipline a committee is established; the committee collects all the publications and creates a ranking of the journals, based on the criteria suggested by the departments and the disciplinary sectors. Researchers that apply for funding are ranked in a 4 levels list; funds are allocated very selectively: the first two levels comprehend 40% of researchers and receive 2/3 of the total amount of money. It is a bibliometric evaluation, whose criteria arise from a mediation between the different disciplinary sectors and the departments of the disciplinary area. In the past, the evaluation was connected to a project submission and funds were allocated to the submitting groups. Now, evaluation and funds regard the single researcher; the judgements are known within the department and this stimulate productivity because affect reputation.

The co-funding process for ministry funded competitive projects has been rationalised: all research groups may now submit a project and the university co-fund those successful.

The relationship with external subjects is very important to stimulate change: external sources become of vital importance in a period characterised by budget constraints. Besides EU, also companies and other public and private bodies become more and more important.

Other important changes can be outlined. The number of students enrolled remained stable until 2004/5 (around 98 thousands), then decreased (88 thousands in 2007/8), following the general national trend of the considered period. New governing bodies have been created, the aforementioned University Committee and the Nuv, settled at mid '90 to support national evaluation process promoted by the ministry and led by CNVSU or CIVR.

In 1994, UNIBO and MiUR supported the establishment of 'Almalaurea', a consortium of Italian universities that aims at easing the relationship between firms, universities and graduates.

In sum, the improvement in research output depends on the reaction of UNIBO to external pressures, but its self reforming capability is limited by the lack of a strong national government steering and by the resistances to change within the institution itself. While the central steering of the university have become stronger, the faculty and department leaders are still 'primo inter pares' elected by their peers; this fact impedes the rationalization of the governance to reach the work floor level. At researchers' level the major incentives derive from the funding systems and the

competition to gain a good scientific reputation. Rather than new governance settings, it is the internal allocation system and the international project competition (mainly European Framework programs) that play a key role.

University of Modena

The University of Modena and Reggio Emilia (UNIMORE) was founded in 1175. It is a generalist university with 875 full professors, 32 departments and 12 faculties, 18.000 students.

UNIMORE attracts many external funds : fourth among Italian universities, and external funding represents about one third of its revenues.

The selected interviewees are: Rector, Dean of the Economics Faculty, Dean of the Biology Faculty, Director of the Management department, Director of Biomedical Sciences department, Head of the CRM Foundation, Head of the evaluation body (Nuv).

UNIMORE has felt competitive pressure on the acquisition of resources because of its geographical position:

- It is located between two strong competitor in the attraction of students, the University of Bologna and University of Parma.
- The territory of Modena and Reggio Emilia are rich of industrial enterprises
- Modena has a very important bank foundation, the Cassa di Risparmio di Modena-CRM.

Governance

The internal governance of University is similar to the national model, with the Rector, the SA and the CdA as major governing bodies. In the formal setting of the decision process the SA should give the political direction of the University action, the CdA should verify the economic and financial feasibility and the Rector should oversee both SA and CdA. Though, praxis is different from the norm. These bodies should control each other but, according to the interviewees, this does not happen.

There aren't any coalition inside the senate: each member represents its own area of interest. The SA has different types of members: originally the SA included only the faculty deans and the Rector; nowadays the senate is larger but the deans still remain the members with the stronger influence. Deans keep in charge also of research issues, despite the departments are the basic unit for research management.

On the one hand, CdA and SA never challenged the proposals of the Rector, that has been in charge from 1999 until late 2008. During its three mandates, the former Rector achieved a key role in the decision process and became decisive for all the meaningful decisions.

'Faculties are afraid to be against the Rector, it is very difficult to form coalitions... because there is a fear that open hostility will sooner or later cast back to the faculty'.

The Rector is very important in the recruitment process; he has a strong influence and capability, thanks to the fact that there are no coalitions, but rather tensions, between faculties with many students and few funds and faculties with few students and much funds for research:

On recruitment issue, the faculties dialogue with the Rector, he makes a proposal and the senate adopt it. There is no systemic coordination of the faculties... the praxis is the dialogue with the Rector. .. in some universities there is a formalised budget of the faculty, that permits autonomy and planning: this is not the case of Modena: every time we check the situation, the money, the roles, but on a very centralised vision on all the matter'.

On the other hand, such a centralized decision making eased fast and incisive responses of the University to external pressures. There has not been a formal reform of the governance; rather, the previous Rector gradually gained more power and the decision process became faster than in a shared governance system.

The new Rector in charge for less than a year and he has not as much power as his predecessor yet; until now he is adopting a more shared decision making process by involving as vice-Rectors the two most important challengers in the electoral campaign.

In UNIMORE there are commissions that last in charge for three years and their members belong to SA and CdA, but they do not have much influence on the proposals.

Funding

The central administration of the university distributes funding to Departments without any evaluation and proportionally to the historical allocation. Departments distribute funding between researchers, in some cases they privilege groups involved in national research project or researchers with a minimum scientific production. These criteria have been always applied in order to guarantee a basic sum to all researchers.

The competitive pressure affected some of the most important decisions of the university and favoured the emergence of a strong decisional core. One strategic decision of the University has been the creation in 1998 of a second important seat in Reggio Emilia. This initiative aimed at challenging the risk to be clashed between the bigger universities of Bologna and Parma, which at that time had already established some teaching courses in Reggio Emilia province. The University adopted

a ‘net’ structure, with Modena and Reggio Emilia as equal seats. This choice produced a high increase in the number of students and revenues from fees.⁷

The connection with the local bank foundation ‘CRM’ is very important; the Foundation invests an average of 6 millions in the research activity of the University; this sum is three times as much as the investment of the University central administration. The Foundation receives inputs from the University and invests in research grants, co-funds national and international competitive projects and purchases scientific devices. Larger investments have been privileged in recent years (a 10 million euros centre on regenerative medicine has been recently built with a 51% support from the Foundation).

The autonomy of the University increased the complexity of management and the vulnerability to external pressures. The law limited the capability to reform universities statutes and governing bodies could not formally acquire strong steering power. All these issues eased the emergence of a strong Rector, which was perceived as the only role able to mediate between different positions and to support a University strategy throughout time.

6 Final discussion and appraisal

The Italian HE system belongs to the continental tradition: the academic oligarchy and the ministerial bureaucracy used to play a major role. In 1989 the autonomy principle was introduced in order to increase the role of the university in the governance of the system; autonomy was partially implemented throughout the ‘90s, for instance by setting the principle of financial responsibility and the power of choice on personnel recruitment, creating a new university funding system based on governmental lump sum budgets instead of a line item model. Autonomy increased duties and complexity of university management but the governing bodies were not entrusted with adequate power, goals and responsibilities; in universities, a faculty and department levels the shared governance rationale remain largely predominant.

The first period of autonomy was characterized by a remarkable growth of HERD expenditure, + 60% between 1995 and 2001, this fact did not incentive a better use of resources. A second phase was characterized by rather stable funding, between 2001 and 2006 (+1,5%). General funding was primarily used to pay salaries and other fixed costs; in this period the universities expenditure for personnel exceeded the governmental lump sum allocation of a billion euros, and many universities realized that without a rationalization of the internal governance and a better use of resources, their financial balance, and ultimately their autonomy, would have soon been endangered. Attempts to rationalize the internal governance were undertaken by the universities themselves, but the limits imposed by law (for instance they can not bargain salaries, nor establish higher tuition fees) and the persistence of a strong

⁷ UNIMORE share of FFO was 1,22 % in 2000 and 1,3% in 2007 (+7%); students grew from 14.770 in 2000/2001 to 18.085 in 2007/2008 (+22%)

academic culture favouring the collegiality in decision-making produced non-effective results.

Both stakeholders and academics recognised the positive effects of the funding reforms in the period 1995-2008, and considered the reform of governance as a further important step. Interestingly, all the interviewees judged the changes produced through the decrees linked to the implementation of the Bologna process as the most important reforms of the Italian HE system in the period. They also recognise the important role of the research assessment exercise VTR, while other measures, such as the implementation of the l. 35/2005 on the Tree-Year Plans of Universities as instrument to design strategies and priority setting, were not considered of the same importance (or were considered of no importance at all) for the academic life.

Finally, improvements in performance (graduation, capability to attract external research funding, research output productivity) were not recognized as effective and stable, rather not significant and contingent; furthermore they are not considered strongly linked to the reforms, instead to other factors affecting the Italian economy (i.e. the firms' behavior), the mode of knowledge production (internationalization processes, concentration of resources through collaborative patterns), the role of external stakeholders funding research activities as well as the EU instruments and policies.

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8 List of interviewees

Prof. Mario Bressan - Member of the CIVR (Italian Research Evaluation Committee)
Prof. Franco Cuccurullo - President of CIVR (Italian Research Evaluation Committee)
Prof. Andrea Stella - Member of CUN (University Professors association)
Prof. Fausto Fantini - President of the CONVUI (Association of the Italian Evaluation Bodies)
Diego Celli – President of CSU (Association of Italian University students)
Prof. Luigi Fabbris – member of the CNVSU (National Evaluation Committee of the Higher Education System)
Prof. Andrea Gamberini – Member of the CRUI Committee (CRUI is the association of Italian Rectors)
Dott. Andrea Lombardinilo – MIUR Ministry of University and Research
Dott. Antonello Masia – MIUR Ministry of University and Research
Dott. Enrico Periti – President of CODAU (Association of Italian Universities Administrative Directors)

Governance and Funding Reform in the European Higher Education Area

National system analysis: Latvia¹

1 Introduction

This report summarizes the main changes in governance and funding in Latvian higher education system during the previous ten years, as well as their impact on the functioning and overall performance of the system.

It is based on existing literature on higher education in Latvia, analysis of policy related documents and initiatives, as well as on written and oral communication with key informants and policy-making actors and stakeholders in the country (names of the informants can be found at the end of this document), who were asked to provide their view on the impact of the reforms on system performance.

The report is divided into four main sections. Section 2 presents a summary overview of reforms in Latvian higher education governance and funding, while section 3 analyses the available indicators on system performance and qualifies them based on in-depth knowledge of the system. Section 4 examines the main impacts of the reforms and the extent to which these have contributed to changes in performance, while section 5 offers some final reflections on the developments of higher education in Latvia.

2 Reforms in governance and funding over the last ten years

In general, the Law on Education from 1991 determined the overall structure of Latvian higher education. In this act, the establishment of private higher education institutions was allowed followed by the introduction of tuition fees. Hence, the Latvian higher education system consists of both public and private higher education providers, and of various institutional types. In 2009 the country has 6 universities, 9 academies, 19 other higher education institutions, and 26 colleges – in total 60 higher education institutions. The public sector is the largest and consists of 37 institutions while the rest (23) are private. Over the last ten years, the student number in higher education has increased rapidly, from around 60.000 students in 1997, to about 125.000 in 2008/09 (Melnis 2009). About two-third of the students are enrolled in the public sector. Of the registered number of students, about 58 percent are full-time students.

The most important legal framework for higher education is the Law on Higher Education from 1995 (Formally: Law on Institutions of Higher Education), with

¹ Bjørn Stensaker, NIFU STEP, Oslo, Norway

several later amendments. Over the last decade, the most important reforms have been:

- The 2001 introduction of formula funding of HEIs aiming at improving the emphasis on results and outcomes (establishment of “contract-like” arrangements between the Government and the individual HEI)
- During the period 2001 - 2004 amendments in the law strengthening the rector and the management structure of universities through better clarifications of roles and responsibilities.
- The 2006 amendment in the law establishing universities as “autonomous public entities” creating a more clarified relation between the Ministry and the institutions
- The introduction (in 2006) of institutional research plans of individual HEIs with the establishment of separate funding for strategic research activities

These reform initiatives are further described below.

Reforms in higher education governance

In general, the influx of students in higher education in Latvia since 1997 have been made possible by both expanding the existing institutions, and by creating new institutions. Important developments include the expansion of the private sector, but also the creation of regional institutions of higher education. Existing institutions have also been allowed to establish branch campuses in other areas and cities. As indicated by the type of institutions created, diversity of the system has been an important objective guiding the expansion.

This diversity is sought made into a more coherent framework amongst other things, by the fact that both public and private institutions have to seek licensing and accreditation of study programmes by an independent quality assurance agency (HEQEC).

The 2001 introduction of more contract-like arrangements between the Ministry of Education and the individual higher education institution can also be said to be matched by a similar dialogue between the Ministry and the Parliament (the Saeima). It is currently expected that the Ministry regularly develop a more overarching and long-term policy and strategy for higher education, and that this is presented to the Saeima to stimulate more unified and shared development in higher education. Latvia has also developed a separate strategic body, the Higher Education Council, to advise the Ministry on strategic issues. The council has the authority to develop the National Strategy of Higher Education, to launch proposals concerning quality improvement possibilities in the higher education system, to review and advise on the annual budget proposals to the sector, and to coordinate various policy initiatives into an overarching framework. Due to the fact that several ministries in Latvia has responsibilities for higher education institutions (in e.g., arts, music, agriculture, etc), the members of the council consists of various public and private

stakeholder groups, including business and industry. Resolutions from the council are binding for all higher education institutions.

As a response to the more systematic governance approach being sought developed in Latvia, most higher education institutions have formulated and implemented their own development strategies and plans on issues such as personnel, curriculum and research development. Studies indicate the Rector is considered to be an important actor in developing the institutional strategy (OECD 2006), and often the strategy is a central part of the programme potential candidates for the rector position put forward prior to the election process. However, since the Rector is elected, issues have been raised about the strategic governing capacity of the institutional leadership in higher education, and especially in the period between 2001 – 2004 several amendments to the Law have been made to ensure and enhance the governing capabilities of the rector and the Senate. However, the division of labour between the Rector and the Senate is still unclear in some areas, not least in financial management.

In 2006 the law was amended again establishing all state higher education institutions (except for the Academy of Police and the Academy of Defense) as “autonomous public entities” creating a more clarified relation between the Ministry and the institutions. Hence, institutions of higher education are currently independent legal bodies. Based on this legislation, higher education institutions can also establish sub-units such as foundations and for-profit arrangements to enable them to establish a more diversified funding base. This latest amendments also reduced the number of mandatory decision-making bodies inside higher education institutions, and paved the way for new councils (up to the individual institutions to establish) intended to strengthen the strategic capabilities of the institutions. In these councils with both external and internal representation, greater adaptability of societal needs is a key task.

Although the legal framework concerning external quality assurance is equal for public and private higher education institutions, there are still differences as to the institutional autonomy of these institutions, not least in their management structure, and in how detailed they are regulated. For example, while private higher education institutions freely can choose which language a given study programme may be taught in, this is a much more limited option for the public institutions.

Reforms in the funding of higher education institutions

A key reform in Latvia during the last decade was the 2001 introduction of formula funding of HEIs aiming at improving the emphasis on results and outcomes. This system was first introduced for universities, and was later (2007) also implemented in the college sector. Traditionally, funding in Latvia was based on a rather detailed line-item budgeting model that had to have the approval of the Ministry of Education. In the new system, funding is allocated on the basis of a contract between the individual institutions and the ministry responsible for that institution. It is interesting to note that after the introduction of this system the total funding for

higher education has increased from around 68.6 million Ls in 2001 to 238,9 million Ls in 2008 (Melnis 2009). In a similar fashion one can also see that the expenditure of tertiary education from the state budget as a percentage of the GDP has increased from 0.65 percent in 2001 to 0.91 percent in 2007 (Melnis 2009).

The new formula funding system, implemented from 2002 onwards, is together with tuition the two most important sources of income for higher education institutions. However, for many higher education institutions the income from the state funding system only cover for less than half of the budget. In addition, the state budget is channeled through various ministries who have ownership of certain institutions. Furthermore, regional authorities and municipalities may also fund institutions, especially those established during the last 10-15 years. In general, this creates a very diversified funding system. A recent study has pointed out that this system may have both advantages and disadvantages (OECD 2006: 5). On the positive side, individual ministries and various other stakeholders have in this way a say in the development of institutions and in how they serve the society. Diversified funding may also pave the way for an increase in the total funding since institutions can find parallel funding to certain activities. On the downside is the problem of fragmentation making control and monitoring of resources difficult.

In general is funding of higher education study programs directly linked to the determined number of study places. These figures are again determined by the Higher Education Council and the Ministry. In principle, state funding is not available for part-time studies. Private higher education institutions, with some exceptions, do not receive state budget funding.

Both public and private higher education institutions charge tuition fees, and the institutions can decide on the level of fees themselves. However, not all students pay fees. In 2009, about 27 percent of the student population was financed through state-subsidised study places while 73 percent paid tuition fee (Melnis 2009). There are no cap on the number of students a given institution can enrol if that student also in paying tuition. In most state institutions, students that fulfil the grade requirements retain the state-subsidised status for the entire length of the study programs.

However, some institutions have developed another system. For example, at the University of Latvia there is an annual competition for state-subsidised places, meaning that a student can lose and retain the state-subsidised status on and off during the length of the study. Based on this competition, 7-10 percent of the students change their status annually (OECD 2006: 4). Since 1997, there are student loans available to students intended to cover for the living expenses for full-time students, and from 1999 such loans were also eligible for part-time students. Initially, the student support system was linked to public funding sources, but this changed in 2001 when commercial banks issued loans with state guarantees.

Although tuition fees represent the an important source of income for higher education institutions in general, tuition is of particular importance in the fields of social science and humanities. Since January 2009 institutional autonomy

concerning the possibility to reallocate resources internally has increased. Hence, funding is currently given through a lump-sum grant, and institutions are free to use this by their own discretion. This also includes institutional autonomy in how to spend the income generated from tuition.

As part of the “contractual” governance arrangements in Latvia in 2006 the Ministry introduced a procedure for approval of the research plans of individual HEIs with the establishment of separate funding for strategic research activities. However, in practise there is no formal approval of institutional research plans although institutions do develop these. In general, funding for research is based on competition which also make the realisation of research plans more difficult.

On-going processes and new reforms envisaged

Informants suggests that further changes in the Latvian system of higher education will follow the main lines and directions of the past. Future amendments in the legal framework is expected to imply a more equal regulation of public and private higher education institutions. This will imply that public institutions will have more autonomy. One of the suggested changes is that universities will own their buildings and real estate (although the decision has still not been taken).

Other expected changes in the system relates to more technical changes in the funding system, for example concerning the level of funding for various types of studies (in science, social science etc.).

However, the current financial crisis is heavily impacting Latvian higher education which may imply a serious set-back for the sector, and that further reforms are postponed for years. For example, in 2009 the special funding for research allocated to universities were cut to zero, and there have also been other significant cuts in the area of education and basic funding.

3 Performance improvements in Latvian higher education

In the governance and funding reform project, the performance of national systems has been measured along the following dimensions and using the uniform international indicators (see technical file for the precise definitions):

- Access: enrolment rate and net entry rate.
- Lifelong learning: mature enrolments and share of new entries above 25.
- Graduation: educational attainment of the population (25-34) and graduation rate.
- Employability: relative earnings and relative employment rate.
- Mobility of students: students from abroad and students studying in other countries.
- Research output: scientific articles and patents.

- Capacity to attract funds: HERD from private funds and from abroad and contributions from private households.
- Cost effectiveness: expenditures per students (in Euros and PPPS).

Relevant indicators include the absolute value of the indicators, either compared to the average of the countries in the sample or the change in the indicator value between the years 1998, 2002 and 2006. Of course, these indicators provide only a partial view of system performance and, hence, we will comment on them below.

According to our data, in Latvia we see improved performance when it comes to:

- Patent applications per million inhabitants
- Students studying in another country
- The number of graduates (20-29 years of age)
- Mature enrolment (students 30 years and older)

Concerning the focus on patenting it needs to be mentioned that Latvia has prioritised research in science, technology and medicine the last twenty years. Hence, there is a strong emphasis on science areas in which patenting normally is part of the output. Still, research funding and the total number of patents are – in comparison with some other European countries – relatively low. This situation may have pushed both researchers and institutions to find alternative sources of income. After Latvia joined the EU, funding from the EU has also increased.

Student mobility and internationalisation has not been very high on the policy agenda in Latvia in the last decade. With respect to incoming students Latvia has some regulations even restricting mobility. For example, public higher education institutions are not allowed to offer study programmes in the Russian language – although the interest from Russian students are considerably.

In recent years, Latvia has experienced an increasing interest also from other foreign students, especially from the Asian region. The profile of Latvia as a country with high quality education in science, technology and medicine is seen as one of the drivers of this trend. As a result, there is an increasing number of study programmes being offered in English. Due to the general economic situation, higher education ‘export’ is considered as a potential growth area in the future.

On the issue of graduates, one should take into consideration that the total number of students in Latvia has doubled during the decade, and that this normally will have a huge impact on the number of graduates. This increase in the total student number can also be said to influence on the number of mature students enrolled in higher education. Hence, one might expect that a general influx of students in higher education is a trend that will affect students in all age groups.

It should still be noticed that the high number of mature enrolment is a development that has taken place without much help of private business and industry since the current taxation system have few incentives for employers to invest in the education

of employees, or for other forms of cooperation between universities and the private sector (see also OECD 2006).

4 Effects of the reforms and other explanations of improved performance

In general, it is argued by the informants that reform activity has been rather moderate the last decade, and that many reforms took place already in the early 1990s. The most important reform element introduced the last decade is believed to have been the 2006 changes in the law giving HEIs a more formal status. Prior to this point, it was unclear as to whether HEIs should be considered as subunits directly under the Ministry, or more autonomous institutions. The new autonomous status has strengthened the role of the institutional leadership although the rector is still elected, and that the institutions have limited autonomy concerning their internal organisation. In this way, institutions have been given more freedom but have still limited capacity to take the responsibilities that follows.

Hence, one could argue that although there are important changes in the legislation in Latvia during the decade, implementation of the new framework conditions have been slower. For example, while a institutional strategic (research) plan became mandatory from 2006 onwards it is still somewhat unclear how these plans should be monitored and evaluated. The 'contractual dialogue' between the Ministry and the individual institutions haven't been systematised and routinised on this issue, and within the individual institutions, the current governance arrangements still seems to lack strategic capabilities although most informants do see improvements in that the number of (competing) decision-making bodies inside the institutions have been reduced over the years.

Several informants also point out that although a special coordinating body, the Higher Education Council, have been established, its functioning is not yet optimal as this council has little resources for analysis and information gathering and systematisation. Hence, decisions and recommendations may sometimes be based on more ad-hoc knowledge and fragmented information.

Why an increase in patent applications?

With respect to patent applications and the increases noticed during the decade, it is mentioned by several informants that the total number is still quite moderate, but that the increase may be explained by the fact that several institutions in fact equals patents to research publications as indications of academic merit. As a consequence, patenting is an important element considered when hiring academic staff.

Due to the fact that academic staff in Latvian higher education is evaluated on a regular basis concerning the quality and quantity of their output, some informants also believe that this is a possible in-direct driver for more visible output of the academic activity.

A third argument provided by the informants is that the increase of patent applications could be explained by a general increase of research funding and projects in fields more open to patenting. Not least are some funding conditioned by a requirement that the research project must result in a patent application.

Finally, the increase is even thought to be linked to the conditions set for the programs financed by European Union structural funds, which give priority to those applicants who already have a registered patent.

Still, when commenting upon the increase in patenting, informants do underline that patent applications per million inhabitants is a rather formal indicator, and that the real value added would be the patents that not only are registered but also utilised in business and industry. The informants were more sceptical as to whether the number of registered patents actually has been transformed into business and industry practise. Several informants also point out that the added-value of academic research is mainly found in publishing research, and that the impact of the sector on society perhaps is greater on the publishing dimension than on the patenting dimension.

Why an increase in the number of students studying abroad?

The increase in students studying in another country is mainly believed to be related to a lack of domestic reform in the student support system, and specific characteristics of student support system in Latvia. For example does not study loans (usually) cover the tuition costs – which may represent a problem for those students that cannot cover for the difference, and there are also more technical hindrances complicating and delaying the whole ledning process.

The existence of tuition is yet another factor triggering students to travel to countries that have tuition free higher education. The explanation offered by the informants is that the level of tuition is quite high compared with other Western European countries, and that this has consequences for recruitment in that students from poorer families may think they cannot afford to send their children to study at a higher education institution.

However, there are also 'external' explanations offered by the informants. EU-membership is seen as a very important stimulus for Latvian students to go abroad, and the removal of more technical hindrances has made the transfer process easier. Some informants with intimate knowledge of the higher education system in Latvia also point out that the authorities has put much energy into clarify processes of recognition and the transferability of education diplomas and qualifications reducing the risk of returning home with foreign qualifications. Increased compatibility of different foreign diplomas and degrees with Latvian education system is thought of as an important element here.

Why an increase in graduation rates?

As mentioned earlier has the total number of students increased significantly in the period from 1997 onwards. As a result Latvia has been among the countries in the world on the indicator 'the highest number of students per 1000 inhabitants' (see also Melnis 2009).

However, the informants also emphasises that except for this structural effect, increased graduation of students can also be related to a weaknesses in the student support system making higher education expensive for those attending. This creates an inverted "incentive" for students to complete their studies and to enter the labour market. Most students are working beside their studies, also those that are formally registered as full-time students.

Why an increase in enrolments of mature students?

The increase of enrolments of mature students is by all informants explained by historical characteristics of the Latvian HE-system, and many argue that the status of having a higher education qualification is a central part of the explanation. The largest and oldest of the universities are seen as prestigious institutions.

However, beside this cultural explanation, there are also two other factors informants believe have been of importance. First, being a country belonging to the former Soviet-Union, education taken during this period has been "devaluated" after independence, and the formal qualifications linked to 'Soviet' diplomas has seen as less relevant. Especially for those holding degrees in disciplines and subject other than in science and medicine, the need for new qualifications is noticeable. This trend can be specially noted in social science and humanities. This has caused older people to re-attend higher education to obtain qualifications that are seen as more updated, relevant, and legitimate.

Second, some informants also argue that the expansion of the whole higher education system has meant that more students also can enter the system. As a result of this, institutions has also been increasingly competing with each other for developing programs more tailored to marked needs. During the last ten years, diverse forms of part-time studies have evolved including programmes offered in a more flexible mode (as e-learning, evening courses, concentrated seminars during weekends, etc).

5 Final discussion and appraisal

Currently, a new Law is are discussed in the Parliament and the outcome of these discussions are not easy to predict. However, the propositions made to the Parliament cannot be said to be very radical. For example, there are no suggestions to change the current system where rectors are elected, and the changes may be said to build on the traditions in Latvian higher education. Many informants also argue that deans still have more loyalty to their academic colleagues than to the institution

they belong, and that decision-making as a consequence tend to be incremental and consensus-oriented.

Concerning the future outlook one of the most important conditions is the changing demographics in the Latvian population due to a quite low birth rate in the early 1990s. This will imply that there are fewer potential students to tap into for higher education institutions. Likely outcomes of this developments are increased competition between institutions, and/or increased efforts by the institutions to attract students from abroad. However, both sceenarios might imply quite dramatic changes in the governance of higher education institutions as competition will necessitate stronger strategic leadership, more profiled institutions, and attractive study programmes. Related to some of the performance improvements noticed abroad, an alternative development could also be that measures have to be taken to reduce the number of Latvian students going abroad, and that 'internationalisation-at-home' and a more developed student support system could be likely strategies to accomplish that. In the current economic stitution finding more resources for higher education can be rather difficult. In fact in the current budget state funding to some higher education institutions have ben cut dramatically.

Concerning the relation betwen reform initiatives and change in Latvian higher education, there are clear indication of a link between the expansion of the system and the number of students attending, and the number of graduates and muture students in the higher education system. There is also a link between the introduction of formular funding and the increase in expenditure on higher education, part of this may have had a positive effect on the positive development seen in patenting. That being said, there are fewer indications that changes inside higher education institutions have had considerably impact on the performance improvements noted.

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Governance and Funding Reform in the European Higher Education Area

National system analysis: Liechtenstein¹

1 Introduction

This report summarizes the main changes in governance and funding in the higher education system in Liechtenstein during the last ten years, as well as their impact on the functioning and overall performance of the system.

It is based on a few existing literature about the system and on documentary analysis, including also the websites of the *Schulamt* (the administrative body responsible for (higher) education) and of the higher education institutions themselves. Additionally, face-to-face interviews have been conducted with representatives from parliament, government and administration as well as with representatives from the largest higher education institutions in the country. These interviews were interested in the actor's point of view regarding reforms and system's performance.

The report is structured as follows. First, a summary overview of the development of and reforms in Liechtenstein's higher education system is provided (section 2). Section 3 addresses different dimensions of system performance. Regarding these dimensions, no international data is available for the case of Liechtenstein, and therefore no indicators can be produced. Instead, the involved actor's point of view is addressed. Section 4 looks at the main impacts of the reforms.

2 Organization and governance of higher education in Liechtenstein

Since 1992, Liechtenstein formally has an own higher education system: in this year, the *Liechtensteinische Ingenieursschule* (formerly *Abendtechnikum Vaduz*) was recognised as university of applied sciences. In 1999, the first professorship position was established. In 2005, the status changed from *Fachhochschule* to *Hochschule*, and since July 2008, the *Hochschule Liechtenstein* is a full university with the right to offer doctoral studies.

The higher education system today is composed by four institutions:

- the public *Hochschule Liechtenstein* (721 students enrolled in the academic year 2007/08, offers study courses in the areas of architecture and economics/finance; Amt für Statistik 2008),
- the *Internationale Akademie für Philosophie* (private institution, recognised by the State, offers a doctorate in Philosophy, 10 students in 2007/08),

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- the *Private Universität im Fürstentum Liechtenstein* (recognised by the State, offers a doctorate in Medicine and Law and Executive Masters in the area of Law, 69 students in 2007/08) and
- the *Liechtenstein-Institut* (a research institution in the area of law, political studies, economics, social sciences and history, focussing on Liechtenstein).

Additionally, the country is part of the sponsorship of the *Interstaatliche Hochschule für Technik Buchs* (NTB), which is part of the university of applied sciences in the eastern part of Switzerland (*Fachhochschule Ostschweiz*, FHO). Given the limited dimensions of the country, however, the higher education system remains restricted to a few fields, and around 90% of all students from the country study abroad.

Governance

The higher education system in Liechtenstein is under the authority of the government (executive body), which is supported, at the administrative level, by the *Schulamt*.

Since 1992, Liechtenstein disposes of a law on the higher education sector, which was replaced by a new *Hochschulgesetz* in 2004. This law describes the tasks and position of higher education institutions, accreditation (including different types of accreditation), the possible types of study courses (based on the Bologna model, establishing ECTS and diploma supplement as mandatory), criteria for students and teachers, academic degrees, quality management and funding and includes information about *hochschulähnliche Einrichtungen* (institutions similar to higher education institutions) as well as about the *Hochschulverbund Liechtenstein*, which represents all higher education institutions in the country.

General higher education policies are developed by the government. Academics, students and institutional leaders as well as companies and industries are involved in the processes through ad hoc committees. The final decision always lays with the government or parliament. However, there is a large autonomy given to the individual higher education institutions.

Regarding the main higher education institution, which is also at the focus of this report, the *Hochschule Liechtenstein*, the highest internal authority is with the *Hochschulrat*, which is elected by the government for 4 years. This council is composed of a representative of the government and 6 members from science, private and public bodies. The rector of the *Hochschule* as well as a representative of the *Schulamt* participate at the meetings, but do not have voting right.

Funding

The *Hochschule Liechtenstein* is funded for slightly more than half of its budget by the government through an operational grant for teaching and research projects. Other important funding sources are student fees and third party funding. There is no competitive research funding, and the internal allocation of funding at the

Hochschule is decided by the Hochschulrat, based on a proposal by the rector. Within the Hochschule, there is a *Forschungsförderungsfonds*, a fund for the promotion of research. The allocation of these funds is decided by a body of external experts.

The *Liechtenstein Institut* benefits from public money (national and local level), as well as from private contributions and science foundations, while the *Private Universität im Fürstentum Liechtenstein* is financed through student fees and private sponsoring. The *Internationale Akademie für Philosophie* is funded on a private basis, independent from public money. Both the *Private Universität im Fürstentum Liechtenstein* and the *Internationale Akademie für Philosophie* are indirectly supported by the government through contributions to individual projects, thus for clearly defined purposes (i.e. building up a library, or for book publications), but not through regular funding. For more information about public funding for education see KOFL 2006.

Reforms in governance and funding

The higher education system in Liechtenstein underwent mainly one reform of the laws since the mid-1990s; a second one was submitted to consultation (concluded) and will most probably be decided by the parliament within the next months.

A new law in 2004

With the new law from 2004 that came into force in 2005, some changes in Liechtenstein's higher education system occurred. This law was created based on the background of the Bologna reform. Compared to the law from 1992, it is much more detailed (in quantitative terms: it is composed of 56 paragraphs, while the former law contained 15). It includes a clear regulation of the accreditation system, both for higher education institutions and curricula, and includes the implementation of the requirements of the Bologna process (BA-MA structure, ECTS, diploma supplement, etc.).

With this new law, the main higher education institution in the country, the *Hochschule Liechtenstein*, moved its status from university of applied sciences to university. Elements such as regular evaluation, quality assessment, appeal mechanisms or participation of students in decision-making processes were introduced and/or formalised. Since 2008, the Hochschule Liechtenstein has the right to award doctoral degrees.

To some extent, this law followed developments that have already taken place before, in consultation with the political authorities: given the small dimensions of the higher education system, it was possible to adapt quite immediately to the requirements of the Bologna process. Liechtenstein was among the first countries to implement the BA-MA structure, and also other aspects were included immediately. Actors in the system often mention the Bologna process as an important driver of reforms in Liechtenstein's higher education system, mainly of the reform in 2004 and the ongoing adaptation of this reform.

Changes in state educational support

Together with the 2004 reform, also the law on state educational support (*Stipendiengesetz*) was renewed. The main changes include the introduction of a transparent, uniform system for both general and vocational training paths, the independency of grants from the parent's income situation for candidates at the age of 25 and higher, relief for students who are parents, an adjustment of maximum rates as well as increased efficiency in the handling of scholarship and loan requests. This reform aims at a reinforcement of the dual educational system and at broadening equal opportunities. It enlarges the governmental offer for financial support, but also underlines the importance of individual responsibility.

A new funding formula for 2005-2009

State funding for the *Hochschule Liechtenstein* is decided on a four-year basis. Together with the implementation of the 2004 reform, also a new financial decision (*Finanzbeschluss*) came into force, which included some smaller changes: While until 2004, public funding was based on the number of students, this mechanism did no longer prove useful with increased modularisation of study courses. Therefore, funding is now based on study places (1 study place = 25 weekly hours, calculated on the basis of lectures, exams (including preparation) and theses). Additionally, also negotiated, historical and contract funding has received some importance.

On-going processes and new reforms envisaged

Overall, the law from 2004 has proven of value, which is also underlined by the actors. However, some need for reform, based on developments in the country, but also on ongoing adaptations in the Bologna process, shows up. Therefore, currently a partial reform of the law on the higher education system (*Hochschulgesetz*) is ongoing, in which the higher education institutions are invited to propose changes. The reform is supposed to include mainly the following areas:

- Differentiation of the tasks and the focusing of a higher education institution
- Stronger emphasis on further education in the higher education area, but also a clear distinction between basic education and further education
- Accreditation as an instrument of quality assurance and development
- The legal basis for a national quality framework (Bologna)
- The legal formalisation of graduate schools as the mandatory form of doctoral studies
- The legal formalisation of a scientific council as advisory board for the government in higher education affairs
- Changes in the area of teaching personnel and the permission to teach

This new law has been submitted to consultation and will probably be voted in parliament in September 2009.

Besides this already started reform, actors perceive room for additional changes and adaptations in Liechtenstein's higher education system. They agree that probably adaptations to further developments in the Bologna process, and more in general adaptations to the needs of a knowledge society, need to be made.

A main area for reform is seen in research funding. So far, Liechtenstein supports the national science foundations in Switzerland and Austria and funds research with targeted projects. Also, a fund at the *Hochschule* has been created, which now is about to be concluded. However, there is no national science foundation in the

country. Different voices have been raised recently proposing the establishment of such a foundation, which provides funds for research projects on a competitive basis. Overall, it seems that some changes in the area of funding will occur in the next years.

Some actors also mention the need to create a more attractive environment for higher education, including for example more housing possibilities for students, conference infrastructure, cultural life, but also scholarships for highly skilled students and researchers.

3 Country performance, dimensions

As no indicators on the situation in Liechtenstein are available, country performance could not be measured through numbers. Instead, the actors were asked to provide their own estimation of the situation of Liechtenstein, within the country and compared to other countries and higher education systems. Information presented in the following does not stem from statistical data, but from the individual assessment of the interviewed actors.

Performance dimensions

Access

Access to higher education depends to a certain extent on the number of awarded degrees that allow for such access. In Liechtenstein, this degree is the *Matura*, which can be obtained only at one public *Gymnasium* in the country. Around 20-25% per age cohort have this degree; the number is restricted. A reason for this low number is the high importance of vocational training (*Berufslehre*). In addition to the 20-25% of degree holders from the public *Gymnasium*, other 10-15% pursue this degree abroad or in private schools.

Given the restricted offer within the country (Bachelor studies only in the areas of economics/finance and architecture), around 90% of the students from Liechtenstein study abroad, most often in Switzerland and Austria. Access to the universities in these countries is granted. At the Hochschule Liechtenstein, around 80% of all students come from abroad. The number of students at the Hochschule is restricted, and each year the number of applicants doubles the number of available study places in the field of economics, and also in the field of architecture the number of applicants outreaches the number of study places.

Most interviewed actors agree that the restricted quota of Matura degree holders influences access strongly. Some see this elitist access to the *Gymnasium* as problematic, and argue in favor of abolishing the quota; however, also the importance of vocational training is underlined, and the traditional system with vocational and general training in parallel is seen as of value. Vocational training has a strong tradition, and actors underline that in Liechtenstein it is a common understanding that not only academics can be successful in their professional life.

What lowers the number of higher education participants additionally is the fact that, when compared with other countries, several professional areas have not been taught at the tertiary level so far; for example, teacher training and training for professions in health care have moved to this level only recently.

Lifelong learning

Liechtenstein seems to have quite a tradition in continuing education, at different levels. The *Hochschule* was founded, in the 1961 as *Abendtechnikum*, designed for studying besides regular occupation, and based on the needs of the regional economy.

Today, besides the offer of the private university and the *Hochschule*, there are other institutions offering courses in several fields, and additionally there is quite a good offer in the region, in the neighbouring countries. The *Hochschule* offers structured courses (for example Certificates of Advanced Studies) in its focus areas; this offer was started in 1989 and continuously enlarged.

Participation in continuing education is seen differently by different actors – while some see the participation as rather low, others are convinced that offer and participation are used very frequently. Coordination between the different institutions offering learning possibilities seems to be rather low.

This coordination, however, might be enlarged in the future. Besides the general NQF that is currently being prepared and implemented, there is the idea to establish also a NQF for lifelong learning, which would allow to have larger concepts of learning and to continuously address individuals with learning offers.

Graduation

Compared to other countries, the share of the population with a higher education degree is rather low, for reasons already mentioned above (see *Access*).

Today, 23.8% of the population aged 25-39 has a degree of at the tertiary level (Amt für Statistik 2008). Knowledge intensive jobs make out 50-60% of the total value creation. This means that employees for knowledge intensive areas are often „imported“ from the neighbouring countries.

Employability

Employability is clearly seen as a strong point of Liechtenstein's system. The actors agree that there are no graduates from the *Hochschule* that do not find a job in the region after graduation, and this holds even true for architecture, which is a field where it is more difficult to find employment. The regional economy needs highly-skilled workforce, and even has to import it from abroad.

This is mainly true for the areas of engineering, economics and finance (even though, with today's situation, some concerns are raised regarding the financial area), but it seems that also degree holders from other fields (that have studied abroad and come back to the country) do not have difficulties in finding an employment.

Mobility of students

Mobility is another indicator in which Liechtenstein is estimated to outperform other countries. First, there is a general basic mobility – around 90% of the students study abroad, and a nearly similar number of international students is found at the higher education institutions in the country.

But also mobility within the study courses is rather high. The higher education institutions have intensive contacts with other universities and research centres abroad, and therefore are able to organise interesting exchange programmes. At the *Hochschule*, in the area of architecture an international exchange is mandatory. At this institutions, both outgoing and incoming mobility has increased strongly since the mid-1990s. Today, around 100 students per year are involved in mobility – around 40 to 45 outgoing and around 55 incoming; compared to a total of 721 students (2007/2008), this leads to a share of nearly 15%.

This mobility is supported by participation in Erasmus and Leonardo project, by organised programmes and international offices, but also by a generous grant and loan system and by support to mobility; there is no limit in the number of mobile students that are supported.

Mobility is also rather high among staff and teachers. Since 2007 programmes for staff mobility exist, and they are highly used.

Research output

Regarding research output, a strong increase over the last years can be observed. This increase is mainly linked to the establishment of the *Hochschule* as university institution: with this change of status, a new law was implemented which regulates also internal procedures, including the appointment of professorships.

This law was to a large extent inspired by the corresponding German law, and therefore professorships can be appointed only to people with a strong scientific background and a corresponding research and publication activity. Obviously, these professors continue their research and publication activities also at the *Hochschule*, and therefore research output in terms of publications has strongly increased over the last years.

The *Private Universität im Fürstentum Liechtenstein's* research output is strong especially in the medical field, with a focus on in international journal publications in genetics and cancer research .

Capacity to attract funds

The capacity of HEIs to attract funds, but also the opportunities to attract funds that are present in the region are seen as rather high. At the only publicly funded HEI in the country, the *Hochschule*, only around 50% of the whole budget is covered through public funds; the other half is covered through third-party funds (projects), through student fees and through sponsorship. Different foundations and private organisations support the *Hochschule* through the establishment of sponsored chairs. Liechtenstein also participates to the Swiss and the Austrian national research

foundations, which gives the HEIs the possibility to apply for funds through research projects.

Generally, there seems to be an important collaboration with the local industry. The actors generally see the potential for attracting private funds as rather high, thanks to a strong high-tech industry sector and an important finance sector „at the doorstep”. Some also say that there is room for improvement, which should be used. However, also some critical voices are raised: additional private funding might also jeopardise independency in teaching and research.

Cost effectiveness

When compared to Switzerland, it seems that expenditures per student of the *Hochschule* are situated somewhere between the data for Universities of Applied Sciences and for Universities. The student-teacher ratio at the *Hochschule* is seen as very favourable, which increases cost per student.

The private university is completely self-supporting.

Short summary

The strong points of Liechtenstein's higher education system seem to lay in the dimensions of employability, mobility (including a general international orientation) and the capacity to attract funds. Lifelong learning is a field that is established, but is likely to be increased in the coming years. Regarding research output, a strong improvement over the last few years (since 2004) can be observed.

Access and graduation are rather low, due to characteristics of the whole education system of the country, with a high importance for vocational training at several levels.

When asked about strong points of the higher education system, the actors most often mention the small dimension and corresponding flexibility of the country. This small dimension allows for rather quick decision making, and therefore also for a smooth adaptation to changes that occur in the broader, international higher education community. This adaptation to the international level is often seen as a vital approach, as the system is dependent on collaboration and exchange with other partners.

4 Drivers and effects of the reforms and alternative interpretations

Most actors agree that the main driver behind the reforms in Liechtenstein have been developments on the international scale, mainly through the Bologna process. This can also be seen in a more general context of European integration¹.

Given the small dimensions of the country, the need, but also the possibility to adapt to the new requirements rather immediately is high. Only three months after the

¹ Liechtenstein is not a member of the European Union, but belongs to the European Economic Area

ministerial meeting in Bologna in June 1999 the *Hochschule* (at that time *Fachhochschule*) started with the first Bachelor study course, and the country was also among the first countries to implement the diploma supplement. These immediate adaptations are also seen as strategies in order to strengthen the higher education system, which needs to be oriented towards the international context, and in which networking with other higher education institutions abroad is crucial.

The law decided on in 2004 is therefore, to a large extent, an adaptation of the legal framework to the already existing structures in the higher education system. It gives a clear framework for the whole higher education system, which corresponds to the international developments. Also the revision of the law that is currently ongoing is seen as an adaptation to changes in requirements on the international level, and, considering the law on the *Hochschule*, an adaptation to its status as university.

Therefore, the effects can not be described exclusively as effects of the new law from 2004, but should be seen in a larger context of developments on the international level. For sure, the change from *Fachhochschule* to *Hochschule*, and the consequent university status of the main higher education institution in the country has lead to quite some changes. With this status change, research became a central topic, and consequently professors with research backgrounds have been appointed.

These developments on the international and national level also enhanced the general discussion about the higher education system in the country. These discussions are still going on, and ideas about the development of a higher education and research area at the regional level are being developed. Ideas about niches in which the country could build distinctive profiles are mentioned by different actors. Possible coordination mechanisms among higher education institutions, but also with other educational institutions in the area of lifelong learning, are addressed. Overall, it seems that quite some ideas about possible developments are being produced and discussed at different points in the system. However, also the risk of missing the chance due to lack of courage or due to contentedness with the current situation is mentioned by some actors.

List of interviewed people

Last Name	First Name	Function
Biedermann	Simon	Director of the Office of the Minister of Education
Broggi	Mario	Member of the <i>Hochschulrat</i> of the <i>Hochschule</i> and member of the scientific council (<i>wissenschaftlicher Rat</i>) of the <i>Liechtenstein Institut</i>
Brunhart	Arthur	President of the <i>Landtag</i> (parliament)
Jenny	Christoph	Director of the Personnel Office <i>Hochschule Liechtenstein</i>
Konrad	Helmut	Director of the <i>Schulamt</i> (administrative body responsible for education)
Näscher	Klaus	Rector of the <i>Hochschule Liechtenstein</i>
Oehri-Walther	Ursula	Agency for International Educational Affairs (<i>Agentur für internationale Bildungsangelegenheiten</i>)
Sohler	Stefan	Agency for International Educational Affairs (<i>Agentur für internationale Bildungsangelegenheiten</i>)
Sudi	Karl	Rector of the <i>Private Universität im Fürstentum Liechtenstein</i>

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- Hochschule Liechtenstein - <http://www.hochschule.li/>
- Internationale Akademie für Philosophie – <http://www.iap.li>
- Liechtenstein-Institut – <http://www.liechtenstein-institut.li/>
- Private Universität im Fürstentum Liechtenstein - <http://www.ufl.li/>

Governance and Funding Reform in the European Higher Education Area

National system analysis: Lithuania¹

1 Introduction

This report gives an overview of higher education governance and funding reforms in Lithuania within the last ten years and the impact of those reforms on the performance of the whole system. The report is based on document analysis and interviews with key stakeholders in Lithuania.

2 Reforms in governance and funding over the last ten years

There are 15 state and 6 private universities, 18 university research institutes, 17 state research establishments, 16 public and 11 private non-university colleges that form the Lithuanian higher education system.

Within institutions, the Senate is the highest body of self governance. It is elected by the academic community and is supposed to define the institutions area of interest. The senate elects the Rector who is the head of the institution and appoints the vice-Rectors. Deans of Faculties are either elected by the faculty board or appointed by the rector, Heads of Departments and Directors scientific institutes are either elected by the faculty board or appointed by the rector/dean. Students are also represented in the senate, though their participation has been rather passive.

In 2006 the Government approved the Lithuanian Higher Education System Development Plan for 2006 to 2010. The goal of this long-term development plan was the improvement of the management of the higher education system, of the internal management of state universities, the reform of financing of higher education, the renewal of study programmes and the quality assurance of higher education (EURYDICE 2009). All this aspects were tackled over the last ten years.

Reforms in higher education governance

The Lithuanian higher education system has a medium level of autonomy. The universities have significant leeway to determine their own governance structures within the ministry regulations. Besides the Ministry of Education and Science there are a number of expert institutions and public bodies involved in higher education governance. The Higher Education Council's function is to evaluate the strategy and issue recommendations for higher education development. The Lithuanian

¹ Akiiki Babyesiza and Robert Owino, International Centre for Higher Education Research – Kassel, University of Kassel

University Rectors' Conference is an independent collegial body that coordinates the relationship of universities as does the Lithuanian Colleges Directors Conference for colleges. The Science Council of Lithuania advises the Seimas (parliament) and the government on research and development policy. Its members are representatives of business and industry, the scientific community and of governmental research and development institutions. The Lithuanian Centre for Quality Assessment in Higher Education which was established in 1995 is responsible for the evaluation and accreditation of study programmes (Lazutka 2005).

Institutions are governed by the Senate, which oversees policy formulation and guidance; the Council, which considers the management principles and activities of the institution on an advisory level and the Rectors and Vice Rectors, who manage the daily activities of the institution making sure that it complies with the laws, operates within the vision of the institution and implements the resolutions of the Council and the Senate. The senate among other duties approves the programmes to be offered under the advisement of the Council and according to the Ministry requirements.

There have been very little changes with respect to institutional autonomy in Lithuanian higher education within the last ten years. In the fields of Accountability and Quality Assurance the level of autonomy has even lessened.

In its year of independence from the Soviet Union 1991 the Law on Higher Education and Research was issued. Higher education reforms during this political transition period were marked by a reform of structure of study programmes (three tiered system) and more autonomy for higher education institutions. Lithuania's attempt to join the European Union and the signing of the Bologna-Agreement in 1999 were the main drivers of reform. The next reform steps followed with the Law on Higher Education in 2000. The main objectives of the law were changes in governance structure, less autonomy with respect to study programmes and the introduction of a binary system in Lithuania. Since then the law has been amended six times (Lazutka 2005):

- With the **Law on Higher Education** *national curricula* for a significant number of subjects were introduced. Any study programme in the undergraduate and integrated studies must conform to the guidelines of the respective study field which is approved by the Ministry.
- Furthermore a new governing body was introduced, the *university council or board*. The reason for its creation was to introduce external governors and representatives of social partners. According to the law, university staff and students, public and professional organisations, state and local authorities are to be represented equally. The council/board is an advisory body of public supervision and guardianship, responsible for strategic planning, while the senate (academic council) stays the supreme governing body. The minister for education and science appoints two thirds of the council/board members, while the university appoints the remaining third of which the rector of the university and the head of a students' union must be a part.

- Finally, the law stipulated the establishment of *non-university colleges*. Former specialized schools, that offered higher than secondary but lower than higher education and that did not have any equivalence in other European countries were reorganised into higher education colleges.

Reforms in the funding of higher education institutions

State budgetary allocations to public higher education institutions are distributed with reference to the draft prepared by the Ministry of Education and Science in accordance with the funding methodology approved by the Government. Public funding for a higher education institution is allocated as a lump sum and is partly related to the results of assessment of the research activities of the institution (EURYDICE 2006).

The institutions hold in trust, manage, use and can dispose of the property transferred to them by the state or municipality. These properties consist of buildings and other tangible assets, non-budgetary appropriations, securities, intellectual property as well as other lawfully acquired property. Higher education institutions on their own manage, use and dispose of the funds to implement objectives and goals laid down in their statutes and as provided for in the approved yearly estimate of the use of funds (EURYDICE 2006).

Universities can accept additional students whose places are not publicly funded. Additional students, part-time students and students taking more than the normative time to complete a degree pay tuition fees whose level is set by the institutions themselves. This also applies to students in private institutions and non-EU students. In 2000 an annual registration fee was introduced. The fee is waived for 50% of the best students in accordance with the results of the last semester. This can lead to rotations and was thought to encourage competition among students. Tuition fees for those are covered from the state budget.

In 2000 also *indicator related funding* was introduced. Funding was linked with the research activities or the vibrancy of research within an institution. At the beginning, only a part of the budget was distributed in accordance with the results of research activities. However when the funding methodology was approved by the government all state funding was linked to research activity and additionally the number of state funded students. The Lithuanian Centre for Quality Assessment in Higher Education evaluates all the research production of the universities and informs national funding decisions since the late 1990s.

On-going processes and new reforms envisaged

The new Law on Studies and Research which was issued in May 2009 comprises significant changes in governance and funding.

1. The legal status of higher education institutions will be changed “from a simple budgetary item to a special public entity status” (SMM 2009)

2. The law features changes concerning internal governance structures, specifically giving more rights and decision making powers to the university council/board and redefining it as an autonomous entity (SMM 2009). The new council/board will have to approve the statute of the institution, make decisions on mission statement and strategy, approve the annual budget, elect the rector and vice-rector and set the rules for acceptance of the faculty members. Half of council/board members shall be members of the academic community, the other half will be appointed by the minister and represent the general public. The new senate will be responsible for internal quality control, study and research & development programmes and study regulations (Vaitkus 2009).
3. Performance based competitive research funding will be expanded and administered by the Science Council of Lithuania,
4. A student's basket model will be introduced where the funding is attached to students as opposed to institutions. This applies only to the best school graduates. The students are free to choose the institution (private or public) and the programme they want. The student baskets have different values depending on the section of study programmes a student chose. The funding for humanities and social sciences is substantially lower than for natural sciences or engineering. The baskets the institutions receive is structured into funds for salary for faculty members and other staff, for materials and goods and for scholarships (Vaitkus 2009)
5. The registration fee that was introduced in 2000 will be abolished.
6. A change of the student loan system. Beforehand students could receive loans from the State Foundation for Studies and Research. Due to this law students will receive loans only from commercial banks, while the State Foundation for Studies and Research will mainly administrate scholarships.

3 Performance improvements in Lithuanian higher education

The performance data collected was based on eight dimensions of higher education performance at the system level operationalised in 19 indicators to capture performance. The eight performance dimensions and their underlying indicators are:

- Access: enrolment rate and net entry rate.
- Lifelong learning: mature enrolments and share of new entries above 25.
- Graduation: educational attainment of the population (25-34) and graduation rate.
- Employability: relative earnings and relative employment rate.
- Mobility of students: students from abroad and students studying in other countries.
- Research output: scientific articles and patents.
- Capacity to attract funds: HERD from private funds and from abroad and contributions from private households.
- Cost effectiveness: expenditures per students (in Euros and PPS).

According to our data there were tremendous improvements in the Lithuanian higher education system with respect to international mobility. The percentage of incoming students improved by 200% and the percentage of outgoing students increased significantly by 43%.

With respect to lifelong learning the percentage of mature enrolment increased significantly (50%), while the percentage of mature entry decreased substantially (-45%) in theoretically oriented study programmes (ISCED5A) and increased slightly (5%) in vocational or professionally oriented study programmes (ISCED5B).

There were significant improvements for graduation in the sense that the number of graduates per 1000 population aged 20 to 29 improved by 42%.

Access to higher education also improved concerning the net entry rate (25%) as well as the net enrolment rate (17%)

There are also moderate improvements with respect to cost effectiveness in the sense of lower expenditure per student compared to GDP per capita (12%) and in Euro PPS (16%).

Concerning employability, there is no data on the relative earnings of tertiary education graduates, the indicator for the relative unemployment rate of tertiary education degree holders improved by 8%.

Concerning research output, there are no data for the number of scientific articles per million inhabitants, while the number of patent applications to the EPO even decreased by 36%.

Overall the two key indicators that had the greatest improvement were mobility of students and increase in lifelong learning exhibited by increased number of students studying abroad and coming to Lithuania and increased enrolment of mature students respectively. Other performance indicators that improved substantially were increased number of graduates and increased new entrants into the higher education institutions.

4 Effects of the reforms and other explanations of improved performance

In the following chapter I will discuss the link between performance improvements and governance and funding reforms as well as the background indicators. Alternative reasons for performance improvement will also be presented.

National curricula

Most of the reforms within the higher education system in Lithuania can be traced to the period of 4 years preceding her entry into the European Union. The introduction of national curricula for a majority of subjects created the necessary preconditions for changing the ineffective procedure of assessing new study programmes. Any study

programme in the undergraduate and integrated studies must conform to the guidelines of the respective study field.

The initiative to create a national curriculum seemed to have exempted the universities from the delay due to red tape and political consideration to determine whether a course ought to be offered by the university. This also made the programmes in Lithuania compatible or comparable with the expectations of other higher education systems within Europe. This could have led to increased acceptance of Lithuanian students to other institutions and hence the outward mobility of the students. The acceptance of the standards or quality of the higher education may have also attracted students from outside Lithuania, further supported by the relatively low cost of education in Lithuania. The introduction of a national curriculum also led to the possibility of collaboration between Lithuanian universities and also with external universities with the assurance of the standards of programmes.

Performance based research funding

One of the two reforms in funding that have contributed towards notable improvement within the Lithuanian higher education system has been the introduction of performance based research funding, linking funding with results of research activities. At the beginning only a small part of the budget was distributed in accordance with research activities. Even though there are some challenges with the methodology, particularly as expressed by the respondents of the expert reviews. It is noted that this has led to more research activities within the universities and growth of the higher education institution's ability to collaborate with external researchers.

University funding linked to research activities acted as stimulus for research as institutions and individual researchers became drawn into competition to access the funds. However, most respondents indicate that the methodology led to plagiarism and other negative acts in the face of competition. Some point out the methodology has led to more emphasis on quantity over quality. A portion of the funding secured by institutions through research activity was directed towards infrastructure development and thereby increasing the quality of services provided to the students. Although the background variables show that while only 0,7% of GDP in Lithuania was allocated to GERD in 2006, which was relatively low in comparison to other European countries. The rate has grown more than average from 2002 to 2006. There is no significant improvement with respect to research output.

Student registration fee

The other important funding reform in 2000 was the introduction of student registration fee. This was meant to increase competition among the students. According to the law on higher education, not more than 50% students studying full time pay tuition fees per semester. Tuition fees for the other 50% are covered from the state budget. The performance of students in the previous semester is the criteria

used to determine the students supported by the state, the best performing half are chosen each semester. This has been criticised for being too unstable and hence not beneficial to students who cannot pay the fees yet oscillate in and out of government consideration for support. For keen students this has been an impetus not only to staying in school, but to perform well too. The introduction of student registration fee also provided some funding for the universities which they channelled towards development of the institutions.

Reforms, performance improvements and other factors of influence

Major reforms that influenced the performance of the Lithuanian higher education system were the expansion of the system by introducing a non-university sector, the institutions' right to admit additional fee paying students and the introduction of student loans. These new developments can be linked to increased lifelong learning, access and graduation indicators. There are also other factors of influence concerning the performance improvements.

With respect to lifelong learning it was agreed by most respondents that the demand for higher academic qualifications and the prolongation of study period of working students taking courses part time due to their professional commitments could have resulted in a higher performance. The freedom to introduce new programmes enabled universities to introduce evening classes which are convenient for working students to enrol without interfering with their work schedules. This has therefore contributed to the increase in mature students enrolment and entry.

Furthermore many students who already received degrees in the Soviet system took advantage of the new three tiered study structure and enrolled in Master Programmes to get another degree. With respect to access and graduation the demographic situation might have played a significant role for improved performance since the population of 18 year olds in Lithuania has grown stronger than average from 2002 to 2006. But it is certainly expected that the young population will likely shrink more than average in the next ten years.

The reform of study programmes in the context of the Bologna-Process might have also encouraged incoming and outgoing mobility in Lithuania. Other factors of influence are the accession to the European Union, which made Lithuania more attractive for non-EU students, participation in mobility programmes and by targeted funding to encourage student mobility. Incoming mobility was encouraged by the development of international study programmes at Lithuanian higher education institutions. However, most stakeholders saw outgoing mobility not as a sign of internationalisation, but as a sign of declining quality and brain drain.

In 2006 1,04% of GDP was spent on tertiary education, which is below the European average. The percentage has also increased less than the European average between 2002 and 2005. These facts combined with the high improvement with respect to access and lifelong learning might explain the improvements with respect to cost effectiveness in the sense of lower expenditures per HE student. This confirmed by

the estimation of the majority of respondents who concluded that the low expenditure per student is a result of the expansion of the higher education system and the stagnation of funding at the same time.

Some of the respondents note that the increase of students, graduates and population within the higher education in general is linked to the reforms in governance and funding but more in a negative sense. They argue that with the universities right to admit as many students as they deem necessary despite the limited human and infrastructural resources, has diminished quality of studies and value of higher education. This however has not been backed by scientific data.

Similarly a reduction of the cost per student is argued to be a result of underfunding and not a result of efficiency.

5 Final discussion and appraisal

Higher education reforms in Lithuania have to be seen in the context of its post-Soviet transition and its subsequent accession to the European Union. The majority of reforms were introduced in order to pass from a totalitarian state controlled system to a system signified by democracy and more institutional autonomy. This was followed by Lithuania's adoption of the Bologna-Reforms.

The major reforms like the establishment of the non-university sector and the universities freedom to admit additional students were quite successful in expanding access to higher education in combination with student loan schemes. While the introduction of performance related research funding did not show any improvements among the research related performance indicators. The most significant reforms, among them an expansion of performance related research funding, were passed this year and therefore could not yet have an impact on the overall system performance.

Overall the Lithuania belongs to the European higher education systems that are in the process of catching up to the frontrunners. This could be linked to the governance and funding reforms outlined in the report.

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List of interviewees

Giedrius Viliūnas – Secretary for Higher Education

Albertas Žalys – Director, Department of Science and Technology

Daina Lukošiūnienė – Head, Division of University Studies

Ministry of Education and Science

Eugenijus Stumbrys – Director

Nora Skaburskienė – Deputy Director; Head, Division for Institutional assessment

Almantas Šerpatauskas – Head, Division for Studies Assessment

Center for Quality Assessment in Higher Education

Eugenijus Butkus – Chair

Rūta Marcinkevičienė – Deputy Chair; Head, Committee of Humanities and Social Sciences

Science Council of Lithuania

Romualdas Ginevičius – Chair, Rector of Vilnius Gediminas Technical University

Albertas Skurvydas – Rector of Lithuanian Academy of Physical Education

Rectors' Conference of Lithuanian Universities

Dainius Dikšaitis – President (since 2009)

Jonas Okunis – Former President (2005-2009)

Lithuanian Students' Union

Governance and Funding Reform in the European Higher Education Area

National system analysis: Luxembourg¹

1 Governance and funding reforms

Luxembourg deliberately refrained from the idea of having its own university over decades. However, in the late 90ies policy thinking changed and the University of Luxembourg (University) has been established in 2003. Accordingly, many of the principles of governance and funding could have created without any historical burden, except for some smaller institutes, which have been integrated into the University. At the same time, due to absence of own experience, learning, making use of opportunities, and a portion of luck was required to build up the new university. As can be seen from the below statements, the portion of luck was quite big.

General Governance

The governance structure of the University of Luxembourg is determined by law. The University is led by an appointed Rector who is responsible to an external Board of Governors. Compared to other countries and universities, this is not very common in Continental Europe, however well established elsewhere.

Within this framework, the University enjoys a high degree of autonomy with respect to its internal structure, research priorities (de facto negotiated with the Ministry of Culture, Higher Education and Research on the initiative of the University), curricula / study programmes, allocation of budget, personnel, and partnerships. In more detail:

- Quality assurance: QA is required, but University is autonomous regarding the chosen methods.
- Programming & selection: University can start new study programmes on their own initiative, content and teaching methods are determined by the university. They have to accept all students unconditionally. De facto, the University is aiming for increasing the number of students. As it aims at a research-based university; master and PhD programmes dominate.
- Staffing & salaries: In the four-year contract the number of staff is pre-determined (de facto negotiated). Within these limits the University is free to appoint individuals. Salary levels are free within boundaries, which themselves are negotiated with the ministry.

¹ Fritz Ohler, Technopolis Group

- **Resources & infrastructure:** The University can create income from contract research and teaching / training, patenting / licensing, donations, gifts and endowments. Internal allocation is completely up to the University. The University does not own its buildings, and borrowing money from the capital market is not allowed. Building up reserves is allowed, and the existence of a four-year plan creates high flexibility in funding.
- **Fee setting:** No tuition fee, except for the Master in Banking and Finance.

Internal governance of Luxembourg's higher education institutions

The governance structure of the University is determined by the law. The University is led by an appointed Rector who is responsible to an external Board of Governors.

According the international evaluation Panel, which has delivered its report in January 2009 (<http://wwwen.uni.lu/university/documents>), the governance model is perceived as both very effective as a general model as well as in its factual implementation, as a great deal has been achieved in a rather short period of five years. However, there are some shortcomings and thus room for improvement. The recommendations of the Panel are thus mainly oriented at motivating the key actors to fully exploit the potential within the existing governance structures and frameworks rather than to change them. These are the main issues:

The University Board (chaired by the Rector) should be of prime importance as a central forum for debate, operational policy making, monitoring and review.

The University Board should be placed in a position where it can exercise strong and independent strategic leadership of the University. This leadership should be exerted more robustly vis-à-vis engaged academic community as well as to the University Council. The Rector in turn needs to have in place effective mechanisms for upward and downward communication with the rest of the University community. There are particularly ambiguous and somewhat ineffective arrangements in relation to policy-formulation, decision-making and policy-implementation.

In the future, starting from a high level, progress is required in both areas in order to enable effective strategic management and policy making underpinned by effective and secure operational planning and monitoring, not the least the communication to the wider University community.

2 Governance and funding reform

As mentioned above, Luxembourg entered the university system by establishing the University of Luxembourg. Therefore, there is no funding reform in a strict sense, rather a funding regime, which is characterised as follows:

- On the initiative of the University, the Ministry of Culture, Higher Education and Research on the one hand and the University on the other have negotiated and agreed on a four-year plan (Plan Quadriennal de l'Université

du Luxembourg 2006-2009). This plan determines a number of subjects vis-à-vis a guaranteed budget over the plans' period. These are the subjects:

- The number and areas of faculties (Faculty of Language and Literature, Humanities, Arts and Education, Faculty of Law, Economics and Finance, Faculty of Sciences, Technology and Communication)
- The number and priority areas in research (high priority: security and reliability of information technology, material science, life sciences, European and business law, finance, educational science, Luxembourg studies; medium priority: geodynamics and seismology, environmental resources and technologies, economy and entrepreneurship, social sciences)
- The number, levels and fields of study courses including target numbers for students enrolled (Bachelor, Master, PhD)
- The fields, number and type of faculty members (professors, assistant professors, support)
- The type and goals of structural measures (quality assurance policy; human resource development policy; society and communication; infrastructure, services and organisation)
- Action plan vis-à-vis time table
- Budget and funding
- As regards to budget, the share of external funding is rather limited, although increasing over time. It ranges from 2 MEUR (= 4% of a total of 50.7 MEUR) in 2006 to 6 MEUR (= 6% of a total of 97 MEUR) in 2009. Particularly, there is no separation between competitive funding, contract research and services.
- Interestingly, while the "Plan Quadriennal" does not put a strong incentive to acquire competitive funding, the University has nevertheless "captured" the Luxembourg funding agency (Fonds National de la Recherche FNR), as it has became the most important single institution (successfully) applying for funding, which itself created a significant impact on the role and status of the FNR.

3 Country performance

The main performance of Luxembourg's higher education policy is to set up a university within a few years and to achieve a considerably high level of performance. The performance of the first five years of operation of the University has been the subject of an international evaluation exercise.

Thus it is possible, to extensively draw from this in-depth analysis of University's performance of its first five years of operation. These are the main findings (<http://wwwen.uni.lu/university/documents>)

- The University is well positioned with respect to its governance model and its implementation. The pioneering phase is considered as being over, allowing for a more systematic and continuous development.
- The Panel's most fundamental conclusion is one of respect for the rapid growth of the University and the extent of successful accomplishment.

- The decision to create the University was not uncontested in Luxembourg society. Many interlocutors of the Panel stated that, although sceptical at the launch of the University, they were now of the view that the University had already surpassed all expectations. In general, the Panel was convinced that the University is now viewed as an essential and highly regarded feature of Luxembourgish society. This respect has been earned through achievements in research, teaching and learning. Student numbers are increasing significantly.
- The University recruits both Luxembourgish and foreign students. Both are recruited in a competitive environment, since many Luxembourgish students receive grants to study abroad.
- The University has also had early success in terms of research and development. Internally, the staff members are committed to, and generally enjoy, working for the University. The quality of the support, teaching and research staff and of the PhD students is generally high.
- The University has established many international contacts and collaborations. This is in a large part due to the international recruitment of staff members (of the 26 professors recruited in 2006, only one is Luxembourgish), who bring in their own contacts, but also through central efforts at internationalization. The University is actively carving out its position in international networks, e.g. as a founding member of a Multilingual Universities Association, and in its plans for a doctoral school in "la Grande région".
- The University has been founded based on a number of ambitious principles, which are also reflected in the founding legislation and the Plan Quadriennal. These principles are (i) interdisciplinarity, (ii) international character and extension of cooperation with other universities, (iii) student mobility, (iv) multilinguism, (v) a symbiotic relationship between teaching and research and a tutorial system to guide students.
- The University is charged with the task of intertwining teaching and research in an interdisciplinary manner. The Panel has observed a balance between education, research and service, where the focus is most strongly on research, less on education, and only indirectly on service to society. Teaching is mainly based on research, especially at the master level. The majority of teaching staff is actively engaged in research, although this is stronger in some areas than in others. The link between research and teaching is weaker in some 'vacataires', although in these areas there appeared to be strong links with professional practice and 'scholarship' of a different variety. Since research is emphasized for the purpose of recruitment, the research base of the University will strengthen further.
- The Panel has observed only a very limited number of interdisciplinary initiatives. In particular, the links between faculties are limited, possibly because they are at different locations, making cross-faculty interdisciplinary work particularly difficult. The Panel did observe, however, some interesting examples of interdisciplinary research (biotechnology and computer science). However, in general, interdisciplinary research or teaching appeared to the

Panel not to be particularly encouraged or facilitated. The Panel has been neutral on whether this should be a principle of development. If it is to remain, then the Panel has urged the University to stimulate interdisciplinary cooperation, within and across Faculties. If it is not to remain, in this case the Panel has suggested that it would be helpful to relieve the University of this obligation.

- The University strives to become an internationally connected, multilingual university. The Panel has appreciated that the University recruits both students and staff on an international basis: 47% of students are non-Luxembourgish and of the 26 professors hired in 2006, only one was Luxembourgish. International mobility is obligatory for bachelor students. Student exchange agreements exist with neighbouring countries, Portugal, the United States of America and recently also China. This mobility is a success in general.
- The University is a founding member of a Multilingual Universities Association and has a clear set of rules or objectives for implementing multilingualism. Each of the three languages (French, German and English) must at least be evident in at least 20% of the courses. There is however no action plan for the further implementation of multilingualism, although the existing objectives have not yet been reached. In day to day University life, everyone seems to adopt a pragmatic stance with respect to language, so that students and staff from different countries and mother tongues try to understand each other. No complaints about language exist, with the exception of foreign students, some of whom claimed to the Panels that they were not informed about the language prerequisites. The Panel has thus reinforced the necessity of making the language requirements of courses more explicit, would encourage language courses for all staff, and would support offering 'Luxembourgish as a foreign language' as an option available to staff and students. The Panel emphasizes the necessity of establishing a clear policy on language mastery with respect to the student selection processes, and on the provision of support for students who are weak in the necessary language skills.
- In relation to tutoring, the Panel found a lack of clarity concerning how this was being interpreted. As stated above, the Panel found that at the programme, Faculty and University levels there was an almost total lack of debate in relation to teaching, learning and assessment practices, and consequently a lack of clear policy or strategy. Further, the Panel was of the view that this requires increased attention, in order to secure the quality of the student experience. In addition to the creation of appropriate strategies and policies, requisite opportunities for staff development should also be provided.
- In general it was the view of the Panel that there would be much to be gained by the University entering into a serious debate regarding its founding principles and their strategic and operational implications. Such a debate, led by the Governing Board, should involve the Rectorate, the University Council, Faculty and external stakeholders. In fact the whole academic community,

staff and students, has to stand firmly together behind the next phase of development of the University.

4 Effects of the reforms

As there was no reform in a strict sense, rather the establishment of a university as such, the above chapters fully cover the issue of effects.

Governance and Funding Reform in the European Higher Education Area

National system analysis: Malta¹

1 Description of the main reforms in governance:

The most important system-level reforms in Malta regarding governance relate to the following developments:

The University of Malta (UOM) conforms to the Bologna process and all courses and faculties use the ECTS system. The Diploma supplement is part of the University's credential landscape. Courses have been modularised across Higher Education (HE) institutions and in most cases follow the study-cycle system imposed by the Bologna process. This has not only facilitated the recognition of degrees and mobility, but has allowed students to effectively measure the learning outcomes of their courses.

One needs to bear in mind that apart from the reforms which pertain mainly to programme provision and harmonization across faculties of the structure and regulatory regime controlling undergraduate and postgraduate courses, governance at the UOM is still largely determined by the Education Act of 1988 and it has not changed, despite the fact that the academic horizon has expanded and exigencies have developed and point to the need for change. It is hoped that a new Education Act may deliver the needed reforms. The need is also being felt for the University Council to be reorganised to reflect the overall policy issues of the UOM. The university's executive body would have fewer members with the role of overseeing the function of the Council itself and ensuring that the Council decisions are put into place.

The national HE institution providing vocational training – the Malta College of Arts, Science and Technology (MCAST) is now providing access to degree courses. MCAST and the Institute of Tourism Studies (ITS) have been integrated within the Education Act in the last set of legal changes being effected in 2006.

Malta Qualifications Council (MQC) is about to sign a memorandum of understanding with UOM as well as with MCAST to peg all national qualifications to the Malta Qualifications Framework (MQF). All qualifications will be level-rated based on quality assurance, on standards and criteria as defined by the council, and on the basis of European tools. A second objective of this council is to ensure that learning within further and higher education is respecting the objectives and goals of government and the social partners.

¹ Dr Carmel Borg

HE institutions are working towards using learning outcomes for quality assurance purposes. The internal quality assurance at University has been reinforced through the setting up of the Academic Programmes Quality and Resources Unit (APQRU). APQRU is providing support to the Programme Validation Committee (PVC) which is a Senate Sub-Committee and the main academic agent of change in quality assurance matters, as regards to university.

The National Commission for Higher Education (NCHE) has been set up, together with ancillary institutions such as the Directorate for Quality and Standards in Education and the Directorate for Lifelong Learning. The Government is in the process of drafting a new law on HE – The Further and Higher Education Act. It has been stressed that the devising of this Act is long and complex, requiring reflection and consultation with all stakeholders and social partners. It will consolidate all governance and funding policies for the sector, as well as introduce new policies related to licensing, accreditation and quality assurance in line with the European Standards and Guidelines adopted within the Bologna Process. This Act will be instrumental in giving a better quality of education to all learners. It will also bring a leap of quality in the provision of HE and in the maintenance of standards and criteria on which Malta's HE will be maintained.

The Erasmus mobility of students has been facilitated.

2 Description of the main reforms in funding:

The most important system-level reforms in Malta regarding funding relate to the following developments:

The National Research Technological Development and Innovation Programme (RTDI) has been set up in 2004. This has been restructured as the National Research and Innovation Programme (R&I) in 2006 as part of the implementation of the National Strategic Plan for Research and Innovation 2007 - 2010. This programme provides financial support for research, development and innovation in the field of science and technology. The National Strategic Plan has led to a boost in funding for academic research.

The funding mechanism of the UOM remains largely unaltered and there is almost complete reliance on State funds. With the advent of other HE institutions and the welcome increase in the student population, a future is predicted where State funds may become a significant limiting factor to the ability of the university to develop further. The need of infrastructural resources and research funding schemes is emphasised; moreover, it is more adequate for the university to have five-year budgets, as opposed to the current yearly ones.

Moreover, as pointed out in the previous section, MCAST is now providing degree courses. Concern has been expressed in this regard by some parties, since the necessary boundaries which have to exist between MCAST and the UOM have now

been blurred. This will only serve to further cripple the funding which is presently directed towards UOM. One also needs to bear in mind that insufficient resources are currently being allocated to APQRU and the Programme Validation Committee within the UOM. The work is particularly slow due to the high demand and study-units are not always made available at the time when students should have been doing their course choices.

Nevertheless, the European Structural Fund allocation to MCAST and UOM is worth mentioning as such funds form a critical part of Malta's current funding policies in relation to these sectors.

Newly recruited academics within the UOM will now be asked to attend pedagogical seminars as a result of a new collective agreement. New conditions and deadlines have also been set for the academic staff to reach target qualifications, like doctoral level degrees. This agreement has stipulated incremental salary rates for different categories of staff over the coming years.

In the last few years there have been developments and changes in the funding of student support and mobility initiatives, like Erasmus, Erasmus Mundus, the Students Maintenance Grants Scheme, the Malta Government Scholarship Scheme and the recently launched ESF funded Strategic Educational Pathways Scholarships (STEPS) scheme. Such developments had the purpose of promoting increased access, participation at higher levels of education and also mobility. Yet it has been noted that Erasmus, although being a very positive development, can be problematic. The amount of applicants has been growing exponentially over the years whilst the size of the grant has been diminishing accordingly. More funds should hence be directed towards Erasmus.

The stipend system has been expanded in particular areas. However, it needs to be pointed out that some courses which have greater expenses than others, such as Dentistry and Architecture, have not been included in this scheme, indicating a relative short-sightedness in the implementation of the present system.

3 Country performances and background variables:

According to the data available, Malta has registered progress in:

- **Government spending on research and development**

There is a single grant for teaching and research, and no distinction can be made between parts of the grant that relate to teaching and to research. From the total public research funds available, competitive public research grants represent 99% of the proportion. These public grants include overhead costs.

Research funds are granted in the context of a national research agenda which is biased in favour of science and technology. Real costs and availability of funds dictate the grant.

There have also been targeted funds to encourage applied research activities, on the basis of competition; targeted funds have also been made available to encourage innovations that stem from research outcomes and to encourage research in strategically important areas.

- **Greater participation of Maltese citizens in HE**

In the case of the UOM, there is the possibility to follow studies leading to Level 5 Certificate or Diploma, but these do not automatically lead to entry into Level 6 short-cycle degree course. In the case of MCAST, students obtaining a National Higher Diploma in some courses will be provided by an additional year of training and hence with the possibility of obtaining a professional degree.

All students who are Maltese citizens and are attending full-time undergraduate courses at tertiary level receive a stipend for the duration of their studies. Stipends are also available to students who study in other countries. The amount of direct financial support from the state to higher education students hovers around 21 million Euros for 2009.

Apart from the fact that undergraduate students studying in local HE institutions do not pay for a tuition fee, all Bachelors students are eligible for grants to cover living costs.

- **Access to HE**

All of the study programmes are now modularised and use ECTS.

The UOM has a maturity clause which allows students to apply for courses and be evaluated on their life experience and not only their qualifications. The system is not structured but involves interviews with students. The Institute of Tourism Studies gives value to work experience of students who want to gain access for study in vocational training. The Employment and Training Corporation (ETC) provides 'Trades Testing' for the unemployed.

The Malta Qualifications Council has also published a policy document on a framework for the recognition of non-formal learning. The plan is to start with the process for Levels 1-3.

The UOM has an access-disability unit.

- **Access of Maltese citizens to international institutions**

Mobility is encouraged through European programmes.

Targeted funds have been made available to encourage researchers to carry out (part of) their research in a university abroad, on the basis of competition.

- **Greater access to the job market through an HE qualification**

89% of all HEIs and at least in some cycles award a Diploma supplement. The Diploma supplement is automatic and free of charge. Students receive it with their degree certificate on graduation day.

On a negative note, Malta does not have a National Quality Assurance Agency, and therefore, Maltese HE institutions are not audited externally. However, within the UOM there is a system of external examiners assigned to the faculties. The participation of students in QA has been that of using feedback forms about the courses and credits they follow. So far, students are not yet involved in the QA committees but they are included in the Bologna Experts Group.

The Government of Malta is working on a new Law which will indicate the national structure for regulating HE institutions in Malta and will also cater for external quality assurance of the university. The UOM is also working towards implementing procedures for quality assurance according to ENQA, but these are not yet fully in accordance.

4 Effects of the reforms in governance:

Setting up of private institutions

The general agreement has been that Malta has seen improved performance when it comes to the expansion of HE. The private sector has set up institutions as training centres for internationally recognised degrees. These institutions so far provide for 2-3% of the total HE provision, offering alternative routes into further or HE programmes. Yet, the quality of outcomes with regards to the private sector contribution to HE provision, and the ensuing improved performances, are debatable. The service is still largely unregulated; some of these private institutions are fraudulent in their nature and do not offer recognised degrees as claimed. The potential for good outcomes from private providers can only be secured given the appropriate safeguards.

Quality control mechanisms

The main governance factor within the UOM is the introduction of quality control mechanisms that may lead to the accreditation of degrees on offer at the university. The quality assurance culture is intended to increase transparency and accountability – this will serve to improve the product offered to students and make the HE experience more worthwhile for them. Yet, it is necessary to mention that endeavours to develop an internal quality assurance system in line with the ESG have been slow and mainly lacking adequate funding for systematic changes to take place in line with necessary governance reforms.

Access and mobility

MCAST has dramatically increased access to further education; moreover, it has also launched 6 top-up degree programmes which improve access, albeit limited, to HE.

In terms of mobility within HE, ECTS, mobility windows and the Erasmus programme have helped students access parts of their studies in other institutions. There is also a genuine attempt to enable students to move from one institution to another and to acknowledge and validate experiential knowledge, although not many examples of such attempts are found on a systematic level. Furthermore, the National Commission for Higher Education (NCHE) is also developing Malta's Further and Higher Education external policy. This major policy initiative outlines how Malta should be promoted as an international centre for excellence in HE and how to attract foreign students to Malta.

Research and development

The development of the NCHE has also led towards faster development of research for the formulation and consideration of reforms; yet, to date none of these reforms have been implemented.

To sum up this section, on a national scale one can note greater participation of Maltese citizens in HE; greater access of Maltese citizens to international institutions and greater access to the job market through an HE qualification. These may be considered as direct results of the reforms in governance. The general direction has been forward, even if the general governance of HE in Malta has remained largely unchanged, with most changes being done in compliance with the present system, rather than having a total upheaval.

5 Effects of the reforms in funding:

Student support schemes

Government stipends have been extended to all undergraduates attending courses within the private sector and the portfolio of courses within the private sector has also increased. Government scholarship schemes have been extended to undergraduates in the private sector, providing for a maintenance grant for the duration of studies. The Government's decision to broaden the access to grants has had an effect on the enrolment of students in both public and private institutions. Having said that, no real correlation study has been conducted so far and it is also possible that students' participation has increased as a result of underlying improved performance of schools in prior years.

As outlined earlier, programmes such as Erasmus, and scholarship schemes such as STEPS and MGSS have proved very useful in helping students move across institutions. The changes in funding and student support have been beneficial in this regard. However, the changes are only more noticeable in specific areas, usually the target of national policies, rather than across the board where change is slower and funding and student support is more limited.

Indeed, the changes in student support have more or less mirrored the changes in funding. These changes have led to some previously less popular courses with students increase in their intake. Having said that, it would be unwise to correlate such increases solely with the increase in student support. There are external contributory factors, such as the demands of the current economy, which need to be taken into account. It is argued that increasing funding in areas such as sciences, maths and IT to increase the intake of training graduates is a myopic way of tackling the problem, one which is bound to have its negative effects later on. Students should be lured to these subjects at a much younger age in order to be better prepared.

Stipends impact positively on the increase of student numbers in tertiary education; they also enable students to move between institutions here and abroad. However, it

has also been argued that it is incorrect to consider student support systems as forming part of the funding to HE institutions. Student funding schemes are indirect funds allocated to students to support and facilitate access. Funds for developing the institution come from a separate budget line. In fact, the growth of student support schemes cause an inverse constraint on growth finance available to institutions in order to deal with increasing student numbers. They also simultaneously heighten the disequilibrium by attracting higher number of students without corresponding increases in funds for the institutions.

The number of scholarships that the government is providing is a clear indicator of progress in the field of HE. For a tiny island, if one has to consider the percentage of the population who are furthering their studies, one can note an enormous indicator of progress. People are increasing their capacity to help their nation move towards what is defined as a knowledge-based society. More learners are being encouraged into the HE area and funding is being distributed in such a way that it satisfies as many requests as possible.

Yet, the greater participation of Maltese in HE can be mostly linked to a pedagogical mindset of the Maltese society at large, rather than to any one system-reform in particular. Although the fact that tuition fees have not been introduced for HE in Malta is a large contributory factor towards positive student numbers, it would not make sense to state that Maltese citizens decide to take up HE because of the student funding or the benefits students receive.

Other funding to HE institutions

EU structural funds and other programmes such as FP7 have had a major impact on the University's ability to improve its teaching and research capacity. The collective agreement for the academic staff has been the most important tool with respect to linking expenditure with incentives for improved performance of staff. Whilst closing the wage differential gap for the academic profession, this has not impacted significantly on the growth capacity required for teaching and research over the coming years.

The budget allocated to the UOM has increased significantly over the last few years, partly in response to a plan for growth for the institution and partly because of the granting of increased pay packages to staff (through collective agreement mentioned in previous paragraph). The latter development is indeed considered as an important measure without which the university could not possibly ever hope to maintain and improve its standards. However, it is very difficult for the institution to develop to greater heights with the current level of financial support. It is essential that funding levels continue to rise in order to improve its position in the world's HEA.

Funding for research

According to the 19 indicators used to capture performance, it results that the quality and quantity of research in Malta has increased thanks to a greater access to international funds as well as greater provision of governmental funds. Moreover, access to international funds may increase substantially if the adequate funding

reforms are implemented. However, it is also argued that spending on Research and Development has increased because of the need of the economy to diversify and specialise, rather than because of the needs of HE, which to date is receiving only limited tangible benefits of R&D. Above all, the EU contributions, over a number of years, to the R&D effort, have been a key impact in this area.

Some respondents have raised their doubts regarding the increase in the level of quality of the research, arguing that no quality assurance measures are currently in place to ensure high research levels. A good indicator of the quality of research would be the number of publications in high-calibre peer reviewed journals. In the absence of such data, one cannot assess whether quality has improved or not. As regards to quantity of research, the available data (Eurostat and NSO) indicates an overall stable picture which shows some increasing trends in 2004-2006 period, but then levels out or decreased slightly in 2007. Available Eurostat data on GERD financed from abroad shows a slight increase between 2005 and 2007 but this trend does not appear to be reflected in GERD data. Available Eurostat data on GBAORD indicates a slightly increasing trend in the 2004-2006 period which levels out in 2007. Again, this trend does not appear to reflect the GERD figures.

How have these reforms contributed to improved performances – mechanisms / links?
As regards to this question, mixed feedback has been received. Some respondents explained that funding to date is a lump sum determined on the basis of requests by different entities together with strategic recommendations by NCHE and the Ministry of Education. However, the response to such requests is determined from year to year with no coherent pattern of links between the cost driver and the resulting funds. The key element to judge whether current funding levels are adequate or not in relation to both inputs and outcomes of the system, that is, through external quality assurance, is currently not in place.

The mechanisms and links which have been identified by the respondents are listed below:

HE having a more defined role

The setting up of various institutions has given HE a more defined role. Whether it's the NCHE, NQC or any other institution working towards the improvement of HE, all such institutions have helped HE to quality assure its provision, to ensure that all learners are now capable of entering into the labour market with higher skills, better knowledge and more competencies. Such improvement is conducive to a better quality of life for the Maltese population; the more people one manages to get into HE, the more guarantees one can get of Malta being competitive in the long run.

Policy implementation

Two policies which would leave a major impact, as regards to access to lifelong learning, are the networking policy of school colleges and the policy of transition into secondary education, together with blended vocational education at earlier levels of schooling. The recent establishment of the Directorate for Lifelong Learning within the Ministry of Education, Culture, Youth and Sport will also lead to the establishing

of a national strategy for LLL in the coming year and to consolidate Malta's efforts in this area. In addition, the NCHE is assisting the UOM and MCAST to chart the contribution of Further and Higher Education towards Adults Learners.

Membership in the EU

Malta's membership in the European Union cannot be undermined. The EU has helped out not just to open up Malta's economy but has also given the opportunity to tap valuable resources – financial and human resources from the EU in order to enhance and improve the HE sector. Nevertheless, one needs to emphasise that access to EU funds has now been in place for a significant number of years and hence is not really a recent improvement. Moreover, there has been the ability, pre-EU membership, to access other funds such as those of the Italian protocol.

Improved quality of life

Malta's quality of life has also permitted such developments to take place, without eroding its income or budget for the other basic needs. The emphasis on HE is primarily a result of Malta's improved quality of life in all sectors. That includes low levels of unemployment, higher levels of income, more employed people and more gainfully employed people who can afford to pay for their HE in terms of private tuition or courses they wish to undertake in lifelong learning.

A structural plan

One needs to bear in mind that all the improvements mentioned are not happening by coincidence. There is a structural way to achieve such objectives and the reform effects are happening according to a plan concerning good governance, a management system that is efficient and effective, within a timeframe which everybody should respect.

Improved mobility

The number of people going abroad and taking advantage of mobility, of Erasmus programmes, of Comenius and other programmes has increased. Many students are going away and returning with valuable experience. Yet, the country can afford to send more students. One of the major handicap of governance is some people's attitudes, in this case of moving out of the country and coming back with renewed, enriched experiences. More people need to realise how one can benefit the personal enrichment, the professional, the career of the individual, and the realisation of the nation's potential. People need to capitalise more on what is available at EU level, in order for the country to be at a much better position than it is today.

One of the suggestions from the respondents has been to make mobility a compulsory process within HE in order for the nation to benefit from such a measure. Students who have been out and come back have a completely different outlook and perception. It has also been argued that mobility can be significantly improved by advocacy. Students need to learn of the importance of spending some time away during one's education. Furthermore, it needs to be added that inward mobility, in terms of students gaining access across different local institutions, needs a much stronger national plan of incentives and measures.

As a means of emphasis, it is important to point out that notwithstanding these factors mentioned, it is very difficult to estimate the performance of HE in Malta as a result of these reforms. Each reform has its own pace of implementation and whilst some of the effects of some of the reforms are more immediately tangible, some others take longer to realise.

To sum up, funding has definitely contributed to more mobility and to the capacity for increased access. As regards to the UOM, no reform or incentive has contributed in any way to third party funding. Indeed, policies in place have actually controlled the tuition fee rates for part-time programmes at the UOM, often resulting in very limited sources of funds for the university through this revenue system.

It is agreed that funding in HE has generally improved and that educational attainment has responded to that. With better governance and funding, students would have brighter prospects in terms of mobility and also hopefully educational attainment. Moreover, student mobility programmes like Erasmus needs to be promoted better among students and also, and especially, staff, if student mobility is to continue to improve locally. At present, Malta is a net importer of Erasmus students rather than a balanced payer; it is thus all the more necessary for Europe to put more money into the venture.

6 Alternative interpretation of improved performances:

The quality of life, that is, the improved general economic well-being of the country, and the increased disposable income of families is definitely one of the alternative interpretations. Moreover, greater expectations of students (and their parents) as citizens of a globalized, electronically-interconnected world can also explain the improved performances.

EU support has also been mentioned in this regard.

The impact of IT needs to be taken into consideration. The fact that Malta is networked to the rest of the world is an important factor. Wherever one wants to go, one just goes on her/his laptop or computer at home, and he/she is capable of obtaining all the information. One has a library at home and can carry it with her/him wherever one goes. Malta is in an excellent position in terms of IT and the country's investment in IT is bearing fruit.

The underlying quality of education at primary and secondary level is another alternative interpretation of improved performances, or rather, of an area which needs urgent adjustments. Suffice to say that from all students who have completed area secondary schooling in 2008, only 6 students proceeded to a sixth form. Area secondary students constitute approximately one third of the student population of every cohort of 4-5000 students. Other students went ahead into vocational institutions, but this segment primarily contributes to the 40% early school leaving rate in Malta. Hence serious reforms need to address this situation, otherwise, no

incentives in the upper end will lead to any further improvements in access. The introduction of new teaching methods, such as problem-based learning, in the primary, secondary and tertiary education is believed to improve educational attainment.

As regards to improved performance on third party funding, whilst one can agree that there has been considerable improvement done over the past years, one still has to point out that the current levels of third party funding are abysmal and much more work needs to be done in this regard to provide the necessary structures to prove such funding and make HE in Malta more lucrative and thus attractive to business. There have also been proposals regarding a trust fund with tax incentives for donors, and more flexibility in setting tuition fees for part-time programmes and post graduate programmes as recommended by NCHE in its Strategy 2020.

The university also needs to have a well funded and thriving research base. This could include a postgraduate school with a significant cohort of postdoctoral fellows.

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European Higher Education Governance and Funding reform projects

National system analysis: The Netherlands¹

1 Introduction

This report summarises the main changes in governance and funding in the Dutch higher education system during the previous ten years, as well as their impact on the functioning and overall performance of the system.

It is based on existing literature on higher education in the Netherlands, analysis of policy related documents and initiatives, as well as on written and oral communication with key informants and policy-making actors and stakeholders in the Dutch higher education system (names of the informants can be found at the end of this document), who were asked to provide their view on the impact of the reforms on system performance.

The report is divided into four main sections. Section 2 presents an overview of reforms in Dutch higher education governance and funding. Section 3 presents some indicators on higher education system performance in the Netherlands and explores whether the observed changes in performance may be linked to the reforms. This exploration is done on the basis of a series of interviews with stakeholders from various national organisations.² Section 4 offers some final reflections on the relationship between reforms and performance at the national level. Section 5 contains a case study of Utrecht University of Applied Sciences (*Hogeschool Utrecht*), where a number of interviews were held to learn about the links between national reforms on the one hand and policy reforms at the institutional level and institutional performance on the other. Section 6 contains a case study of Maastricht University. This provides another case documenting the relationship between funding and governance reforms and their translation into institutional policies and institutional performance.

2 Reforms in governance and funding over the last ten years

In the Netherlands there are two main types of regular higher education, namely research universities and universities of applied sciences (*hogescholen*). The latter specialise in technical and vocational training, while the research universities focus on providing scientific instruction and conducting scientific research. Universities of applied sciences (UAS) award mostly bachelor's degrees (only some award master's

¹ Dr. Ben Jongbloed, CHEPS

² The list of interviewees is included at the end of this report.

degrees or the shorter associate degrees). There are 47 UAS and 14 government-approved research universities (including an Open University). There are a few private universities, including a business school and a handful of theological universities, that have a small student and research volume. Non-university private higher education also exists, offering sub-degree level education and BA-level education often on a part-time basis (or at a distance). Private higher education is predominantly catering to the lifelong learning market.

Since 2002, the higher education system in the Netherlands consists of a bachelor's and a master's phase. The research universities receive basic funding for teaching and research from the government (the Ministry of Education, Culture and Science: OCW). Additional research funding is made available through competitive grants, most of which are distributed by the Netherlands Organisation for Scientific Research (the research council: NWO). Additional research funds come from contract research and EU framework programmes. UAS receive base funding for teaching only and have in recent years gained access to some public research funding to underline their knowledge transfer (or rather circulation) function.

The ruling Cabinet has embraced the Lisbon objectives and recognizes that education and research are vital for the Dutch knowledge society. The main challenges for higher education and the policies to strengthen the knowledge economy are identified in the *Strategic Agenda for higher education, research and science* (November 2007) of the Education ministry.

The two higher education sectors have distinctive features, but in terms of governance they are largely similar. In terms of funding there are some differences, mostly because of the research funding going to the universities. During the past 20 years, the state steering of the sector has changed as a result of ambitions of strengthening the institutional autonomy and the internal governance and management structures of higher education institutions.

Reforms in higher education governance

With respect to the governance of the HE sector, the year 1985 should be seen as a turning point. In that year the white paper "Higher Education: Autonomy and Quality" (Dutch abbreviation: *HOAK*) was released. It proposed a new steering philosophy for the HE sector - a shift from an interventionary state to a *facilitatory* state (Neave and Van Vught 1991) - with the government keeping a distance from the institutions and taking the sector level as the point of application for steering, instead of the institutional level. The HOAK philosophy was codified in the *Higher Education and Research Act* (Dutch abbreviation *WHW*), put into effect in 1993.

The 1993 Act codified the enhanced institutional autonomy and introduced the principle of self regulation for HEIs. Since then, the policy framework for the Dutch HEIs revolves mostly around funding and quality assurance. The HOAK paper introduced *quality assurance* as a policy instrument in the steering philosophy. In exchange for more autonomy, the HEIs were expected to play an active role in the

establishment of a new quality assurance system for teaching and research. In disciplines with an explicit vocational character the world of work was to be represented. Quality assurance was based on self evaluation reports prepared by the institutions and site visits were carried out by experts (peers) for each disciplinary area in a six year cycle. By all accords, the system is believed to function well and still is in place today, although some changes were made over time such as the introduction of accreditation in 2004. The acceptance of the system is also due to the fact that government does not translate the outcomes of the quality assessments into its budget allocations. It was agreed that the intermediary bodies representing the institutions (the *VSNU* and the *HBO-Raad* for the research universities, respectively the *hogescholen*) play the coordinating role with respect to quality assessment. In essence, the higher education institutions themselves and their professionals were playing the leading role in quality assurance. The new steering philosophy of the government opened the door for more pronounced competition. Universities and UAS were triggered to establish more distinct profiles and explicit strategic planning became common. The institutions were stimulated to create their own niches and were invited to intensify their efforts to enlarge 'private funding' and raise their income from project funding. Both in teaching and in research, third party funding has grown since the mid 1980s. Nowadays no single Dutch HE institution would survive without this source of income.

One of the most profound effects of the shift in governance has been the increased importance of the central institutional management. This level in the higher education system was traditionally weak in the Netherlands. In the *HOAK* white paper and related documents, the minister was very clear that institutional management had to be strengthened if HEIs were to be successful in a competitive world. Moreover, the drawing up of institution-wide strategic plans was legitimating a more active role of the central management.

In terms of the governance reforms we mention the enactment of the law on university governance. In 1997, the Dutch parliament passed a bill that marked the end of an era of participatory modes of internal governance in research universities. This internal governance reform can be regarded as one of the final comprehensive institutional changes in the light of the *HOAK*-philosophy (see de Boer 2003). According to the new Act, 'Modernising University's Governance Structures' (*MUB*), executive leadership was strengthened, powers became more concentrated, and representative bodies where academics, non-academics and students held seats became advisory instead of decision-making bodies. In other words, the latter were stripped from their main authorities.

The Act promulgated a significant shift in internal authority distribution; new bodies were created (Supervisory board) and some old ones were – formally – abolished (disciplinary teaching and research units – *vakgroepen*). The powers of the executives – rectors and deans – were increased. The supervisory board (*Raad van Toezicht*) is made up of highly respected persons from outside the university. It is meant as a

buffer between the government and the executives of the university and to enhance the university's role as a 'societal entrepreneur' (or 'public entrepreneur'). The Supervisory Board of public universities (10 in total) is accountable to the minister of education. Chairman and members of the supervisory board of (government dependent) private institutions of higher education are appointed by the private corporate body that upkeeps the institution.

Since 1997, most powers regarding academic and non-academic affairs in research universities have been attributed to the executive positions at central and faculty level. The new governing bodies comprise a system where executive and legislative powers are concentrated. All members of the crucial governing bodies —the supervisory body, the central executive board (*'College van Bestuur'*), and the dean ('*decaan*')— are appointed by the body located one level higher. The main governing bodies of the research universities at the central and middle level are: the Supervisory Board (consisting of five members external to the university), the central executive board (made up of three members, including the rector), the university council (made up 50% staff representatives and 50% student representatives), a senior management team (consisting of the central executive board members, the deans and some senior managers), and the deanship. The 1997 changes implied that the positions of the executives at the central and faculty level were strengthened and the disciplinary research groups (*vakgroepen*, "departments") were formally abolished. The latter is important because these units used to be very powerful. Generally, within the university we witness tendencies of centralization ('vertical integration') with respect to academic matters.

For the UAS, the governance bodies look largely similar. At the central level there is an Executive Board (three members) and a Supervisory Board. However, the law does not specify the Supervisory Board. Instead, the law (the WHW – see above) mentions a council (*bestuursraad*) that a UAS has to have in place for overseeing the Executive Board. It is good to mention that formally, almost all Dutch UAS (bar two) legally have a private status – usually a foundation – but they are government-dependent nevertheless due to their funding situation. For their corporate governance, the UAS have decided to voluntarily subject themselves to a Code of Conduct (*BrancheCode Governance*) in 2006, after discussions that were inspired by developments in the private sector. As a result the supervisory board (SB) was put in place – consisting of 5 to 9 independent members. The SB supervises the governing of the institution and sees to it that the executive board acts in compliance with laws and regulations. Chairman and members of the supervisory board of (government dependent) private institutions of higher education³ are appointed by the private corporate body that upkeeps the institution.

Each university or UAS has a Main Representative Advisory Board (MRAB – the *Universiteitsraad* or *Hogeschoolraad*) that consists of 24 members. The students

³ Three universities and almost all UAS.

choose half of them and staff members choose the other half. The chairman is chosen out of the members.

In sum, in just one decade the modes of coordination in Dutch higher education were completely changing. The government's focus had shifted from rather detailed *ex ante* measures to *ex post* evaluations; a shift in steering from input to output control.

Since 1993 the major governance changes (as reflected in the WHW) are among other things related to the introduction of the BaMa structure (in 2002), quality assurance (the establishment of the National Accreditation Council, NVAO), and the decentralization of human resources policy and the transfer of the economic ownership of university buildings to the institutions themselves. In the middle of the 1990s, the research universities (1995) and the UAS (1994) became owner of their buildings, receiving an increase in their operational grant to support their infrastructure. At the end of the 1990s, the terms of employment were almost fully decentralised from the ministry to the universities and UAS.

Universities and UAS are free to determine free to appoint 'regular' full-time senior academic staff, to determine the salaries of their staff; to borrow funds on the capital market, to build up reserves and/or carry over unspent financial resources from one year to the next; to determine how they spend their public operational grant; and to generate most categories of private funding.

Reforms in the funding of higher education institutions

Universities and UAS are publicly financed via different flows of funds. We will first describe the mechanism for the research universities. This is followed by a description of the system for the UAS. Apart from the public funding, institutions receive private funding. Students pay a uniform tuition fee (the same across all institutions and all programmes). Uniform fees are paid by all BA/MA students. Fees account for 6% (universities), resp. 18% (UAS) of revenues.

The research universities receive their public funding via three funding flows. The first - the base funding – originates directly from the Ministry of Education, Culture and Science (OCW) and tuition fees paid by students. It is approximately 60% of total university revenue. The second flow of funds consists of research council funding and represents 10%. The third flow of funds makes up the remaining 30%. In recent years the "first flow" funding was cut back (€50m less annually) by the new cabinet. This money is added to the NWO budget to support excellent individual researchers through competition-based funding (second flow).

The Netherlands Organization for Scientific Research NWO is responsible for allocating the second flow. NWO receives funding from the Education ministry and the Ministry of Economic Affairs (the latter supports the natural/technical sciences). NWO then awards project funds after reviewing the research proposals submitted by researchers. Competition for this type of prestigious funding is high. Only

universities can win competitive research council grants. Such grants have become more important over the years but are still not very large.

The third flow of funds consists of a heterogeneous mix of revenues from activities such as contract research (approximately half of the third stream), contract teaching, consultancies, research commercialization, endowments and renting out university facilities. Clients are: private businesses, government, non-profit organizations and the European Union, as well as individual students and staff.

As far as the *first stream* of funding is concerned, each research university receives a formula-based lump sum (block grant) for teaching and research. The lump sum allocation is based on measures of volume (student numbers, diplomas), prices (rates per student) and historical considerations. The allocation mechanism is known as the *BAMA model*, named after the BA and MA degrees that were introduced from the year 2002 onwards. The BAMA model is largely formula-based; it distributes a given sum of money (set by Parliament) across the 13 research universities. The formula takes into account the relative performance of each university (as compared to the other universities). The BAMA allocation consists of a *teaching component* and a *research component*, but this distinction is for calculation purposes only. In fact, the Executive Board is free to use its own model in distributing the first stream funding (and the tuition fees received directly from its students) across teaching and research activities. The teaching component is 42% of the lump sum (excluding the Academic Hospital allocation), and the research component makes up the remaining 58%.

The *teaching component* consists of

- (a) a new entrants allocation (about 15% of the teaching grant);
- (b) a diploma (BA/MA) based allocation (about 60%); and
- (c) a basic allocation (about 25%).

For individual universities, these shares may differ, due to their relative performance. The *basic allocation* consists of fixed amounts per university. Actual amounts differ across universities; they have a historical basis. The emphasis on performance increased in 2000, as degrees received a higher weight in the formula.

The *research component* of the BAMA funding model consists of six parts:

- an amount for each university depending on the number of BA and MA diplomas
- allocation for PhD degrees and designer certificates (in Dutch: *ontwerpers-certificaten*)
- allocation for research schools (in Dutch: *onderzoekscholen*)
- allocation for excellent research schools (in Dutch: *toponderzoekscholen*)

Smart Mix

strategic considerations allocation.

The first part – the basic allocation – consists of allocations that vary according to the teaching performance per university. On average the allocation is 20% of the research grant. The premiums for postgraduate research degrees (PhD⁴, designer certificate⁵) represent on average 12-15%. There are two components for research schools, each representing 3% of research funds. From the early 1990s onwards, the establishment of so-called *Research Schools*, consisting of researchers and PhD students from different universities working in the same field, has been used as an instrument for the integration, concentration and proliferation of research. The first of the research school components is allocated proportional to each university's sum of parts (a), (b), and (f). This allocation, which has existed from the year 1998 onwards, is meant to stimulate universities to establish accredited research schools. From 1999 onwards, the second part of the research school component is allocated to a selected number (in fact: six - all of them in the natural sciences) of research schools: only the ones that are regarded as excellent. Although the Minister had planned to extend this so-called *depth strategy* to the social sciences and humanities, s/he abandoned this policy.

More than half of the research component (55%) is allocated under the heading of *strategic considerations* (part (f)). It consists of fixed allocations⁶ per university, based on historical reasons.

The *Smart Mix* component (part (e)) was a new addition to the BAMA model, introduced in 2006 to 'dynamise research'. In 2007, an amount of € 100 million was taken out of the strategic considerations component and redistributed according to each university's success in terms of winning research council grants (from NWO) and selected competitive research contracts in the third stream of funding. However, after a new Cabinet took office in 2007, the Smart Mix policy was abandoned and the 100 million was redistributed by the research council for strengthening fundamental research in universities.

The funding model for the UAS so far has remained largely intact from the early 1990s onwards. Until a new harmonized funding model for both universities and UAS will be introduced (in 2011), UAS receive recurrent funds on the basis of a formula. The formula takes into account the number of registered students, the number of graduates (BA only), the number of dropouts, and the duration of

⁴ For PhDs, two funding rates apply: for social sciences and laboratory-based sciences. The rates for science PhDs are twice as high compared to social science PhDs. From 2009 onwards, the performance premiums will be uniform across all disciplines and there will only be one rate: 90,000 Euro for each PhD.

⁵ A two-year degree awarded in engineering.

⁶ When from one year to another, there is a rise in the number of PhDs or designer certificates, the strategic considerations component is lowered in favour of the 'performance' part (b). The result being that the total research allocation is kept within the bounds set by Parliament.

enrolment for students. The funding formula stresses performance, especially in terms of graduation rates.

The UAS budget covers recurrent costs (mostly staff) and the costs related to infrastructure. UAS so far do not receive recurrent funding for research, although they can apply for competitive funds set aside for applied research that is closely connected to the professional training they do. More recently (6 years ago) funds were introduced for a new staff position in UAS: the *lector*. This is a kind of associate professor who is expected to engage in practice-oriented research collaborating with the regional business sector. Special funding is awarded to UAS through an intermediate body (a foundation).

From the 1990s onwards, research universities (and to a lesser extent UAS) have become very active in applying for special research subsidies and project funding. They also increasingly conduct research for external clients and in many collaborate in joint research projects. The majority of this *third flow of funds* consists of resources from international and national government bodies and research funding supplied through charities (non-profit institutions). A smaller part is coming from the business sector. From 1995 to 2008, universities saw the share of third party funds increase from 19 to 28% of their revenues.

Related to this, the criteria of 'what makes a good researcher' have been changing. The competition among academics is no longer exclusively based on science-intrinsic elements (e.g. the number of peer-reviewed articles). There is an increasing need to win projects and to bring in money. Of course this is still largely based on having good research skills and a good academic track record, but acquisition skills and possibilities to secure prestigious research projects are increasingly becoming part and parcel of the job.

In recent years the UAS also have been encouraged to generate third party funding. They have seen their external funds (including programme funds and targeted subsidies) grow from 12 to 14% of their revenues. Apart from the funds for *lectors* (see above) we mention the RAAK subsidy scheme. The RAAK-program (*Regional Attention and Action for Knowledge Circulation*) aims to stimulate regional research collaboration between UAS and business (in particular SME), with a view to develop joint innovation activities and stimulate knowledge exchange. All of this is also very much in line with the ambition of UAS to become fully fledged knowledge institutions that play an important role in their region.

The economic relevance of academic research is increasingly being emphasised from the outside (e.g. the government) and from the inside (institutional management). The government wishes to see the benefits of academic R&D exploited. Many academics are nowadays expected to be active in commercial activity, consultancy, advisory work and other forms of interaction with society. Related to this is an important system-level reform in the area of funding. It is the increased pressure on *valorisation* (i.e. increasing the chances that knowledge produced in HEIs will be taken up in practical applications by the private sector), both in research universities

and UAS. From the middle of the 1990s onwards, separate funding streams (often conditional on the HEIs collaborating with business & industry) such as the *Smart Mix*, dedicated research council grants, the RAAK subsidies and other programme funds were made available for this.

For researchers, winning valorisation funds and other third party funds brings conditions as well as more 'enforced' forms of cooperation. The conditions tied to some research programs demand national and (increasingly) international cooperation, such as the establishment of networks or consortia of researchers. Another issue here is that of co-funding (or matching). In order to qualify for competitive research funds, the funding bodies frequently require business to provide part of the research funds and universities to also meet part of the research costs. In other words, there is as yet no universal policy of full costing of research.

Student support for eligible students consists of three components: A performance grant (and a public transport pass), a supplementary performance grant, and a loan. The performance grant is not means tested (but there are different rates for students living with their parents). It is paid out as a loan initially (for a maximum of 4 years) and needs to be paid back if the student does not succeed to earn a degree in 10 years time. Only students that study full-time and that are younger than 30 years receive student support (to cover fees and living costs). If students take less than 10 years to graduate their performance 'loan' will be changed into a grant. The supplementary performance grant is means tested (depends on parents' income). The loan (bearing an interest) is independent of parental income and will have to be repaid in 15 years time (after graduation).

In the area of student support, a significant reform that took place was the introduction of the performance grant in 1996. This meant that the award and conditions for student support from that year on were conditional on the student's progress. Before the introduction of the performance grant there was a grant awarded to all full-time students, independent of parental income. From 1999 on, the student support was made more flexible: students can take 10 years to finish before their grant turns into a loan (before 1999 this grant period was 6 years). From the year 2000, there is a separate loan that students can receive to cover the cost of the tuition fee. Grant amounts were revised (downwards) accordingly. This implies that the grant is nowadays only meant to cover living costs.

3 Performance improvements in Dutch higher education and their links to reforms

Introduction

In the governance and funding reform project, the performance of national systems has been measured along the following dimensions and using the uniform international indicators:

- Access: enrolment rate and net entry rate.

- Lifelong learning: mature enrolments and share of new entries above 25.
- Graduation: educational attainment of the population (25-34) and graduation rate.
- Employability: relative earnings and relative employment rate.
- Mobility of students: students from abroad and students studying in other countries.
- Research output: scientific articles and patents.
- Capacity to attract funds: HERD from private funds and from abroad and contributions from private households.
- Cost effectiveness: expenditures per students (in Euros and PPPS).

According to national and international statistics, the Netherlands has managed to improve the performance of the higher education system on a number of indicators. Looking at the period 2002-2006 and our indicators to capture performance we notice a relatively large improvement of performance when it comes to:

- the percentage of incoming students from other European countries (+77%)
- the percentage of outgoing students to other European countries (+24%)
- educational attainment (percentage of 25-34 year olds with tertiary education) (+33%)
- expenditure on higher education R&D from business and industry (more ‘third party funding’) (+25%)

Reforms

Like some of the Scandinavian countries, the Netherlands can be seen as an “early adopter” of governance and funding reforms. Reforms such as decentralization, steering at a distance, quality assurance, accountability and performance based funding were implemented from the mid of the 1980s until 1993. All our respondents still regard the HOAK philosophy (implemented before 1995) as the main driver of today’s authority distribution in Dutch higher education and as an essential element in explaining the overall performance of universities and *hogescholen*. Most post-1995 reforms have been rather marginal or represent a further extension/specification of the system implemented in 1993. An example is the new law on university governance (MUB – see above).

An important reform that took place after 1995 and that was not related to governance or funding was the introduction of the Bachelor-Master structure. This structural change, according to our respondents, has led to a reshuffling of programs

with more variety and a greater orientation on individual students and their abilities. Students feel that the BA-MA system has brought along many measures that erected barriers for students in terms of flexible learning routes, student finance conditions. On the positive side, they see more variety in programmes and more attention to mobility.

According to most respondents, the new governance legislation introduced in 1997 (the MUB Act) has had a positive impact on the governance of institutions. HEIs can now set their own course and act more adequately to opportunities. One has to add to this the autonomy that institutions have in their personnel matters (negotiating salaries) and their infrastructure (own their own buildings). More responsibilities have been put on the shoulders of institutions. As a result of this, universities and UAS have to be managed more business-like and professionally. Students, however, feel that their voice is heard less well compared to before the governance reforms. As a result of that students have experienced more barriers in putting education matters more firmly on the agenda.

In terms of governance, representatives of the institutions and those in advisory bodies feel there are more clear links nowadays between the central institutional management and the faculties/departments. The Boards of Trustees are more critical and intrusive compared to the past. The Governance Code of Conduct agreed in the UAS sector (see above) has contributed to creating a more mature and professional governance structure.

A more general factor explaining overall performance in higher education has been the growth of the sector of the *hogescholen* (Universities of Applied Sciences, UAS). This sector has quickly become the biggest sector, housing two-thirds of all students, with many coming from non-traditional backgrounds and continuing from the postsecondary vocational education sector. The growth of the UAS sector was partly the result of deliberate government policies, e.g. to encourage students to continue learning in vocational tracks. The rising enrolment has posed some challenges for the UAS, as their student population became more diverse and included more students that were academically less well prepared. Many of the UAS students are from families that 20 years ago would not have sent their children to higher education.

Employers have shown appreciation for the UAS graduates. UAS bachelors usually find a job quite easily. The recent introduction of *Associate Degrees* in the UAS sector is regarded by some as a good development, as it will increase the options for those that first may not have considered doing a higher education programme.

Performance improvements in Dutch higher education

Mobility

Growth of incoming and outgoing students mostly caused by the Dutch mentality of being oriented on the world and the opportunities that lay elsewhere. The rapid introduction (in 2002) of the BA/MA structure in the Netherlands has, according to

our respondents, certainly contributed to the attractiveness of Dutch higher education. Also the fact that many programmes these days are offered in English has helped. It is not so much student finance or government policies that increased mobility. Mobility is more an autonomous trend in society and less a result of deliberate policies. Our respondents mentioned the fact that a lot of the ingoing mobility is explained by students from Germany that live in the border region. In terms of outward mobility they remarked that there are many Dutch students in Flemish universities.

Inbound mobility is also the result of the good reputation (in terms of quality) of Dutch higher education and their recruitment efforts in countries like China. European programmes were also mentioned. Some respondents find the data on international students problematic. Data probably suffer because of the definition of an international student (having double passports).

Capacity to attract funds

Looking at research funding, one needs to make a distinction between the core research funding and the funding for special programmes to stimulate partnerships between universities, UAS, and business.

Research funding oriented at basic (fundamental) research in the research universities did not undergo any increase. Rather, funding was at most stable. Our respondents mentioned the role played by the research council (NWO). For many years the research council has been pursuing a policy where excellent individual researchers can win special (individual) funds and scholarships to carry out their own research. Any steering in science policy has not so much originated from the Ministry but rather from the research council (NWO) and the Academy of Sciences (KNAW). The 'principal investigator' model is now firmly established in the Netherlands and connected to the human resources policies in academia (tenure track systems).

The research council (NWO) in its encouraging and funding of basic research does not so much select areas where research funding is to be channelled and, consequently, concentrated. Such concentration is more common due to the targeted research funds that are made available next to the core funding and the research council funds and that are meant to encourage strategic and applied research of relevance for the Dutch economy.

Research funding aimed at encouraging the carrying out of research that is directly relevant for industry has been encouraged by means of special programmes funded from the proceeds of natural gas exploitation. Many such programmes focus on a selected number of areas of national strategic importance ('key areas'), where research should be concentrated. Such key areas combine existing knowledge producers and strong economic sectors (materials, water, energy, chemical industry). The programmes make funds available for innovation-oriented research, to be carried out by public-private partnerships. Some respondents regard these programmes as

successful, but have doubts about some of the underlying selection procedures and their effectiveness in stimulating innovation. They criticise the idea of 'backing winners' (past performance) and rather would prefer 'backing challengers' (future performance). In the UAS sector, the RAAK funding and so-called knowledge vouchers for firms are regarded as quite successful in stimulating knowledge circulation between UAS and regional SME.

In any case, valorisation certainly has come to be widely accepted in Dutch academia. It has led to a change in culture in academia. Most feel it has stimulated the creation of clusters and networks between academia and industry and as a result the generation of private revenues.

Some of our respondents are not convinced of concerns expressed by policymakers and the Economic Affairs ministry that academia is too distant from the needs of industry. Actually, the profile of the Dutch business sector - or rather the *exporting* business – is very much mirrored in the research landscape in Dutch universities (food, energy, services, and electronic consumer goods). There is a strong overlap, and not much of a 'knowledge paradox'. Dutch universities have always been quite open to the outside world in their academic contacts and their contacts with the private sector. This also explains their relative success in terms of research publications and winning international competitive grants (such as from the ERC and Framework programmes).

Much research nowadays is part of larger research programmes and embedded in institutes and networks. This interaction is believed to have led to an increase of the quality of research and led to a rise in third party funds.

The initiative of creating *lector* positions in the UAS sector (in 2001) is seen as promising by some – inspiring and improving the curriculum, creating much needed career options for UAS staff. They claim that teaching always needs to be informed by research nowadays. However, others would rather see the UAS sector stick to its traditional role of providing vocational education. There are also some doubts about the sustainability of the UAS research encouraged by the subsidies out of the RAAK scheme. If such special – often short-term – funding is depleted, many research initiatives may come to a halt.

Universities are by and large *forced* to use their own means to supplement many research activities funded from third party funding (such as the national government, research council, non-profits, or the EU). A large portion of externally funded research is not funded at full cost. This 'matching' problem has meant a depletion of the universities' own resources. Consequently, universities have limited possibilities to make their own strategic research decisions. It creates a 'catch 22' situation for universities: they cannot afford to neglect competitive research opportunities (among other things because of prestige and financial turnover) while at the same time they cannot afford it.

Educational attainment

The rise in attainment seems less the result of the introduction of performance elements in the institutional funding or student finance (the tying of student grants to student performance) and is probably explained by the rise in student numbers. The fact that institutional funding is partly tied to diplomas does not seem to have had an effect on the number of diplomas issued. Some respondents feel that the increase in educational attainment (i.e. degrees per inhabitant) is more a result of an increased emphasis on quality, due to the system of peer review and accreditation. There is more attention these days for quality and accountability – externally as well as internally (inside the institutions). And not just the quality in the sense of excellent programmes for the top-level students, but also quality in the sense of programmes for those that are academically less gifted. Some HEIs have translated the external pressures (peer review results, funding on basis of a student's achievements – in their internal budgeting. Some HEIs have decided not to copy the national allocation model and designed their own internal allocation models - ranging from sophisticated performance-based approaches to more traditional incremental model types. There are, however, respondents that feel that the reforms in student finance did have an effect on student success and have made students more critical in deciding where and what to study.

Our interviewees feel that students are not very much affected by the level of tuition fees – after all fees are uniform. Representatives of students feel that tying student support to student progress has not produced shorter times to degree. Student behaviour seems to be more the result of how teaching is organised.

Some respondents had doubts about the numbers showing the increase in attainment. They feel it may be an artefact of the BA/MA system because there now are two diplomas (the BA and MA) after finishing a university programme, whereas in the past there was only one. In the past students that dropped out after three years did not receive a diploma whereas today they may have been granted a BA degree.

In an absolute sense, graduation and attainment levels are not that high at all. There still is a high drop-out in universities and UAS.

4 Observations on the links between reforms and national performance

The HOAK steering philosophy implemented at the end of the 1980s and combining autonomy with accountability, has contributed to creating a responsive system of higher education institutions in the Netherlands. Overall this framework has enabled HEIs to act strategically in terms of providing teaching and research. Although some feel that this has led to less attention for strategy at the level of the ministry. The management of HEIs has become more professional, some would say business-like. However, some respondents feel this change is not because of governance reforms but mostly because of the competitive pressures felt in the higher

education system and the decline in public funds. According to most respondents, autonomy has in many ways led to higher performance. However, performance levels are very much a consequence of investments in the past.

Conditional funding of research is the norm nowadays. However, it is not performance funding that is affecting performance in higher education. Rather, it is the rules of the game: the accreditation in teaching, the quality assurance in research and the competitive funding in research.

In education, the Dutch system is characterized by open access. The Dutch society is an egalitarian society. According to our respondents, this fact, combined with the large increase in student enrolment, has caused the still rather mediocre levels of graduation and the relatively high level of drop-out. Others feel that the quality assurance and accreditation system has had a positive impact on education quality. Most feel that the reforms that have had the most impact on performance were the Bologna reforms. These reforms have stimulated differentiation and today underlie the creation of graduate schools, where postgraduate (research) masters programmes (and PhD training) is housed. Respondents differ with respect to the effectiveness of generic instruments like performance funding. Some feel they do not work and believe that it is the rules – or rather: the environment – that has the biggest impact on performance: the acceptance of competition in research and the non-acceptance of competition in teaching.

Universities today are less driven by the core funding they receive from the government and more by the research council funds, third party funds and other external revenue sources. Universities – but also UAS – are more oriented on the outside world compared to the past. Their regional role has become larger. Their role in society is now much more emphasized.

5 Institutional case studies

Hogeschool Utrecht

Introduction

Within the binary higher education system in the Netherlands, the *Hogeschool Utrecht* (Utrecht University of Applied Sciences) is part of the HBO-sector (*Hoger Beroepsonderwijs*), meaning its main aims are to train professionals for the workforce and to promote regional development. Only recently *hogescholen* started to engage ‘more seriously’ in applied and practical research and development. Hogeschool Utrecht (HU) was founded in 1995 as the result of a merger of several independent institutions in the city that provided higher vocational training. HU is the third largest HBO-institution in the Netherlands with around 36,000 students in 2008. This is about 10% of the total HBO-student population in the Netherlands. The academic staff counts about 1,900 people in 2008. The HU is a comprehensive institution. It offers a wide range of courses in its six faculties: Communication &

Journalism; Economics & Management; Natural Sciences & Technology; Health Care; Education; and Society & Law.

The HU profiles itself as a knowledge institution, committed to innovation and professionalisation of professional practice through first-class education and applied research. The ambitions of the HU lie in providing higher vocational education and in being a regionally oriented provider of applied research activities connected to the professions. HU, as most HBO-institutions, does not strive to become a research-driven university. Its research activities are meant to contribute to the development of professional practice and to contribute to regional economic development, particularly in the small and medium-sized enterprises.

The HU has been selected as a case study for the EU governance and funding reform project because it provides a good example of the potential impact of introducing principles of “new governance” in professional higher education institutions (i.e. the codes of conduct), and because of its ambition to attract funding for research and developing research in professional higher education. Finally, the HU is selected as a case to examine the potential impact of changes in financial student support arrangements that were introduced in 1996 (the performance grant system-‘prestatiebeurs’).

Principles of new governance: codes of conduct

In the new arrangements of governance in higher education, codes of conduct are expected to play a pivotal role. In 2006, the HBO-Council – the national representation organisation of HBO-institutions – adopted a code of conduct for good governance. Though higher education institutions are to a significant degree operationally self-regulating, they are expected to conform to the codes of conduct that prescribe principles of good governance⁷. At the HU, the codes of conduct are considered as a significant policy instrument. In accordance with the ‘*Branchecode Governance*’, the HU implemented the codes of conduct in its governance structure. While still being under construction, the codes of conduct are already considered as an important instrument for good and effective management. According to one the respondents, a clear conception of governance is indispensable for the governance of an institution and to provide good quality performances. At the HU, today’s governance structure is more transparent as the result of the implementation of the codes of conduct. A direct impact of the introduction of the codes of conduct on the effectiveness of governance is however hard to prove. What seems to have changed is what one of the respondents calls the professionalisation of the governance.

At the central level, the distribution of tasks and responsibilities of the Executive Board and the Supervisory Board (the Board of Trustees) are clearer.⁸ In line with

⁷ De Boer, H. & Goedegebuure, L. (2007). ‘Modern’ governance and codes of conduct in Dutch higher education. *Higher Education Research & Development*, 26:1, pp. 45-55.

⁸ The Executive Board consists of three persons. The Board of Trustees consists of 6 persons.

the codes of conduct, the executive board governs the HU and is responsible for realising the goals set, the strategy, the financing and the policies of institution. Furthermore the executive board is responsible for compliance with national laws and legal rules and the internal day to day management. This includes risk analysis of the operational and financial goals of the HU, a code of integrity, a quality assurance system, and guidance for financial reporting. The supervisory board is monitoring the executive board. It guards the continuity of the *hogeschool* and advises the executive board on strategic matters. In terms of decision-making, the executive board deliberates with the directors of the faculties on the strategies and their execution.

At the faculty level, a similar structure is in place. Here, decisions are based on the deliberation between the management of the faculty and the directors of the different institutes of the faculty. In the near future, the existing integral governance will be substituted by 'partnership governance'. Partnership governance entails that decision making will be less hierarchical and have more joint decision making characteristics. In the institution, there is a general awareness of the logic underlying this new mode of governance.

In terms of policy making, the HU sees itself as one institution instead of having a strong separation of the executive board on one side and the faculties on the other. Strategic policy initiatives are primarily the responsibility of the executive board and are binding. That is, once decisions are made, based on the deliberation structure, the strategy should be supported throughout the organisation to assure its effectuation. The governance culture at the HU can be typified in terms of openness and partnership, without losing sight of hierarchically defined responsibilities and accountability lines. There is a continuous alignment within the organisation between the different levels of governance and the effectuation of policy by the employees of the HU. The HU also has a Central Council of Representatives, consisting of 10 student members and 10 employees. This council has the right of consent, the executive board is only allowed to take a decision if the central council of representatives agrees. Next to the right of consent, the council can take initiative: the council has the right to propose and address subjects or ideas on current matters concerning the HU. This is a result of the recent past, where common interests in the HU are clearer without ignoring or downplaying the diverse interests and particularities of different faculties and institutes.

Attracting funding for research and developing research

Conducting (applied) research is relatively new to the Dutch universities of applied sciences. There has been a long tradition in research-related teaching and relationships with (regional) business and local authorities (particularly in the form of internships and thesis projects), but a stronger focus on applied research is relatively new. The HU aspires to be a (regional) knowledge centre that makes valuable contributions to innovations within the vocational field. Knowledge development, transfer and circulation are considered as key responsibilities:

knowledge acquisition furthers practical expertise which, in turn, is channelled back into education. This knowledge emerges from societal needs, and aims to advance current professional practice. The HU has selected five focal areas: creative industry, healthcare and technology, regional area development, sustainable society and ICT. The HU works closely with businesses and other organizations, both educational and non-educational, to acquire practical and applicable knowledge that corresponds to societal needs.

The issue of applied research and development has substantially gained importance in HBO-institutions through the appointment of "lectors". This is a new staff category in the HBO-area ("associate professorship") that was introduced in 2001. A lector should stimulate and develop the applied research function of the *hogeschool* in a particular domain. The HU welcomed its first lectors in 2002. Since then the number of lectors grew steadily, and at present 43 lectors are appointed at the HU. Based on their expertise, the lectors develop research programmes in dialogue with the vocational field. A lector heads a so-called knowledge circle. This is a research group within the university of applied sciences that links education, professional practice and practice-oriented research in socially relevant fields. The number of students carrying out projects attached to the research groups is increasing every year.

The practical output is appreciated in terms of the valorisation ('utilisation') of research. In terms of funding, there are two types of valorisation important to the HU: the funding for the lectors and the so-called '*RAAK*-funding'. In Utrecht, the government funding for the lectors is essential for the development of applied research. This funding for lectors is augmented by means of funds raised from industry, non-profits and public sector organisations. Approximately, the government pays for 70% of the lector positions and the remainder is funded by industry, public sector organisations, etc. For each lector, half of the funding from the government is used for the lector's salary and the other half is used to build a research team. The funding for the lectors is not a lump sum; it is earmarked for a specific research purpose.

The second important instrument is the *RAAK* funding. The *RAAK* (Regional Attention and Action for Knowledge Circulation) programme, introduced in 2005, is managed by a foundation (SIA: *Stichting Innovatie Alliantie*) that receives funding from the Ministry of Education, Culture and Science. *RAAK* subsidies are awarded to regional innovation projects that are aimed to exchange knowledge, and are executed by a consortium of one or more education institutes and one or more business companies. The availability of these types of funding has had a direct effect on the HU's budget. The "valorisation funding" has become an integral part of the funding of the faculties. However, not all faculties equally profit from the valorisation funding. First, not all the research groups perform equally well. This may be due to the field of knowledge of a particular sector, both in terms of funding that is available as well as the awareness of research at the institution. This has both an effect on the dissemination of knowledge and on bringing in financial funding. Secondly, if a

faculty wants to have valorisation funding for its research activities, it should match this funding. This requires, according to one of the respondents, clear strategic choices. In order to gain valorisation funding, the faculties are checked for funding they apply for, to ensure the financial feasibility. Their research ambitions have to be in line with the financial possibilities.

The allocation model of the HU is defined on transparent calculation rules. The state contribution (*rijksbijdrage*) is the principal source of financial income. The state contribution is based on student numbers and student success (the '*onderwijsvraagfactor*'). The HU allocates the state contribution between the faculties and services. This allocation is primarily based on the budget of the previous year, while taking into account expected changes in the budget year. The funds are distributed between the faculties primarily on the basis of the number of students. For the time being there are no real, direct financial incentives in place. Faculties for example do not get extra funding if they perform well in terms of quality. There is an indirect incentive: faculties with high student success receive more funding.

If we look at the external funding, the "valorisation funding" stays with the respective faculty. The valorisation funding can be understood as a financial incentive from the perspective that the allocation of these means is usually based on the quality of project applications and the research performances of the faculty or research group ('lectors'). Obtaining this kind of funding is stimulated by the executive board and the directors of the faculties. According to one of the respondents, the main incentives to bring in external funding for research concern both the development and the dissemination of new knowledge in education. Obtaining extra financial means as such is not the primary goal. Valorisation funding and doing research is also important as a means to extend the network of the lectors and the research groups.

The valorisation funding and the research groups are believed to lead to increasing performances in education and practice-oriented research. The possibility for vocational higher education to have applied research activities by appointing lectors has a significant impact on the HBO-institutions. The lectors and their research groups demonstrate that research at HBO-institutions is focused on practice-oriented research questions and application-oriented solutions. The added value of research in vocational higher education institutions is underlined. The HU also utilises its research activities for furthering the careers of their employees. As a result of strengthening the applied research function, both education and research at the HU are likely to improve, although the translation into education and the visibility of research at the HU is not visible at every faculty to the same extent. This may amongst other things be due to the relative novelty of research for some faculties.

Whereas faculties do not have a lot of financial autonomy, they are responsible to organize both teaching and research processes within the allocated budget. The faculties use their own allocation model for granting finances to research groups. In

the governance structure of the HU it is emphasised that the faculties do not (financially) function independently; the faculties are part and parcel of one HU and they are dependent on each other. This dependency is reflected in the financial management of the HU. The faculties used to have their own reserves. Today, a collective reserve is in place. If a faculty wants to use parts of these reserves, it has to negotiate with other faculties.

Financial student support

The third national policy initiative studied in terms of its effects on the HU concerns financial support. In the Netherlands, financial student support is provided as a performance grant (*'prestatiebeurs'*). The introduction of this performance-related grant (in 1996) has not led to a change in the structure of education and financial management of the HU, nor has it unequivocally increased the number of graduates. The implementation of the performance-related grant presumably seems to have an effect on the study duration. Students in general want to avoid debt. Most students nowadays have a job besides their studies to prevent extra debt. This may cause students to take extra time to finish their studies. Within the HU it is actively stimulated that students finish their studies within 4.5 years. The binding study advice (telling students whether they can continue their programme based on the results achieved that far) is one of the incentives to raise the number of graduates. For the HU, the efforts to reduce the study length only pay off slowly. The HU does have institutional policies to reduce the study length, but this is not directly related to the performance-related grant for students. These initiatives are predominantly in place for the HU's financial management.

Performance areas of the Hogeschool Utrecht

In addition to the three national policies discussed above, in this EU reform project on governance and funding policy reforms the following three different performance areas at the HU were examined: its international ambitions and engagements (such as attracting international students); the HU's ambitions in terms of the number of graduates, and the goal of generating research funds from private sources.

The international ambitions and engagements of the HU encompass attracting ingoing and outgoing student and staff mobility. In the last two years, the number of students participating in a study abroad is slightly growing. In 2008, 289 HU students studied abroad, this is 0.8% of the total number of students of the HU. The number of students travelling overseas for an internship has also increased (to 497 in 2008). The number of incoming foreign students is limited. In 2008, 910 international students were enrolled at the HU; this is 2.5 % of the total number of students studying at the HU in 2008.

The HU has an institution-wide internationalisation policy. The HU wants to position itself internationally in order to compete on a European and global scale

with other institutions for higher education. This includes the objective for internationalisation at home, which comprises preparing students for an international labour market and a multicultural society. This involves the ambition for a more international curriculum in terms of study materials and programmes taught in English. The HU furthermore wants to raise the number of incoming foreign student and raise the staff mobility. At large, the international ambitions and policies are in place, but so far the results are not visible yet. The performances of the HU on internationalisation are partly ascribed to the international contextual setting of the HU. The city of Utrecht is internationally oriented and the University of Utrecht is internationally performing very well. This is a stimulating environment for the HU. The introduction of the bachelor-master structure is also mentioned as an incentive and possibility for the HU to have a more international standardized curriculum.

The HU aims to improve its performance on the number of graduates from 46% to 56% (in other words it intends to reduce the number of drops out, which is a serious problem for all HBO-institutions in the Netherlands). This ambition is in line with national ambitions to raise the number of graduates. There are a number of policies developed at the HU to achieve this goal. One of these policies is to stimulate students from non-traditional backgrounds to finish their studies successfully. Another initiative is the creation of Associate Degrees, particularly for a particular subpopulation of students (i.e. incoming students that have graduated from post-secondary level vocational training schools - MBO). The Associate degree (short cycle HBO-education – 2 years programmes) will probably attract more students. Coaching students more closely and directly is another means to improve student success. In this framework it should also be mentioned that the HU aims to upgrade its teaching staff: the HU stimulates its staff to get a PhD degree.

Generating research funds from private sources has partly been discussed in the subsection on the valorisation funding for research at the HU. The HU is successful in generating these funds, and its ambitions are high in this respect. It must be noted that generating research funds from private sources varies between the different faculties and their research groups. Generating research funds in the HBO-institutions is still relatively new. For the HU, the long research tradition of the University of Utrecht is helpful in reaching its own ambitions. The HU definitely wants to reach higher in applied research. However, as mentioned, the aim is not to attract research funds to generate extra income per se; rather the aim is to generate knowledge, improve the quality of education, and contribute to solving socially relevant problems.

The link between national reforms and institutional adaption

There is a clear relation between national and the institutional policies of the HU. Institutional policies are often a response to national policies. In developing the future plans for the HU national policies are clearly taken into account, but the HU

definitely uses its room to manoeuvre to develop its own strategies. The HU's own course is leading.

Good governance has become a 'must' for public institutions, including higher education institutions. With the establishment of the '*Brancheicode Governance*' by the HBO-Council in the Netherlands, the HU also committed itself to the codes of conduct. The code of conduct, as a national policy initiative, contributed to a clear conception of governance at the HU. In this case, policy does matter, both at the national and the institutional level. Arguably, this is not only a direct effect of the governance codes, but also the result of more attention for good governance and risk management in public institutions generally. It has created a general awareness and both the institutions and the employees at different levels of the organisation have to account for their actions. The steering approach at the HU for more joint decision-making is not a direct result of the codes of conduct, but can be denoted as institutional policy. The two are nevertheless related; amongst other things, considering the codes of conduct incentivised dialogues within and outside the HU between the internal and external stakeholders.

The research activities at the HU are directly affected by national policy that emphasises the task of practice-oriented research at the HBO-institutions next to teaching. This has given the HU the incentive to broaden its research activities. The "valorisation funding" as a policy initiative has further encouraged the growth of research activities of the HU.

The performance-based grant for financial student support is not directly linked to the institutional level. Policies at the institutional level to increase the number of graduates is a concern also motivated by financial strings attached if the students do not graduate within a certain period of time. These institutional policies to improve study success are directly related to national debates and discussions between the HBO-institutions and government.

Maastricht University

Profile and mission

Maastricht University (UM) is the youngest university in the Netherlands, established in 1976 in the province of Limburg. The university was founded in order to meet specific regional needs. The shortage of training opportunities for prospective doctors in the Netherlands in the second half of the 1960s prompted the need for an eighth medical faculty. Nowadays UM has extended well beyond the medical faculty, although the medical sciences and life sciences still hold a key position in the institutional profile of the university. Currently UM enrolls about 13,100 students and employs roughly 3,500 employees, half of which are academic teaching and research staff. The largest faculties are Economics and Business Administration and Health Sciences. The university offers educational programs on all levels – Bachelor, Master and Doctoral level.

The total revenue of the UM is ca € 318 million (in 2008). The main revenue source, 61%, is the core funding from the Dutch government. Tuition fees represent 6% and 18% of the revenue derives from project grants, including grants from the Dutch Research Council (NWO). Other income (15%) includes income from short-term contract teaching, short-term research contracts, from renting out facilities, and other university services.

According to the university's mission statement, UM is an internationally focused university that focuses on:

- a distinctive portfolio of degree programmes, which is of European top quality and international in its orientation
- curriculum is based on the concept of problem-based learning
- high-quality research centering on a limited number of research topics,
- active collaboration with companies and institutions,
- contributing to the development of the cross-border (Eu)region where the university is situated.

The international focus is one of the central aspects of the university's identity. The university has a very high proportion of international students. Almost 50% of the intake of students is from abroad. On top of this, the university admits a large number of students for short-term study visits. Maastricht students themselves are encouraged, and in some cases required, to spend part of their studies in a foreign university. 16% of the academic staff is international and this share is growing. More than half of the UM's 16 bachelor's programs and nearly all of its master's and PhD programs are offered in English. The university has a very high proportion of German students as UM is the closest English-speaking university for these students and demand for study places in Germany is high.

The *Problem-based learning* approach has guided the educational activities in the university since its beginning. Problem-Based Learning is a unique educational model that actively engages students in the study process. In a small group of students, called a [tutorial group](#), students analyse a series of challenging problems and jointly endeavour to get a grip on the issues at hand. This educational model is believed to help students to effectively absorb theoretical knowledge, link the theoretical knowledge to practical applications, and develop communication and presentation skills. Most of the study programs at the university are ranked highly in national rankings and the university believes that this particular educational approach has contributed a lot to the quality of education at the university.

Regional profile. Maastricht University has both national and international ambitions but it also sees its role in promoting the economic development of Maastricht and its surrounding region. The unique location of the university, on the borderline with Belgium and Germany, has given to the university a special

“European” focus. Many of the university’s programs have a strong European or international orientation: e.g. European Law, European Public Health, and International Business. The European focus extends both to its teaching and research activities. The university interacts heavily with regional authorities and also the Euregion, the cross-border structure set up by Dutch, Belgian and German local authorities to promote common interests. Currently, the university together with its hospital is the largest employer in the region.

Subject profile. Maastricht University does not attempt to be a comprehensive university. It has identified three concentration areas: Life sciences, Innovation, and Governance. Teaching and research is divided between seven faculties: Humanities and Sciences, Arts and Social Sciences, Economics and Business Administration, Medicine, Health Sciences, Psychology, and Law. In addition, the university operates a University College, which is a liberal arts college that offers Bachelor degrees in arts and in science.

R&D funding from business

Total revenues from contract research activities are 57 Million Euro in 2008. This is about 18% of total UM revenues. One fifth of that is from business and private non-profit organisations (foundations). The rest is from national and international public authorities and research councils (NWO, KNAW).

University-Enterprise Partnerships are well developed in UM, varying from ad-hoc contract research projects to complex cooperative research institutes and university spin-off companies. In order to encourage and facilitate university-industry cooperation the university has established several supporting structures, such as the UM Holding company. The University is involved in a business incubator in the area of life sciences and is currently participating in developing a science park. These initiatives are discussed in greater detail below.

The *Universiteit Maastricht Holding BV* is a separate unit set up outside of the university that enables the university to take business risks and undertake commercial activities that a university would normally not be allowed to do. It was established in 1992 with the aim of converting university knowledge into economic activity ('valorisation') and it is a structure that manages university's start-up and spin-off companies. Currently the Holding serves over 20 companies: ca 10 companies where UM is the majority shareholder and 12 companies where UM is a minority shareholder. The UM Holding sees its mission in taking innovative ideas closer to the market and contributing to commercially applicable inventions and discoveries.⁹ The UM Holding is a limited liability company, fully owned by the UM. The university as a shareholder has given the UM Holding the explicit “task” to provide its own means. The UM Holding therefore operates at "arm's length" from the UM. Increasing the profit of the UM Holding is one of the strategic goals of the university.

⁹ See the UM Holding website at www.umholding.nl.

The profits of the UM Holding are invested in the university (e.g. for scholarship programs). The companies under the Holding structure support university research also indirectly. Since the companies are closely related to the university, they indirectly support also university research by hiring PhD students or sharing equipment and laboratory facilities.

The Biopartner Center Maastricht¹⁰ is an incubator for start-up businesses, particularly in the area of Life Sciences. It is a UM initiative supported and funded by the Limburg provincial authorities, the Maastricht municipal authorities, Industry Bank LIOF, the university hospital azM, University of Maastricht and the Ministry of Economic Affairs. At the moment, 17 companies and two project organizations, employing 54 people, are in residence. There is a mix of starters and existing companies and life science support services. The Center offers a place where facilities and knowledge can be shared and it offers guidance and support with regard to business, fiscal and legal issues.

BioMedbooster is an organisation that is set up by three partners: Maastricht University, the university hospital *azM* and Industry Bank LIOF. It identifies itself as a “valorization company”¹¹ and it aims to create sufficient critical mass to utilise knowledge successfully and to accumulate the knowledge and capital needed to develop findings into products and spin-offs. BioMedbooster activities include identifying, analysing, acquiring, developing, expanding, managing and utilising knowledge and intellectual property rights.

As a very recent initiative, University of Maastricht is developing a Science Park in Randwijk, specifically in the area of life sciences. The Science Park is still in the developmental phase.

Maastricht University participates actively and successfully in several cooperative research institutions that are set up as public-private partnerships. Some of them are established under the framework of the Leading Technological (Top) Institutes, a national level policy initiative introduced in 1997. The institutes integrate research conducted in several universities and in the industry sector. UM has been an initiator of three such institutes. In addition, the university participates in Leading Technological Top institutes in the area of polymers and nutrition and the field of pensions. The UM has actively encouraged this by means of financial incentives and start-up funds.

Research partnerships today are much bigger in financial terms compared to earlier years. They constitute a recognizable part of the university's budget. In UM ca 40% of all research is now funded by the core funding from the Dutch government and

¹⁰ See the Biopartner website at <http://www.bpcm.nl>.

¹¹ See the BioMedbooster website at <http://www.biomedbooster.com>.

60% from other, mostly competitive, sources, while twenty years ago ca 90% of the funding came directly from the Dutch government.

The UM has become actively involved in university-industry partnerships to a large extent due to necessity. The UM, as a relatively young university, from its beginnings only received limited core research funding from the Dutch government. In order to strengthen its research base the university had to be proactive in finding external funding opportunities. Industry and targeted research funds provided by the Dutch government offer the necessary additional sources for conducting research.

Many such research opportunities require matching funds from the university. Since its core research funding is limited, the UM is very selective in choosing research opportunities.

The UM case confirms that universities are very responsive to national R&D and S&T policies. One reason why UM has been actively involved in Technological Top Institutes is the financial resources that the government and industry invests into the institutes. The national Innovation Platform suggested the focal areas where partnerships should be developed and some of these areas are congruent to the directions that the university has taken in advancing its research. Partnerships and valorisation have a prominent place in the UM institutional mission and daily actions. The university sees the relationship with the industry and valorisation in general as a way to maintain and advance the scientific base of the university. In its strategic report for the 2007-2010 period, the university identifies intellectual property as a central theme in the knowledge valorisation policy.

UM does not use extensively individual level incentives in order to encourage UEPs. Some incentives are designed, especially for young researchers, to encourage involvement in contract research and grant writing. It is in the individual researcher's own interest to become successful in grant applications, especially in terms of grants from the (prestigious) Dutch research councils (NWO). The university's Centre for Contract Research has an active role in facilitating the process of attracting external resources. The Centre has ample experience in grant procurement and can quite accurately estimate the chances of an application, for example, in the EU Framework Programme.

External income is not exceptionally large for the UM. It is only a few percent. However, some collaborative research projects are placed outside the university (e.g. in Technological Top Institutes; BioPartner, Holding). Project funding from competitive external sources comes mostly from public sources and non-profit organizations.

Mobility

40% of UM students are from abroad. This is due to the quality and reputation of the university, the low tuition fee in the Netherlands, the English language and internationally-oriented curriculum, combined with the location of the university.

Institutional (i.e. UM) policies matter more than national policies here, including its marketing efforts. Actually, according to our respondents, there is no national policy on mobility. In fact, the distinction that is made in the national funding model between EU students and non-EU students is contrary to the idea of internationalisation. On top of that, there are still problems getting the one year Master's programmes in the Netherlands recognised abroad. Scholarships for foreign students cannot be funded from the university's public funds (this is forbidden).

There is also outward mobility. As mentioned above, there is a condition that UM students have to do part of their programme abroad. About 1400 of its students in 2007/2008 are outgoing exchange students. Incoming exchange students number about 800.

Governance reforms and performance

At the top of the university structure are the Board of Trustees and the Executive Board. The Executive Board consists of a President, Rector and Vice-president. The Executive Board has the responsibility for the management and administration of the university as a whole. The Board of Trustees monitors the Executive Board, supports the Executive Board by giving advice and, in addition, approves a number of important documents, including the UM administrative and management regulations, the organisation plan and the budget. The Board of Trustees is accountable to the Minister of Education. The Executive Board has devolved a large number of responsibilities to the deans of the faculties by mandate. Deans operate as mid-level managers and thus bear final responsibility for the overall management of their faculty – the contents of teaching and research as well as the finance and human resources of the faculty. However, the UM does not have professional deans. The university's Board of Trustees consists of external members, but these members do not act 'on behalf of the business sector. Overall the new governance model has made the UM more entrepreneurial and business-like. The introduction of new programmes requires a business plan, together with plans about the programme's contents, quality and fit with the overall UM strategy.

Governance reforms are regarded as having been positive – a blessing for higher education. They have led to more responsive, flexible organisation that can more quickly react to opportunities. The role of the Supervisory Board, Executive Board and deans are well articulated. Policies to start new degree programmes and research programmes are initiated in a bottom-up fashion (by the deans) and intensively discussed with the Executive Board in a collegial setting (in a Management Team). The support processes have been organised centrally in service centres that work with service level agreements in a professional way. Quality assurance is centrally organised because it is a crucial to the UM's wish to be 'leading in learning'.

Funding reforms and graduation

The national funding model that incorporates diploma funding is seen as effective in Maastricht. Graduation rates are high, not just because of the funding, but also because students deserve a good education. Funding of research is less transparent compared to that of teaching. Smart mix (see above) is seen as 'casino financing' – intransparent. The problem with funding reforms is that they often are short-lived. The university cannot base its research funding policies on the national model. UM has implemented a policy where only research that is evaluated as very good to excellent will continue to receive funding. The funding of teaching in the UM is equal in terms of drivers to the external funding model.

Faculties are not rewarded (anymore) for generating external project revenues. Earning power is not rewarded ex post, but initiatives (i.e. proposals) to generate external money are funded ex ante. For instance, sending in ERC grant proposals is stimulated. The ex post rewards are not rewarded anymore because the differences between the faculties were felt to be too large, with the medical faculty dominating other faculties in terms of winning external research council grants.

The UM Strategic Programme is translated into measurable indicators which are part of agreements made with deans. There are about 15 items related to teaching, research and valorisation in a Balanced Scorecard. However, there are no bonuses or sanctions connected to these agreements. Making targets and performance transparent is what it is all about – not the setting up of a complicated model. The Scorecard is a means to start up a debate about the strategic plan.

UM does relatively well compared to other Dutch universities in producing graduates. Dropout is much lower in Maastricht than in other places. According to our respondents this is primarily due to its problem-based learning. The UM has initiated many efforts in raising its graduation rates when the new BAMA system was introduced. Monitoring quality is control The national funding model – as a kind of bonus – rewards the university on the basis of its graduation rates but is not regarded as the driver of the high graduation rates.

The other factor underlying graduation is the quality of the UM students. Many students are from abroad and have made a deliberate choice to come to Maastricht – they are relatively highly motivated.

The student finance reforms have been successful in the eyes of our respondents. They have made students work harder and made them aware of the limits of the public funds they receive for doing their degree programme. UM provides its own scholarships from the dividend that the Holding pays out.

List of interviewees

Ministry of Education, Culture & Science

Mr. R.C.G. van der Meer (deputy director Higher Education department)

Drs. W.A. van Niekerk (senior policy advisor)

Ministry of Economic Affairs

Dr. J.A. Bartelse (Director Knowledge & Innovation)

Mr. B. Leeftink (Deputy Director General Economic Policy)

Netherlands Organisation for Scientific Research (NWO)

Dr. J.K. Koppen (director Policy Development)

Accreditation Organisation of the Netherlands and Flanders (NVAO)

dr. K.L.L.M. Dittrich (chairman NVAO)

Netherlands Association of Universities of Applied Sciences (HBO-raad)

Mr. D. Terpstra (chairman HBO-raad)

Dr. G. de Jager (director HBO-raad)

Mr. E.B. van Braam (policy advisor)

Association of Universities in the Netherlands (VSNU)

Dr. S. Noorda (president VSNU)

Dr. P. Baggen (policy advisor)

Education Council (Onderwijsraad)

Mr. C. van Leest (staff member)

Dr. I. Waterreus (staff member)

Advisory Council for Science and Technology Policy (AWT)

Dr. J.F. Sistermans (chairman AWT)

Student Unions

Mr. J. Betkó (vice chairman, Dutch National Union of Students, LSVb)

Mr. H. Terpoorten (ex-chairman, Federation of student unions - Interstedelijk Studenten Overleg, ISO)

Employers' organisations

Drs. A.J.E.G. Renique (secretary Education Affairs at VNO-NCW - Confederation of Netherlands Industry and Employers)

Mrs. G. Visser-Van Erp (secretary Economic Policy, Education & Innovation at MKB-Nederland Employers' confederation for small and medium sized companies)

Social and Economic Council of the Netherlands (SER)

Dr. V. Timmerhuis (secretary-general SER)

Hogeschool Utrecht

Harm Drost - Dean of the Faculty of Health Care

Dick de Wolff - Dean of the Faculty of Education

Rene Versteegh - Chair of Representative advisory board

Jolanda van der Zande - Head Business Control

Maastricht University

André Postema MA – Vice President Maastricht University

Dr. Nick Bos – executive director Maastricht University

Dr. Astrid Boeijen – Director Academic Affairs

Patric Machiels MSc- Biopartner

Ermo Daniëls MA- Expertise Centre for Contract Research

Harry Fekkers --UM strategy unit

Prof Jan Cobbenhagen - University Maastricht Holding

Bram van Beek - Centre for Entrepreneurship

Governance and Funding Reform in the European Higher Education Area

National system analysis: Norway¹

1 Introduction

This report summarizes the main changes in governance and funding in the Norwegian higher education system during the previous ten years, as well as their impact on the functioning and overall performance of the system.

It is based on existing literature on Norwegian higher education, analysis of policy related documents and initiatives, as well as on written and oral communication with key informants and policy-making actors and stakeholders in Norwegian higher education (names of the informants can be found at the end of this document), who were asked to provide their view on the impact of the reforms on system performance.

The report is divided into four main sections. Section 2 presents a summary overview of reforms in Norwegian higher education governance and funding, while section 3 analyses the available indicators on system performance and qualifies them based on in-depth knowledge of the system. Section 4 examines the main impacts of the reforms and the extent to which these have contributed to changes in performance, while section 5 offers some final reflections on the developments of higher education in Norway.

2 Reforms in governance and funding over the last ten years

In Norway, the higher education system is divided into a university sector and a college sector. There are seven universities, of which three have recently been granted this status. In addition, there are five smaller specialised universities in e.g. physical education, business education and music, which also belong to the university sector - although with a much smaller student body. The college sector comprise 24 state institutions. Since 2003, colleges offering a minimum of four doctoral programmes can apply for university status. Also, there are 21 private higher education institutions in the country (enrolling 12 percent of the student population). With the exception of the Norwegian School of Management (BI) with more than 10.000 students, most of the private institutions are quite small.

Even if one can distinguish between different types of higher education institutions in Norway, higher education is still rather coordinated and integrated. A common Act

¹ Bjørn Stensaker, NIFU STEP, Oslo, Norway

is valid for all public higher education institutions, and transfer of credit points and recognition of study programmes across institutional types are mandatory and in most cases unproblematic.

Norwegian higher education has expanded tremendously according to student numbers during the last decades, and today the total number is closer to 210.000 students. Traditionally, university degree types were inspired by the continental university model, with a four-year first degree, and a two-year second degree on top. Some professional degrees have traditionally differed from this structure (e.g., teacher training, medicine, etc). In the college sector, the first degree traditionally varied between two and four years. Normally, a second degree has not been offered in the college sector. During the last decade, however, a few colleges have been granted the right to offer second-degree programs and even doctoral studies in given subjects. Traditionally the higher education system could be said to belong to the continental mode of steering with emphasis on input based factors (e.g. number of students) instead of output factors (number of graduates produced). However, during the last 15 years the state steering of the sector has changed as a result of ambitions of strengthening the institutional autonomy and the internal governance and management structures of higher education institutions.

Reforms in higher education governance

However, the Norwegian higher education system have during the last decade changed significantly as a result of the so-called “Quality Reform” (St. meld. nr. 27 (2000-2001)). This reform, implemented since a 2001 white paper and amendments in legislation in 2002, and with mandatory changes within higher education institutions required from 2003, was a result of: the need for quality improvement in higher education and research (student drop-out, delays before graduation, emphasis on student learning, and better follow-up of students), but also the Bologna Process and Norway’s obligations in that respect.

The Quality Reform encompassed the following elements:

- Change in governance structures at the institutional level allowing institutions full autonomy concerning organisation and management issues (below the board/rector level). At the institutional level, two main models of institutional leadership (board/rector) can be chosen: The normal arrangement is where the Rector is elected. This implies that the Rector also is the chairperson of the board. However, if this model is chosen by the board, the institution must have dual leadership at the institutional level and must appoint a director responsible for all administrative matters at the institution. The alternative model is where the rector is appointed by the board (for a limited period). One of the external members must then act as the chairperson of the board, but the Rector has full academic and administrative responsibility (no need to appoint a director). Two third majority among the board members is required if the institution should go for the alternative model.

- Increased institutional autonomy, for example concerning the introduction and repeal of courses and study programmes, and what study programmes institutions want to offer
- The introduction of a compulsory national quality assurance system and the establishment of an independent quality assurance agency (the Norwegian Agency for Quality Assurance in Education - NOKUT). Accreditation of institutional status is introduced along with systematic evaluations of institutional quality assurance systems
- A new degree structure according to the Bologna Process, introducing a bachelor's, master's and ph.d degree system according to the 3+2+3 model, and the launching of a new grading system based on the ECTS
- New forms of student guidance, evaluation and assessment intended to improve the follow-up of students, reduce drop-out and interruption of studies, and to stimulate students to complete their studies at a younger age

An important part of the new governance structure can be said to be the development of several new autonomous and semi-autonomous agencies responsible for specific tasks. NOKUT is a typical example here, but one could also mention the establishment of the Norwegian Centre for International Cooperation in Higher Education (SIU).

Reforms in the funding of higher education institutions

Following the Quality Reform, a new funding scheme for higher education was also introduced from 2004 onwards. The development of this scheme can be said to represent a continuation of earlier changes in the funding of higher education emphasising more the output and the performance of the system. The most important change in the system was that a greater part of the budget became dependent on previous results, and that several new 'performance indicators' were introduced. Hence, the key elements of the new system were:

- A new funding formula for the institutions emphasizing accomplishment of results and institutional output to a larger degree than former funding systems. The funding system contains three elements: a component for basic funding (60 percent of the resources allocated); a component for research (15 percent of the resources allocated); and a component for education (25 percent of the resources allocated). Part of the education and research component are result-based (e.g. research publications)
- A new scheme for financial support to students, linked to the former point in that it is designed to stimulate timely completion of studies. The system initially provide students with a loan covering all study costs, but completion of studies will transform 40 percent of the loan to a grant providing a direct incentive to the individual student
- More emphasis on internationalisation as a means to improve the quality of Norwegian higher education was also a visible part of the funding system as

mobile students received a price tag intended to stimulate institutions of both receiving and sending students out.

On-going processes and new reforms envisaged

The funding system is currently under evaluation, although no major changes in the key elements are expected. It is believed that changes in the funding system will further increase the institutional autonomy with respect to how funds can be re-allocated internally at institutions.

3 Performance improvements in Norwegian higher education

In the governance and funding reform project, the performance of national systems has been measured along the following dimensions and using the uniform international indicators (see technical file for the precise definitions):

- Access: enrolment rate and net entry rate.
- Lifelong learning: mature enrolments and share of new entries above 25.
- Graduation: educational attainment of the population (25-34) and graduation rate.
- Employability: relative earnings and relative employment rate.
- Mobility of students: students from abroad and students studying in other countries.
- Research output: scientific articles and patents.
- Capacity to attract funds: HERD from private funds and from abroad and contributions from private households.
- Cost effectiveness: expenditures per students (in Euros and PPPS).

Relevant indicators include the absolute value of the indicators, either compared to the average of the countries in the sample or the change in the indicator value between the years 1998, 2002 and 2006. Of course, these indicators provide only a partial view of system performance and, hence, we will comment on them below. According to national and international statistics, Norway has managed to improve the performance of the higher education system on a number of indicators. Some earlier domestic studies have e.g., showed a reduction in the number of students failing during examination (Hovdhaugen 2006); an increase in the number of credits (ECTS) taken and in the number of graduates (Hovdhaugen 2006; Frølich 2006); an increase in the number of students in higher education of non-western ethnic background (Hovdhaugen & Aamodt 2006), and an increase in scientific publications in peer review journals (Frølich & Klitkou 2006). However, in this specific study, in Norway we see improved performance when it comes to:

- a) percentage of incoming students from other European countries;
- b) scientific articles pr million inhabitants;
- c) graduation rates in the 20-29 year range
- d) annual expenditure on public HE institutions per student

e) the net enrolment rate (of students between 17-29 years)

Concerning *mobility*, the percentage of incoming students from other European countries increased significantly in the period 2002-2006 (18 percent), and have continued to increase in the later years (Kunnskapsdepartementet 2009: 150). Norway especially seems to attract students from Germany, France and Spain. In general, universities and specialised universities attract international students, and these institutions receive more students than they send out. The situation is reversed for university colleges.

According to international databases, Norway also shows improvement in *research performance*. Especially with respect to scientific articles pr million inhabitants are there signs of a steady and continuing growth. In the period 2002 to 2006 the growth was about 18 percent, and in the latest statistical count the number of citations are also increasing accordingly (Kunnskapsdepartementet 2009: 108-109). Hence, it seems that Norway is experiencing improved performance on both volume and impact. In general, it is the universities that have most research publications. About half of the articles published in 2007 were co-authored with foreign researchers (Kunnskapsdepartementet 2009: 115). The number of patents also shows a positive development (12 percent in the period 2002-2006), although very few institutions seem engaged in patenting activities (Kunnskapsdepartementet 2009: 178).

A positive development with respect to improved performance graduation can furthermore be noticed in *graduation*. In the period 2002 – 2006, graduation rates in the 20-29 year age range improved by 18 percent in Norway. In later years this trend has continued, and on average there has been an increase in the graduation rate from 79 percent in 2005 to almost 84 percent in 2008 (Kunnskapsdepartementet 2009: 42). In general, university colleges and specialized universities have a higher graduation rate than the traditional universities, and the main problem for the universities is the large number of students that are not graduating on time.

With respect to *cost-effectiveness*, the Norwegian higher education system have seen the annual expenditure on public HE institutions per student rise in the period from 2002 – 2006 (14 percent). Although the growth have not been linear, basic funding allocated to higher education increased with 7 percent from 2008 to 2009, a growth in real terms of 3 percent (NIFU STEP 2008).

Regarding *access*, Norwegian higher education has in the period from 2002 – 2006 seen an improvement in the net enrolment rate (of students between 17-29 years) of 12 percent. In the latest report summarising developments since 2000, one can witness an increase in the number of younger (20 – 24) and older students (over 40), and a decrease of students in the age group between 25-29 years (Kunnskapsdepartementet 2009: 18). It is a general trend that institutions in cities attract more students than those located in more rural areas.

In the areas of *life-long learning, employability* and the *capacity to attract funds*, Norway has not seen much improvement since 2002. With respect to the first two dimensions, the country has enjoyed a rather favourable position with a relative flexible higher education system offering students many possibilities for part-time or ICT-based studies. Moreover, the rate of unemployment has in general been very low. Concerning the capacity to attract funds, Norway does not stand out in any way.

The problems of relating these results to the Quality Reform is that some of the changes with respect to output started before the implementation of the reform, and that some measures, for example related to funding, have been implemented more recently. Still, one could argue that the Quality Reform may have had some impact on these results (see below).

4 Effects of the reforms and other explanations of improved performance

The fact that one can identify improvements on various performance dimensions (graduation, mobility, research output) before implementation of the reform may be related to the fact that some institutions started their implementation of the reform prior to the set date (Michelsen & Aamodt 2006; Frølich 2006). This is a possible explanation also mentioned by several informers as the major elements of the reform were known already in 2000-2001. However, the informers also point to the fact that some of the underlying principles of the Quality Reform can be dated back to earlier reforms taken place in the 1990s. Three more historical elements are here regularly mentioned as drivers, leading up to the Quality Reform.

First, in the last two decades one can identify a strong political belief in decentralisation as a means of creating a more effective and efficient public sector in general in Norway. This belief has been rooted in what many refer to as New Public Management as a way of modernizing the public sector. More result-oriented elements culminating in the Quality Reform can be traced back to the ideology of decentralisation and modernization. Second, an increasing political interest in higher education can also be identified, as well as the significance of this sector as a means to renew and stimulate other sectors in society. As Norway's dependence of the oil and gas industry will deter in the coming decades, higher education and research is often highlighted as means to renew the economy and to stimulate further innovation. Third, and more specifically related to the Norwegian higher education system and its continental roots, leadership and management has traditionally neither been emphasised, nor assessed, as an important characteristic of the institutional governance arrangements. In many ways, this has been a neglected area with respect to the functioning of the higher education system up until the early 1990s. Since then, and partly interrelated to several reforms in the 1990s, institutional leadership and management have been sought developed in various ways. However, one might argue that it was only with the Quality Reform that governance issues were fully brought to the forefront of reform, and – very importantly – matched with a funding system backing a more strategic leadership within institutions.

In an early study on how public institutions adapted to the new freedom of choice after the Quality Reform, Larsen et al (2004) found that following changes were taking place in the governance area:

- an elimination of the academic councils (especially in the college sector)
- a tendency towards integrating administrative and academic responsibility at the faculty/department/institute/unit level with appointed academic leaders heading departments
- a tendency to remove departmental boards and replace them with consultative bodies, staff meetings, etc.
- a strengthening of the hierarchical structure of the institutions through new reporting mechanisms, new internal budgeting systems, etc.
- greater variation in institutional governance arrangements, sometimes combining elected academic leadership in some departments with appointed ones in others, with similar variation at the faculty level (disciplinary differences)

As part of the national evaluation of the Quality Reform, later studies have confirmed this picture – although change may occur slower than those advocating reform would like to see (Bleiklie et al. 2006). In a recent report summarising how higher education in Norway is organised and led in 2009, only eight institutions have an appointed rector – most of these are university colleges (Kunnskapsdepartementet 2009: 211-213). Hence, most institutions have kept the traditional governance model with an elected Rector (Chancellor) who also acts as the chair-person in the Board. At lower levels, there are signs of more radical change as appointed leaders at department level have been the preferred model for a majority of the institutions. Interestingly, a number of the colleges and some universities that have initiated more comprehensive internal reorganisations, resulting, for example, in eliminating the department level and strengthening the faculty level.

Based on a representative survey on the academic faculty in Norwegian universities and colleges some interesting findings have come to the fore (Bleiklie et al 2006). Given the often heated debates surrounding changes in the governance structures, one should, for example expect a quite negative attitude towards the new and more “managerial” models implemented in some institutions. Although such scepticism may be noticed, the survey still indicated that academic faculty with elected leaders actually had less influence on decision-making processes than those with an appointed leader. The survey revealed that influence often occurs through dialogue between leadership and staff, and that such a dialogue is a vital characteristic in Norwegian higher education institutions after the Quality Reform. The ability to establish such a dialogue seem very important for the perception of the governance arrangement: The more distance between levels of faculty and leadership, the more likely it is that faculty prefer elected leaders, while those close to the leadership want to maintain appointed leaders.

Still, when summing up the experiences with the new governance and management models being implemented in Norwegian higher education, Bleiklie et al (2006) concluded that the new governance arrangements have not caused a general dissatisfaction or lack of trust in the new leadership. On the contrary, a majority of academic faculty has much confidence in their leaders and seems to trust them also in a situation where boards have been eliminated and leaders appointed (see also Vabø & Ramberg 2009).

In the area of funding our informants also pay much attention to the new model for resource allocation, and the general belief is that this model – together with the changes in governance – have had a strong effect on institutional behaviour. In a recent study of funding models at the institutional level in Norway, Frølich (2007: 26) found that there is still much variation as to how institutions re-allocate resources internally. While some copy and use the national incentive system directly towards those faculties and departments producing the results, others have developed their own model. Among the latter institutions, the resource allocation model has often been linked to strategic ambitions. It is a trend that more of the incentive-based resources related to research is allocated directly back to the individual unit, while incentive-based resources related to, e.g. the number of credit points taken is redistributed at the institutional level (Frølich 2007: 13). This means that the individual faculty and department get more returns on performance in research than in the educational area. Several informants point out that this is one of the reasons why 'research production' is seen as important by academic and academic leaders.

However, the interest in research and internationalisation of Norwegian higher education can also be related to the new institutional accreditation scheme providing institutions with formal status as 'university' or 'university college' depending mainly on their research production and activity. For many institutions with strategic ambitions the status as 'university' is attractive as it provides the institutions with more autonomy – especially in the area of education. For example, an institution with status as a university does not need accreditation for PhD and master programmes, and can in principle improve its competitiveness compared to those institutions that must undertake such formal procedures. Interestingly, this means that competencies in research provide the institutions with more autonomy in the educational area.

Compared to past governance arrangements it may be argued that the new institutional governance model, the new funding model and the new national quality assurance and accreditation regime provided the institutional leadership (Board/Rector) with a rationale for becoming more active, and more strategic. While the governance arrangement prior to the Quality Reform especially aimed at strengthening institutional leadership and autonomy, there were few elements in the funding system or in the formal recognition/national evaluation system that rewarded such actions. In other words, there were few consequences of not taking action in the old system.

A related development triggering the need for “action” is that the tendency towards increased institutional autonomy is balanced by attempts to strengthen accountability. Hence, the establishment of an external quality assurance body with independent power could be seen as one way of improving the level of accountability. Beside the system of accreditation and evaluation, other quantitative and qualitative systems for checking on efficiency and effectiveness issues have also been established.

On the quantitative side, the setting up of a national database for higher education (DBH) has been an important step towards improving the performance indicators of, and the information on, the sector. DBH contains information on staff, students, mobility as well as financial data, and is mainly used for planning, monitoring and budgetary purposes by the Ministry. DBH, however, is accessible to everyone, and can also be used for transparency/accountability purposes. Other quantitative data are collected regularly and analysed for continuing and adult education, R&D and other areas.

As part of the budgetary process, the Ministry also requires an annual report from every higher education institution on their results and achievements and future plans. This report is also used as a basis for consultative annual meetings between representatives of the Ministry and the individual institution. The reports and meetings are important for monitoring the system, as well as for setting targets and objectives for the coming years. This form of a dialogue-based approach between the Ministry and the public higher education institutions has a long tradition in Norwegian higher education (Bleiklie et al 2000), and in recent years it has been formalised as a standard procedure.

In addition to pointing out some overarching explanations for the link between the Quality Reform and the changes in the Norwegian higher education system, our informants also offered more specific suggestions as to how they saw possible links between the performance improvements identified in section 2, and the Quality Reform.

Why an increase in incoming students?

With respect to the *increase in incoming students* from other European countries, several explanations are developed. First, amendments in the law have opened up for more courses provided in English if foreign students attend these. In later years this has resulted in a radical change in courses, modules and programmes offered in English – from 2568 in 2007, to 3529 in 2008 (Kunnskapsdepartementet 2009: 151). Second, it has been an important policy objective for Norway to achieve a balance of incoming and outgoing students. Historically Norway has been an importer of higher education meaning that students going abroad have been greater than the number of incoming students. As a consequence, more attention has been given to attract foreign students, for example by strengthening the agency for internationalisation of the Norwegian HE-system (SIU).

This agency organises national conferences and seminars for institutions with little tradition and capacity in student exchange, and several informants claim that these processes have been important for capacity-building inside the institutions. Third, Norwegian HE is also tuition free, and this may have an effect on attracting foreign students in general as several other countries now charge tuition fees. A possible example here is the fact that incoming students from the Netherlands has increased by 36 percent from 2007 to 2008 (Kunnskapsdepartementet 2009: 151). Still, the informants do agree that all of the increase in incoming students cannot be related to the Quality Reform. For example, while incoming students from Poland show a steady increase throughout the last years, it is likely that much of this increase is also related to a favourable labour market in Norway during these years. Some informants also emphasise that Norway in a European perspective is somewhat exotic, and that it attract students for other reasons than the academic. As one of the representatives of stakeholders at the national level argued:

"Norway is a small country in the outskirts of Europe. I do think that this is one of the reasons why we see so many students from France, Germany and Spain coming. For those living in more populated central European countries, Norway is an interesting country due to its geography and nature".

Why an increase in scientific publishing?

The increase in the *scientific publishing* is partly commented above, and has been noted through various studies in Norway the last couple of years. There is an agreement among our informants that the introduction of a metric (result-based/formula) incentive system for funding (based on publications) is an important – although indirect - factor. This system is mainly designed for allocation of funding to institutions, and it is not targeting individual academics. The mechanisms mentioned as most likely creating the link between this reform and the increased performance is that HEIs as a consequence of the funding system has developed their own research strategies – partly based on ambitions of changing institutional status or based on a general feeling of increased competition in the sector - and that this has led to greater awareness of the need to produce output of research by individuals. Sandström and Sandström (2009) have in a recent study of variations in scientific publishing in the Nordic countries argued that psychological factors indeed may have had an impact on research production as the new incentive-based publication system was discussed at length prior to implementation, and that this gave the system much attention. However, Sandström and Sandström (2009) also points to the possibility that Norway has experienced stronger growth in the overall funding of higher education than the other Nordic countries, and that this may have an additional impact. Some informants suggest that international cooperation is yet another contributing factor. However, national data indicate that international co-authorship of scientific articles is quite stable and that this has not changed significantly since 2004 (Kunnskapsdepartementet 2009: 116).

The majority of the informants agree that the changes in the governance system inside HEIs, opening up for appointed academic leaders at department and faculty level, has had considerably impact on research production. As one of representative of the national authorities pointed out:

"One of the reasons why we see an increase in scientific publishing in Norway and one reason why Norway now have a higher increase in scientific publications than other Nordic countries is undoubtedly related to the new governance system inside the institutions. In Sweden and Denmark they started to change the governance system already in the 1990s, and we are finally catching up".

The argument is basically that academic leadership in the old system was more about administration, and especially on organising the educational offers. Research was – amongst the staff – not an issue seen as something the academic leadership should be involved in. Recent studies have indicated that this attitude is changing, and that appointed academic leaders also see themselves as responsible for the development of research in general, and of the research profile and activities in particular (Vabø & Ramberg 2009). In this way, it is assumed that more professional leadership has had an impact on the increase in research production.

Why an increase in graduation rates?

Graduation rates have also improved since 2000 in Norway. One could argue that this might be an effect of a general shortening of the study structure. The Bologna reform (3+2) meant a one year shortening of the total length of graduate studies. However, most informants agree that three other factors are more important. First, as part of the Quality Reform an incentive system was introduced for students. This system is linked to the student support system where initial support is given as a loan to student. However, completion of the studies will transform 40 percent of the loan to a grant creating a substantial benefit for those that complete. Second, the new study structure also forced student to apply to a particular study program “filtering” out students not very interested in studying. Third, as part of the reform there has also been changes in the follow-up of students creating tighter links between students and teachers through seminars and more diverse learning measures. However, improved graduation rates forms part of an international trend, hence the Norwegian improvement potentially relates to broader societal transformations and not exclusively to the national reforms. In later years, graduation rates have not shown the same positive development. One of the reason for this is perhaps that beside the bachelor and master degree structure, there has also been established a number of one year courses in various subjects. At the national level about 45 percent of the students now attend various bachelor studies, and about 14 percent are enrolled at a master degree study.

However, about 25 percent of the students are enrolled at one of the one year courses available, while the rest are enrolled at various other study programmes

(Kunnskapsdepartementet 2009: 26). This means that about half of the students are enrolled at programmes outside the 3+2 structure. As one informant argue:

"It is a problem that we still have not established greater status for the new bachelor degrees available. Instead of going for a bachelor degree, we see many students that 'cut and paste' educational offers – often ending up with unclear formal qualifications, and where follow-up and graduation also may become a problem".

Why an increase in the annual expenditure per student?

The *annual expenditure per student* has increased in Norway since 2000, and this is a result of the decision-making process related to the Quality Reform. Universities and colleges managed to come up with very convincing budgetary consequences of the suggested reforms (supported by the students) – creating the message that fresh resources were needed, and that quality is not "free of costs". These messages were also supported by the opposition in the Parliament.

Why an increase in the net enrolment rate?

In general, *net enrolment rates* in Norway have increased for quite a long period. Already in the late 1980s enrolment rates started to increase quite dramatically. Most respondents believe that a generous student support system is a key factor reducing the economic risk associated with studying (up to 40 percent of the student support can be given as grants if students succeed). However, improvement of net enrolment also forms part of a general international trend. The societal importance of higher education increases, thus the enrolment rates.

5 Institutional case studies

University of Bergen

Introduction

The University of Bergen was established after World War II, and is a relatively young university. Most of its premises are concentrated in the heart of the city of Bergen. There are about 14,500 students enrolled, and 3,200 faculty and staff. The university can be considered as a comprehensive university organized in six different faculties (in Humanities, Law, Mathematic and Natural Sciences, Medicine and Dentistry, Psychology and Social Sciences) covering most of the traditional university disciplines. Within the faculties are included 60 different specialised departments, centres and institutes.

The University of Bergen has an ambition of being an international oriented university, and international cooperation is significantly emphasized. Hence, the university is involved in international co-operation in both research and education

with bilateral agreements and joint projects with universities, research institutions and academic centres of excellence globally.

UiB is especially committed to co-operating with developing countries and has established programmes with universities in Third World Countries in the areas of health, poverty, and resource management. However, the University is also engaged in the European Union's Framework programmes for research and technological development. The institution also has a high profile in marine research and education, and three areas have been identified as strategically important: Marine and fisheries biology; climate change, and exploration & exploitation of oil & gas.

In relation to the current study, the University of Bergen has been selected as a case study because of its international profile and interest in attracting international students, but also as an example of the potential impact of new internal governance models on research productivity and output.

Internationalisation and attracting international students

The emphasis on internationalisation at the University of Bergen has a long history which dates back to the establishment of the institution. More systematic work with respect to internationalization started in the mid-seventies when the university formalized a guest researcher programme with the aim of inviting international scholars to the university on a more regular basis. The university claims that internationalization is integrated in all activities. Hence, among the Norwegian universities the University of Bergen stands out as it has not established a separate budget for internationalization.

In 2009, about 600 of the students at the university are international, and about 60 percent of these are linked to a formal exchange program. In 2008, almost 13 percent of all students at the University of Bergen had a foreign citizenship. As the trend is for other higher education institutions in Norway, the number of outgoing students has decreased while the number of incoming students is increasing. As the case for other institutions, the number of study programmes and courses offered in English has increased (from 133 to 179 only from 2007-2008), and during the later years the university has set-up four international joint-degrees in cooperation with partner universities in other countries. Such joint degrees have also been established within the Nordic region.

The university has during the later years tried to professionalise the handling of international students through establishing more systematic routines and rules, and new rules and regulations for establishing and running international joint-degrees have in addition been set-up.

When talking to representatives from the university, several arguments are mentioned as drivers for this strong engagement in internationalization. One argument often highlighted is related to the identity and culture of the institution:

"The fact that internationalization is highlighted as a strategic area and an important part of our academic profile is undoubtedly important. In almost every speech made by our institutional leadership, we are reminded of our obligations in this field, and this has provided considerably status to work and activities related to international cooperation".

There are, in other words, strong indications that the engagement and involvement of the institutional leadership is of great importance for maintaining the focus on internationalization.

Another factor emphasized by our informants is the fact that the institutional organization of work on internationalization is integrated throughout the organization. In an earlier study of internationalization in Norway, one of the findings was that internationalization tended to be centralized to a greater extent than before creating greater distance between the institutional level and the basic units (Frølich & Stensaker 2005).

A side-effect of this centralization can be a sort of 'compartmentalisation' - where issues related to internationalization is not linked to other activities. However, at the University of Bergen there is no department for internationalization at the institutional level, and work in this area seems more integrated:

"Although there indeed are tensions at the university between the institutional and the departmental level, I still have the feeling that both levels cooperate more in the field of internationalization. Perhaps it is a result of a lack of formal organization in this area forcing the parties to talk to each other and find practical solutions instead of using formal positions and hierarchies to get backing for their views?"

Related to this, it seems that the University of Bergen also uses much resources and energy on training and information of staff at various levels providing capacity-building in general as well as stimulating better contact between individuals at different units and with different responsibilities.

"The last couple of years, we have organised a number of meetings and seminars for staff at the faculty and department level to increase their knowledge and know-how on how to do this in practice. We tended to have a number of 'sleeping' exchange agreements with other universities, but I think we have managed to activate, alternatively eliminate, many of these as a result of these seminars."

To conclude, organization and leadership seems to be important factors for the engagement and success in attracting international students to Bergen.

Governance and research productivity

The University of Bergen has kept the traditional governance structure at the institutional level, thus the Rector is elected and is also the chairman of the board of the institution. However, at the faculty and department level the situation is different. At the department level, most head of departments are currently appointed, and the university has recently opened up for appointed deans in the Faculty of Mathematics and Natural Sciences and in the Faculty of Medicine and Dentistry. Hence, currently, the university has a mix of appointed and elected academic leaders at various levels.

The university has also tried to establish innovative governance structures to link up with industry and business, and external research institutes, and established in 2008 The Bergen Maritime Research Cluster in an attempt to boost research concentration and integration. Within the university, the most successful faculty in obtaining EU-funded research contracts is the Faculty of Mathematics and Natural Sciences.

The University of Bergen is the third most productive university with respect to research output in Norway, and the increase in scientific publications has been between 4-6 percent annually the last couple of years with the Faculty of Mathematics and Natural Sciences as one of the most productive.

In a recent evaluation of the governance structure of this faculty, the relationship between governance, quality and research productivity was examined, suggesting a positive correlation between the governance structure and research output (Frølich & Stensaker 2009). Several aspects are here of importance: First, the faculty has been re-organised since the 1990s merging several of the smaller departments into larger units. A survey among the academic staff indicated that this merging process have had a positive impact on the strategic planning in each institute enabling reallocation of resources, and the creation of larger and more comprehensive research initiatives (Frølich & Stensaker 2008: 19, 42). Second, the introduction of an appointed head of departments is by the staff seen as important for academic development in general. Given the fact that head of departments traditionally only were expected to be in charge of organizing the education given, and take care of administration, 75 percent of the academic staff at the faculty is positive towards department leaders with increased responsibility for research activities (Frølich & Stensaker 2009: 28). In sum, staff see a positive relationship between a strengthen governance structure and research output and quality.

Various informants at the university shed more light on the possible mechanisms through which this development has taken place. Three factors are in general highlighted as important drivers. First, several informants believe the appointed leaders have a stronger academic basis for the job than previous head of departments:

"It used to be the tradition that everyone had to take their turn as head of department, and that some of our most prominent researchers

managed to 'buy' themselves out of this duty. Currently, the head of department is a position where you as an individual can negotiate more with the faculty establishing terms and conditions that make it more attractive to take up the position. Hence, today I would say that it is possible – although indeed difficult – to combine the job as head of department with active research".

The result is that more high-profiled researchers has taken up the position as head of department bringing with them more legitimacy and status to instigate changes. Among the informants, it is seen as a necessity that an academic leader has a strong academic track record. This was not always the case in the past.

A second factor mentioned is the new formal authority, responsibility and powers that are linked to the head of departments. This was changes that took place at the same time as the University of Bergen introduced the system of appointed head of departments, and among the elements mentioned by the informants are the elimination of various councils and boards and the department level, and the transferring of the responsibilities of these bodies to the head of department. Furthermore, the new head of departments also got increased responsibilities in economic matters (lump-sum budgeting), in developing the strategic plan, and in personnel issues. The combination of this seems to have given the head of department considerably more influence as one of the informants also underlines:

"We should be careful in claiming that appointed leadership is all about finding the right person. Yes, it is partly about that as well, but we should not forget that the new leaders have a much larger 'toolbox' at their disposal than the previous generation of leaders. They may have more academic authority, and they have more means to realize their strategic ambitions".

The final factor mentioned by the informants is related to how research is organized in the new institutes. After the mergers in the 1990s, some of the institutes at the Faculty became quite large requiring new forms of research coordination internally. However, it was not before the new appointed head of departments started up that there was established a system for coordinating various research activities, and with the establishment of the position of research coordinators. In the new governance system, the head of department meet regularly with these research coordinators, and it seems that in the new system this is the channel through which the head of department communicate with staff. Research coordinators are at the various institutes often elected by the staff in the research group they belong, and can be seen as a sort of replacement for the eliminated academic councils. This does not indicate that there is no direct link between the head of departments and the individual staff member, but the research coordinators seems to act as a 'buffer' for the head of departments providing them with more time to engage in more strategic issues:

"One of the problems in the old governance system was that decision-making structure was quite unclear. For example, there was often disagreement as to what responsibilities the former board of the department had, and ditto unclarity about the roles representatives on the board should have in various decision-making processes. Today, most staff members talk to their research coordinator in most cases, but an also go directly to the head of department if there are issues of a character that require this. This system has given the head of department an opening for not only dealing with more trivial personnel issues, but to also be engaged in more strategic questions".

When asked about how they see the relationship between governance and research productivity, our informants believe that it is the combination of the factors above that have had most impact, although they also acknowledge that the changes experienced may have been very different without the Quality Reform.

The link between national reform and institutional adaptation

Although the informants at the University of Bergen tend to emphasise institutional factors and developments when analyzing the change process the university is undergoing, they do acknowledge the role the Quality Reform have played as a stimulus for institutional change. The areas of internationalization and governance were both highly profiled during the reform implementation, although the role the national reform played in the two areas were quite different. As regarding the internationalization area, this constituted a good 'match' between national priorities and the institutional identity. Hence, although the university was dedicated to internationalization also prior to the reform, the engagement in this area can be said to be further strengthened in the period after.

Regarding the changes in governance, the situation was slightly different. The university has traditionally emphasized academic values such as academic freedom and university democracy, and there have been quite hard debates as to whether the university really had to abandon the traditional governance structure in favor of appointed leaders at department level. The emphasis on academic freedom is undoubtedly one of the reasons why the university still has an elected rector. That being said, there are also strong believers in the new governance model – especially within science and medicine, and several informants think that the Quality Reform was mostly used by academics within these disciplines to push the university to accept a more radical governance arrangement in the two faculties that in the future also will have appointed deans.

Summing up, it seems that the Quality Reform has been flexible enough to be interpreted in different ways, and to be useful to stakeholders with various interests during implementation. In the case of the University of Bergen, it seems that the increased institutional autonomy has also resulted in more autonomy for the individual faculty – although the jury is still out with respect to whether this is a permanent outcome.

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List of interviewees

Mr. Edmund Utne, Central administration

Mrs. Bente Krossøy, Senior executive officer, University Director's Office

Mrs. Etelka Dahl, Central administration, dept. of student affairs

Mr. Bjørn Erik Andersen, Central administration, dept of research

Mr. Lars Helge Nilsen, Office for Education Development and Evaluation

Prof. Jarl Giske, Head of department, Institute of Biology

Prof. Hans Petter Sejrup, Dean, Faculty of Science

Norwegian Institute of Science and Technology (NTNU)

Introduction

The Norwegian University of Science and Technology (NTNU) was founded in 1996 as a result of a merger between the Norwegian Technical College (NTH) and the Schools of General Science (AVH), the Science Museum, and the Medical School in Trondheim. Although the name may suggest otherwise NTNU is a comprehensive university offering education in a broad range of fields and disciplines. Currently the university has seven faculties (Faculty of Architecture and Fine Art; Faculty of Engineering Science and Technology; Faculty of Arts; Faculty of Natural Sciences and Technology; Faculty of Information Technology, Mathematics and Electrical Engineering; Faculty of Medicine; Faculty of Social Sciences and Technology Management) with about 20000 students in total. The academic staff counts about 2700 people.

The strategy of NTNU has ambitions of strengthening the international focus in general, and further develop and becoming a leading university in some specific areas of technological research by using an interdisciplinary approach. NTNU has selected six thematic interdisciplinary strategic areas that address the key societal challenges where the university believes it is especially qualified to make a contribution: Energy and petroleum, resources and environment; Globalization; Information and communication technology; Medical technology; Marine and maritime research; Materials technology.

In relation to the current study, NTNU has been selected as a case study because of its international ambitions and engagement (by e.g., attracting international students), but also as an example of the potential impact of new internal governance models on research productivity and output. Finally, the university has also launched a number of measures to increase graduations rates.

Internationalisation and attracting international students

NTNU has during the last decade tried to systematize its work on internationalization and in attracting international students. In many ways, the institution has succeeded in this effort. In 2008 NTNU had 765 international students on formal exchange programmes, and 1716 (of total 20000) students were foreign citizens. Hence, almost 9 percent of all students had a foreign passport, and this number has steadily increased since 2000. The number of international master programmes has also increased from 13 in 2004 to 32 in 2008, and the number of applicants to these programmes has risen from about 500 in 2004 to almost 2000 in 2008.

In many ways this expansion can be seen as a success story, although part of the explanation for the activities in this area is also related to difficulties to attract domestic students to some specialized science fields. The planned expansion in the internationalization area has still not always been linked to the strategic ambitions of the university. As one of the informants underlined:

"The drive for internationalization of our studies has stemmed from both the national and the institutional level. Nationally, we have been told that internationalization is a sign of quality while from the institutional level, indications are that internationalization is also a long-term survival strategy for some academic areas. Hence, some areas which have domestic problems in recruitments have tried to develop international offers. Seen from the institutional perspective, it would perhaps be better if some of these areas were shut down".

As part of this expansion, the university has also increased the number of exchange agreements with universities internationally, and only in 2008 35 such agreements were renewed or established. As a consequence of the expansion, NTNU initiated an evaluation of the international master programmes in 2007. The result of this evaluation showed a portfolio of programmes in which some had a high number of applicants and students, while others faced a more critical situation regarding both applicants and students. The ambition of the university in the coming years is to eliminate programmes with few applicants, and develop more master programmes in line with the strategic ambitions of the university. Establishing more collaborative and joint programmes with other European universities is a central priority, and in the latter years NTNU have (together with partner institutions in other countries) established three new Erasmus Mundus programmes. Another ambition is to establish more international master programmes in cross- and multidisciplinary areas important for NTNU, or in relation to existing centers of excellence in research.

Informants also mention that the expansion in master programmes in very different academic areas also is linked to the 'double purpose' of modern internationalization. While national authorities emphasise quality as one of the key arguments for establishing international programmes, many in the academic staff also value the aid dimension in internationalization. Hence, many see it as a responsibility for an academic institution to provide educational offers to students from the third world, and in some instances, such studies are also partly funded by the Norwegian Centre for International Cooperation in Higher Education (SIU) under the quota-programme. For the university and especially for the design of international programmes, this has created some problems:

"What we have seen is that some of our international master programmes have tried to serve both the aid dimension and more academic ambitions related to excellence. Of course, in principle these two dimensions can perhaps be combined, but what we have seen in practice is that we have ended up with master programmes with a very unclear academic profile".

In the latest strategy for the university, the ambition is clearly to prioritise academic excellence over the aid dimension in internationalization issues, and the informants do see a number of advantages with this strategy:

"Some of the problems of programmes with a dominant aid dimension are that the students tend to be dominantly male, that there are very few Norwegian students enrolled in the programmes, and that such programmes in general have quite few students enrolled in total. The result is that students in these programmes are 'isolated' from the rest of the students, that we work against our ambition to increase the number of female students in science and technology programmes, and that the programmes are not run in an economic sound way".

To conclude, internationalization at NTNU has partly been a necessity, and partly an 'unplanned' expansion resulting in a considerably increase in the number of international students and international master programmes, although the university has not managed to integrate the international programmes in the overall strategy, and to other educational and research activities.

Governance and research productivity

NTNU adopted in 2005 a governing structure that differs from most other universities in the Norway in that it has an appointed rector and an external chairman of the board, appointed deans, but with elected department heads (Hope et al. 2008). At the same time, the management structure is integrated, meaning that elected leaders have both the academic and the administrative responsibility within their department. The board each department had prior to the new system was abolished. In a recent evaluation of this governance system the conclusion was that the governance system indeed had strengthened the institutional leadership at NTNU, not least with respect to research concentration and internal re-allocation of resources (Hope et al. 2008). Part of this is related to the principle of lump-sum budgeting combined with stronger accountability and reporting schemes throughout the organization. Re-allocations of resource and a new decision-making structure have still caused some turbulence at the institution. While most of the academic staff claims that academic governance has been weakened as a result of the changes, the opposite view is held by the academic leaders themselves (Hope et al. 2008: 25-30).

However, the university has during the last couple of years managed to increase scientific production (as measured in the Norwegian system of publication points) with more than 7 percent from 2007 – 2008. From 2006 – 2007 the increase in scientific production was even larger (16,5 percent), and in the last four years NTNU has steadily increased the scientific production.

Among the informants the new governance system is seen as an important – although indirect – contributor to the increased research performance. The argument is that the new governance structure have managed to re-allocate resources to research intensive groups to a greater extent than before, and that it is the new responsibilities and powers of a more integrated leadership at department level (and not whether leaders are appointed or elected) that are of importance.

"What we have today is a decision-making structure where the department heads are stronger supported by the faculty, but also stronger pushed by the faculty to take action and to instigate change. In this system, the important thing is not whether you are elected or appointed – the pressure from above would have been the same".

It should also be mentioned that NTNU has implemented a large leadership training programme as part of the new governance structure where department heads meet colleagues, and is provided with input and coaching with respect to their job.

There is also one other factor mentioned that have been important for stimulating increased research production at NTNU. Prior to the new governance structure, and also prior to the Quality Reform, NTNU started in 1999 a process of creating more thematic oriented and comprehensive research groups paving the way for several centers of excellence which are among the prime producers of research at the university. Some of the thematic research initiatives stems from national policy initiatives while others are taken more internally at NTNU. The result is that more research over the years is conducted in such thematic groups, and due to a favorable resource situation academic staff has been engaged in this process. As one of our informants argue:

"What we see today is a situation where many factors pull in the same direction. Our staff is working together in more targeted research areas, they are resourced and led in a much better way than in the past, and they are also rewarded when they succeed. And both nationally and institutionally, the prime sign of success these days is to publish internationally – that we experience a rise in the number of publications is on this basis not very surprising".

Improvement in graduation rates

As part of the funding of higher education institutions in Norway is dependent on student performance, graduation rates is increasingly a concern for many institutions. At NTNU a number of initiatives have during the last decade been taken to increase both the number of credit points taken, and to improve graduation rates in general. Not least has various measures been taken to improve student follow-up, tutoring, and teacher – student interaction. There are also a number of initiatives taken with respect to curriculum design, improve the pedagogical skills of staff, and to use evaluation more creatively (Stensaker 2007). For NTNU as an institution, the last four years have been rather unstable with respect to graduation of students, with fewer graduated students at bachelor level while the number of graduated students at master level is increasing (from 734 in 2005 to 886 in 2008, peaking with well over 1000 students graduating at master level in 2007).

Informants tend to believe that the difference between bachelor and master level is partly related to the fact that the bachelor degree as yet has a rather unclear status in the Norwegian labor market, and that many students tend to shift from bachelor

programmes to the large number of one year courses available in different subjects. For those students enrolled in various master programmes, graduation rates tend to be better than for those on various other professional degree programmes. One of the measures taken to improve the follow up of students is a change in the quality assurance system aiming at analyzing study programmes more coherent than the previous system of evaluating individual modules and courses. It is believed that the design of the study programmes has a major impact on student success (and graduation rates):

"At NTNU we had a long tradition for evaluating our engineering programmes more comprehensive every four or five years. I think we need to get back to some of these things. The current ICT-based system is an 'evaluation machine' but do not always produce meaningful information as to what the problem really is. We need to look at our study programmes in a more integrated way".

The link between national reform and institutional adaptation

The informants recognize the importance of the Quality Reform as a key event for the many changes experienced at NTNU the last couple of years. The new governance system would not have been possible to implement under the former legislation, and the new bachelor and master degree system has inspired the institution to re-think the whole educational portfolio and how study programmes should be designed. As one example of the latter, NTNU is currently considering whether the integrated 5 year master degree programme in engineering – a programme with much tradition and with considerably prestige – should be reorganized into a bachelor – master structure (3 + 2). Interestingly, the university is in this process also very aware of what comparable international universities are doing. Hence, it seems that the national reform have stimulated to a greater awareness of international developments.

With respect to the increases noticed in research production the informants tend to see this as a result of the national funding system, and institutional initiatives. The creation of more thematic research groups and areas a decade ago was not solely an initiative of the university as national authorities had signaled that research resources in the future would be allocated in greater concentration and to larger groups and consortia. The fact that these groups received more funding seems to have inspired other to establish similar constructions at NTNU. Today, these groups are the most research productive at the university, and account for much of the productivity gain in research.

If we compare NTNU with the University of Bergen, there is still an interesting contrast between the two institutions in terms of governance. In the case of the University of Bergen, it seems that the increased institutional autonomy currently has resulted in more autonomy also for the individual faculty. At NTNU the situation in that it is the institutional leadership that seems to have gained most power.

Related to the Quality Reform, this implies that the reform has allowed for different forms of institutional autonomy in Norway.

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6 Final discussion and appraisal

Looking back at the reform attempts, and especially the Quality Reform, it is possible to identify some findings and experiences that should be transferable to other contexts than the Norwegian:

- One lesson seems to be that changes in governance systems needs to be interrelated with changes in other elements creating space and providing tools for the institutional leadership. Past reforms in Norwegian higher education did not create much room for leadership, while one could argue that it is the totality in the changes in the funding model, in the request for institutional systems for quality assurance, and in formal institutional autonomy as a consequence of the Quality Reform, that is a vital explanation for the performance change witnessed.
- Another lesson is that an emerging “managerial” system of institutional governance (appointed leaders, elimination of boards at department/faculty levels, etc), does not necessarily affect the actual influence of the staff at institutions. While influence of staff in the former system was dependent on participation in councils, boards and by knowing the “right people”, the new system is more dependent on leaders willing to listen, and with a more interactive leadership style. Available evidence suggests that the new appointed leaders indeed relates well with the staff, and academic legitimacy perhaps is even more prominent in the new system than in the old (since “representation” was considered as an important source of legitimacy). Partly related to this is also findings revealing that external members of boards are often seen as offering new insights and perspectives in strategic discussions (Of course, one should notice that external members are not in a majority in institutional boards in Norway, making their presence less influential than if they had majority).
- A third lesson is perhaps the “autonomy paradox” emerging as a result of the Quality Reform. Available evidence suggests that while the institutional leadership has increased its autonomy as a result of the reform, the feeling among academic staff is that of losing autonomy. A different interpretation of these findings is that the “identity” of the institution has become stronger while the “local identity” at the department level is weaker than before. The irony concerning this finding is perhaps that this development is occurring while rather traditional governance structures largely are being upheld at the very top level (elected rectors, and with the rector acting also as the chairperson of the board). Hence, one could argue that the trust/distrust issue is perhaps not related to the choice of “management system” *per se*, but to other aspects of how higher education institutions currently are governed.

While there might be lessons from which others could learn, one should also notice some Norwegian particularities making knowledge transfer more difficult. One issue in this respect is the level of funding in Norwegian higher education. Although the

sector might disagree whether the Quality Reform was well funded or not, it is a fact that the reform implied extra resources transferred to the sector (Ministry of Education and Research 2005). Hence, in general the economic climate surrounding the Quality Reform was very positive (Michelsen & Aamodt 2006). One can speculate whether changes had been the same if not the extra resources had been available. This is clearly a situation not enjoyed by all countries initiating reforms of their higher education system.

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List of interviewees

Director Torill Johansson, Ministry of Education and Research

Dep.Director Ole-Jacob Skodvin, Ministry of Education and Research

Director Division of Science, Hege Torp, Research Council Norway

Executive for international affairs, Magnus Malnes, National Union of Students

Norway

Executive for academic affairs, Karen Oldervik Golmen, National Union of Students

General Secretary Ola Stave, the Norwegian Association of Higher Education
Institutions

Mr. Arvid Ellingsen, The Norwegian Association of Researchers

Dep. Director Jon Haakstad, NOKUT (the Norwegian Quality Assurance Agency)

General Secretary Ina Tandberg, the Norwegian Association of Students

Senior adviser Ingebjørg Birkeland, Norwegian Centre for International Cooperation
in Higher Education

Senior advisor Bente Gundersen, Norwegian Centre for International Cooperation in
Higher Education

Senior advisor Berit Hyllseth, the Norwegian Association of Higher Education
Institutions

Senior advisor Erik Øverland, Norwegian Ministry of Education and Research

Senior advisor Bjørn Ragnar Stensby Norwegian Ministry of Education and Research

Deputy Director, Torbjørn Ryssevik, Union of Education Norway

Ola Nafstad, Norwegian Ministry of Trade and Industry

Special Advisor Kirsten Voje, Research Council Norway

Senior advisor Stig Ove Gravdal, Ministry of Finance

Senior Advisor Aarne Røvik, Ministry of Finance

Dep. Director Karl Georg Øhrn, Ministry of Education and Research

Governance and Funding Reform in the European Higher Education Area

National system analysis: Poland¹

1 Introduction

This report gives an overview of higher education governance and funding reforms in Poland within the last ten years and the impact of those reforms on the performance of the whole system. The report is based on document analysis and interviews with key stakeholders in Poland.

2 Reforms in governance and funding over the last ten years

In the academic year 2007/08 there were 455 higher education institutions in Poland of which there were more than 200 government independent institutions which do not receive funding from the state. Public higher education institutions are formed by dedicated acts of parliament while private institutions are formed by individuals or legal entities. Higher education institutions with at least one organization unit that confers doctorates are classified as university type while those that offer bachelors and masters are referred to as non-university higher education institutions.

As of May 2006, there are two separate ministries handling education in Poland. Ministry of National Education and Sports which supervises education in general and Ministry of Higher Education which supervises the higher education system. The exception is the academies of music, fine arts, theatre and cinematography, which are supervised by the Ministry of Culture, Academies of medicine which are supervised by the Ministry of Health, The Higher Police Training School and the Main School of fire Services, which are supervised by the Ministry of Interior and Administration, Military Schools which are supervised by the Ministry of Defence and Gdynia Maritime Academy and the Maritime University of Szczecin, which are supervised by the Ministry of Infrastructure.

The main players in the system include:

The *General Council for Higher Education* which is an elected higher education representative body. It provides opinions on matters presented by the ministry, other public authorities on matters including legal instruments, budget as well as the principles for granting state subsidies to the institutions of higher education;

The *State Accreditation Committee*, which is the only statutory organ that covers the entire higher education area and operates for the benefit of the education quality

¹ Akiiki Babyesiza and Robert Owino Odera, International Centre for Higher Education Research – Kassel, University of Kassel

evaluation and its opinions and resolutions have a legal effect. Among its competences are, review application for establishment of higher education institution and evaluation of quality of education;

The *Conference of Rectors of Academic Schools in Poland* (CRASP) which is a voluntary association of rectors representing Polish higher education institutions that have the right to award a doctor's degree with the objective to represent the common interest of members and the advancement of higher education;

The *Conference of Rectors of Private Higher Education Institutions*, (KRUN) is a voluntary association of rectors of non-state higher education institutions, established by the permission of the Ministry with the principle objective of equalising the rights of non-state higher education institution;

The *Students Parliament of the Republic of Poland* is a nationwide representative body of all student self- governments. They co-decide on the distribution of the material aid fund for students and subsidies for youth organizations operating at higher education institutions. They encourage cultural life among the student and influence the work of organs that determine the curriculum and study programme.

Reforms in higher education governance

One of the major governance reforms was the introduction of mandatory internal quality assessment of teaching and the establishment of the state accreditation commission in 2001. Since then all higher education institutions are obliged to introduce the internal quality evaluation system for teaching including student assessment.

In September 2007 the Ministry for Higher Education issued the ordinance for the external quality evaluation systems and audit for research in higher education institutions. Since then all higher education institutions that receive state funds for statutory research programmes and those that receive a financial grant for research that exceeds 450 000 € are obliged to provide an external quality evaluation (audit) to the ministry.

Under the higher education act from 1990 national curricula were issued by the ministry. This changed with the new Law on Higher Education from 2005 with a shift in responsibility from the ministry to the State Accreditation Commission. With respect to access and admission to higher education there was also a shift from entrance exams hosted by the institutions to external maturity exams. At the same time the representation of students in governing bodies of public universities increased.

Reforms in the funding of higher education institutions

Private higher education: The higher education law passed by Parliament in 1990 provided the basis for far-reaching changes which included the devolution of

authority from the government to institutions, the introduction of fees and the elimination of barriers of entry for private higher education. These changes led to the substantial expansion of higher education particularly through the private sector. The number of private providers rose from 3 in 1990 to 280 in 2004, while student numbers rose from 6,500 in 1990 – 1991 to about 510,000 in 2003-2004, while the total enrolments jumped from 400,000 in 1990-1991 to 1,845,400 in 2003-2004. Still about 70 % of students are studying in public higher education institutions.

Financial management: State funding is distributed to the Polish universities according to an algorithm that is closely related to enrolments. Internally, university administrators retain approximately 30 percent of their grants for central system functions and distribute the remaining 70 percent to their faculties for instructional and other costs. In addition, most of the public universities earn approximately 25 percent of their total operating budgets from external sources including tuition from part-time and continuing education programmes. Full time students still receive some funding from government. Under these circumstances, individual faculties and departments operate on one-line budgets and may carry forward savings from the current year to the next. Under the Law on Higher Education from 2005 institutions have to pay taxes on the revenues that are invested in establishing their own private companies or when buying shares of private companies.

Student support: Since 2001, full time students in private higher education institutions were eligible for state financial support. From 2004 onwards, all part time students are eligible for the state financial support on the same terms as full-time ones. This made private institutions compete for better students who previously enrolled on public higher education institutions because of the ability to provide services that compare well with public institutions.

On-going processes and new reforms envisaged

The ministry intends to create so called "flagship universities" where the majority of state funds for research will be channelled. This attempt is criticised by some experts because it might marginalise higher education institutions in small and medium sized towns in the field of research since the majority of the funds will probably go to big and highly reputed universities.

There is also the introduction of new, more flexible and transparent ways of academic careers, because the current habilitation process takes too long and is very difficult to obtain for academics from smaller universities.

The Ministry is also discussing the possibility of charging tuition fees for full-time studies in public sector, which the respondents express their opposition to, as it may close the accessibility to higher education for many poor students

Other envisaged changes include exploring the possibility for higher education institutions to develop their own curricula and not use the ministry standards and a change in the mode of state financing of statutory research in higher education institutions.

3 Performance improvements in Polish higher education

In the governance and funding reform project, the performance of national systems has been measured along the following dimensions and using the uniform international indicators (see technical file for the precise definitions):

- **Access:** enrolment rate and net entry rate.
- **Lifelong learning:** mature enrolments and share of new entries above 25.
- **Graduation:** educational attainment of the population (25-34) and graduation rate.
- **Employability:** relative earnings and relative employment rate.
- **Mobility of students:** students from abroad and students studying in other countries.
- **Research output:** scientific articles and patents.
- **Capacity to attract funds:** HERD from private funds and from abroad and contributions from private households.
- **Cost effectiveness:** expenditures per students (in Euros and PPPS).

According to the data, there were substantial improvements with respect to the capacity to attract funds from international sources (412%), while the performance of private contributions (-22%) and funds from business and industry (-45%) decreased.

With respect to student mobility the percentage of incoming students remained unchanged, while the percentage of outgoing students has improved substantially.

Concerning research output the Polish higher education system has improved substantially with the number of patent applications to the EPO (90%) and the number of scientific articles per million inhabitants (51%).

While the graduation rate only improved by 3% the educational attainment of the population aged 25 to 34 improved substantially with 75%.

Cost effectiveness in the sense of lower expenditure per student in Euro PPS improved by 35%.

The relative employment rate of tertiary education degree holders did not improve (-39%).

While there is no data available for net enrolment and entry rates the percentage of mature entry, the percentage of mature enrolment for ISCED 5 has decreased.

Also important are background variables

The unemployment rate of 9,8% in Poland is higher than average and increased less than average.

Only 0,6% of GDP in Poland was allocated to GERD in 2006. The rate was relatively low in comparison to other European countries and has grown less than average.

The population of 18 year olds has decreased and will probably deteriorate further.

4 Effects of the reforms and other explanations of improved performance

The most important reforms in Poland took place at the beginning of the 1990s after the transition to democracy. Higher education institutions got more autonomy, a financial algorithm was introduced as a basis for state funding and a private higher education sector developed. The most recent reforms dealt with quality assurance of teaching and research, student access and financial support.

The introduction of quality assurance for teaching and research and the establishment of the state accreditation commission lead to overall performance improvement and more transparency of the system, because all institutions, private and public, were measured by the same rules.

The introduction of external maturity exams on the one hand made access to the higher education sector more transparent, on the other hand deprived institutions of their decision making power to select students according to their own admission standards.

The reform of financial students' support since 2001 led to competition between public and private higher education institutions for the best students. Especially students with a lower socioeconomic background benefited from this reform since they form the majority of students in private institutions with high tuition fees. The reforms of the last ten years, especially those dealing with quality assurance, student access and support are widely believed to have contributed to higher quality and improved educational attainment respectively.

Private Higher Education

Educational attainment: The increased number of graduates between the age of 25 – 34 can be attributed to reforms that allowed higher education institutions to open campuses or relocate to smaller cities. This opened the way for new groups of students who could not relocate to the big and far away cities because of cost constraints. Closely linked to this was the emergence of new and more private higher education institutions, these institutions provided supply driven increment.

Funding reforms

Improved research output can be attributed to the increase in percentage of state funds allocated to competitive research grants which was also opened to the private higher education institutions. The introduction of quality assurance of research also played a significant role in this regard. In general reforms in funding gave the institutions authority to prioritize and hence direct them to areas where they would

produce maximum effect. The reforms in internal assessment forced higher education institutions to verify continuously their academic staff and curricula which increased the general quality of teaching and research in higher education institutions.

Other factors of influence

The improved performance with respect to higher education research & development funding from international sources can be linked to Poland's accession to the European Union and its subsequent access to EU research funding. The mobility of polish academics that return and use their contacts and the skills they learned abroad in order to compete internationally plays an important role.

The increased cost effectiveness of higher education might be a result of reduced state funding combined with a general increment of students, which reduces the mean mathematically. Only 1,19% of the GDP is spent on tertiary education, which is below the European average, while the growth of the percentage from 2002 to 2005 was higher than average. Some of the respondents indicated that this was as a result of a depressed economy that reduced the amount of funds available at the particular time. Poland ranked 53rd in the Global Competitive Index and has fallen even more behind between 2001 and 2008. It is said that due to reduced funding the management of higher education institutes has been professionalized and hence made more from the limited funds available.

Educational attainment: The labour market preference for higher education professionals produced demand driven increment of students' enrolment. The other economic reason for more enrolment was the increased salaries of higher education graduates in comparison to other groups in the labour force. Some of the respondents point to the social pressure for Poles to assert themselves as successful in the labour market.

Research output: The number of Polish citizens working outside and returning who contribute to international mobility in teaching or research has increased transfer of technology to the Polish higher education system. It was pointed out that initiatives of the European Union have acted as catalysts in this particular regard. At the same time the public funding for competitive research grants has risen and the number of PhD holders pursuing research has increased. In general Poland's performance improvement in this regard can also be related to its accession to the European Union, mobility and competition with international researchers.

5 Final discussion and appraisal

Poland has undoubtedly made considerable steps toward developing a stable higher education system. An indication of this strategic thinking is detailed in the Education Development Strategy for the period 2007 – 2013 that has been prepared as part of the National Development Programme. The government has managed to develop and coordinated a working formula with the actors within the higher

education system to work towards general improvement of higher education. There is a sense of unity of purpose from within the system.

The commitment to the European Union initiatives in general and the Bologna process in particular has also been a driving force for the higher education system. One of the issues that is already at discussion level is the issue of charging tuition fees as the government reduces its contribution to higher education and particularly research. Another foreseeable challenge is the ability of systems capacity to accommodate the demand that has grown for higher education in the country.

List of people interviewed
Bartłomiej Banaszak

The President of Students Parliament of Republic of Poland

Prof Dr. hab. Marian Duczmal

Rector of Academy and Management and Administration in Opole, the member of Polish Academy of Sciences, the president of economic section of PAN in Katowice

Professor Marek Grochalski

Vice Rector of Opole University – member of Conference of Rectors of Academic Schools in Poland (KRASP)

Prof. Dr. hab. Wiesław Gworys

Rector of Academy and Tourism in Częstochowa, member of the Conference of Rectors of Vocational Universities in Poland

Professor Jerzy Skubis –

Rector of Opole Technical University – member of the Conference of Rectors of Technical Universities in Poland (KPUT)

Prof dr hab. Danuta Strahl

State Accreditation Commission, the President of Commission for Economic Studies.

Governance and Funding Reform in the European Higher Education Area

National system analysis: Portugal¹

During the period analysed (1997-2007), Portuguese Higher Education has faced some very different political situations, with periods of instability due to the frequent changes of government and Ministry in charge of Higher Education. After a regular mandate of 4 years by Minister Marçal Grilo (1995-1999), there followed a series of shorter periods. In the government of the period 1999-2002 there were 3 different Ministers in charge of Higher Education: Oliveira Martins (1999-2000), Augusto Santos Silva (2000-2001), and Júlio Pedrosa (2001-2002). Then, in the period that followed (2002-2005), we have had 2 different ministers: Pedro Lynce (2002-2003) and Graça Carvalho (2003-5). In recent years (2005-2009) there was a period of significant stability in that respect, with the same Minister in charge again for a period of 4 years (Mariano Gago), but the Ministry has launched a series of legal changes aiming to reform the higher education and science landscape significantly. These reforms were also supported by the recommendations by a series of reviews commissioned by the ministry to the OECD (System Review), ENQA (Quality Assurance System), and EUA (Institutional Evaluations).

1 The Main Reforms in Governance

Following the OECD report of December 2006 and its recommendations, a reform of the legal-juridical system of higher education was prepared and subsequently approved by Parliament in the autumn of 2007. One of the main criticisms in the OECD report that influenced that legal document had to do with governance mechanisms. In recent years, traditional modes of collective decision-making, and the participation of students in governance, had been under attack for being inefficient, corporative and contrary to the needs of the society and the economy.

This is believed to be the most significant reform in governance after the Autonomy Law of 1988. It has a universal character as it is applicable to the whole system of higher education: universities and polytechnics, public and private institutions. The main features introduced by the new legal framework were:

- Diversity of governance systems and increased autonomy;
- Setting up Governing Boards with mandatory external participation;
- Possibility of independent legal status for public institutions, namely as public foundations governed by private law (with a respective Board of Trustees);
- Establishment of consortia among institutions;

¹ Pedro Teixeira, Cipes

- Recognition of research centres as part of University management framework.

Although the new Law only defined a set of guidelines that had to be implemented by a Committee in each HEI, the document was rather specific on the mandatory decision bodies in each institution, both at the central and at the department/faculty level. Moreover, the document was also quite explicit about the composition and size of those bodies. In general, the new regulations are characterized by replacing collective decision making by centralization of power in individual decision-makers. Another major change has been the reduction of the size of the main decision bodies (both at the central and lower levels). The new rules also reduced the size of the student participation and increased the participation of the outside community in institutional governance (making it compulsory in the central government body of each HEI).

Under the new legal regime, the internal governance structures underwent significant changes:

The University Assembly, the largest collegial body of university governance, was substituted by the General Council, with a much reduced membership (between 15 and 35 members) and with its President and 30% of members selected from external personalities (previously this was possible, though optional). Though academic participation in this body is predominant, external participation is valued through inclusion of external members in the decision-making process. The Rector is elected by the members of the General Council and can be either internal or external to the Institution, and it can also be either a national or a foreigner. The role of the Rector or the President (in the case of polytechnics) is considerably reinforced by this new regime. Its powers are only limited by the General Council (and by the Board of Trustees in the case of those institutions that became public foundations). The Academic Senate may exist in universities and does not exist in polytechnics, and always with a consulting nature.

The governance structure at lower levels was also modified. Faculty's or Department's Assemblies were replaced by a smaller body, though it may not exist. In that case, the Dean is appointed by the Head of the University/Polytechnic. At this lower level there was also a tendency of concentration of power within the executive power (Deans), with reduced power for the remaining bodies (pedagogic and scientific councils). There were also some changes within Faculties, Schools and Departments, namely with the reduction of collegiality, the possibility of including external stakeholders in the main ruling body and the possibility to elect a Dean external to the Unit.

During the past two years, HEIs have been adjusting their structures according to the new legal regime. The first step was to change the statutes of HEIs, for which purpose a statutory commission was elected. By October 2008 HEIs had to submit new statutes accounting for the changes to the Ministry of Science, Technology and Higher Education. This was followed by the elections to the General Council and to

the Rector in most cases. At present the process is continuing with the elections of Directors of the Departments, Faculties and Schools.

Another main feature of this Law is that the new framework allows institutions to become public foundations governed by private law. A university foundation has potentially the following advantages: to borrow and to raise funds; to have full control of budgets to achieve objectives; to set administrative and management procedures; and to have more autonomy regarding human resources management, including different pay-scales and reward systems. These institutions are supposed to be funded according to 5-year strategic plans presented to and agreed with the Ministry of Higher Education. Public Foundations are governed by a board trustees selected from external personalities (proposed by the Institution's governing body and approved by the Ministry). The names of trustees are proposed by the institution and have to be further approved by the ministry. Three public HEIs: University of Porto, University of Aveiro and ISCTE have decided to adopt this new regime, being presently in the process of transforming their current structure to this new regime. It will be interesting to see how this process evolves, not the least because other institutions may apply in the future for this legal regime.

2 The Main Reforms in Higher Education and Research Funding

In Portugal the funding of HEIs and research is separate. The funding of HEIs is done through direct basic funding to public institutions for teaching and the funding of research is done through direct funding of research units based on evaluation results (evaluation and funding performed by the Foundation for Science and Technology).

As far as the teaching function is concerned, since the late 1980s, the government provides the funding according to a basic formula, which is mostly based on enrolment numbers and discriminates according to the type of programs (favouring degrees that demand more practical or laboratory classes, e.g., medical sciences and engineering). This money is given as a lump sum, and it is up to the university to decide on its internal allocation; nevertheless a large part share of the money goes to academic and non-academic staff salaries. Concerning research activity, the funds are normally allocated directly to research centres and therefore are not accounted for in the budget of universities. Research activities have mostly been funded through three sources: research grants to support master and doctoral studies (including these abroad), research grants to individual research projects, and multi-annual funding to recognized research centres.

Besides the sources provided by the government, there is a set of resources generally classified as private funds. One portion of these funds is provided by students' fees, which are considered to be resources of higher education institutions. Other private funds refer to income earned by universities from various activities. The main sources of private funds are the following: fees paid by students for various services; income generated through training (short-term courses), research activities and other

services (overheads and others); and net balances transferred from previous fiscal years.

There have been several attempts to reform the way higher education institutions are financed in the past 10 years.

The first of these attempts worth mentioning is the law published in 1997 which established the principles of contractual approach translated in institutional development contracts (3 or 5 years) and program (short-term) contracts to be agreed between the Ministry and each HEI. However, this reform was never implemented.

In 2003 a new financing law was passed (Law 37/2003 of 22 August) and the allocation rationale has been changed to become progressively more performance-based. The government designed a new formula that increasingly considered institutional performance by moving into a more output oriented approach. The following performance indicators were included:

- The standard ratio of teaching staff to students;
- The standard ratio of teaching staff to non-teaching staff;
- Incentives for the qualification of teaching and non-teaching staff;
- The quality indicators of teaching staff at each institution;
- The indicators of pedagogical efficiency of the courses;
- The indicators of academic efficiency of master's and doctoral courses;
- The indicators of management efficiency of the institutions;
- The merit classification resulting from the evaluation of the course/institution;
- Budget structure, reflected in the ratio of staff expenses to other operating expenses;
- The merit classification of research units.

The proposed changes however were only implemented in 2005. Another change that was made for the budget of 2006 was that instead of calculating the budget-standard (the budget calculated using the indicators of the funding formula) the global budget (the budget really available for HE) for Higher Education was taken into consideration.

Up to 25% of institutional budget was meant to be calculated according to the above performance criteria which in practice resulted in a great disparity between institutional budgets. To avoid this undesirable effect the government introduced a limit of 3% on the increase of the budget as compared to the previous year as well as a cohesion factor.

Because of the differences in budgets calculated according to the formula and real needs of institutions, and the lack of flexibility of institutions to adjust to major cuts in their annual budget, the formula calculations had to be calibrated every year. This has increased the level of unpredictability on the amount of funds to be transferred in the future, bringing instability to institutions and making it impossible to use the

formula as a management tool. Since the year 2007, the quality criteria have been dropped altogether.

The operational budget for HEIs has been decreasing in past years. Since institutions spend almost all of it for the expenditures with the staff categories and there was a tendency for growing qualification of both academic and non-academic staff, it can be said that currently some features of the old funding formula are used but their application is not adapted to institutional realities. Moreover, since 2005 the institutions were also obliged to pay deductions to the pension fund (7.5%-11% of the total amount of salaries). This situation has led HEIs to pursuing non-government revenue streams, but even this sometimes is not easy as in some cases HEIs have to match competitive funding with their own resources which are scarce.

The same Law of 2003 established a minimum and a maximum value for tuition fees. Until the early nineties the nominal value of tuition fees remained frozen (since 1941) at a value of €6 per year. However, in the early nineties the level of tuition fees was updated by taking into account inflation since 1941. Tuition fees remained a hot political issue throughout the 1990s. In 2003 the new funding law introduced a mitigated system of variable fees. HEIs were allowed to set the value of tuition fees between a minimum of 1.3 times the minimum monthly wage and a maximum determined by updating their value relative to inflation since 1941. The expectation was that it would promote inter-institutional competition, since better quality institutions could set higher tuition fees while lower quality institutions had to keep prices low to attract clientele. However, the law presents two problems. Firstly, the gap between the minimum and maximum limits is too low to make a real difference. Secondly, institutions cannot determine the number of vacancies because of the *numerus clausus* system. Therefore an institution cannot rely on having more students at lower fees because it is the state that has the final word in determining annually the *numerus clausus*. Tuition fees for postgraduate studies have been usually established by each institution or its organizational unit. However, with the implementation of the Bologna process, most of the Master Programs will now be regulated by similar legislation as first-cycle programs, if institutions want enrolled students in Master programs to be counted for the funding formula. Otherwise, they can opt-out of funding for those programs and it that case be free to set the level of tuition fees.

The investment in Research and Development has grown significantly in the past 10 years. The Government elected in 2005 made it its strategy to increase the research potential and output introducing a number of measures. The expenditure with Research and Development (R&D) reached 1,2% of GDP in 2008. There were introduced Fiscal Initiatives for Companies investing in R&D. Up to 82,5% of investment in R&D can be tax deductible. The budget of the Foundation for Science and Technology to finance research grants increased 50% in comparison with 2005.

In the area of student financial support, in 2007 a new system of student loans with mutual guarantee was introduced with the publication of the Decree-Law n.^o 309-A/2007 of 7th September. This new system has a universal character and is

applicable to all higher education students and all higher education institutions. The loans can be given for 1st level degree as well as for postgraduate studies and for international mobility programs.

The main features of these student loans are:

- The amount can vary between 1.000 and 1.500 € per year and maximum of 25.000€;
- The amount is to be paid in 12 annual payments;
- There will be 1 year of grace period during which only interest is paid;
- No collateral is needed to be eligible for student loan. Equally no life or other kind of insurance is needed for the loan;
- The interest rate is calculated on the bases of “swaps” rate plus 1% spread which can be reduced based on a student’s scholarly merit.

In the period between November 2007 and May 2008, 3.000 student loans were given. It is quite early to assess the impact of this new system, namely if it is reaching different groups than traditional student support mechanisms and if the system is being used by middle-class students to fund some expenditures due to the attractive interest rate and loan conditions. Until presently there is no public information about the student population using this type of mechanism, though a preliminary study appraising the first years of operation is expected to be published towards the end of the year.

3 Country performances and background variables

To measure the change in country performances the data on various indicators for 2002 and 2006 were compared. According to the collected data Portugal has performed especially well on the following indicators:

- Research output;
- Contribution to HEI by private households;
- Educational attainment (25-34 year-olds with tertiary education);
- Graduation in the range between 20-29 years of age;
- Efficiency

Portugal performed especially well in the category of research output, which is measured in the number of scientific publications and the number of registered patents per million of inhabitants. For the referred period the number of scientific articles published in internationally referenced journals increased almost 3 times, as well as the number of registered patents.

An equal increase is observed in the contribution of private households to higher education. During the period of 2002-2006 it grew three times as well. Since 2001 that Portugal has faced a difficult fiscal and economic scenario, which led to a stringent situation regarding public HEIs. On the other hand, the period analysed is

characterised by steps towards greater cost-sharing in higher education, mainly through the contribution of students and their families.

On the “Graduation” variable Portugal has scored well on both indicators: educational attainment and graduates aged 20-29 per 1000 population. Educational attainment or the percentage of population aged 25-34 with tertiary qualifications, increased by 33% and graduation rates of 20-29 year-olds grew by 18%. If looked by academic degree, the growth is even more expressive in the number of Master’s and PhD graduates, though in these categories the starting levels were very low. This evolution is essentially explained by the recent massification of the Portuguese HE system, which only took-off in the late eighties and has continued henceforth.

During the period under study (1997-2007) the Portuguese system of higher education has experienced an increase in student enrolments until 2002 and a decrease up to 2006. Overall, as stated above, the economic background against which higher education reforms were launched cannot be described as very favourable. Some indicators that reflect some aspects of the country's economic health are: GCI (Global Competitiveness Index), unemployment rates and public expenditure with higher education. Portugal dropped 18 places in the Global Competitiveness index between 2001 and 2008-2009. Unemployment rate has grown from 4.1% in 2002 to 8.1% in 2007. In terms of public expenditure on education (as % of GDP), Portugal scored worse than some of EU countries. In fact, in the period of 2002-2005 the expenditure on all levels of education has decreased and the expenditure on tertiary education has slightly increased.

The Effects of Governance Reforms

All the interviewees agreed that it is too early to evaluate the effects of the governance reform that was introduced 2 years ago. However it did not prevent the respondents from reflecting on the contents of the reform and its possible outcomes.

The New Legal Regime provoked mixed reactions on the part of the academic community: acceptance, debate, criticism and even rejection. Some view this reform as a way to reduce HE autonomy, its democratic character, an attempt at privatization of higher education and leaving the most important decisions to the private sector. The others see it as an opportunity for an opening up of the University to the larger society, for modernizing university management, and for promoting the cooperation between HEIs and the society. Yet, there are those who believe that this can be an opportunity for a desired change, but who warn of possible undesirable effects of the new regime. It is common understanding that the New Legal Regime may bring positive changes.

Several aspects of the New Legal Regime have been commented on by the interviewees.

First, there is an introduction of a new, unprecedented executive organ, the General Council. Its composition is much smaller than the old General Assembly and it has to incorporate 30% of external members, including its president.

Smaller collegial bodies are viewed by some as a positive change allowing to speed-up the decision-making processes, improve management and increase individual responsibility. On the other hand, there is an opinion that a smaller decision-making body is more vulnerable to political tension and to weaker degree of participation. It seems that the underlying logic of the new legal regime is informed by the New Public Management rationale. However, there are doubts among the respondents that this is the only possible way for HEIs to function. There has been expressed the opinion that to ignore the opinion of the Academy represented by the Senate would be an awful error.

There has also been raised a question about the election of the Rector by such a small electoral college. Two kinds of logic can be applied to the figure of the Rector. One stems from Anglo-Saxon tradition, where the rector is seen as a manager and should be elected based on his professional qualities. In this case the Electoral College does not need to be extended to the whole academic community. On the other hand, the rector can be viewed as a political figure, legitimised by the votes of as many representatives of the larger electoral body as possible. The role of the Rector is seen by several of the interviewees not as a CEO in the first place, but as a moderator of different needs inside the institution. As an institutional leader, the Reactor is perceived as finding common points between the Academy and the General Council, include all the members of the academic community into decision-making process, trying to be a unifying force of the institution, instead of being a speaker for diverse groups, a liaison between the aspirations of the Academy and the society, in other words, promoting internal cohesiveness which is regarded as having been curtailed with the new legislation.

As to the external participation, our respondents believe that HEIs may highly benefit from their inclusion into decision-making. It is viewed as an opportunity for fruitful collaboration with the society at large. The size of the external participation in the General Council, with 30% of its members and including its President, is seen as having a lot of potential for the definition of the strategic orientation of the HEIs in true relation with societal needs and expectations, and also for a strong social and political backing of the institutions.

Several points have been raised by our interviewees regarding the external participation. First of all, there is a question of who to choose as the external members. If these members are chosen by convenience, through existing social links of the members of the institution, only in order to comply with the new legal requirements, then their influence can be minimal. If the external personalities are chosen strategically, bearing in mind institutional mission and goals, then together with the members of the Academy they can promote change. The interviewees agreed that as there has been no culture of joint governance, the institutions as well as the

external members will go through a long learning period to gain experience in this matter. The adjustment will have to be made from both sides.

The role of the external members is also viewed differently. Some view them more in the Anglo-Saxon framework, capable of contributing to fund-raising activities and political lobbying in favour of the institution. Others see them as the liaison with the society at large, the means to open up the university in other ways and not so much through additional funds or political influence. These views are likely to be reflected in the choice of these external members.

In relation to the possibility of HEIs becoming public foundations guided by private law, in general the interviewees hold an opinion that time is needed to fully understand the advantages of this form of university organization. It has been mentioned that despite the advantages that the foundation status may bring in terms of managerial flexibility and independence from traditional public administration, the legislation is quite opaque as to the details. That is seen as the main reason for the fact that only three institutions have decided to experiment with this new organizational form. The Law leaves open the possibility for others to choose this option later as well as the institutions that have adopted this regime to go back to the way they used to function.

It has been noted by the respondents that the advantages that foundations will have, namely, the contractual form of funding, based on development plans, could have been extended to all other institutions under the framework of institutional autonomy. Moreover, this form of funding is possible under the current funding law and with a little political will could be put into practice. From the interviewees' point of view, it is not yet clear what the real political objective for the foundations is. As of now they will enjoy a greater government support in terms of funding. In times of greater competition between HEIs this differentiated treatment can create some tensions difficult to control.

As we are at the end of the present legislature, it would be important to see to what extent the recent legal changes will be given political continuity and support from the following government. This may be decisive for the success or failure of recent changes in transforming the higher education landscape. Several of the interviewees expressed their belief that the changes are still very recent and need to be consolidated, and that most may be reversible within a changing political context.

The respondents have expressed their hopes that the new legal regime is not another passing fad, the tribute to present day fashion but a real attempt to modernize higher education in Portugal, making it more flexible and responsive to the needs of the modern society. They also pointed out that until now there has been little continuity as regards to the reforms. The informants hope that the reform is not guided by the short-term objectives but by a strategic vision and a long-term political commitment. The final point to mention is that without proper financing from the state it is difficult to implement the reforms.

Possible effects of the current governance reform can be in a greater approximation of teaching and research, as the law presupposes integration of research centres into HEIs management framework. Another quite obvious effect is the HEIs cooperation with the society and the ability to attract external funds. And one of the most desired effects is the increased autonomy and management flexibility.

4 The Effects of Funding Reforms

While the question about governance reforms and their possible effects produced various responses, the question about funding reforms received more uniform answers. Most of the interviewees considered that the reforms in funding had hardly any effect on higher education system's performance. The performance-based indicators had little impact on the individual budgets of HEIs due to the 3% budget increase cap and a cohesion factor. The criteria in the funding formula were changed every year as the calculated budgets never corresponded to the real situation in HEIs, so the institutions had neither guidance nor incentives to adapt to the criteria.

What is believed to have had the effect on Higher Education system is the decreasing operational grant transferred to HEIs by the government. Since 2001 that Portugal has experienced a fiscal crisis, breaching the stability pact in that year and leading to the adoption of painful budgetary measures. This has led several governments to freeze promotions and salaries in the public sector (including public higher education), to cut higher education's budget and to restrict HEIs' level of expenditure (even when using their own resources). Thus, the last years were characterized by significant financial difficulties for public HEIs. These budgetary cuts have been even more complex because staff expenditures have continued to present a strong tendency to grow due to the increasing qualification of the staff (especially the academic one) and the financial addition that it encompassed. Most of the interviewees indicated the insufficiency of government funding as the main feature of the current funding situation of HEIs.

The efficiency indicator is especially explained by persistent underfunding of HEIs. This situation made institutions to rationalize their budgets, cutting back on some expenses, including expenses with academic staff and consolidating some services. Budget constraints also led institutions to look for resources outside government appropriations.

The share of the earned income in institutional budgets varies between 30% and 55%. The operational grant from the government only covers the expenses with the salaries; other strategic objectives of the HEIs have to be covered by the earned income. In recent years there was also a noticeable increase in the relative share of tuition fees and some signs of diversification of funding sources of public universities. However, the evolution of the funds available to Portuguese public HEIs indicates that government funds continue to be by far the major source of funding. Although the Portuguese public university system has become less reliant on government sources during this period, it still depends on these sources for most of its funding.

Improvement in educational attainment was also reported to be partly influenced by the funding situation. The access criteria for students over 23 are established by each institution, and there is no government regulation regarding this matter. As the funding is largely based on student numbers, it is in each institution's interest to attract more students. Students over 23 are considered as regular students and, without regulations of the access at the national level, they represent an "easier" target for the institutions. Several of the interviewees pointed out that some HEI of lower quality who have difficulties in attracting traditional student population, tend to compensate student enrolments with older students, lowering entrance requirements. The consequences of mixing in the same classroom older students admitted by facilitated criteria established by the institution and regular students admitted by nationally established criteria can be the overall decrease in quality of student body and consequently, teaching.

As to the increased contribution from the households (students and their families), this indicator was influenced by government policies, namely the law of 2003 on Financing of Higher Education (Law 37/2003 of 22 August). This law established the minimum and the maximum limit for tuition fees for undergraduate degrees and left tuition fees for postgraduate courses up to each institution and organizational unit. The idea was that the best institutions would be able to charge higher fees, thus creating a price differential related to quality. In practice, almost all the institutions chose to charge the maximum end tuition fees as they represent the earned income for HEIs.

As regards the recent introduction in 2007 by the government of a student loans scheme with mutual guarantee, our interviewees considered that it is too early to evaluate its effects. Namely, more information is needed as to the socio-economic composition of the students taking out the loans, for which courses and degrees they are taken, etc. However, this is normally regarded as a positive step, which had been planned in previous funding laws but was never implemented due to financial, political, and administrative issues.

In the area of research, the funding policy was directly linked to the improvements in the performance. The respondents highlighted an increased commitment to R&D during this legislature in particular. The improvement in research output is mainly associated with the increased critical mass of researchers and increased funding of research units. According to the latest data, the percentage of researchers in the active population grew from 3.8% in 2005 to 5% in 2007 and is estimated to reach 6% in 2009. In 2007 there was also noted a 20% increase in researchers holding a PhD in research centres in relation to 2005. The financing of research grants by the Foundation for Science and Technology increased 50% from 2005. While overall these are seen as very positive developments, some criticisms were expressed by our respondents.

The main criticism presented by the interviewees is that they regard teaching and research as integral parts of the Higher Education system and think that one cannot thrive at the expense of the other. The interviewees also questioned the fact that

more resources cannot be spent on higher education due to other public sector needs. The problem the interviewees referred to relates in the poor distribution of resources and not in their lack. Several actors expressed concerns that channelling funding for R&D may seem to be more oriented towards short-term objectives of performing well in international comparisons and complying with Lisbon strategy. They expressed doubts that it can correspond to a sustainable policy. Moreover, there were also concerns regarding the political continuity of this recent strategy, especially bearing in mind the changing political context that higher education has faced in the past.

Another criticism that was expressed during the interviewees, is that while a number of researchers has increased due to a big lump of money being spent on doctoral, post-doctoral and research grants, several actors are doubtful that the system will be able to absorb all current grant-holders and to provide them with full-time academic and/or research jobs. A concern was expressed that this situation may create a serious time problem of highly qualified unemployment in the near future.

The increase on the variable “number of patents’ applications per million of inhabitants” seems to be less visible to our interviewees, especially if measured as patents/FTE researcher. It is suggested that the measurement should be not only of the number of patents but of the number of the commercialized patterns and their impact on the society. It was noted that the economic use of knowledge requires a complex chain that few institutions appropriately master and the support for KT (knowledge transfer) structures is significant.

List of interviewees

1 Senior person at the Ministry of Science and Higher Education – Mr. Miguel Leocádio – Head of Staff of the Secretary of State for Higher Education and Science

Former President of National Education Council – Prof. Júlio Pedrosa – President of NED (2005-2008), Former Chair of the Council of Rectors (1998-2001), and Minister of Education (2001-2002)

**Head of National Accreditation and Evaluation Agency – Prof. Alberto Amaral
Head of National Commission on Access to Higher Education – Prof. Virgílio Meira Soares**

Chair of the National Council of Rectors – Prof. Seabra Santos

Former Chair of the National Council of Rectors (1991-1998) - Prof. Sérgio Machado dos Santos

Governance and Funding Reform in the European Higher Education Area

National system analysis: Romania¹

1 Description of the main reforms/current situation in governance and in funding

Reforms and current situation in governance in HE in Romania

Reforms in governance have been limited in Romanian higher education system, when we compare with governance systems in other countries, but they have been substantial if we compare with the situation prior to 1990, when there was a completely centralized higher education system.

When we discuss governance in Romanian higher education, we can talk about two levels: system level and institutional level.

At *system level*, at present there is a high degree of decentralization as HEIs have a large autonomy in terms of financial and academic respects and the Ministry of Education has rather a consultative and coordinating role in the system. The relationship between HEIs and the Ministry of Education is based on strategic plans (starting 1998) that constitute the basis of the contract between the HEI and the Ministry of Education for the institution's basic financing. HEIs received in 1995 financial and academic autonomy. In terms of governance, HEIs still have to have their Rectors confirmed by the Ministry of Education. Confirmation implies the checking that the person proposed fulfills the legal requirements to occupy the position.

However, at *institutional level* there is a high degree of centralization within institutions. In Romania, HEIs do have the freedom to determine their own internal governing structures, such as governing bodies, their composition and their main powers, but within the limits of the law and the law is very strict. Internal governance structure for HEIs in Romania is prescribed by detailed law. Law no. 128 /1997 prescribes the main governing bodies in any Romanian HEI. There is a collegial management system with governing bodies being elected. At university level the Senate is the consultative decisional body and the Small Senate, the Rector and Vice-Rectors are executive bodies and at the faculty level the Faculty Council is the consultative decisional body and the Small Faculty Council, the Dean and the Vice-Deans are executive bodies. Each academic department has a Head of department, also elected from the academic body. Non academic departments are managed by heads and chiefs of departments, who are usually appointed.

¹ National expert Professor PhD Luminița Nicolescu

Other types of governance structures when present in some HEIs (such as President of university, Advisory Board, Administration Council, etc), do not have executive powers, as they are not recognised by law. They might have consultative power, but decisions are taken by the legal bodies presented above.

Reforms and current situation in funding in HE in Romania

The financing of HE is one of the fields of HE in Romania that has been highly reformed after 1990. The 1995 Education Law introduced the academic and financial autonomy. That law has been subsequently amended and improved and effectively started to be implemented in 1999. The main shift was from a complete centralized and 100% state funded HE system to a system in which multiple financing sources were allowed and there was financial decentralization from the Ministry of Education. Before 1995 funds were allocated by the Ministry of Education in a non-transparent way based on previous years allocations and individual negotiations.

The 1995/1999 financial autonomy reform introduced the current financing system in Romanian higher education: the dual system.

Public universities can raise funds from multiple sources, such as: a) budgetary sources (state budget) and from b) extra-budgetary sources (they have been allowed to raise tuition fees and to receive sponsorships). The budgetary sources (from the state budget) can be obtained by a HEI in two forms: as basic financing and as complementary financing. Basic financing that comes as a block grant and is distributed to HEIs based on a formula that takes into consideration both quantitative (number of equivalent students calculated based on different coefficients applied depending on the domain of study and the level of study) and qualitative criteria (quality of teaching staff, the impact of the research on the teaching activity, material base and university management). The importance given to qualitative criteria grew in time from 0 in 1999 when the formula financing has been introduced to 20% in 2002-2006 and to 30% in 2009. Complementary funding refers to funds dedicated to large investments and funds obtained through competition for research activities from Research Councils.

The extra-budgetary sources refer mainly to tuition fees, as HEIs have been granted the right to enrol tuition fees paying students along with the ones that are budgeted from the state.

The proportion of budgetary/extrabudgetary funds differs in different public HEIs. HEIs with higher proportions of fields in high demand on the market at present (such as business, law, humanities) have higher proportions of private funding from tuition fees than other fields such as engineering. For instance, in a HEI specialized in the economic field tuition fees can reach 40-50% of the total income, but in most HEIs there is a 25-30% proportion of private funding.

Internal allocation of public and private funds is established by public HEIs and presented to the Ministry of Education through the strategic plans. The use of funds

even though established by HEIs has to be approved by Ministry of Education. Funds have to be used for the destination for which they were obtained.

Private universities can raise their funds from private sources (tuition fees, sponsorships, donations) and after these reforms they are entitled to compete for the state funds that are allocated through competition (for research).

2 Country performances and background variables

Background information for Romania

The 18 years old in total population has decreased in Romania in the period 1997-2007 and projections for 2007-2017 show that the situation is likely to deteriorate further in the future. They being the traditional pool of potential new entrants for higher education, a decrease in the demand for higher education services is to be expected in the future in Romania.

In terms of the global competitiveness rank (GCR), Romania dropped 3 places from 2001 to 2008 from place 26 to place 29. The country is doing less than average, therefore falling behind. This can be an indication for possible difficulties in sustaining future reforms including in higher education.

As far as the GERD as % of GDP is concerned, Romania had a lower than average percentage of intramural expenditure on R&D in GDP in the period 1998-2006 (0.92% as compared with the average of 1.13%), but a steadily growing trend from 0.5% in 1998 to 1.2% in 2006. This shows that Romania spends less than other countries do on investment in R&D, but the spending is increasing, creating the premises for improved activity in the future.

Total public expenditure on education as a % of GDP, for all levels of education combined in Romania remained relatively stable in the period 2002 – 2005 with a very small decrease from 3.52% to 3.48% from GDP. However, the public expenditure for higher education as a % of GDP increased with 16% (from 0.7% to 0.81%) in the period 2002-2005. This illustrates an increasing priority given by the government to higher education. As compared to other countries the percentage is small, only 3 countries in Europe having lower % of GDP designated to higher education than Romania's and all other countries having higher and much higher percentages than Romania.

It is believed that a higher share of students in science and engineering in total enrolments reflects a higher degree of specialization, performance and cost patterns in higher education. In Romania in the 3 subsequent years studied total enrolments grew, more than doubling and number of students in science and engineering also grew. However the percentage of science students in total enrolments decreased from the first year to the third year from 6% to 5%, while the percentage of science and engineering students in total enrolments decreased even more from 28% to 23%.

Such a decrease was in line with the tendency at European level and in the third studied year Romania had a similar percentage of science and engineering students in total enrolments as the European average (23%). The average decrease for the 3 years was 6% in Romania higher than the other countries average decrease of 5%, but this can be explained by the higher than European average percentage of science and engineering students in total enrolments held by Romania in the first two studied years.

Unemployment rate fluctuated in Romania in the period 1999 – 2007, with a decreasing tendency in the last years from 8.1% in 2004 to 6.4% in 2007. In 2007 the unemployment rate in Romania was slightly higher than the European average of 6.29%. At this indicator Romania is very close to the average both in terms of unemployment rate in 2007 and as change in the unemployment rate in the period 2000-2007, that decreased by 10%, close to the European average decrease of 12%.

The *country performance in HE* is measured through a number of 19 indicators grouped in 8 dimensions: access to higher education, lifelong learning, mobility, employability, research output, graduation, capacity to attract funds and cost effectiveness.

In the period 2002-2006 Romania registered improved performance in particular for the following indicators monitored:

- the percentage of mature enrolment, respectively the number of students aged 30 years and older as a percentage of total enrolment increased by 88%. This illustrates an increased lifelong learning in the country. Some of the main causes of this increase refer to: the appearance of private higher education, the reforms in financing and academic autonomy allowing the introduction of tuition fees places in public HEIs, etc.
- the percentage of mobile students sent out also increased by 5%. This illustrates an increased mobility as the students studying in another EU-27 country, a EEA or Candidate country, as a percentage of all students also increased. Some of the main causes refer to: increased participation of Romania to European exchange programs and increased openness of Romanian HEIs for cooperation with other HEIs in Europe, due to increased institutional autonomy.
- the number of patent applications to the EPO by priority year at the national level per million of inhabitants increased 3.43 times.
- graduates per 1000 population aged 20-29 in the total number of graduates increased by 93%, illustrating increased graduation. Some of the main causes refer to: the increased number of enrolments of mature students, the restructuring of the Romanian economy and job demand with effects on some graduates requalification by obtaining second higher education degrees in different fields.
- the capacity to attract funds also increased as the percentage of expenditure from international sources of the total expenditure on research and development increased by 38% in the studied period. Some of the main causes

refer to: the scarcity of internal research resources for a number of years, the higher openness of HEIs to create partnerships of all kinds and the new requirements in promotion criteria for academics and in financing criteria for public HEIs that emphasize on international activity such as publications and research.

The next section details more on the causes of the evolution of these indicators.

2.1.1 Effects of the reforms and alternative interpretations of improved performances

Given the fact that major changes took place after 1989 and the communism fall in Romania, changes within the economy and the society as a whole, as well as changes into education and higher education, the discussion on reforms will be extended to the pre 1989 and after 1990 periods, where relevant. The effects of the reforms are looked at from the perspective of the opinions of the interviewees.

In terms of reforms taking place in Romania in the field of finance and governance after 1995 most of the respondents agreed that the ones mentioned above are the major reforms in these domains in Romania, including also the new regulation in the field of quality assurance in higher education.

After 1990 there was a high degree of **decentralization** in the Romanian higher education system. Prior to 1990 in Romania there was an over centralized system with the Romanian Communist Party having the largest power and the Rector being appointed by the Ministry of Education. He was subordinated to the Party and had limited power. At the time HEIs did not decide on financial and academic aspects, all aspects regarding funds and their use, number of places for students, study programs and curricula were established at ministerial level. After 1990 the big change was in decentralization of such decisions with gradual changes to the present complete decentralization of the relationship between the Ministry of Education and the HEIs. Many of the changes were introduced through legislative measures. Therefore, Law 84/1995, the Education Law is seen as the basic law in the Romanian higher education. The law introduced autonomy in HEIs from a number of perspectives:

- a) for the teaching activity as all decisions regarding study programs, curricula and syllabuses are now taken at institutional level consequently the effect is complete academic autonomy at institutional level.
- b) from managerial point of view, as the involvement of the Ministry of Education has been reduced to only validating the Vice- Councillor. The effect is higher managerial autonomy at institutional level.
- from financial point of view: c1) Prior to 1998 (when the 1995 law started to be implemented) the financing of public HEIs was done only from the state budget and based on the number of teaching norms. Consequently HEIs were increasing artificially their norms in order to increase their financing. Financing was in a situation of scarcity according to the general evolution of the economy at the time and education was sub-financed. The multiple

sources have been introduced by the 1995 law. HEIs obtained the freedom to gather funds from other sources than from the state (tuition fees, sponsorships, donations, contracts). The mechanisms for distributing the state funds also changed. Two distribution mechanisms have been introduced

1. the basic financing that uses a formula to distribute state funds to HEIs, formula that has as basic principle the number of equivalent students and 2) complementary financing that distributes state funds based on competition.
2. the introduction of the concept of public money in the higher education system. The freedom of HEIs to use funds increased through autonomy, but funds can be used as public funds, therefore limitations in the use of funds exist, according to law (the obligation to use the auction system for acquisitions, etc).

Consequences and effects of the 1995 (1997/1999) law (autonomy law) were that:

- HEIs through academic autonomy have changed their academic management principles, as after the reforms university management started to define the mission and the objectives of the HEIs they administer, taking into consideration the local and national demand of human resources, as well as the demand for research
- HEIs started to introduce new study programs, conditioned to obtaining accreditation for them from the Quality Assurance Agency.
- universities were allowed to look for funds from other sources. This encouraged the entrepreneurial spirit of public HEIs management. They became more aware of financial issues and the need for a different kind of financial management. The degree of responsibility and of accountability for the use of funds increased at institutional level.
- universities were allowed to enrol tuition fee paying students and now most public universities enrol two categories of students: students budgeted from state and tuition fee paying students (students' tuition fees state financing depends on academic performance at admission and also further on during study years). The number of tuition fee paying places offered by HEIs depends on the availability of resources (human and material). The number of tuition fee paying students depends on the demand on the market for each specialization. This represents a supplementary source of income for HEIs.
- the basic financing formula has been improved in time through the increase of the importance given of qualitative indicators (reaching 30% in 2009).
- strategic management has been introduced through the law requirement that each HEI has to develop a strategic plan, that represents the basis for its relationship with the Ministry of Education.
- the attitude of HEIs towards quality has changes towards higher responsibility for quality, once the new financing principles and systems have been introduced.

- the financial and academic autonomy increased the level of competition between HEIs for funds, for students. Competition also developed within HEIs for accession of funds, mainly for research.

In terms of *governance*, the effects of the reform consisted in the following:

- most respondents consider that the changes in governance of higher education, as compared to 1989 are spectacular, but insufficient
- after 1990 the management of HEIs was elected as opposed to the period before 1990, when it was appointed. The introduction of the collegial system that had as a consequence the democratization of the decision making system in HEIs
- after 1990 students started to be represented in decisional structures in higher education. Between 1990 and 1995 there was a transitional period and students received higher powers than their position would require, such as the veto right and participation in decisions such as the academics' promotion. Starting 1995, these aspects have been reglemented and at present students have a consultative role in many issues and some decisional roles through participation in decisional bodies of HEIs.
- after 1995 HEIs received the freedom to set their internal managerial structures, but these have been heavily reglemented through 1997 law. The consequence was that most HEIs have similar managerial structures, but not identical. Some respondents appreciated that there are pre established patterns in Romanian higher education. Within the law limits new structures have been introduced in HEIs, such as the Boards of Directors and President of University. Such positions have rather consultative or representative roles, without participating in executive decisions. It was appreciated that around half of the public HEIs in Romania have the position of President of the University, the first such position being introduced in 1999. There were some legislative initiatives to restructure the governance system in higher education, but they failed. More will be discussed under future possible changes section. Most of the respondents appreciated that governance structures did not change at all after 1995, but the relationships between different levels have changed: externally through decentralization and autonomy of HEIs from Ministry of Education and internally through different levels of decentralization at faculty level. Most universities have decentralized academic decisions at the level of faculty and department, but very few have decentralized budgets and financial decisions at that level.

Recent *quality assurance* reforms were initiated in 2005 through legislative regulation and in 2007 they started to be implemented. It is to be mentioned that Romania has tradition in the accreditation and quality evaluation systems. Romania was one of the first countries in Europe to pass an accreditation law in 1993, mainly in order to control the quality in private higher education that increased to a high pace after 1990 in the conditions of a legislative vacuum. That law functioned as a qualitative filter for those who wanted to enter the supply side of

the higher education system and introduced the statute of non-profit organization for the organizations operating or willing to operate in HE. That law functioned for a number of years and had positive effects for the Romanian higher education system. For instance: all HEIs underwent the accreditation process, some private HEIs that did not meet the quality requirements have not been accredited and have been closed down. The 1993 legislation had as main drawbacks the fact that the accreditation requirements emphasized on inputs and the fact that it regulated only authorization and accreditation, but not periodical quality evaluation. The new 2005 quality assurance changes introduced process and output criteria for evaluation, besides the input criteria and introduced the periodical quality evaluation (every 5 years) that became compulsory for all HEIs in Romania. A new quality assurance agency has been created, in order to ensure external quality assurance: the Romanian Agency for Quality Assurance in Higher Education (ARACIS). This agency corresponds to ENQA standards. The stipulations of the 2005 regulations are quite new and their implementation started only in 2007, but progress so far included: a) the creation of a quality evaluation methodology, its piloting on 10 voluntary HEIs; b) most HEIs introduced internal quality assurance mechanisms, as this is a requirement of new qualitative standards; c) the periodical quality evaluation process it's on its way and HEIs in Romania are being evaluated.

There were mentioned other reforms that have taken place in Romania after 1995 in the field of higher education:

- the introduction of the *3 cycles structure of degrees*: Bachelor – Master – Doctorate according to the Bologna process (starting 2005)
- together with the introduction of the Bologna structure, the restructuring of the general architecture of the higher education system through the restructuring of the specialization portfolio by the reduction of the number of higher education specializations from 700 to 200.
- the introduction of the *Doctoral School system* for the third cycle replacing the old doctorate system.

Relationship between reforms and performing higher education indicators for Romania will be looked at in the following section.

A. The *mature students of 30 years old and over* as a percentage of total number of students increased in Romania in the period 1995-2007. This evolution can be linked to causes both related to the higher education reforms and causes not related to the higher education reforms:

- prior to 1990 the Romanian higher education system was an elitist system and there was available a limited number of places within HEIs that were occupied on a very tough entry exam. Consequently the demand for higher education was much higher than the supply of higher education. A large number of people willing to go to the university did not have the opportunity. After 1990 more opportunities aroused for these people, many of which being close or after the age of 30.

- after 1990 the higher education supply started to increase: the first to benefit of the unsatisfied demand were the private HEIs (self-called) that invaded the market. Also, previous (before 1989) short degrees (3 years) offering public educational institutions have been transformed in universities.
- the evolution of the economy and its structural changes made many graduates to reconvert to other professions, by studying for a second university degree. For instance, an engineer who studies for a second degree in economic field. These are usually mature students.
- mentality of people changed and more people are willing to study, especially those who already have some practical experience
- after 1995, public HEIs received higher academic and financial autonomy and this led to also increasing their offers of higher education services. The effects of the reforms on the evolution of the number of mature students
- new and more diversified programs have been introduced attracting different kinds of learners
- new branches of public HEIs have been opened in different locations bringing the supply closer to the demand (attracting local people who otherwise would not travel to study)
- the number of places have been increased through the introduction of tuition fee paying places in most public HEIs
- the introduction of the Distance Learning degrees that attracted especially people who work and need more flexible study programs, many of which being mature students
- new requirements at the work place for people who graduated for a number of years, so that they come back to study, usually for a master degree.
- the relationship between the restructuring of the degree system on the B-M-D structure and the labour market. The labour market does not make the difference between Bachelor and Master. Even though recently introduced (the first generation of 3 year Bachelor students graduated in 2008), many employers do not understand the new degree system and consider that graduates with only Bachelor degrees do not correspond to their requirements. In banks or insurance companies hiring requirements stipulate clearly the holding of a Master degree. Therefore, most Bachelor graduates are willing to study further at Master level. Except the 3 year Bachelor graduates, graduates who recently finished their studies with 4 years are also assimilated by the employers with the previous ones and are willing to study for a Master degree.

B. The *students studying abroad* in another EU 27, EEA or Candidate country as a percentage of all students increased in the period 1995-2007.

The main causes for increased mobility are related to reforms in higher education, as well as to other changes in Romanian economy and society:

- once Romania became first a candidate country and then a EU country, there was higher degree of openness at institutional and individual level for

international and European cooperation in higher education, as well as the in the labour market

- Romania's EU integration brought larger European funds for mobilities
- Romania accessed European programs such as Socrates, Tempus
- Romania's openness towards Europe manifested also through different intergovernmental agreements that resulted in more cooperative programs developed by Romanian HEIs with counterparts from Europe
- the Ministry of Education offered unilateral bursaries for partial studies abroad
- due to economic growth in Romania, the level of welfare increased and the number of families with higher than before material possibilities grew too and therefore larger number of mobilities were possible with family financial support
- the larger academic autonomy combined with the increased openness resulted in more cooperation of Romanian HEIs at European level, through diverse partnerships including inter-institutional agreements for partial and total mobilities
- larger financial autonomy allowed Romanian HEIs to fund mobilities from their own funds
- the larger academic autonomy resulted in new study programs, some of which taught in international languages that allowed cross mobilities with HEIs from European countries
- similarly the increased quality of higher education in Romania attracted more European students in cross mobility programs, allowing more Romanian students to travel abroad for studies
- the introduction of ECTS in Romanian and European HEIs as part of the Bologna process, facilitated mobilities as studies done abroad were recognized
- the academic autonomy and the Bologna process allowed the introduction in the internal regulations of Romanian HEIs of rules for the equivalating studies conducted abroad
- at national level in 1999 it has been created the National Council for the Equivalence and Recognition of Diplomas, as an answer to increased international mobilities

C. The ***patent application*** to the EPO per million inhabitants increased and possible explanation can be related to the new financing mechanisms. There were patents invented even before by academics and researchers from HEIs (especially technical ones) but there were no financial means to register those. After 1998, due to the higher financial autonomy, HEIs can use their funds to register and protect patents invented by their members.

D. The ***graduates per 1000 population aged 20-29*** increased.

Respondents agreed that the growth is related with the increased enrolment for all age categories in Romania: young (20-29) and mature (30 and over) students. Among

the causes for the increase in the graduates determined directly by the increase in enrolments, are:

- the increase in enrolments took place in the context of a higher demand than supply in higher education prior to 1989
- in 1990 all short term higher education institutions (3 years) became universities and their students became graduates
- at present in Romania there is no alternative to study for a professional job after graduating high-school. High-school graduates can work mainly as unqualified workers, therefore many high-school graduates are willing to go into higher education to increase their chances in the labour market
- the high demand for higher education started to be fulfilled through a higher supply of higher education services:
 - the increase in the number of private HEIs (they account for around 30% of total enrolments) and the accreditation of some (accreditation law of 1993)
 - the 1995 law that granted autonomy to HEIs allowed the acceptance of tuition fee paying students, therefore public HEIs doubled their capacity to absorb candidates
 - the number of places budgeted by the state have increased as the percentage of the GDP allocated to education increased gradually aiming to reach the 6% threshold
 - due to academic and financial autonomy the supply of educational services delocalized through the opening of branches in non-traditional places, that are closer to the demand for higher education. In this way they attracted candidates who otherwise would not travel to study.

E. Expenditure on R&D from international sources as percentage of total expenditure on R&D grew in 1995-2007. Some of the causes for this evolution were:

- Romania's integration in EU increased accessibility of Romanian HEIs to European funds, as well as our capacity to absorb these funds. The increase is not seen as being large, but it is an increase from nothing to something
- academic and financial autonomy brought by reforms, developed a culture of competition for research funds from both national and international sources. This coupled with a learning effect in the application processes determined higher rates of success and higher levels of research resources attracted from international sources
- academic and financial autonomy coupled with European integration encouraged higher cooperation between HEIs from Romania with HEIs from other European countries, that resulted in partnerships of different kinds, including the ones in the field of research
- the improvement of the material base and the material base for research in the last years through investments from the state budget allowed Romanian

HEIs to participate in international consortia to apply for international funds for research

- the financial reforms gave Romanian HEIs the possibility to co-finance research projects and to participate in international research partnerships that require co-financing, increasing therefore access to international research funds.
- the change in the human resource policy in higher education at national level through the introduction of the 2005 new promotion criteria encouraged international cooperation. The 2005 promotion criteria for academic staff introduced the international dimension as very important in order to increase the international visibility of the country: in order to be promoted on superior academic positions such as full professor or senior lecturer, a candidate has to have international publications and participations in international research projects. This regulation stimulated the applications for international sources of research funds.
- academic and financial autonomy allowed some Romanian HEIs to encourage and support their qualified academic staff to participate in international bids. Some universities have specific strategies in this field and use proactive policies to support international cooperation in research.

Other effects of the reforms on specific aspects of higher education (such as access, life-long learning, employability, capacity to absorb funds and cost effectiveness) are taken into discussion in the next section.

Access to higher education in Romania is high, as any person who graduated from a high school can enrol in higher education. The access to higher education has increased as compared to 1989 when access was limited to a small predetermined number of places in universities. At present higher education has higher absorption capacity as supply of higher education increased in different forms as presented above. The reforms in governance and funding of higher education contributed to the increased access to higher education through increased supply. However, there are still some categories of population who are disadvantaged in terms of access to higher education: the low income categories who cannot afford expenses related to higher education and the people from rural areas. A double parallel system of education developed in high school: learning in school and learning in private through private lessons. The ones who also learn in private (have more material means to do so) have more chances to be admitted in HEIs where there are exam requirements for admission. There are no credit systems for students in Romania, but the introduction of credits for students would increase the access to higher education of capable students coming from low income families.

Lifelong learning is not necessarily seen as being related solely with higher education. There is no clear legislation regarding the role of universities in life long learning. However, there are HEIs that are already involved in lifelong learning activities and developed specific lifelong learning programs. Most HEIs in Romania have a specific department called "Post-graduate studies department" whose role is to conduct lifelong learning programs. The reforms in higher education have a positive effect on lifelong learning in the sense that more, diverse, customized programs can be developed now by autonomous HEIs. There were respondents who

drew the attention on the fact that is not clear who has a higher role in encouraging lifelong learning: the HEIs or the employers. Also there is high competition on the lifelong learning market a large part coming from other structures outside higher education. Professional bodies have their own training programs as part of lifelong learning, some training programs became requirements to access certain jobs in certain fields. For instance, in the field of accounting, banking, auditing there are specific certification programs organized by professional bodies, some of which compete with programs offered by HEIs, some others simply replace those, as they are the only ones accepted by employers (either by law or by custom).

Employability is seen as being influenced by different factors. First of all employability differs from one field of activity to another and has to be considered as such. There are domains that are in demand such as building, architecture, informatics and have higher degrees of employability than others. Reforms in higher education are seen as increasing employability in two respects: a) the autonomy allows for higher flexibility and adaptability of study programs to the labour market requirements on the one hand and b) the creation of the possibility of professional reconversion, by enrolling in a second degree program.

Another aspect related to employability relates to the restructuring of the degree system according to Bologna process: Bachelor – Master – Doctorate. This restructuring, being at the beginning (in 2008 was the first graduating cohort of the 3 year Bachelor) has been received with some level of distrust by the labour market, in the sense that some employers consider that a Bachelor degree does not offer sufficient qualification to graduates, therefore jeopardizing their employability. The consequence is that most Bachelor graduates are willing to continue with a Master degree. Therefore employability should be looked at the two levels: for Bachelor graduates and Master graduates, as it differs greatly.

The **capacity to attract funds** has increased in higher education with the implementation of reforms, due to:

- the fact that legislation allows for multiple funding sources after 1995
- there was a period (before the launching of the 2008 economic crisis) in which higher education benefited of more funds from the state budget, some of which based on competition (mainly research funds)
- partnerships with business are allowed
- tuition fee paying places were introduced together with new study programs, many of which at Master level
- sponsorships were attracted in the recent period mainly for the organization of events as opposed the previous periods when sponsorships were designated to investments.

However, on one aspect all respondents agreed: the capacity to attract funds depends on the university management, on its entrepreneurial spirit.

Cost effectiveness has been also influenced by reforms as follows:

- university management became aware of the fact that they have to look at cost effectiveness indicators such as the expenses/student. Respondents appreciated that the expenses per student have increased in Romanian higher education together with more funds dedicated to education and this resulted in an educational environment more modern.
- public HEIs have to publish annually their budgets, therefore the process became more transparent

Future expected changes

The reforming process of higher education is still in progress, and more changes are envisaged for the future. We will exemplify some of the ones in progress and under debate at present.

In 2009 it is discussed the introduction of a new financing mechanism, a mechanism designated to distribute funds specifically for institutional development. The funds will be distributed to HEIs based on competition and proven performance. At the moment (June 2009) there is the Parliament general agreement for the introduction of this mechanism.

In 2009 it is envisaged the introduction of credits for students. This is also agreed in principle by the Parliament and it is a measure that if implemented, will increase access to higher education.

Also in 2009 under debate is again the introduction of more flexibility in the governance system in Romanian higher education, by allowing a larger diversity than there is at present. More higher education stakeholders are to be involved in decisional processes. In 2006-2007 it was a law project that envisaged changes in governance as: the institutionalization of a Board of Directors with members from more stakeholders categories, the Vice-Councillor was to be appointed based on contest, not elected as it is at present, the relationship between the executive power (Rector and his team) and the academic Senate was to be based on a contract. The project did not pass through Parliament. At present there are other 4 law projects that follow a similar philosophy, and are initiated by different groups. There are however concerns from some respondents that the enlargement of the types of stakeholders with decision power within HEIs will bring the risk of the intrusion of politics into education.

List of interviewees:

Remus Pricopie, Adviser at Ministry of Education, ex-Secretary of State on Higher Education, 10 June 2009

Dumitru Miron, Vice-Rector Academy of Economic Studies, Bucharest, ex-Secretary of State on Higher Education, 12 June 2009

Claudiu Cicea, academic and researcher on Higher Education, 15 June 2009

Mihai Korka, Bologna Follow Up Group member, ex-Secretary of State on Higher Education, 16 June 2009

Constantin Brătianu, Head of Department Academy of Economic Studies, former General Director at the Direction for Higher Education in Ministry of Education, expert in Higher Education, 18 June 2009

Radu Petrariu, student representative in the Small Senate, Academy of Economic Studies, Bucharest, 18 June 2009

Mihai Păunică, General Director at General Direction Budget, Finance and Investments in Ministry of Education, 19 June 2009

Ion Roșca, Rector of Academy of Economic Studies, Bucharest, member of National Council of Rectors, 22 June 2009

Ovidiu Nicolescu, President of National Council of Private Small and Medium Enterprises of Romania, academic, 23 June 2009

Laura Marinaș , General Director at General Direction OI POS DRU (Intermediary Organism, Sectorial Operational Program for the Development of Human Resources), Ministry of Education, 24 June 2009.

Governance and Funding Reform in the European Higher Education Area

National system analysis: Slovakia¹

1 Introduction

This report summarises the main changes in the governance and funding systems of higher education in Slovakia over the past decade. There were several significant changes during the period 1995-2008. This analysis explores their impact on the functioning of higher education in Slovakia.

The report is based on analysis, existing documents and 12 interviews with representatives of Slovak universities, Slovak Academy of Sciences, Slovak Ministry of Economy, Slovak Accreditation Commission, Slovak Council of Research and Science, Slovak Association of Universities, Slovak National Students Union and the Slovak Ministry of Education. Interviewees were asked to provide their views on the reforms and their impact on system performance.

2 Reforms in governance and funding over the last ten years

Slovakia has 20 public higher education institutions (17 of which are universities and 3 are arts academies), 10 private higher education institutions and 3 State higher education institutions (a Medical University and police and military academies). Some 5000 students are registered in private institutions and 140,000 in public institutions. Universities provide all three types of accredited study programmes (bachelors, masters, PhD). Professional higher education institutions provide bachelor studies.

Reforms in higher education governance

Over the last decade, the most important system-level governance reform in higher education in Slovakia has been *Act No. 131/2002 on Higher Education*.

The 2002 Act represented a major package of reforms for Slovakian higher education. In August 2000 the Government of the Slovak republic approved a program document *Concept of the Further Development of Higher Education in Slovakia for the 21st Century*. Based on this document a new Act was developed – Act No. 131/2002 of Law Code on Higher Education - which came into force on 1 April 2002. The Act introduced some important changes in the governance of Slovakian higher education.

¹ Lucia Polakovičová, NOVUM PRO+, Bratislava and Jon File, CHEPS

State higher education institutions were transformed to public higher education institutions except the police higher education institution and military higher education institutions. The autonomy of higher education institutions was thereby increased and the responsibility of the self-governing bodies for the activities and development of their higher education institutions was increased. The self-governing bodies recognised in the Act are the Academic Senate, Rector (or Dean at the faculty level), Scientific Board and Disciplinary Commission (responsible for student disciplinary matters) and their roles and powers are prescribed in some detail at both institutional and faculty levels in the Act. In terms of increased autonomy the changes were most profound in terms of funding (see the following section) but other significant examples included: a higher education institution no longer needed the consent of the Ministry of Education for the establishment, merger, affiliation, split or dissolution of a faculty; and faculties were no longer legal entities recognised by law thus strengthening the roles of the self-governing bodies at the institutional level.

The Act also changed the conditions for the establishment of private higher education institutions. Before 2002 a new act was required to establish each new private higher education institution and only one such institution had been established (College of Management in Trenčín in 2001). From 2002 state consent from the Government of the Slovak republic is necessary for the establishment of a private higher education which simplified the approval process considerably. In 2003 one new institution was approved, in 2004 two were approved, in 2005 two more, and in 2006 four new private institutions were established.

The new Act also introduced a new internal governance structure within public higher education institutions: the Board of Trustees. The Board was introduced as a body to support the strengthening of the link between the public higher education institution and society. It implements and promotes the public interest in the activities of a public higher education institution, particularly in connection with the use of its assets and funds granted to the public higher education institution by the State.

The board of trustees is not a self-governing body of a public higher education institution but a body composed of 13 members drawn from the external environment who are appointed and may be dismissed by the Minister of Education and six members appointed by the rector of the university with the consent of the academic senate. The Board has to approve the annual report of the institution, its strategic plan and real estate transactions.

In terms of external governance the new Act also reformed the role of the Ministry of Education in the coordination of higher education institutions. The Ministry remained responsible for creating favourable conditions for the development of higher education institutions and the higher education system, but would no longer coordinate the activities of higher education institutions as directly as it had before 2002. The major new policy instrument introduced by the Act was that the Ministry of Education should prepare and annually update a long-term strategy in

educational, research, development, artistic and other creative activities for the area of higher education institutions. Higher education institutions should then create and update their own long-term strategy and the strategies of their faculties in terms of the long-term plan for the system. The Ministry should then discuss and review the strategies of institutions.

Reforms in the funding of higher education institutions

As in the case of governance reform, over the last decade the most important system-level funding reform in higher education in Slovakia has been *Act No. 131/2002 on Higher Education*. In the section above the change of legal status from state higher education institution to public higher education institution has been described. In terms of financial autonomy this meant that Slovak public universities ceased to be state budgetary organisations which in theory had all of their costs covered by the state budget and in consequence had to transfer their own income to the state budget and could not carry forward a surplus into the following financial year. The new financial model introduced by the Act was premised on the gradual introduction of multi-source funding, the ownership of land and buildings by the institution and the introduction of accrual accounting procedures (and the transfer of surpluses and deficits into the following year). Apart from these structural financial changes the Act also introduced lump-sum funding (replacing the line-item structure of the state budget) and a complex funding formula based on inputs and outputs designed to make public funding of higher education more transparent and to link it to the strategic goals of the system – notably to increase access, enhance quality and increase research and development performance

The new funding system also made provision for targeted project-based funding for higher education institutions linked to the priorities of the long-term strategy for the system. The introduction of targeted funding focused on increased participation, lifelong learning, the development of young teachers, international research cooperation and specific research priorities.

While the new funding system included output based parameters, particularly for the research and development component of funding, developments in national (Slovak Council of Research and Science) and European research and development funding over the decade have seen the share of competitive research grants rise from about 10% of institutional research funding to a range between 15% and 30% depending on the institution concerned. In terms of governance, this has been accompanied by an increase in the coverage of external quality assurance procedures for research.

Finally, through the Act and subsequent amendments Slovak higher education institutions now have the power to decide on the level of fees for special groups of BA and MA students. These include students who have taken longer than five years to complete a first degree (or who take a second first degree), non-EU-students, and particular groups of part-time students (beyond those that are publicly financed to study part-time.) For the Slovak students included in the groups above the Ministry

sets a maximum tuition fee that varies according to the expensiveness of the programme concerned.

3 Performance improvements in Slovak higher education

In the governance and funding reform project, the performance of national systems has been measured along a number of different dimensions using uniform international indicators. According to this data, in Slovakia we see improved performance over the period 2002 – 2006 when it comes to:

- a) access: an increase in the ratio of new entrants (17-29) as a ratio of the population of that age
- b) lifelong learning/mature students – the number of students aged 30 years and older as a percentage of total enrolment and the ratio of entry rates of old (25-45) and young (17-25) new entrants
- c) graduation – the percentage of the population aged 25-34 with tertiary qualification and the total number of graduates as a percentage of population aged 20-29
- d) outward mobility - mobile students sent out to EU-27, EEA and candidate countries, both for whole degrees and part of a degree
- e) An increase in private contributions to higher education, in foreign funding of R&D and in business funding of R&D

4 Effects of the reforms and other explanations of improved performance

In this section we consider each of the areas of performance improvement in turn and report on the views of the interviewees on the reasons for these performance improvements including possible links to the governance and funding reforms outlined earlier. The section concludes with some more general observations by those interviewed.

Increased access

The major reason cited for increased access over the period 2002 to 2006 was that this was a core objective of the 2000 strategy for the further development of higher education in Slovakia and that this was promoted by the new 2002 funding formula which provided real incentives for institutions to enrol, retain and graduate as many students as they had the capacity to accommodate. The number of new entrants to full-time programmes at public universities increased from 27,000 in 2002 to over 36,000 in 2006, while new part-time students increased from 8,000 to over 17,000. As shown earlier the number of private institutions increased rapidly over this period as well although their proportion of the total number of students remained small.

On the demand side, interviewees mention demographic growth that ensured a growing number of secondary school leavers eligible to enter higher education, and student perceptions that a higher education qualification was becoming an essential

requirement for a good position in the labour market and for European labour market mobility (Slovakia joined the EU in 2004).

In addition the strategy for the further development of higher education also included the specific goal of improving social support for students. One element of this was the expansion of the funding available for means-tested "social scholarships" to support students from economically disadvantaged backgrounds. In 2002 almost 8,000 students were awarded such scholarships and this had increased to over 12,000 by 2006. (In 2006 a further improvement saw the value of the scholarships doubled and the financial eligibility criteria relaxed.)

In summary, Slovakia took a conscious policy decision to increase access to higher education, demographic trends and (perceived) labour market demand for graduates ensured a rising demand for higher education, and the incentives built into the new funding formula ensured that institutions increased their offer of places.

Lifelong learning

Interviewees believe that the primary driver of increased numbers of mature students is demands from the labour market for higher levels of education and training on the part of their employees. This is reflected in the increasing numbers of part-time students noted earlier. The question of financial incentives for institutions to offer part-time programmes is a complex one. In the period before the 2002 Act the law was ambiguous on whether part-time students could be charged tuition fees and many institutions offered such programmes and charged fees. The 2002 Act opted for the principle of free part-time first degrees and this lead to an immediate reduction in the offer of part-time programmes. Subsequent amendments to the Act have led to the position where tuition fees can be charged to part-time students above the number of part-time study places that the Ministry is able to fund. Overall it appears that there have been sufficient incentives for institutions to provide such programmes.

Interviewees also believe that the targeted project-based funding for lifelong learning (linked to the priorities of the long-term plan) has played an important role in raising the profile of the need for lifelong learning both within institutions and within the general public.

Proportion of graduates in the population

Interviewees see the increased proportion of graduates in the Slovakian population as a reflection of the rapid growth in the higher education system from 1990 onwards and particularly in the period 2001 – 2005 (almost a 50% increase in new full-time and part-time entrants). The first few of these increasing cohorts of graduates would already be evident in the 2006 statistics.

Outward mobility

Interviewees see the increasing number of outwardly mobile Slovak students (for full degrees and parts of degrees) in the period 2002 and 2006 as a function of two factors. Firstly, an increase in participation in European mobility schemes in the pre-

accession period and after joining the EU in 2004. (In 2007 all Slovakian universities were included in the Erasmus program. This opportunity was used by 1697 students in academic year 2007/2008 - an increase of 26%.) Secondly, significant numbers of Slovak students study in the neighbouring Czech Republic where they are eligible for free higher education in Czech language programmes. Slovak students account for 60% of the EU students studying in the Czech Republic.

Diversification of funding

The international statistics show an improvement in Slovakia over the period 2002 to 2006 in the levels of private funding for higher education, in foreign funding of research and development and in business funding for research and development. Interviewees were of the view that there had been improvements in all three areas but in all cases this reflected a low starting point and that Slovakia still had a long way to go to be competitive with other EU member states.

Levels of private funding for higher education probably reflect the growth in private higher education over the period and possibly an increase in the number of part-time students paying tuition fees. The increase in business funding of R&D may reflect new opportunities provided by the change of the legal status and level of financial autonomy of public higher education institutions in 2002 and the policy goal of introducing multi-source funding of higher education. In absolute terms interviewees believe that Slovak business investment in R&D is still low (in 2006 it was below the European average).

In terms of foreign funding of R&D the key explanation on the part of interviewees is the obvious one: access to the EU in 2004 and the increased opportunities this provided for competitive research and development funding. Once again interviewees are cautious about reading too much success into this; as one put it: "Slovakia had the biggest amount of grants from EU in terms of the percentage of successful applications: that was 19% successful projects and in the UK this was just 17%. But 19% in Slovakia means 6 successful projects from 31 prepared, 17% in UK means 850 successful projects from 5000 prepared. So the success in percentage does not reflect the real state."

Other observations on the effects of the reforms

Interviewees pointed to a number of concerns they had about the impact of the reforms described earlier. In this concluding section we indicate a number of the most frequently voiced observations.

In terms of governance reform, a number of interviewees are sceptical about the extent to which the changes introduced by the 2002 Act have led to improved institutional management, decision-making and flexibility. They believe that the loss of legal status for faculties and the consequential centralisation of decision-making and financial management at the institutional level may have led to increased levels of internal bureaucracy and micro-management. The degree of flexibility and responsiveness at a faculty level may have decreased as a result of the concentration of decision-making power in the office of the rector.

The overall growth of the system, the rapid expansion of the private higher education sector and the incentives in the funding formula to admit, retain and graduate as many students as possible have all given rise to concerns about quality and the absence of a quality assurance system that is robust enough for this set of challenges. What is missing in the governance arrangements is the implementation of what is termed “complex accreditation” by the Accreditation Commission. The framework for this was introduced in 2002 but implementation has been seriously delayed. Complex accreditation of the activities of a higher education institution is a process during which the accreditation commission assesses and evaluates teaching, research, development, artistic and other creative activities of higher education institutions, as well as personnel, technical infrastructure, information provision and other conditions in which such activities are carried out. Complex accreditation of the activities of a higher education institution is intended to be undertaken every six years. Without this in place a number of interviewees believe that there is a serious risk of a drop in quality, or of particular programmes (and even institutions) failing to achieve a satisfactory level of quality.

Interviewees also believe that the overall growth in student numbers may be disguising an underlying problem. The largest expansion of students has taken place in study programmes in law, economics, management, informatics and medicine while the technical universities have struggled to maintain their enrolments. Although there is no evidence of significant graduate employment in the 2006 statistics, it is believed that if this trend continues it may lead to unemployment or employment in unsuitable jobs for graduates in the very popular fields of study. The current economic crisis has increased these concerns.

Finally, interviewees are concerned about the overall funding of Slovak higher education. While public funding levels have increased as promised in the developments leading to the 2002 Act, while spending on social support for students has increased significantly and while there have been improvements in the contributions from private sources, business and European funds, many interviewees see a shortage of resources as a structural brake on the levels of performance improvement that can be achieved by governance and funding reforms.

List of interviewees

Slovak Ministry of Education

Doc. Ing. Peter Viest, CSc, department director of funding Universities

PhDr. Z. Škvarková, director development planning

PhDr. M. Páleníková, director of research on Universities

Slovak Ministry of Economy

Mgr. Monika Bartovičová, personal director

Slovak Accreditation Commission

Prof. RNDr. Jozef Masarik, CSc, vce president

Slovak Council for Science

Prof. MUDr. Fedor Čiampor, DrSc, vice president

Slovak Council for Research and Science

Prof. Dr. Štefan Luby, CSc, vice president

Slovak Academy of Science

Prof. Dr. Jaromír Pastorek, DrSc, president

Slovak Association of Universities

Prof. RNDr. Peter Kúš, CSc, vice president

Doc. Ing. Milan Koštial, CSC

Slovak National Students Union

Bc. Karolína Gibalová, member of board

Slovak Confederation of Industry

Mgr. Branislav Masár, executive director for education, research and science

Slovak Confederation of Small & Medium enterprises

RNDr. Jozef Mihál

Governance and Funding Reform in the European Higher Education Area

National system analysis: Slovenia⁶¹

1 Introduction

This report summarizes the changes in governance and funding in the Slovenian higher education system since mid-90s, as well as their impact on the functioning and overall performance of the system.

It is based on existing literature on Slovenian higher education and on extensive documentary analysis, as well as on a set of 20 interviews to decision-makers in Slovenian higher education (names of the interviewed people can be found at the end of this document), who were asked to provide their view on the impact of the reforms on system performance.

The report is divided into 4 main sections. Section 2 presents a summary overview of reforms in Slovenian higher education governance and funding, while section 3 analyses the available indicators on system performance and qualifies them based on in-depth knowledge of the system. Section 4 examines the main impacts of the reforms and the extent to which these have contributed to changes in performance, while section 5 draws a final assessment.

2 Reforms in governance and funding over the last ten years

The Slovenian higher education system has been rapidly growing and continuously changing since the mid 90's. It is marked by transitional problems. Slovenia became an independent state in 1991 and started to build its higher education system on the basis of new strategic directions, legislation, changing relationships between the government and HEIs, changes in the funding system and changes within institutions.

The higher Education Act (HEA) of 1993, which still exists though in a modified way, set up a legal basis for the transformation of the higher education system to meet the needs of modern Slovenian society which has aimed to become a well developed and internationally oriented EU member⁶².

The HEA came into force when Slovenia had only two universities with very special features regarding their internal organisation and relationship with the government. Slovenia inherited universities with a very loose structure where faculties, art academies and schools were legal entities and not the university as a whole (Kump et

⁶¹ Aleksandra Kovač and Hans Vossensteyn, Center for Higher Education Policy Studies, University Twente.

⁶² Slovenia became the member of the EU in 2004.

all. 1998, Zgaga 1996). Universities did not have serious academic power, instruments of strategic planning, cooperation and communication between various faculties. Such disintegration of universities provoked differences in academic standards of higher education institutions, impeded transfers among study programs and reduced rationality of the entire higher education system (Zgaga 1996).

The basic building blocks of the reforms of the higher education system have aimed (Krek, 1995):

- To transform universities into autonomous, modern integrated (self-governed) institutions;
- Establishing next to public also private HEIs to assure competition and plurality in the HE system and to increase access to HE;
- Systematic integration of teaching and research;
- Implement quality control and quality assurance of HE activities;
- Restructuring study programs;
- To develop higher education strategies by a master plan for the sector and
- to change the funding system to assure more accountability for public funds.

There were several, rather incremental changes implemented in the HE legislation. Not all led to serious change of procedures and operation of the system. In the following chronological summary the main highlights of the recent reforms in the system are listed. These reforms will be presented in the next two subsections in more detail.

1. The Higher Education Act (HEA) from 1993 gave academic autonomy to higher education institutions. Universities became legal entities and not their members – faculties and HE colleges. Private, so called free-standing HEIs⁶³ were allowed. The HEA put forward regulations for the governance and funding structure of HEIs and set up the legal basis for QA. The Council for HE was set up as a intermediary and consultative body between the Government and HEIs.
2. Amendments of Higher Education Act in 1999 gave full autonomy to universities giving them ownership over the buildings and full spending freedom. This was to prepare universities for lump sum financing. In addition, access to decision-making was widened to young teachers, assistants and students. Faculties of public universities and private higher education institutions had to set up an academic assembly composed by all faculty staff and a number of students. At least one fifth of the assembly's members should be students. In addition, students have their representatives also in University's and Faculty's senate (one seventh). In 2004 they were also conferred the right to vote in the election for a new Rector.
3. The 2004 amendments of the HEA introduced lump sum funding and Bologna degree structure. Also a quality evaluation system was introduced. At the

⁶³ These type of HEIs are not necessary completely privately funded. They can be also established by the local public institutions like municipalities, but not directly by the state like are for the time being three universities.

institutional level the rectors and deans got responsibility for implementation of the system. At the national level a Public Agency for HE was supposed to manage the national quality system and accreditation from 2005 onwards and to replace the National Education Quality Assessment Commission which proved not very powerful since its establishment in 1997. The QA was implemented only partially, at the institutional level in this period. These changes of the HEA required the Administrative Board of universities to include also representatives of the founder (e.g. government), representatives of academics, support staff and students.

4. The Public Agency was abolished by new amendments of the HEA in 2006. The National Commission for Quality Assurance in Higher Education continued to operate as an independent consultant body up to 2007. In January 2008 the Senate for Evaluation was established at the Council for Higher Education of the Republic in Slovenia to take over QA.
5. Since the beginning of 2008 the administrative and organisational tasks of the Council of the Republic of Slovenia of Higher Education are not part of the Ministry of Education, Science and Technology anymore. The Council now has an independent administrative Secretariat. The Council is now in charge of accreditation, habilitation and evaluation of all post secondary education.
6. Changes of the HEA in 2008 set up the legal basis for establishing international HEIs.
7. In October 2009 changes of the HEA gave again the legal basis for establishment of the National Agency for Quality Assurance in Higher Education which will be responsible for external evaluations and accreditation of study programmes and HEIs. The role of the Council will change and it is expected to become an advisory body in the area of HE development, legislation and strategy.

Reforms in higher education governance

The governance arrangements underwent a number of important reforms since the mid-1990s. A very important feature of the HEA from 1993 is that, since 1994, besides public or state higher education institutions also private and the so-called “free-standing higher education institutions” could be established. Such HEIs can be different types: universities, faculties, art academies and professional colleges. Like public higher education institutions also private institutions are allowed to perform public service. They can be granted a concession for public service by the government decree on the basis of a public tender and consequently they can receive public co-financing. Free-standing HEIs (faculties, art academies and colleges) can also become affiliated members of public universities.

In the period 1994-97 seven of such independent higher education institutions were established (Ministry for Education, Science and Sport, 2001). Another interesting development took place at the two universities in Ljubljana and Maribor, where some large faculties were reorganized into several smaller ones, mostly in the area of engineering and natural sciences. A dynamic development continued in the last

decade. For example, 4 free-standing higher education institutions were established, 2 research institutes and part of the Pedagogical Faculty of the University of Ljubljana merged into a new public university, the University of Primorska in 2003. In 2006, the first private university was established, also on the basis of a previous free-standing higher education institution – the Politehnika Nova Gorica. The University of Nova Gorica provides teaching and research at 5 faculties and 2 university colleges. Finally, the first international university in Slovenia was established in 2008 - The Euro-Mediterranean University (EMUNI University).

Whereas the University of Ljubljana has a relatively stable structure with 23 faculties and 3 Academies, the University of Maribor has been restructuring its own faculties and establishing new ones. For instance, the University of Maribor established a new Faculty of Medicine in 2003 and in 2006 the Faculty of Education was divided into three faculties: the Faculty of Arts, the Faculty of Natural Sciences and Mathematics and the Faculty of Education. In the same year a Faculty of Logistics was established and the Faculty of Criminal Justice and Security became a new member of the University of Maribor⁶⁴. In 2008 the Faculty of Energy was established. All together the University of Maribor now comprises 16 faculties.

Next to the four mentioned universities there are 26 free-standing higher education institutions (mostly faculties and colleges). Some of the dynamics of the growth in the higher education system since 1995 is summarized in Table 1.

⁶⁴ Before that it was a free-standing institution – College of Police and Security Studies and affiliated member of the University of Ljubljana.

Table 1: Overview of the number of higher education institutions in Slovenia

Year	Number of HEIs										
	Public					Private					total
	university			free-standing HEI	total	university	free-standing HEI		total		
	university	HEI as members of universities					faculties	Professional colleges			
		faculties	professional colleges		total						
1995	2	30	4	34	-	2	0	0	4	4	6
2005	3	40	4	44	-	3	0	5	5	10	13
2007	3	45	3	48	-	3	1	9	14	24	27
2009	3	48	1	49	1	4	1	13	13	27	31

Source: Ministry for Higher Education, Science and Technology, 2009.

Curriculum reforms

An interesting characteristic of Slovenian higher education is that it is a binary system only in terms of provision of study programs and not the institutions. Slovenian HE has gone through two major curriculum reforms in the observed time period and both curriculum structures are still in place.

In 1996 the first curriculum reform was completed. This reform divided undergraduate programs into those leading to a professional higher education degree and those leading to a university degree. Professionally oriented programs last three to four years and those leading to academic (university) degrees have a study load of four to six years. On top of this, an additional year of studies (*absolventska leta*) is added in which students are allowed to finalise their studies (to fulfil the remaining academic requirements and prepare their degree dissertation and defence), while keeping the student status with all social benefits. Students were allowed to go to the labour market earlier if they want, but the majority of them use this year completely.

At the graduate level three types of study programmes are offered. The professional degree (*specializacija*) can be obtained after one or two years of study. Academically or scientifically oriented graduate studies last two years and lead to a scientific master degree (*magisterij znanosti*). The PhD degree (*doktorat znanosti*) can be obtained in two ways. Students with a scientific master need to study two additional years to receive the PhD and students with a academically oriented undergraduate

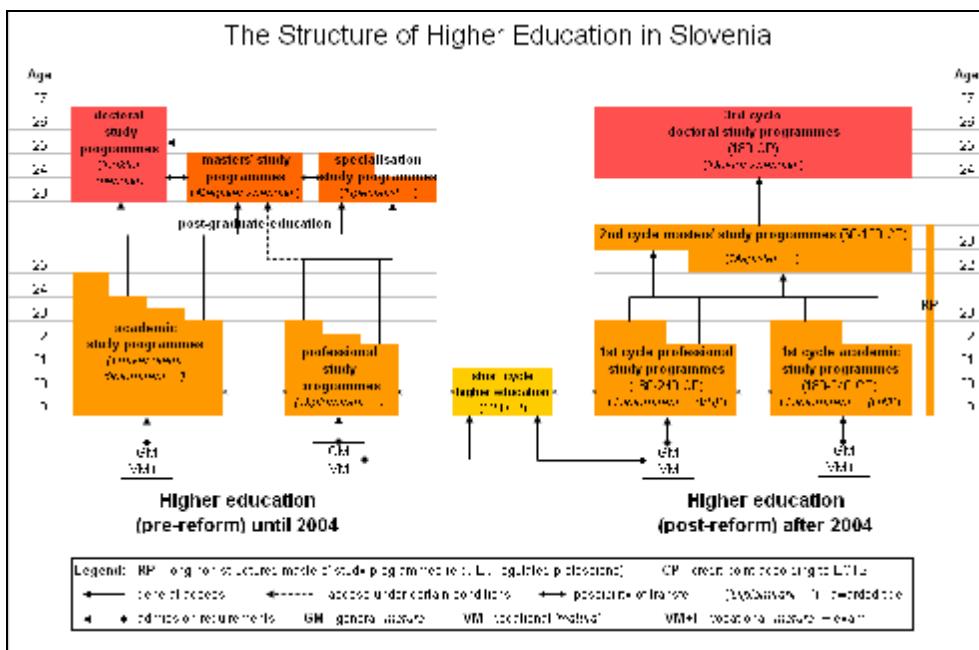
university degree four years. Only students with high marks at the undergraduate level can enrol in PhD programmes.

The academic year 2008/2009 was the last year that it was possible to enrol in this programme structure. Students need to finish their studies in these programmes the latest in the academic year 2015/16. All students that start after 2009/2010 can only study in the new "Bologna programmes".

After discussions for some years, an Amendment to the Higher Education Act in May 2004 set the legal basis for the three-cycle structure of study programmes according to the Bologna guidelines. The duration of study programmes is limited in credit points (CP) in which one CP stands for 25-30 hours of student work and 60 CP represent one academic year.

- The first-cycle has a binary system of academic and professional study programmes (180-240 CP; 3-4 years differing per discipline and study program) leading to the first-cycle degree. (*'diplomirani ... UN'*, *'diplomirani ... VS'*)
- The second-cycle offers masters study programmes (60-120 CP; 1-2 years), leading to *'Magister ...'*. The new *'Magister ...'* differs from the old *'Magister znanosti'* in content and the scientific title awarded after completion. The new *'Magister ...'* is not a first phase of doctoral studies any more but belongs to the pre-doctoral study structure.
- The third-cycle concerns doctoral studies (180 CP; 3 years) leading to *'Doktor znanosti'*.

The new Bologna study programmes have been introduced gradually since the academic year 2005/06. The following picture shows both study programme structures.



Source: Ministry for Higher Education, Science and Technology, 2009⁶⁵

The Bologna-related curriculum reforms were delayed. First, by the preparation of the new Professional and Academic Titles Act (adopted in June 2006) which was related to polemic discussions on awarded titles after finishing study at “old” university programmes and shorter Bologna first cycle programmes. Graduates of both types of programmes were granted the same academic title and this led to conflicting reaction of graduates with degrees of the longer, old university programmes. Second, major discussions arose on the comparison of the ‘pre-reform’ and ‘post-reform’ HE levels as well as on the funding of the second cycle studies. Both issues were finally settled in the 2006 amendment to the Higher Education Act.

Respondents stressed that after the Bologna-driven curriculum reform, the duration of study has been practically prolonged because most students continue after the first cycle and use their right for the additional year (*absolventsko leto*) to complete their education obligations in both cycles. Students also have the right to either repeat one year of study or change study program. This not only increases the duration but also the cost of study.

Reforms in the area of Quality Assurance

Though HEIs have full autonomy to develop their own curriculum in terms of content of courses, teaching and assessment methods, the Council for Higher Education of the Republic of Slovenia approves and accredits all new study programmes. In the

⁶⁵ The figure also shows the *short cycle higher education programmes*. These higher vocational programs are organised in parallel with higher education but are officially not an integral part of higher education. They fall under the jurisdiction of the Ministry for Labour, Family and Social Affairs. The first vocational colleges were established in 1996/97. The programmes are markedly practice-oriented and tightly connected to the world of work. In 2008/09 higher vocational education students represented 14% of all tertiary students. There are ideas to integrate higher vocational education into higher education. Accreditation procedures have been already taken over by the Senate for Accreditation at the Council for Higher Education.

period observed, the Council changed the criteria for accreditation to meet the demanded changes in the HEA and the guidelines of the Bologna process and the Lisbon strategy, stressing international comparability of study to ensure the employability of graduates.

Accreditation of higher education institutions and study programs has a long tradition, but other elements of quality assessment have been implemented rather slowly. QA has been included in the HEA in 1993 already. Though a number of elements were implemented, a well operating quality assurance system with a competent national agency that would meet the ENQA requirements has still not been established.

The awareness of the importance of QA has been expressed in policy documents like the Master plan from 2002 and the latest Resolution on the national programme for HE for the period 2007-2010. However, these developments are more normative than coherent ideas and (financial) plans for the QA system.

In mid-90s HEIs took more concrete initiatives and established the National Commission for Quality Assurance in 1996 as an independent consultative body composed of academics from different disciplines and experts from professional fields. The Commission operated up to 2007 without sufficient financial resources using infrastructure of the University of Ljubljana at the beginning and later at the University of Maribor. The Commission developed criteria for the quality of HE study programs, research and art, assisted HEIs in developing a methodology for self-evaluation, annually collected self-evaluation reports of HEIs, and published a national report. Legally the Commission did not have much power. HEIs were not obliged to follow its decisions. The Commission anyway applied for ENQA membership in 2007 but was refused because it did not meet the criteria in terms of its organization, autonomy, competences and experiences with external evaluation.

HEIs, particularly those of Ljubljana (UL) and Maribor (UM) found it important to take part in international external evaluations and accreditations. On their own initiative they took part in the CRE/EUA institutional evaluations and follow-ups. Some study programmes/institutions⁶⁶ gained accreditation from international professional associations in their respective fields (e.g. EQUIS accreditation of Faculty of Economics of the University of Ljubljana, EAEVE accreditation of Veterinary Faculty of University of Ljubljana, sixteen FEANI courses at the University of Maribor and twenty-nine at the University of Ljubljana) (Lesjak&Marjetič, 2009).

The government formally demanded quality assurance as a pre-condition for financing HEIs by the HEA Amendments in 1999. Systemic care for the quality of teaching and the formation of internal quality commissions that have to organise the self-evaluations became a concern of HEIs. According to the HEA (Amendements

⁶⁶ In Slovenian higher education term "institution" is oft used also for faculties, art academies and university colleges which are integrated part of a univiversity.

from 2004) the rector is responsible for QA at the level of the university and the dean at the faculty's level. HEIs prepare and issue annual self-evaluation reports about the realization of institutional goals, management, curricula, teaching and research. Students' representatives are members of the commission. Self-evaluation reports are publicly available at institutional web-pages. It has also been decided that study programs should become reaccredited every seven years. For this purpose HEIs are obliged to send self-evaluations to the Council of HE.

The amendments of the HEA of 2004 envisaged the establishment of a National Agency for QA by the end of 2005, but the new Government did not implement these reforms. Instead, it proposed another change of the HEA in 2006 with the decision to reorganize the Council for Higher Education. Before this was realized the National Commission for QA continued to work for another year. In 2006, the Commission did 4 pilot external institutional evaluations and another round with 10 external evaluations took place in 2008. HEIs were however not obliged to implement the decisions of the Commission. Because of dissatisfaction with this practice, in 2008 the Senate for Evaluation was established at the Council for Higher Education of the Republic of Slovenia which replaced the National Commission for Quality Assurance in HE. This independent body is competent to run external evaluations, nominate commissions for evaluations of programmes and higher education institutions, collect and analyze self-evaluations reports, publish reports of external evaluations, amongst other tasks. The Senate for Evaluation already applied for membership of ENQA. In January 2009 the Senate for Evaluation announced to conduct 20 external institutional evaluations.

Recently a public discussion on establishing the independent agency for quality assurance has been revived again and led to a new amendment of the HEA which again made a legal basis for establishing new National Agency.

Institutional autonomy in terms of internal governance and management

Institutional autonomy has been increasing since 1995. In late 1990's there were vivid discussions on what the autonomy that is guaranteed by the Constitution of the Republic Slovenia from 1991 to "state universities and state colleges" practically means. In 1998 the Constitutional court provided some explanations and clarifications to the term (Official gazette 18/98, 1166-1176). The legal basis of the institutional autonomy is more precisely defined in the HEA. It appears that it is easier to apply institutional autonomy in the area of academic work (study programmes, research) than in other aspects of governance and (financial) management.

HEIs are legal entities, but their essential governance bodies are determined by the HEA. For universities, the governance bodies are defined at two levels: at the rectorate and at the faculty level (member of the university). Universities are however allowed to add additional governance bodies in their constituent act and statutes.

State universities are required to have the following governance bodies: Rector, Senate, Managerial Board and Student Council. The bodies of the faculties (or free-standing higher education institutions) are: Dean, Senate, Academic Assembly and Student Council. Since the 1999 amendments of the HEA, HEIs are allowed to separate academic and business management functions, to have next to the rector (or dean) also a director of the HEI, but none of the state universities has opted for this option up to now. A director has only been appointed at the private University of Nova Gorica.

Up to the amandements of the HEA in 1999, only full professors were members of the institutional governance body. The amandemends widened access to decision-making processes to all teaching and research staff and to students. The same amandements also required the establishment of a new internal body, i.e. the academic assembly at faculties (members of universities and private HEIs). The academic assembly is composed of all faculty staff and at least one fifth of its members must be student representatives. The assembly elects the Senate of the faculty and prepares proposals for the Dean to its Senate. The amendments of the HEA from 2004 allow students to have their representatives also in the university's and the faculty's senate (one-seventh). These representatives have a right to vote in the election of the rector.

Currently, the rector at state universities is elected by all teaching and research staff and by the student representatives⁶⁷. The academic assembly of the faculty proposes candidates for the Dean to the Senate of the faculty. Then the Senate of the faculty elects one candidate and proposes him/her to the Rector of the university. Finally the Rector appoints the Dean of the faculty. Before 1999 the Rector was elected by the Senate of the university only, and the Dean was elected by the Senate of the faculty only.

The Higher Education Act of 1993 already defined that the Student Council is an organ at both the university level and the faculty level. Within this body, students had the right to vote on the statutes of the HEI, the candidates for becoming Rector and Dean and on students' rights and duties.

Universities are free to decide on how many and which type of (senior) academic staff they want to have. The freedom of determine salaries of academic staff is limited by the Salary system in Public Sector Act, the Collective agreement for non-commercial activities and the Collective agreement for education activities. Salaries are determined by the working place, and academic staff is recruited based on their academic status and habilitation. In addition, efficiency criteria and working conditions, personal competences and additional work undertaken determine the salary.

Academic staff needs a *habilitation* for being involved in teaching. This means that one can be elected on the basis of his or her teaching and research record in the

⁶⁷ This can be different at university which is not established by the government. At the University of Nova Gorica the rector is appointed by the Administrative Board for example.

following titles of higher education teachers: assistant lecturer, lecturer, higher lecturer, assistant professor, associate professor and full professor. The habilitation criteria are adopted by the University Senate after obtaining the opinion of the Council for Higher Education of the Republic of Slovenia. Teaching staff of private HEIs is habilitated by the Senate for Habilitation of the Council for Higher Education. Before 2008 this responsibility was carried out by the Commission for Habilitation of the Council for HE when the restructuring of the Council took place.

Reforms with relation to the Council for Higher Education

The Government of the Republic of Slovenia established a consultative body - the Council for Higher Education of the Republic of Slovenia in 1994. Its primary task was to advise Government in the preparation and adoption of higher education legislation and planning of the development of higher education. It has always had an important role in the accreditation of higher education institutions and study programs. Up to 2004 the Council assessed whether new HEIs and study programmes fulfilled the Criteria for accreditation of HEIs and study programs set by the Council. Without a positive opinion of the Council a HEI or programme could not be established. The accreditation procedures for free-standing HEIs differ as the Council had to agree with the establishment of a programme instead of only having assessing it. A negative assessment implied that the program was not eligible for public funding, and awarded diplomas would not be state approved, but a university could theoretically offer the program. Since the 2004 amendments of the HEA, all study programs need to be accredited by the Council for HE. Within this body a special commission was appointed to carry out these procedures. This special commission was cancelled in 2008 when the Senate for Accreditation was established.

The Council consisted of representatives of universities, free-standing higher institutions and other experts. The work was divided between commissions and working groups for particular fields of study.

After several earlier attempts to extend the Council into a Public Agency for Higher Education its change in status only took place in 2007 (on the basis of the Amendments of the HEA from 2006). The Council is now in charge of accreditation, habilitation and evaluation of the whole tertiary education sector including post-secondary vocational education. The role of the Quality Assessment Commission has been taken over by the Council as well. Its tasks were divided between specialized bodies – Senates for accreditation, habilitation and (external) evaluation. The Senates are autonomous and the Council serves as a superior appeal body. The professional, technical and administrative support for the Council is provided by the Secretariat of the Council. All operations of the Council and its Senates are secured from the state budget. Up to 2008, the Council was a governmental body, it is currently independent.

Some changes were implemented with relation to the Council's composition, the number of members and the working bodies, i.e. the senates of the Council. Members

of the Council are appointed by government from professionals in the field of HE, science and technology, students' representatives and representatives of employers and employees.

Reforms in the funding of higher education institutions

With relation to the funding of higher education, a first landmark was the Amendment of the Higher Education Act in 1999 which gave full autonomy to universities in terms of ownership over the buildings and full spending freedom. These reforms were intended to prepare universities for lump sum financing. The criteria and formula on the basis of which the public budget for Higher Education Institutions are calculated, are determined by Higher Education Act and additional public financing regulations for Higher Education. How the funds are distributed among a university's constituent parts can be determined by the Managerial Board of each University.

In 2004, further amendments in the HEA introduced lump sum funding based on a formula. This meant that the traditional way of funding by normatives and standards (about numbers of teachers, workloads and hours per week) was replaced by funding formula based on numbers of students and graduates. Regular funding is now only intended for fulltime undergraduate studies (first and second cycle). Postgraduate and part-time studies are financed by full-fee charged to students. Public financing does not differ between academic and professional study programmes. Weaknesses of the old funding model were considered:

- Strong state regulation and little institutional managerial freedom
- Non-efficient spending of money
- No performance orientation, flexibility and responsiveness to developments

Lump sum funding was envisaged to provide more flexibility, spending freedom and managerial capacity. In addition, lump sum funding should bring more focus on quality, excellence, transparency, predictability and efficiency in the acquisition and use of resources. To secure a gradual transfer into the new system, the funding mechanism consists of a fixed part and a flexible part. In 2004 the fixed part accounted for 80% of the total budget, which was gradually reduced to 60% in 2009. The flexible part is based on student and graduate numbers according to six different tariff groups ranging from 1.0 to 4.5, implying that the most costly programme would receive 4.5 times as much money in the flexible funding part as the cheapest study programme. The teaching allocations include expenses for:

- education and related research, artistic and professional activities of higher education, teachers and staff and scientific staff,
- libraries, information, and other professional activities, and
- organisational, administrative, and general infrastructural activities.

Though the reasons underlying the funding differences through tariffs are found in cost differences between study programs in different disciplines, the funds allocated

through the formula are mostly meant for teaching staff. Infrastructural investments and research are funded in a separate way. These differences in the flexible funding part could lead to over- and underfunding of study programs in high versus low tariff groups respectively.

Another interesting development can be seen with regard to the freedom to use resources within universities and their constituent parts. Universities and member faculties may only use profits to invest in new buildings or equipment. Member faculties or other constituent parts of universities may have their own bank accounts to deal with their own income other than from public funds (that is to be on the university's bank account). This means that HEIs have enormous flexibility in the use of third party funding. Units are stimulated to be entrepreneurial in finding additional resources. Parts of these additional revenues do not necessarily support further investments in teaching and research as the revenues can be used to appoint research- and teaching assistants, to go to conferences, purchase equipment, but also to increase individual salaries. As the system is rather intransparent and not subject to strict accountability checks, it is unclear what such funds are used for. Respondents indicate however that this mechanism heavily stimulates contract activities. The opportunities for contract activities nevertheless differ substantially between disciplines and faculties.

Postgraduate studies (old scientific master and doctoral studies)

Postgraduate students pay tuition fees set by the HEIs. However the state provides public funding for co-financing of these tuition fees through:

- *Public tender for co-financing of postgraduate studies* that, since 1998, finances around 60% of tuition fee for students whose faculties fulfilled the conditions of the tender (among others tuition fees must not exceed the one set by the state, around €2000 per annum). In academic year 2008/09 around 42% of enrolled postgraduate students received co-financing.
- An additional 16% (2008/09) of postgraduate students receive co-financing through a 'young researchers' financing scheme, which covers full tuition fees, part of the material costs for the research in which the student is involved, and a salary for the young researcher.

Tuition fees and student support

Slovenia has a so-called dual-track tuition system: free higher education for students admitted according to regular criteria (only a small registration fee is charged), and a fee-paying track for students who do not qualify for the state-financed places. In practice, this implies that part-time students are charged a tuition fee.

Most of the costs for students (living costs and tuition fees for part-time studies) are to be paid by the parents and/or the students, who pay for their educational costs through student work. Student work in Slovenia is widely established and regulated by the ministry responsible for labour.

No special reforms took place in the field of student finance. Full-time students who study at public HEIs and private higher education institutions with concession can apply for grants (state social scholarships, merit-based scholarships, and company scholarships) and are entitled to public subsidies for food, housing and public transportation. Less students are entitled to state social grants because of the means-tested measures. Furthermore, business sector scholarships are rather marginal (compared to the socialist times).

Any study abroad that is recognised as part of regular study (ERASMUS) is regarded as study at a national HEI. All rights, linked with the student status in Slovenia remain unchanged. National scholarships are portable.

Students may also apply for scholarships for the whole period of study abroad if a chosen study program is not provided at a Slovenian HEI or when studying abroad is geographically more suitable. In all other cases the candidate has to prove that studying abroad will enhance his/her employability and/or professional expertise.

Funding of research and investment

Higher education institutions obtain funds for research in accordance with the provisions of the Research and Development Activities Act. In December 2003, government established the Slovenian Research Agency. The Agency is an indirect user of the state budget in accordance with the legal provisions in the fields of public finances and public agencies. The Agency carries out the tasks entrusted to it by law, which are in the public interest, with the objective to provide for a permanent, professional and independent decision-making on the selection of research programmes and projects that are financed from the state budget and other financial sources. The Agency also performs professional, development, and executive tasks regarding the implementation of the National Research and Development Programme and of its specific components as well as other tasks for the enhancement of research and development activities.

Financing of research programmes and projects is divided by public tenders. Funds for research and infrastructure projects and research programmes are calculated according to standards set by government.

Funds for investment (building, renovation or purchase of real estate and equipment) and investment maintenance are determined pursuant to:

- The Act on Basic Development Programmes in the Area of Education and Science or the multi-annual investment programme of the HEI to which the minister responsible for higher education and science has consented,
- The annual investment programme of the HEI and additional State budgets.

Research and investment funding did not change much over the past decade.

On-going processes and new reforms envisaged

Respondents are sure that the process of change will continue. The most important change areas are QA, the financing of HE, a new HEA and a new National Program of HE.

QA is an area in which formal changes are again visible in the near future. In fall 2009 the National Assembly will decide on new Amendments of the HEA to finally establish independent National Agency for QA. It has been estimated that this area needs to be further professionalised, with full-time and independent experts. Up to now the Senate for Evaluation of the Council for HE is composed of members from academia who do not perform the tasks professionally. The Senate for Evaluation gets administrative support from the Secretariat of the Council for the time being but this is regarded insufficient for the demands of an increased number of HEIs. The establishment of the National Agency for QA will probably reduce the QA tasks of the Council to a consultative role only in the future.

Also the financing of HEIs is under revision. The introduction of changes is foreseen by 2011. But before that a temporary solution for 2010 will be adopted (Government of the Republic of Slovenia 2008). Opinions have been expressed that the current formula does not ensure an effective use of public funding because a big part of the funding is still fixed and based on historical trends and past costs of study activities rather than on the actual needs and size of the HEIs. No quality criteria are in place yet, which, according to the respondents, could be included in decisions on funding in the future. Some respondents wish for serious changes in the funding system, e.g. to allow longer term planning, but HEI representatives are afraid that bigger changes will bring even less money to the institution than the current funding arrangements.

The Rectors' Conference prepared a law proposal to separate universities from the rest of the HE sector and claim a different status than other public institutions. They wish more autonomy in governance structures, want to step out of the public salary system, be autonomous in the accreditation of study programs, and have universities take part in a well established system of external evaluations by both European organizations (i.e. EUA) and the National Agency for QA which should operate on the basis of ENQA recommendations. The discussion of the law stopped at the point where they should clarify the relationship between the rectorate and member faculties, between rectors and deans, their mutual way of cooperation and competences. From the point of view of some respondents many of these ideas will be further discussed in the preparation of the new HEA.

The Ministry plans to drastically revise the HEA and because the many amendments in recent years made the current HEA intransparent. A special working group is going to work on the new act in the coming year. This group needs to address some important status and legal questions related to the governance and management of universities. As mentioned before, government is very much aware of the necessity to define what the university is, what the faculty is, and possible management

structures (i.e. integrated, centralized). The respondents expect this to be the most difficult negotiating part with a lot of positional and power related interests.

According to the opinion of the respondent from the Ministry, the new HEA will most probably again include issues related to the workload of teaching staff of the HEIs. Nevertheless, HEIs should already be able to manage these issues on their own within the limits of their funding capacities. Some correction needs to be done in definitions of student status and their rights of transition between different study programs and the final year (*absolventsko leto*).

Some changes will be addressed as a response to the experiences with the new Bologna Degree Structure. The results of the implementation of the new degree structure do not completely fit to the idea of employability after the 1st cycle. Some faculties marginalized this goal and planned their study programs in such a way that students after finishing the 1st cycle cannot directly continue with their studies in the 2nd cycle which leads to prolonged study periods.

HEIs addressed demands to the Ministry to completely fund not only the 1st cycle but also the 2nd and even the 3rd cycle. A conceptual decision needs to be taken about what kind of professional and academic knowledge Slovenia needs in each cycle, particularly the 2nd. Some faculties still think that this level should lead to the scientific degree. Also the 3rd cycle needs to be redesigned to guarantee the expected academic achievements. Some faculties find that the time for a PhD is too short which is problematic because it has negative effects on the quality of PhDs.

The HEA will also address many other issues, e.g. lifelong learning, transnational education, postsecondary vocational education to meet the needs of the Slovene higher education system in the European Higher Education Area.

Finally, national strategic goals for HE have always been defined in the Master Plan. After the first Master Plans were adopted by the National Assembly in 2002 and 2007, in 2010 discussions on the new Master Plan for 2011-2015 is foreseen.

3 Performance improvements in Slovenian higher education

The performance of national systems has been measured along the following dimensions and using the uniform international indicators (see technical file for the precise definitions):

- **Access:** enrolment rate and net entry rate.
- **Lifelong learning:** mature enrolments and share of new entries above the age of 25.
- **Graduation:** educational attainment of the population (25-34) and graduation rate.
- **Employability:** relative earnings and relative employment rate.
- **Mobility of students:** students from abroad and students studying in other countries.

- Research output: scientific articles and patents.
- Capacity to attract funds: HERD from private funds and from abroad and contributions from private households.
- Cost effectiveness: expenditures per students (in Euros and PPPS).

Relevant indicators include the absolute value of the indicators, either compared to the average of the countries in the sample or the change in the indicator value between the years 1998, 2002 and 2006. Of course, these indicators provide only a partial view of system performance and, hence, we will comment on them below.

According to these indicators, the Slovenian system improved performance when it comes to:

- a) Research performance (more research outputs in terms of numbers of articles published);
- b) External income generated (more third party funding);
- c) Access to higher education (more students);
- d) More international student mobility.

In the following section is presented the analysis of the improved performances in these dimensions.

4 Effects of the reforms and other explanations of improved performance

Although Slovene higher education went through a period of substantial growth and change, the general conception of the stakeholders is that these developments have partially been initiated by public policies in the area of governance and funding. Using our international performance indicators, in this section effects in the area of student enrolments, international student mobility, research output and capacity to attract external funds are analyzed. Most stakeholders explain the good performances of Slovene higher education in these areas not only as effects of governance and funding reforms, but partly also by other, particularly international factors.

Enrolment and Graduation

Enrolment in higher education has been growing in Slovenia. According to the comparative data used for this project the growth in the period between 2002 and 2006 was of 16%. National statistics show a rapid growth since 1991 up to 2007 after which a slight drop can be noticed due to the decreasing size of new generations entering higher education. Despite this demographic decline the participation rate in tertiary education has increased and reached around 60% of the population. The policy goal is to keep this high rate of participation in tertiary education, in a variety of programmes of higher education and of vocational post-secondary programmes. It is the government's goal to improve the educational level and structure of the labour force to strengthen the international competitiveness of the economy.

Our respondents and policy documents show reasons for the increasing enrolment in higher education up to 2006 in increasing number of higher education institutions and demand for higher education of the young generation. The Slovenian labour market demands a highly educated labour force. In addition, many young people want to continue studying in higher education as a strategy to avoid unemployment. Important is also the shift in cultural and career perceptions of younger generations who have higher educational and career aspirations than previous ones (Zgaga, 1997). Consequently young people massively applied to higher education and created a strong demand for HE, putting pressure on its infrastructure.

The government responded by investing in the higher education infrastructure to satisfy this increased demands for HE. Financial investments in HE have increased. In the last decade, 3 universities (one public and two private) were established in addition to more than 20 small private HEIs. Private HEIs with concession are also entitled to receive public funds to run their study programs. All institutions are allowed to accept full-fee paying part-time students. Though many new private HEIs have been established, more than 90% of the students are still enrolled in public universities with the University of Ljubljana enrolling 61.4% of all Slovenian students. Private, free-standing higher education institutions enrol only 7.4% of all HE students (Statistical Office of the Republic in Slovenia). Most of them are small in size offering a limited number of study programs.

With the increased number of HEIs and student numbers one can also expect an increase in the number of graduates. Data indeed show such an increase: 23% in the period 2002-2006. Respondents indicate that this increase not only stems from the increased student numbers, but also from the selection taking place in popular fields of study like the social sciences and medicine. In such cases, HEIs can select the best students with good learning capacities and motivation who are likely to be the most successful students. In addition, HEIs are more and more aware of the importance of the quality of teaching, particularly those which enrol students with relatively low academic scores in secondary education. They offer additional teaching support to students. Finally, the number of graduates has also become an important element in the funding system and stimulates HEIs to produce more graduates. Some respondents expressed criticism that some HEIs (particularly the youngest ones) therefore reduce their quality standards and award their degrees easier.

International Student Mobility

Mobility is predominantly stimulated by the general trends of internationalization and the development of the European HEA. Together with the Bologna process, mobility is one of the key policy objectives in the Master Plan for HE and other Slovene policy documents. Data show that the number of incoming and outgoing students increased in the 2002-2006 period with 33% and 24% respectively.

The EU mobility programmes are key drivers for student mobility and Slovenia participates in these programmes since 1999. For outgoing mobility (student and teacher) the main EU programmes are ERASMUS (now under the Lifelong Learning

Programme), the Central European Exchange Programme for University Studies (CEEPUS) and bilateral agreements. In Slovenia the National agency for the European Community Programme (CMEPIUS) was established in 2006 to support international programs and mobility. Respondents reported that mobility and internationalization gained in importance and widened in different types of activities after Slovenia joined the EU.

Participation in the ERASMUS programme stimulated the general implementation of the Diploma Supplement in 2000 and gradual implementation of ECTS in all accredited study programmes. Our respondents reported that students in general do not have problems with recognition of their credit points. Next to this, Slovenia was among the first countries who ratified the Lisbon Convention. Since 1999 it focused on the recognition of qualifications and diplomas to reduce obstacles for international mobility.

To support international students mobility, the Slovene Human Resource Development and Scholarship Fund (previously called Ad Futura), have been established to provide scholarships and grants for internationally mobile students and researchers. The fund also manages company scholarships and merit-based scholarships for talented Slovene students which can also be used for studies abroad.

Respondents agreed that HEIs are taking initiatives to increase international mobility and to attract foreign students to assure sufficient student numbers to compensate for the shrinking Slovenian student population in the near future. Institutional bilateral agreements are gaining importance in this respect.

The respondents find it problematic that legislation (HEA) allows only parts of study programmes to be taught in a foreign language (but not the whole). HEIs particularly try to attract particularly students from former Yugoslav republics as cultural and geographic closeness makes mobility easier. The Ministry of Higher Education, Science and Sport indicates that more than 1000 students come from these countries annually with around 700 from Croatia. The Ministry is willing to intensify financial support for these students in the coming years. Nevertheless respondents from HEIs pointed at administrative problems (visas) for attracting non-EU students.

Many stakeholders indicated that Slovene higher education could benefit much more from student mobility if curricula are changed according to the demands of mobility. To solve the problem the UL established a university scholarship fund for up to 60 exchange students based on donations from business in 2007/08. Thirteen schools of the UL offer at least one semester of classes taught in foreign language. They also offer 4 accredited programmes leading to a joint degree with a foreign university and more are in the accreditation process.

Finally, in 2008 the first international university was established in Slovenia: the European Mediterranean University (EMUNI). Amendments in the Higher Education Act, adopted in June 2008, allowed such an international alliance of universities on the basis of a written contract or agreement between at least one

Slovene and one foreign university. The diploma must state that a certain study programme was implemented in the framework of such an alliance.

Research output: scientific articles and patents

Slovenia has remarkably improved its publication of scientific articles. In the 1995-2005 period there was a growth of 138%. The high research output of Slovene higher education has its origins in multiple developments.

First of all, Slovenia has a strong research system consisting of public research institutes next to substantial research performed in the university system. Universities and public research institutes are treated on an equal basis. The research budget is divided about half-half between the two sectors. Research policy fosters publishing and transfer of knowledge. There is a long tradition of stimulating research quality, international comparative data, competition and knowledge transfer. Younger generations of researchers learned how to successfully publish in refereed journals and universities developed efficient internal systems to collect data on publications.

The second reason can be found in the decentralized system of research funding which allocates rather small amounts of money for small projects but on a highly competitive basis. Despite its disadvantages in terms of limited research concentration and focus, this approach highly stimulates research productivity.

Thirdly, in 2004 the Agency for Research of the Republic of Slovenia (ARRS) was established to implement the National Research and Development Programme. Research proposals are reviewed on the basis of international recognised standards including bibliometric analysis, peer review and panel assessment. There is also another independent public agency, the Public Agency for Technology of the Republic of Slovenia (TIA) which promotes technological development and innovation in Slovenia by providing grants and fostering cooperation between R&D institutes, universities and industry (PPPs). They also promote international cooperation projects to develop new technology policies and services to the Slovenian industry.

Fourthly, continuously increasing performance criteria are imposed on academics for PhD obtaining the degree, attaining research projects, and habilitation. One requires a habilitation to get the right to teach at HEIs and to get promoted in the salary system. Strict selection criteria are applied in these procedures, including continuously increasing demands on the number of research outputs. All of this resulted in a highly competitive system with many short term projects and short term employment contracts for researchers.

A fifth major factor is the very open and transparent bibliographic databases (COBISS, SICRIS). Since some 20 years ago these databases make the academic records of all individual academics publicly available.

Sixthly, in 1985 the “Young Researcher Scheme” was introduced. It allows young researchers to enter the (old research) Masters and PhD tracks with regular employment contracts and salary. Around 200-300 new PhD candidates annually start in this scheme that aims at supporting a highly educated labour force to satisfy societal needs. In 2001 also the “Young Researchers for Economy Programme” was introduced to stimulate research cooperation with industry.

Seventhly, Slovene universities (i.e. University of Ljubljana) are ambitious in getting (higher) up in the Shanghai Ranking. Finally, the contributions of business to R&D are increasing. Together with the enormous freedom of professors and university units to decide what these private resources are spent on, academics are very active in attracting research projects from private entities.

Regardless of the remarkably improved research outputs and transparency in the Slovene system, some stakeholders expressed their concerns that researchers strategically focus on publications but do not aim to contribute to the economic development of the country.

Capacity to attract funds

Slovenia's performance on the dimension that measures the capacity to attract external resources may have partially to do with the creation of new higher education institutions, but predominantly is the result of a relatively successful performance in attracting EU-projects (EURECA, Framework etc.) and the opportunities to attract full-fee paying students into part-time study programmes. But the number of part-time students has been decreasing in the last few years due to an increased number of regular study places in new HEIs as well as a gradual decline in the numbers of applicants. The national policy aims to reduce part-time studies for young students and have them enrol in full time programmes. Part-time studies should be reserved for LLL purposes in the future.

HEI respondents point at the need to attract external funds to compensate for insufficient public funds, particularly to invest in research equipment. Science and engineering faculties are particularly involved in projects for business and other external partners, whereas other faculties, e.g. Faculties of Education offer additional courses (i.e. for teachers). The Ministry of Higher Education, Science and Technology indicates that there is a relatively stable funding mix for HEIs with 50%-60% of their budget for full-time study, some 15% to 20% for part-time students and the rest is earned through research funds and business cooperation. The Ministry perceives the HEI's revenues from business to be relatively low in Slovenian HE.

Academics are stimulated to attract external funds, particularly from private sources as they can decide how the revenues should be spent (hiring research assistants, paying conference attendance, and upgrading their own salaries). Also, the Agency for Research of the Republic of Slovenia (ARRS) stimulates projects that attract third party funds by matching funds.

Finally, next to the fees from part-time students, HEIs receive substantial fee-income from the regular master students who have to pay substantial tuition fees. As long as these fees do not exceed a certain level defined by government, public resources (co-financing) will still be available to the HEI.

Other factors of influence

The developments in Slovenian higher education have been influenced by several factors. The most important factor with a strong impact on the national and institutional policies is international development related to the Bologna Process, ERASMUS Programme, EU research projects and other corresponding processes to develop the European Higher Education Area and the European Research Area.

Most changes were introduced either by the government through legislation and funding mechanisms or by the HEIs themselves by responding to international developments. For example, the amendments of the HEA form 2004 completely follow the Bologna agenda with clear definitions on degree structure, including joint degrees, providing a legal basis for developing a system of quality assurance and external evaluation within the National Agency.

The Ministry stressed that the HE legislation does not hamper HEIs to follow international developments. There are no limitations in designing curricula, to participate in joint programs, develop LLL, to take part in international mobility schemes, research cooperation, international accreditations and external evaluations.

Higher education institutions take their own initiative to become internationally recognised and competitive institutions. Particularly universities and research institutions are eager to improve research activities. The University of Ljubljana for example built a clear strategy to get a visible position in international rankings (Shanghai Chart, the Times THE-QS 2007 Rankings). Some HEIs took their own initiative to became externally evaluated and accredited by international organizations (i.e. EUA, EQUIS, FEANI).

On the national level the most important factors of influence are the growth towards mass higher education, needs of the labour market, career aspirations of students, and last but not least the tensions and interests of different powerful actors in the system.

5 Institutional case studies

University of Ljubljana

The analysis of the University of Ljubljana is presented in 5 sections. Section 2 gives some general information about the institution, its size, disciplinary orientation, and its vision and strategy. In sections 3 and 4 the changes in governance and funding are presented. Section 5 explains the improved performances in enrolment and graduation, international student mobility, research productivity and capacity to

attract external funds. The final section outlines the highlights of the reforms in the period observed.

Basic information about the University of Ljubljana

The University of Ljubljana (UL) is the biggest and oldest university in Slovenia established in 1919 on the basis of centuries of educational tradition. The institution has survived three political regimes of three different states. It is a public (state) institution which offers teaching and research in almost all scientific disciplines. Currently the university has 23 faculties and 3 Academies. It enrols more than 60.000 students and has about 4000 higher education teachers. UL is ranked among the 500 best universities in the world according to the Shanghai Chart and the Times THE-QS 2007 Ranking.

It is interesting to see what changes happened in the area of funding and governance at an institution that enrols more than 60% of all Slovenian students and produces around 50% of all national research output.

The UL strives for excellence and quality in all fields of science and arts such as humanities, social sciences, linguistics, arts, medicine, natural sciences and technology throughout basic, applied and developmental research. Research is supposed to be a basis for teaching. The university promotes interdisciplinary and multi-disciplinary study like Biomedicine.

The UL also wants to be open to the national and international environment in terms of sharing achievements in science and arts with other institutions , carrying out scientific research, and cooperate with various economic institutions, national and local authorities as well as other civil institutions. The strategy of UL is focused on 8 main goals⁶⁸:

1. *High quality research and development work* which should be achieved through improvements in staffing policy, research infrastructure, setting up an institute for innovation and development which would serve as a university incubator to facilitate a more direct and efficient transfer of knowledge to those who may use research outcomes. In this respect the UL aims to set up also a University service for technology transfer, i.e. a “patents office”.
2. Introducing *study programmes in line with the Bologna process principles* in order to meet the requirements of developing professions and scientific disciplines, the needs of individuals for intellectual development and a career, as well as the needs of the labour market. Special attention is paid also to formulating joint inter-university programmes.
3. More effort than in the past is put into strengthening and enhancing *international cooperation* through cooperation with excellent comprehensive

⁶⁸ The mission and strategy of the University of Ljubljana are available on the website: http://www.uni-lj.si/en/about_university_of_ljubljana.aspx

universities in Europe in teaching and research. Student, teachers, and researchers exchanges are regarded important as well as offering courses in foreign languages, offshore education and funding foreign students.

4. Growth of *the application of knowledge into practice* is another goal of the UL which should be achieved with more applied knowledge (e.g. including students in working and research environments, educators and researcher in applied research, experts in teaching and research processes, creating an advisory body for business leaders and monitoring the employability of students).
5. Establishing a comprehensive *system to monitor and assure quality* which is integrated in the annual workplan of the university (i.e. self-evaluation, promotion of international accreditation of faculties and their study programmes, student surveys, habilitation procedures, a system of student tutorship and career guidance as well as an office in charge of quality).
6. *Development of supplementary activities* for students to enhance and enrich their studies and student life like sports, cultural and artistic activities, social events, informal education and training on a systematic way with appropriate spatial and financial support.
7. The UL strives to *strengthen mutual cooperation among its members* (faculties, art academies) and other organisational entities for the purpose of achieving excellence and greater international recognition for the entire University. Such cooperation needs to take into account the autonomy, initiative and special features of the members (Faculties).

Changes in the area of governance of the UL

There have been some ideas to divide UL into 3 or 4 smaller units to make it easier to manage, but this has not been realised. Though the institution is very complex due to its size and variety of disciplines (23 faculties and 3 art academies as the members of the university), it managed to become more integrated in the last few years. The university and not individual faculties became the legal entity and the negotiator for the government about public financing. But university members are allowed to have their own accounts to directly receive private and market funds.

The governance structure is defined in the Higher Education Act. The change in the last decade was to extend access to institutional decision-making to younger academics and students who now make up at least one-fifth of each decision-making body of the university and its members. The university has limited possibilities to form its own governance structure which basically is defined by the Higher Education Act.

The rector represents the university and is responsible for academic and business leadership of the UL, though the Statutes of the UL allow the rector to appoint a manager with the power of procuration. In such a case the leadership of the academic work and business management of the University would be separated. The UL has

four vice-rectors responsible for specific areas. They can also replace rector in his absence.

The Senate represents all faculties, academies and students and decides on academic issues. The Senate has several working bodies. These are commissions and working groups which work on specific issues like habilitation, undergraduate studies, PhD studies, master studies, research and development, internationalization. Decision-making is sometime difficult because all issues that have any financial consequences need to be approved also by the Administrative Board, which task is to decide on financial matters. The Board is composed of representatives of the university (teaching, research and administrative staff), the founder (the government), representatives from business and students.

The Student Council represents students of the UL; it discusses and gives the competent bodies of the University its opinion on the University Statutes and on all matters relating to the rights and obligations of students. It also forms its opinion on the candidates for the Rector and elects the members of the bodies of the University, and proposes the candidates for their working bodies from among students.

A similar governance structure is applied at faculties and art academies. The Dean has autonomy in leading and representing the faculty or academy. He or she is responsible for teaching, research and development issues as well as for QA, employment relations, student applications in study and other duties. The faculty or academy has one or more vice-deans responsible for special areas. The administrative part of the institution, both at the level of the rectorate and member institution,n is ruled by the secretaries, whose educational background is usually in law.

The Senate of the members of the University (faculties) is composed of full-time employed HE teachers and student representatives. It decides on academic issues. It has bodies like a commission for study matters and a commission for research.

The Academic Assembly of the Member consists of all teachers, researchers and associates. One fifth of all members are student representatives. The Assembly reviews the reports of the Dean on the work of the Member and prepares proposals and initiatives for the Senate. The Academic Assembly elects the members of the Member's Senate and proposes to the Senate the candidates for the position of Dean.

The UL is an autonomous HEI regarding educational work, scientific and research work. The institution decides independently on its own developmental strategy, rules of institutional organization and operation, devising the study and research programmes. The UL is free to decide on the habilitation and habilitation criteria of the university teachers, researchers and associates. The institution is also free to decide on employment of its own staff.

In recent years the need for change in many activities has been recognized at the UL. First initiatives to integrate the universities started in the late 1990s when the experts of the Council of Europe and external evaluators of CRE (now EUA) pointed

at the problem of disintegrated and highly decentralized structure of the university with its almost independent faculties and academies. The university managed in 1996 to prepare its first institutional mission and 10 years later its first strategy. The previous rector managed to agree with the faculties and academies on distribution of tasks, responsibilities, and funds, though this issue remains the biggest managerial challenge of the institution. The UL anyway managed to implement a big part of its strategy.

Implementation of the QA

The UL started to implement internal QA though actions like the external EUA evaluation and the implementation of student questionnaires to assess HE teachers in late 90's. Since 2000 the university and its members prepare self-evaluation reports annually. At the rectorate the Office for QA was established to support all QA activities in the whole university. Also the member faculties and academies have their own QA committees appointed by the deans. The UL and its members adopted the QA indicators in 2006. On the basis of QA reports they build action plans to improve their internal organisation, teaching, research and other related activities.

The UL took its own initiative for external evaluation and invited CRE/EUA experts in 1996 and 2007. Next to that, some faculties and their study programmes became internationally accredited (e.g. EQUIS accreditation of Faculty of Economics of the University of Ljubljana⁶⁹, EAEVE accreditation of Veterinary Faculty of University of Ljubljana, EAPAA accreditation of Faculty of Administration, and twenty-nine FEANI courses at the University of Ljubljana) (Lesjak&Marjetič, 2009; University of Ljubljana, 2009c). The UL became aware of the importance of the quality and excellence of teaching, research and other activities in order to stay attractive and become more attractive for students, as well as national and international partners in research and development. The international external evaluations and international cooperation in general contributed very much to this awareness.

Curriculum change

In recent years the UL managed to design study programmes according to the requirement of the Bologna Process. The University offers studies at undergraduate and graduate levels. The three cycle degree structure has been implemented in parallel⁷⁰ with the old structure of programmes composed of higher professional programmes, university (Bachelor) and Doctoral programmes. The UL included students in the process of restructuring study programmes, and in few cases they cooperated with employers from business and public services. Those who prepared the programmes warned for insufficient financial resources, teaching capacities, buildings, equipment and capacities for study placement in business and public companies.

69 The Faculty of Economics is also in the proces for AACSB accreditation (Assoc. to Advance Collegiate School of Business)

70 In accademic year 2009/10 is the alst year when students can enroll into the "old" programs. After that year only enrolment in the "Bologna programmes will be possible". This decision has been taken at the national level.

The university managed to design new PhD programmes on a more coherent, systematic way than the 1st and 2nd cycle programmes. Special committees of the Senate were to guide members towards achieving a balanced development of the programmes. They are sure that this approach contributed to the quality of programmes. The UL designed 25 new PhD study programmes, among which are 3 interdisciplinary oriented. These interdisciplinary programmes with a focus on knowledge transfer were designed in cooperation with member institutions and some other research institutions in Slovenia.

Development of the transfer of knowledge of the UL

In the last few years the UL put effort in increasing knowledge applicability and knowledge flow between the university and other organizations in the economic and public sector. For this purpose the university established the Economic Board, The Ljubljana University Incubator, The Innovation Development Institute, the Career Development Centre for students, and the University Service for R&D Intellectual Property (University of Ljubljana, 2009a). Some of these new projects are still developing and challenge university management in terms of work distribution, and the division of competences between the University rectorate and faculties.

A more coherent approach was developed in the area of internationalization, where faculties and academies participate in international student exchange and research cooperation

Recent development in financing of the UL

Lump sum funding was introduced in 2004 which brought more transparency in the system. But the reform has not been fully implemented yet which brings uncertainty to the university planning. The First Decree provided the public funding from 2004 till 2008 and now the university needs to negotiate with the government annually for funding. The funding for 2009 changed so that programmes and not institutions were financed. The programmes are classified according to 6 different tariffs groups across disciplines. Some representatives of the institutions which offer programmes in low paid tariffs are unhappy with the system because differences between tariffs are substantial. The system also did not bring the envisaged flexibility to allow the financing of special tasks of institutions. The funding system stimulates institutions to attract more students and to award more degrees. Some respondents have some hesitation to such initiative because the national QA system does not operate properly yet. They do consider international accreditation of faculties and programmes very beneficiary. They report that employers gradually start to distinguish between the quality of graduates of different schools (faculties) in the HE system.

The University of Ljubljana uses a financial plan by which resources for the University Administration and central tasks are allocated annually. Faculties and academies finance joint tasks. The amount they need to contribute is based on the entire earnings of the faculty/academy and is decided by the Administrative Board.

The financial contribution of the member faculties and academies to the UL for common activities is currently very low. The UL has a symbolic “Reserve fund” to which members contribute 0.22% of the total revenues of the faculty/academy. Next to this the faculty/academy needs to pay 2.5% of the revenues from public teaching funds for the common tasks of the university. For the management and distribution of all other funds the member institutions of the UL enjoy full autonomy. The dean is responsible for the management of both public and all commercial activities of the faculty/academy.

Next to public funds, faculties and academies are allowed to generate income from other funds like research projects, tuition fees and other market and private sources. All respondents agree that public funding is not sufficient to offer good quality and competitive education to students. Faculties and academies cover the cost related to education (i.e. premises, equipment, teaching staff), research equipment and other investments partly from non-public money. For this purpose they try to earn third party money by offering fee-paid programmes, market oriented research, consultancy and similar for profit activities. A strong incentive to earn third party money is also privately oriented.

A senior researcher (leader of a research group) can generate high personal funds (author honorariums) out of market-oriented activities. The Dean decides how much money needs to be paid to the faculty out of these activities. The proportion of third party funds that need to be paid to the faculty/academy varies between faculties from 10% up to 50%. For the rest the project leader can decide on his/her own how the money will be spent (salary increase of the researchers and him/herself, equipment, research assistants or other investments).

In the case of external money earned from publicly funded research, a project leader who is involved in teaching for maximum hours according to the national criteria can increase his/her own salary at maximum for 20%.

The general funding structure of the University of Ljubljana did not change much in recent years. In 2008 73% of the total financial resources came from public funds, 12% from the market, 2% from EU funds and 13% from private funds (University of Ljubljana, 2009a).

Effects of the reforms and other explanations of improved performance

In the following we present the development on some indicators on which Slovenian HE has shown substantial improvement. These indicators are enrolment and graduation, research output, international student mobility and generation of third party funds.

Development in enrolment and graduation

The UL is the biggest institutions in terms of student enrolment. 64% of all university students study at the UL. Since the beginning of 90's the number of students more than doubled. Since 2004 the number of students decreases gradually

due to both the enhance of new HE institutions and demographic developments. According to national statistics, the total number of enrolments at the University of Ljubljana dropped from 63.118 in 2004 to 60.284 in 2008 (Statistical Office of the Republic of Slovenia). Comparing to other HEIs in the system however, UL continues to have highest number of student enrolments in Slovenia.

Particularly at the undergraduate level, the number of graduates grows slower than wished for. But the number of post-graduates grows; particularly the number of PhDs has increased rapidly. About 60% of all PhD defenses in 2008 took place at UL. But UL still needs to improve the transition rates between study years and also to shorten the time to degree in undergraduate programmes. The university introduced a tutor system to offer additional help to academically weaker students in 1st and 2nd cycle programmes. Many initiatives are taken such as more interactive and problem-based teaching and learning methods. Other issues that contribute to long study periods and high drop-out rates are that programmes that are built on the Bologna logic (1st and 2nd cycle) still include old elements like the right of students to repeat one year of study and to use an additional year (*absolventska leta*) at the end of each programme to finalize all study requirements.

Many students stay in HE only to keep social benefits which are entitled to the status of being student and to postpone entrance into the labour market (to avoid unemployment). Most students in the last years of study have already part-time jobs (University of Ljubljana, 2009b).

Growth of international student mobility

UL and its member institutions are very active in international activities, particularly in student exchange. The most important in these respects are student exchanges with 750 European universities within the ERASMUS program. The UL joined the program in 1999 and the number of students in it has been growing continuously, both in terms of outgoing and incoming students. 83 students went to study abroad and only 2 foreign students came to the UL in the academic year 1999/2000, whereas in the academic year 2007/08 there were already 865 outgoing and 402 incoming students. The process of student mobility was very much accelerated in the academic year 2004/05 when Slovenia became member of the EU⁷¹.

UL cooperates also with 25 HEIs in Southern and Eastern Europe and over 100 universities through other bilateral agreements. On the basis of business donations UL established a university scholarship fund in 2007/08 to provide student exchange programmes for up to 60 students staying at the UL for longer period. UL is particularly interested in attracting students from former Yugoslavia because of its geographical proximity and linguistic closeness and similarities. 13 schools of the UL offer this year at least one semester of classes taught in a foreign language. They also

71 Statistics on students mobility are available at the webpage:
http://www.uni-lj.si/files/ULJ/userfiles/ulj/o_univerzi_v_lj/univerza_v_stevilkah/incoming&outgoing.xls

offer 4 accredited programmes leading to the joint degree with a foreign university and new ones are in the accreditation process (University of Ljubljana, 2009a).

Student mobility within EU countries became easier with the entrance of Slovenia into the EU in 2004 and also by the implementation of mechanism for recognition of foreign degrees, ECTS, and Diploma Supplements. Some members of the UL established their own international offices and/or have coordinators (i.e. Erasmus coordinators) (University of Ljubljana, 2009c).

Improvements in research productivity

UL is also the largest research institution in the country and significantly contributes to the whole national research agenda. Over the last 10 years the number of scientific publications increased and ranks as 590th in the world according to the number of quotations or in the top one percent of all the institutions in the world listed by the ISI Web of Science (University of Ljubljana, 2009a). According to the absolute number of quotations the most successful researchers are in the fields of physics, clinical medicine, chemical engineering, material sciences and the sciences of plants and animals. Next to these international publishing achievements, the UL produces over 250 own monographic publications annually which makes the UL the larger publisher in Slovenia (Ibid.).

The UL is involved in international programs (6th and 7th Framework, Structural funds and other international projects, mostly European projects such as EUREKA, COST, Safer Internet Plus, Intelligent Energy for Europe, LIF+, DAPHNE, CULTURE, TEMPUS and many others).

The UL also established the Research Infrastructural Centres Network to provide support for the research and infrastructural groups of the UL, its pedagogical activities and for outside users. The institution improved in knowledge applicability and transferability between the UL members and other organisations in the economic and public sector.

For all these achievements, the UL ranked for the third consecutive year among 500 best universities in the world in the Academic World Ranking of Universities 2008 (the Shanghai Chart). The UL is also listed in the 400-500 group of the worlds best universities by the 2007 Times THE-QS rankings (Ibid.).

All these achievements are the result of the demanding criteria for selecting research programmes and projects at the national Agency for Research of the Republic of Slovenia (ARRS), and of increasingly more selective habilitation criteria at the UL. Suggestions for further research improvement are to focus support on a few top research areas and to define research priority areas. Respondents think that research projects are too fragmented with insufficient interdisciplinary cooperation between different faculties. In addition, researchers and HE teachers are said to suffer from work overload (University of Ljubljana, 2009c). There are still no mechanisms in place to stimulate strategically oriented research at the level of

individual faculties and at the level of the whole UL because research interests vary very much among different research groups and disciplines.

Capacity to attract funds

The changes in financing of the UL have been described in section 4. One of the interesting findings was that academics at member faculties and academies are highly motivated to earn third party money. They are completely autonomous in managing and obtaining their own financial resources through national and international for profit research projects, offering fee-paying programmes, consultancy and other market and commercially oriented activities. They can decide on their own how to spend money generated through these funds. They can substantially increase their own salaries, invest in teaching, research and other infrastructure. They only need to contribute to the university's "reserve fund" with 0.22% of the total revenues of the faculty/academy, and for common tasks of the university with the 2.5% of the public teaching funds they receive.

Final discussion and appraisal

The changes and reforms implemented at the UL were very much related to the Bologna Process and other international developments like the requirements of different international accreditation organizations and rankings.

The UL strives to become a strong international, competitive, and comprehensive university based on high productivity and high quality research output. The institution focuses its attention on international rankings and wants to improve its score among the best 500 universities worldwide in the Shanghai Chart and the Times THE-QS Rankings.

The university not only puts a lot of policy efforts in enhancing international cooperation in the area of research, but also in the area of student exchange. Next to international programmes like ERASMUS, the university, with support of external stakeholders, initiated special funds to attract students from former Yugoslav republics and invested its own resources to offer courses and programmes in foreign languages. However the number of English taught programmes is still very limited.

There are also other indicators that show institutional improvement since the 90's like student enrolment and graduation rates. The UL is the biggest institution with 60% of all students enrolled in Slovenian HE. For the purpose of improving education achievements the institution introduced study programmes in line with the Bologna declaration. Attention has also been paid to QA. Because the national external QA systems does not yet fully function the UL stimulates international accreditation of individual schools and programmes where possible.

Actions were taken to promote knowledge transfer, and to develop cooperation with several external stakeholders. The UL has developed strong capacities to attracting external funding through international and applied research, fee-paying study programs, consultancy and other market-oriented activities.

Though there were several changes in governance and also some in funding that support mentioned improvements at the UL in line with the institutional vision and strategy, the impact of the traditional internal governance structure remains very strong. Member faculties and academies enjoy high autonomy not only in teaching and research, but also financially, particularly concerning third party money.

This means that the inherited governance structure with very powerful faculties and academies remains a big managerial challenge for the institution. So far, no solution has been found to smoothly introduce and manage initiatives at the university level. Mechanisms of mutual cooperation, labour distribution, efficient administration procedures would give UL capacities to use their resources more efficiently and to strengthen its position as an internationally competitive comprehensive university.

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People interviewed

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Prof. Dr. Dušan Mramor, Dean, Faculty of Economics, University of Ljubljana

Aljoš Pertinač, Vice Secretary General, University of Ljubljana

University of Maribor

Introduction

The analysis of the University of Maribor is presented in 5 sections. Section 2 gives some general information about the institution: its size, disciplinary orientation and its vision. Sections 3 and 4 present changes in institutional governance and funding. Section 5 explains the improved performances in enrolment, international student mobility, research productivity and capacity to attract external funds. The final section outlines highlights of the reforms in the period observed.

Basic information about the University of Maribor

The University of Maribor is second biggest university in Slovenia and is one among three public and two private universities in the country. It is a public institution, established by the Republic of Slovenia in 1975. The roots of higher education in this region goes back to the second half of 19th century but the immediate forerunner of the present university was the Association of Higher Education Institutions, which was composed of the first colleges⁷² established in the period between 1959 and 1961. The Association was supposed to meet the industrial needs of the city Maribor.

The predominant goal of the university since the mid 90's has been to grow into a comprehensive institution. It offers study and research opportunities in a variety of disciplines. For the time being, UM has 16 faculties.

In 2008, 23.363 students were enrolled at UM, which is 23.8% of the total student population in Slovenia. The UM offers around 200 undergraduate and graduate study programmes and employs around 1800 staff members.

The vision⁷³ of the UM is to provide the highest quality of undergraduate, postgraduate and professional education. It will remain one of the leading academic institutions in Slovenia, contributing to world-quality research in the arts and sciences. The mission of the UM is to strive for excellence in education, research and artistic expression. It also aims for international cooperation through student and staff mobility, participation in international associations, networks, and projects. At the same time the institution wants to promote and protect the Slovenian language and national identity.

Another intention is to build partnerships with various stakeholders in business and governmental and non-governmental institutions in society. It also strengthens democratic and ethical values, and addresses important issues like ecological, environmental goals and also wishes to contribute to public goods.

⁷² The first colleges were: School of economics and Commerce, Technical College with departments of mechanical engineering, electrical engineering, textile technology, civil engineering and chemistry, College of Agriculture, College of Law and School of Dentistry. A bit latter joint the association also the College of Organizational Studies.

⁷³ The vision and mission of the UM are available on the web page: <http://www.uni-mb.si/povezava.aspx?pid=6183>

The University of Maribor was chosen as a case study because it is the second largest and oldest university in Slovenia and had to go through all governance and funding reforms since the mid-90s.

Changes in the area of governance of the UM

The UM has been exposed to changes and reforms from the national level and international context.

Governance structure

The most important governance bodies are defined by the Higher Education Act (HEA) and have not changed much in the last two decades. Main decision making bodies at the central university level include the rector, the university senate, the administrative board and the student council.

The rector represents the university and leads the institution both in academic and business matters. Though the HEA allows to have a director to manage business issues, the UM has not decided for this option in the last few years. The rector cooperates closely with the vice-rectors who are responsible for different fields, e.g. research and educational development, internationalisation and legal issues. The Secretary General is nominated by the rector after positive opinion about the candidate was reached by University Senate. He or she is the leader of the university administration.

The University Senate is composed of academic staff who represent all academic disciplines of the university, and of student representatives. The Senate decides on academic issues like teaching and research policy, quality assurance, international development, habilitation of academic staff, but its decision making power is limited when decisions have financial consequences. Then the formal decision-making process takes place at the Administrative Board. Both bodies - the Senate and Administrative Board - have special working bodies called commissions which discuss and prepare expert opinions on possible decisions for them. The Administrative Board is composed of representatives of the founder (the government), academic and non-academic staff, students and employers representatives. Members of Administrative Board cannot be rector, vice-rectors, deans and vice-deans.

The Student Council discusses issues related to student rights and obligations, forms opinions on candidates for rector and elects their representatives for decision making bodies at the UM.

A similar governance structure is found at the level of faculties (members of the UM). The Dean is representing and leading the faculty. Together with vice-deans he or she is responsible for teaching, research, QA and other governance and business issues. Also at the faculties, the HEA allows to separate the academic and business management functions but none of the faculties decided to do so. The head of the administrative staff at the faculty is the faculty secretary.

The Senate of the faculty is composed of academic staff and student representatives. Its competency is to discuss and decide on academic issues like education, research, QA, international development, and habilitation. Also at this level the Senate has some commissions which discuss particular issues more in-depth and prepare possible decisions for the Senate.

The Administrative Board decides on financial matters, business cooperation and market-oriented activities. Members of the Board are elected by the Academic assembly, ex-officio members are the dean and the secretary of the faculty.

All faculties are obliged to have an Academic Assembly which elects the members of the Senate, Administrative Board, propose candidates for the Dean and reviews reports of the Dean about the work of the faculty, and discuss developmental programme of the faculty.

The Student Council is to discuss matters related to student issues and to elect their candidates who will represent students in other decision-making bodies of the faculty.

The main changes in terms of governance are related to wider access to decision-making to all teaching and research staff besides full-time professors. In all of these bodies students compose one fifth of the members which has increased their impact on the institutional decision-making. A new decision-making body at the faculties is the Academic Assembly. The composition of the administrative board has changed slightly due to the inclusion of representatives of government.

Like at other public universities in Slovenia, the complicated governance structure leads to long-lasting and costly administrative procedures in which different interests can lead to many tensions particularly between the rectors office and faculties, but also among faculties.

Since the late 90's university management tried to make the internal governance more efficient and to overcome the traditional fragmentation in decision-making and administrative operations. A first attempt was made with the common Development Plan for the period 1998-2003 and with the decision to establish a common fund to which all faculties would contribute for common developmental projects and tasks.

Up to now, the UM has centralised several activities. The unified human resource system and accounting system, as well as one purchase department for the whole university are examples of this. Next to these, the university is owner of its buildings and estates rather than the faculties. The Rector also signs research tenders and many other documents of the faculty. All these changes created additional tensions between central university management (rectorate) and some individual faculties and deans, who perceive current management as highly centralized and inefficient when fast reaction of the faculty is required.

Next to the mentioned mission, vision and the 1998-2003 Development plan the university did not provide much information on mid term-strategic planning at the central or faculty level. They usually prepare plans and reports on an annual basis which are required for the ministry to negotiate and obtain public funds.

Growth of number of institutions, study and research fields

One of the important goals of the UM stated in the Developmental Plan 1998-2003 was to build a strong, comprehensive university, developing a variety of academic disciplines and study opportunities, and to become a strong institution in the national system which would build capacities for strong international cooperation in teaching and research area. In this sense the institution managed to accredit several new faculties and study programmes. The vision is to build a university that acts like Harvard with a tight network of business-like activities around the academic core.

Different from current developments in many western universities where mergers are taking place to improve governance efficiency and quality in teaching and research, the UM decided to use a different approach. The pattern of splitting up faculties in smaller units started in 1995 when the departments of Technical Faculty were divided into new faculties.

The establishment of new institutions brought to the UM new study programmes, disciplines and students but also managerial challenges. The decision-making bodies expanded. The University Senate for example requires representatives of all scientific disciplines. New institutions require also new resources (staff, buildings, equipment etc.). Particularly challenging was the break up in the Faculty of Education which lead to financial problems of the two new faculties, Faculty of Arts and Faculty of Natural Sciences and Mathematics.

Next to these new institutions and their study programmes the university made a big step in restructuring all study programmes according to the requirements of the Bologna Declaration. Faculties find it very important to adjust to international developments and are eager to cooperate with foreign universities.

The international impact is not only visible in curricula but also in research orientation and in student and staff exchange through numerous international programmes. These areas are presented in section 5.

The UM made some first steps in the area of quality assurance in the late 90's. A special commission for QA was established in 1997 at the rectorate of the university. The university also decided to take part in external CRE (EUA) evaluations. The first one took place in 1998 and the second one in 2004. Many faculties went into the process of international accreditation. Faculties and the university do prepare self evaluation reports on an annual basis, and have their own commissions for QA, but the culture of quality of higher education is developing rather slowly.

An important area in which the UM invests a lot is the transfer of knowledge and cooperation with business in the region and in the wider national and international

environment. The UM sees potential in this area to earn important additional financial resources in the future.

Recent development in financing of the UM

Changes at the national level in 1999 and 2004 increased the financial autonomy of universities. They became owners of their estates and other teaching and research infrastructure and got more freedom in managing their own resources. The implementation of a lump-sum funding system changed the financial allocation model.

The UM has been trying to adapt to the lump-sum system though the formula does not allow much flexibility in distributing the public funds between faculties because the most important criteria are the number of students and graduates in different disciplines (tariff groups). The formula determines the amounts of public money faculties are entitled to and makes it difficult to negotiate for a different distribution.

Out of the total lump-sum fund, university management agreed that 4.7% is kept at the university rectorate for funding central activities and facilities an additional 1% of the lump-sum is called „University Fund”. Its allocation is decided by the rector and deans. There is also a small „Rector’s Fund” of 300.000€ on which the rector can decide on his own.

The general financial structure of the UM in 2008 was as follows (UM 2008):

63 %	public money for teaching (lump-sum)
11%	public money for research (Ministry for HE, Science and Technology, Agency for Research of the Republic of Slovenia)
1%	other public money from national and local (municipality) budgets
2%	EU budget (programmes)
17%	Public services (e.g. fees of part-time students)
6%	Market funds
100%	Total

As can be seen from this funding structure, most of the university budget comes from public sources. Most of the resources are transferred to the faculties but the UM uses some resources to run some joint activities at the central level (joint purchasing system, human resources policy and single accounting system).

Respondents agreed that the public funds for teaching are not sufficient for the daily teaching operation. Faculties are therefore required to offer also public services (e.g. fee paid part-time studies). The lump-sum funding does not support or stimulate institutions to develop additional study programmes and specialisations. The central university level is aware that it is not realistic to increase the small proportion of money they can levy from the faculties for central purposes. For this reason, as well as to become less dependent on government, the university decided to put great effort in earning additional funds through market activities and research projects.

The UM develops activities to stimulate knowledge transfer and attract external funds. They take some well established US universities (e.g. Harvard) as examples. The TechnoCenter was established in 2005 as a Technology Transfer Office to offer services to researchers of the UM to transfer research results into products attractive to the business sector, to establish contacts with industry, to do marketing, acquiring research funds and offer services in the establishment of 'spin-off' companies. The office also supports students and companies that need assistance in their research, and in establishing networks with UM researchers and (regional) business.

Another idea of supporting entrepreneurship is the Business Incubator of the UM which has an advising role and offers supportive services to new entrepreneurs. There are also plans to establish the University Maribor Scientific Park. The University Service operates with the purpose of providing a variety of supporting services to the UM like education, promotion, catering and leisure activities. The UM expects visible results of spin-off companies in 10 years time.

Effects of the reforms and other explanations of improved performance

Development of student enrollment at the UM

University of Maribor remained the second biggest university in the country in terms of student enrolment. It enrolls 23.8% of all Slovenian students. The number has been rapidly growing and more than doubled between beginning of the 90's and 2005. Then student numbers started to decrease slightly because of demographic reasons. Another reason was a rapidly decreasing number of part-time students. Most of the part-time students used to belong to the same age cohorts as full-time students who could not enter the full-time study places because of lower academic records. But with decreasing applicant numbers these students now could either get full-time study places or they were attracted by the new HE institutions which have been established in Slovenia in recent years. Many of these new institutions offer studies in the area of management and business administration and have an important impact on enrolment in some programmes and faculties of the UM.

The UM managed to keep the number of full-time students high by establishing some new faculties in the last decade and offering new study programmes in additional academic disciplines (medicine, logistics, criminal and security studies and energy technology).

The growth of graduate students is increasing faster than in undergraduate studies. In the academic year 1997/98 only 417 students were enrolled in master's and PhD programmes, whereas in 2008/2009 there were already 1303 students enrolled (Univerza v Mariboru, 2008). Though the number of graduate students has been growing gradually, it has jumped rapidly in the last few years due to the implementation of the Bologna structure in which the new master's programmes are considered graduate programmes. For the time being students can enrol in both programmes in the old structure and in the new Bologna master's and PhD programmes.

Growth of international student mobility

International activities, particularly student mobility has grown rapidly in the last 10 years. This was also included in the National Plan which is adapted to the Bologna Process and other international developments. Though UM has been participating in the Central Eastern Exchange Programme for University Studies (CEEPUS) since 1995, the UM's membership to the ERASMUS programme (since 1999) has boosted student mobility.

In the ERASMUS programme the number of outgoing students grew from 86 in 1999/2001 to 290 in academic year 2008/09. The most attractive countries have been Germany, Austria, Spain, Portugal and the Netherlands (University of Maribor, 2009a). The large increase of outgoing students is related to improved institutional policy of informing students about student mobility and its benefits. Also the number of incoming students has been growing continuously from 35 students in 2000/2001 to 232 in 2008/2009 (University of Maribor 2009b). The interest to study at the UM has been growing particularly since 2004/05 and 2005/2006 when Slovenia became an EU member state. The UM is particularly a desired institution for students coming from Spain, France, Portugal and Turkey.

Students from the UM which have been involved in the ERASMUS programme help students new groups of (potential) mobile students, both incoming and outgoing. They give advice and information and act as buddies. The student club Erasmus Socrates Network takes care for the incoming students through a system of buddies and the organisation of social activities which build an image of friendly and entertaining social atmosphere at the institution. The UM does not provide study programmes in foreign languages, but instead gives more attention to students through their supervisors.

The UM is actively involved in the Leonardo da Vinci programme, within which it has successfully submitted 6 mobility projects for students and graduates since 2005. Also in this programme the number of participating students increases every year.

Faculties are interested to attract full-time students from former Yugoslavia because of language similarities and geographical closeness. But there are still some financial problems and legal barriers in getting visas for these students. These problems have been solved for students from EU countries.

Already for several years, the UM has an International Relations Office and a special Senate Commission which decides on institutional internationalisation policies. The Commission is chaired by the vice-rector for international cooperation. The responsibility for international cooperation at the faculty level is given to the Erasmus coordinator and an internationalisation commission which is chaired by the vice-dean of international cooperation.

Growth in the research output

The growing number of research publications is a result of national research policies. Particularly the tough criteria for evaluation of researchers and projects by the Slovenian Research Agency stimulated a high competition between researchers. Publication records are also the most important criteria for an individual's promotion and habilitation. These criteria are set by the university and confirmed by the National Council for Higher Education.

The university has special commissions of senates at central and faculty levels to discuss and set up research policies on a yearly basis. The institution and individual researchers learned smart publication strategies (e.g. ISI Web of Knowledge). Gradually, the UM is improving also in terms of the number of patents. Since 2005 the growth in the number of patents is around 37% annually (University of Maribor, 2008).

Another strong incentive to do research is related to financial benefits. Whereas the EU projects have strong regulations on how the money has to be spent, the business and national research projects give more spending freedom. Researchers are motivated to do such projects because they can improve their own salaries from these funds. Particularly researchers in engineering attract a lot of national and international projects.

Capacity to raise external funds

External money is partly coming from part-time students' fees. But in recent years this income stream decreases. Other resources are coming from research projects particularly applied research and market oriented activities like consultancy, business projects with industry, etc. Most of these funds can be kept at faculty level. Only 1% of these external revenues go to the university's central administration (rectorate). People are motivated to do such work because they can improve their salaries. Faculties decide on their own what part of this money is going to be spent for the development of teaching and research (equipment) or for team enhancement and salary increase.

In the future the UM expect a lot of the spin-off and commercial activities offered by the TechnoCenter, Business Incubator and Uni Servis Ltd.

Final discussion and appraisal

Since the mid-90's, the UM has been growing considerably in all respects such as in the number of faculties, study programmes, students, research output, etc. Most changes follow national patterns (change of legislation) or follow international developments. The Bologna process has boosted internationalisation strategies and the wish to become competitively involved in international research projects and study exchanges. It is remarkable that mobility strategies are focused on students from ex-Yugoslavia instead of investing in English taught programmes for a wider audience.

From an organisational perspective, the UM has been trying to build more integrated units in order to enhance the university's efficiency. This seems to be a good and efficient development. Faculties are nevertheless still strong and financially independent. The lump-sum budget did not bring much of a change in terms of developing a strong institutional financial strategy.

This is visible in the tensions within the university. Faculties and central leadership often find themselves in conflicts over appropriate leadership styles, and budgetary decisions. The perception is that the UM is already too centralised. On the other hand, the rector and secretary general are not allowed to be members of the administrative board which is in charge of financial issues. Nevertheless the rector and secretary general are powerful in the development of the institution through a strong central steering towards revenue generating activities. This is probably related to the fact that according to the constitution of the UM, the rector has to be elected out of the academics employed at UM.

The major challenge is to find a better balance in the cooperation and coordination between faculties for implementing common activities. The UM has no coherent strategic plan. It uses only annual plans which are submitted to the ministry for funding purposes.

Finally the UM is a relatively closed system with hardly any foreign academics. In the area of internationalisation the institution is strong but could further develop if some programmes would be taught in foreign languages.

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People interviewed

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Dr. Boštjan Brumen, Secretary General, University of Maribor

Prof. Dr. Samo Fošnarič, Dean, Faculty of Education, University of Maribor

**Prof. Dr. Željko Knez, Dean, Faculty of Chemistry and Chemical Engineering,
University of Maribor**

**Prof. Dr. Igor Tičar, Dean, Faculty of Electrical Engineering and Computer Sciences,
University of Maribor**

6 Final discussion and appraisal

The Slovenian higher education system has displayed substantial growth and significant changes in the observed period, but we cannot talk about deeply grounded reforms. The changes have been rather slow and incremental.

It looks like power and positional interests and a lack of expertise and managerial skills prevented the country to move faster away from old structures and to choose new directions that could lead to a more efficient system. Some changes led into long and polemic discussions (university autonomy, the titles awarded to graduates, the rapid growth of free-standing higher education institutions, the salary system and the implementation of an effective QA system).

HEIs, particularly the traditional comprehensive universities, are struggling with the internal governance structures that are mostly determined by law, though it allows some institutional freedom. Universities could for instance separate between functions of academic and business management, but the state universities do not take decisions into that direction. Decision-making processes remain highly complex and politicised. The tensions between rectorates and faculties are still remarkable, often leading to serious conflicts of interests. A lot of decision-making and administrative work is taking place at both levels. It appears to be a major challenge to make these processes more efficient.

On the positive side, there are developments in the direction of more integrated and coordinated activities of universities. The impact of external evaluations guided universities to develop institutional missions, visions, and strategic directions. They do develop some institution-wide policies like in the area of internationalization, business cooperation and setting up career centres. But such policies show problems in a distribution of competences, labour, and funding between rectorates and faculties.

The new projects and initiatives require more professional administrative, managerial and policy expertise and such skills are often lacking in the strongly politicised system. It appears it would be very helpful for HEIs if newly appointed deans, vice-deans, rectors, vice-rectors as well as other policy makers and administrators receive some training on HE legislation, internationalisation processes, and in managerial skills.

For example, the new lump-sum funding did not bring much change in the behaviour of universities because the inflexible part of the formula is rather large and based on the 2003 situation. Universities have not yet started to allocate funds in different ways and according to internal allocation models that better fit their own profiles. This however, is a practice that can be seen in more countries. It takes some time before institutions start to develop their own internal financial policies and rewarding systems.

And in Slovenia there seem to be problems to understand the funding formula and institutions are limited by national salary systems and options for new study programs.

Universities internally struggle with staffing policies. For example, the promotion of academics through habilitation into higher salary scales is not foreseen in the funding formula. The same goes for other types of rising costs. Some faculties also did not understand the formula and developed several new study programmes with many optional courses which also do not lead to additional public funding. Instead, institutions should keep teaching hours at minimum. Though they are getting aware that students and graduates matter financially, the relative efficiency of programs is important. This situation raises new managerial challenges, particularly now the student cohorts are shrinking, resulting in lower numbers of fee paying part-time students. It now also becomes clear that senior teaching staff is expensive with long term effects due to permanent employment contracts. Gradually institutions will have to adjust to such circumstances. But situations differ substantially between faculties as the discussion on the substantial differences in funding tariffs has shown.

The current system comprises a combination of old and new elements. This is strongly visible in the curriculum structure where both the old and the new Bologna programmes exist in parallel. Regardless off the curricula reforms and modernisations there is no unified 3-cycle structure. One side-effect of the curriculum reforms is that students prolong their studies because in many areas the employability bachelors is marginal which guarantees sufficient numbers of students in the 2nd cycle. Next to that, the Student Union was successful in maintaining the additional old year (*absolventsko leto*) on top of bachelor and master programs.

Slovenia appears to have weak governance capacities in the area of QA. Several incremental changes in legislation and attempts to establish the National QA Agency took place, but were only partially successful. The Agency lacks authority and sufficient numbers of trained experts to carry out the (external) evaluations.

The Council for HE shows similar weaknesses in other areas of operation like in the accreditation of study programmes and HEIs. There are few experts available and administrators are overloaded and often have to do their tasks next to their regular jobs. Though the Council is legally an independent body it somehow struggles with political interests from government and the fact that rectors, who are ex-officio members of the Council, can block decisions.

The power of the three State Universities is further emphasised by the fact that they collectively started designing a new university act on their own.

To conclude, the growth and development of the Slovene higher education system raised the need for professionalization of intermediary bodies of the HE system. Though Slovenian HE is relatively young, it already has achieved some remarkable performance improvements in the period of observation like access, graduation,

international student mobility, research output, and generation of external money. Continuous growth, diversification and international demands still require further changes and improvements in the area of governance and funding.

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Governance and Funding Reform in the European Higher Education Area

National system analysis: Spain (Catalonia)¹

1 Introduction

Universities in Spain have undergone significant changes in the past thirty years, however most of them took place during the years that followed the end of Franco's regime. Hence these changes have been closely related to the political, social and economic transformation experienced by Spain since the establishment of parliamentary democracy, as well as Spain's integration into the European Union and the development of the welfare state.

The Spanish state is divided into autonomous regions. These *Autonomous Communities* have the authority to make political and administrative decisions in certain areas, such as education, health, environment, culture, social services and regional organisation. There are 17 autonomous regions in Spain (and two autonomous cities), with historical roots and national identities of their own such as Catalonia, the Basque Country, Galicia, Castile, Murcia, Extremadura and Madrid. Each autonomous region has its own constitution providing basic institutional regulation through which political competences and structures are specified. These constitutions also regulate the relationship between the autonomous regions and the central state within the framework of the Spanish Constitution. Within the assigned political competences, an autonomous region's political action is the responsibility of its own government, this being regulated by a parliament elected by the region's citizens.

Spain has some very specific features regarding higher education that must be taken into account and understood for the later reforms and changes, such as the following:

- Higher education in Spain consists primarily of university institutions: 'higher education' is basically an equivalent term to 'university education'.
- The "Napoleonic model" of state-based control: (most) academic staff have civil servant status, and study programmes (including the core curriculum) are approved by central authorities for the whole country.
- The system consists primarily of public universities that are financed by autonomous regions with only a small sector of private higher education institutions. Public universities receive around 85 per cent of their budgets from (regional) government subsidies.

¹ Alicia Betts, Associació Catalana d'Universitats Pùbliques (ACUP) and Jon File (CHEPS)

- Policies on student grants and scholarship systems are the responsibility of central government and these systems are under-developed in relation to most European countries.

The (post-Franco) Spanish Constitution of 1978 established freedom of teaching and the autonomy of universities as fundamental rights. The 1983 University Reform Act (LRU) granted universities autonomous status (within a regulatory framework) and transferred major system level governance responsibilities from central to regional government. The major features of the LRU were:

- universities became autonomous entities with the capacity to establish their own programmes and curricula;
- professors were no longer part of a national body and began to 'belong' to each university;
- responsibility for universities was transferred to regional governments;
- institutions began to receive public appropriations as a lump sum, and to have wide ranging capabilities in allocating funds internally (Mora and Vidal, 2005).

In terms of the rapid changes over the past three decades the major developments have been the following:

- Rapid increases in access to higher education (mass higher education) with over 40 per cent of the age cohort now entering university.
- A major expansion in the number of institutions with now over 70 universities enrolling more than 1.5 million students.
- The expansion and diversification of the regulated degree programmes offered and major changes to programme curricula.
- A significant increase in university scientific production in recent years.
- The amount allocated for higher education as a proportion of GDP is within the European average.

Within the university sector, autonomous regions have broad responsibilities for higher education including the creation of public universities and the recognition of private ones; planning and co-ordinating the supply of university study programmes; financing the system of public higher education; and science and technology policies. However, the issuing and standardising of professional and academic degrees; the determination of basic university staff legal regulations (as civil servants); the specification of the internal governance arrangements for public universities; and the general coordination and promotion of scientific and technical research are the responsibility of central government. University autonomy in Spain needs to be understood within this framework.

In 2001 a new University Act (LOU) granted further responsibility to autonomous regions, established a national Quality Assurance agency (ANECA), introduced a national system of habilitation for professors, and increased the representation of

academic staff in internal governance structures in relation to student representatives. In particular the new law made specific changes to the legal structure of higher education including:

- the incorporation of some lay persons (always a minority group) into the running of the university (Social Council);
- election of the rector by direct vote (as opposed to being appointed indirectly by the senate);
- an increase in academic staff representation in the collegial bodies (reducing the former high representation of students);
- the requirement that academic staff obtain national qualifications before being appointed by universities;
- the obligatory post hoc accreditation of study programmes by the new National Agency for Quality Assessment and Accreditation (ANECA) (Mora and Vidal, 2005)

In addition, the LOU gave more independence to the regions to organise their regional higher education system thus allowing regions to create their own legal frameworks (Catalonia is an example of this).

Acknowledging the opportunity provided by the LOU to the autonomous communities, Catalonia passed a specific Act on Catalan higher education in 2003 named LUC. The LUC regulates the important aspects of the Catalan university system such as the academic staff policies, quality assurance policies, social participation, funding, research and the relations between university and the private sector, among others.

Catalonia's university system is made up of 12 universities, 7 of which are public, 1 Open University and 4 private institutions. It is mainly a public system with almost 90 per cent of Catalonia's more than 200,000 university students attending public universities.

2 Reforms in governance and funding over the last ten years

The Spanish higher education system has not undergone any major governance and funding reforms at the system level in the past decade. However there have been a number of important changes.

Freedom to design new curricula

One of the most important developments can be found in the 2007 reform (LOMLOU) of the 2001 University Act (LOU) by which universities now have more freedom in terms of curriculum design as Spain has moved away from the national degrees which had almost identical content (in each field of study).

Role of the Social Council

The 2001 University Act (LOU) introduced the Social Council, a new body in the internal governance structure of universities that represents society.

The three key bodies at the institutional level are the Governing Council, the University Senate and the Social Council. The Governing Council is the “organ of government of the university”. It establishes the programmatic and strategic lines of the university, as well as policies and procedures in the areas of the organisation of teaching, research, economic and human resources and the university budget. Three members of the Social Council who are not members of the university community are also members (Article 15, LOU). The University Senate is the “senior representative organ” of the university community. The Rector presides over it, the General Secretary and the University Manager are members together with a maximum of 300 members elected by academic staff, administrative staff and students respectively (the three ‘sectors’) according to regional laws and university statutes but with at least 51% of the members being “civil servant doctors” of the university.

The Social Council is the “organ of participation of the society in the university”. Its task is the supervision of the economic activities of the university and of the performance of its services, promoting the contribution of the society to the university’s financing, and the relations between the university and its social, economic, professional, and cultural environment. The Council also approves the budget and the plurianual programming of the university, as proposed by the Governing Council. The membership (maximum of 30 members) is regulated by the law of the autonomous region but will be drawn primarily from people from social, labour, economic, professional, and cultural life who are not members of the university community. The Rector, the General Secretary, the University Manager, as well as a professor, a student and a representative of the personnel of administration and services, chosen by the Governing Council from amongst its members will also be members of the Council. The autonomous region will designate the president of the council (Article 14, LOU).

The Social Council (based on the pattern of boards of trustees in other university systems) was established as an external body to represent the wider interests of society in the university. Nevertheless, in Spain in general, the real influence of this body is quite limited, due to a lack of tradition and to an unclear legal definition of its role. The fact that the President is appointed by the regional government makes this position to be often considered as an honour position rather than an executive one. In addition, the position of President is combined other full-time responsibilities often not permitting consistency or true involvement. In the past few years the role of the Social Council has seen a series of incremental changes.

Quality assurance

The Catalan Agency for Quality (hereafter AQU) was constituted in 1996, five years before the national quality agency, with the aim of promoting the improvement of quality in the Catalan university system. It was legally constructed as a consortium which included the Rectors and the Presidents of the Social Councils of the public universities and the Catalan government. Like the national agency (ANECA), it is not an independent body. In succeeding years AQU developed rapidly and has achieved European and international recognition. It is also a founding member of the ENQA and REACU. Under the Catalan University Law of 2003 AQU is considered as the main mechanism for the enhancement and evaluation of quality and was given a new legal status. These changes were necessary to bring the Agency into line with the new responsibilities deriving from the new Spanish Law (LOU, 2001) and to give it the independence and professionalism that characterise the main European quality agencies. It has created three commissions: evaluation of candidates for professional posts, quality evaluation and research evaluation.

It is important to emphasise that Catalonia and its university system has been the pioneer in Spain in the development of policies on evaluation and the improvement of academic and institutional quality. Such policies were introduced at a national level only with the LOU in late 2001 when the national quality and evaluation agency – ANECA – was established.

Over the past 10 years there has been a series of incremental changes. Internal quality evaluation is now a consolidated part of institutional activities as well as the accreditation of professors. On the negative side, it is believed that there is too much bureaucratisation in higher education accountability and quality evaluation and accreditation processes and that this goes against the increase of institutional autonomy promoted by the 2001 Act (LOU) and the 2007 reform (LOMLOU).

Funding Reforms

The financing system of Spanish public universities is based on three main sources:

- Public government subsidies: the autonomous region provides general financing and funding for university investments while the central state provides most grants and scholarships awarded to students.
- Tuition fees paid by students themselves, covering less than 15 per cent of the full cost of university education.
- Funding (public and private) for research activities and other services (knowledge transfer, continuing professional education, contracts and patents). Public funding subsidies cover the largest part, constituting 85 per cent of total university income. The main public subsidies are general subsidies usually based on objective input indicators; subsidies of a specific nature or strategic projects particular to each institution; and finally, subsidies of a competitive nature, primarily in the area of research funding.

Universities also receive public financing for long-term investment plans for infrastructure and equipment.

In 2000, the Catalan parliament urged the Catalan government to adopt a basic financing system, in tune with public, objective and equitable parameters, and to generate complementary financing linked to the specific aims of each university, through a contract-programme negotiated with each institution. In response the Catalan government applied a new model from 2002 to distribute university financing, based on the following structure:

- Fixed funding, equal for all universities, covering the minimum structural expenses necessary for their operation.
- Basic funding, which provides resources for their ordinary academic activity and related operating expenses. Based on common objective parameters.
- Derived funding, for expenses deriving from employment of teaching and research staff.
- Strategic funding linked to quality objectives in relation to university strategy.
- Competitive funding, for certain measures, particularly research, determined by the Ministry of Universities, Research and the Information Society (DURSI) and affecting all universities simultaneously.

The multiyear university investment plan and the financing of university R&D activities, linked to the autonomous government's innovation and research plan, and to other sources of research financing (central government, European Union and private sources) are important additions to this general funding model.

There have also been substantial increases in public resourcing of Catalan universities. The Ministry of Education and Universities, the Ministry of Economy and Finances and the seven public universities of Catalonia signed a new financing plan on October 10th, 2006. According to this agreement, between 2007 and 2010, the public financing of the universities will grow from €523 million in 2003 to €1,032 million in 2010 - a growth in real terms of 56% in 8 years, practically double the 30% target set out in the 2003 Catalan Universities Law. This will provide more funds for research, with the aims of integrating university staff in research programs and securing higher levels of external resources.

Additionally there has been an increase in targeted national funding for increasing teaching quality and for national and international student mobility as well as a rising importance of competitive research grants at regional, national and European levels.

To sum up, the most important developments in the past ten years have been:

- The introduction of a new Universities Act (LOU) in 2001 and its subsequent reform in 2007. Since the 2007 reform institutions have had more freedom in

- terms of curriculum design as Spain has moved away from national degrees which had almost identical content (in each field of study)
- The introduction of a Catalan Universities Act (LUC) in 2003 with the aim to structure the Catalan university system, increase university funding and establish the regulatory framework for contracting teaching staff.
 - The introduction of a national quality assurance system over the past decade and the reorganisation of competences of the regional quality agency (AQU) that was already functioning
 - The introduction of formula funding and with it an increased emphasis on outputs
 - An increase in targeted national funding for increasing teaching quality and for national and international student mobility
 - Rising importance of competitive research grants at regional, national and European levels

3 Performance improvements in Spanish higher education

The main system-level performance improvements in Spain have been improvements in:

- a) the percentage of incoming students (for whole degrees and parts of a degree) from other European countries;
- b) the enrolment of mature students (over 30 years old)
- c) the production of scientific articles (per million of population)

Regarding the improvement in the percentage of incoming students from other European countries the evolution of the Erasmus programme indicates the important progress in the number of European students taking higher education courses in Spain although not all European students coming to study in Spain do so through the programme. Spain has become one of the countries that receive the highest number of Erasmus students and this has been increasing since the late 90s (see Table 1 below). The Autonomous Communities that receive the most students under this programme are Madrid, Andalusia, Catalonia and Castille and Leon.

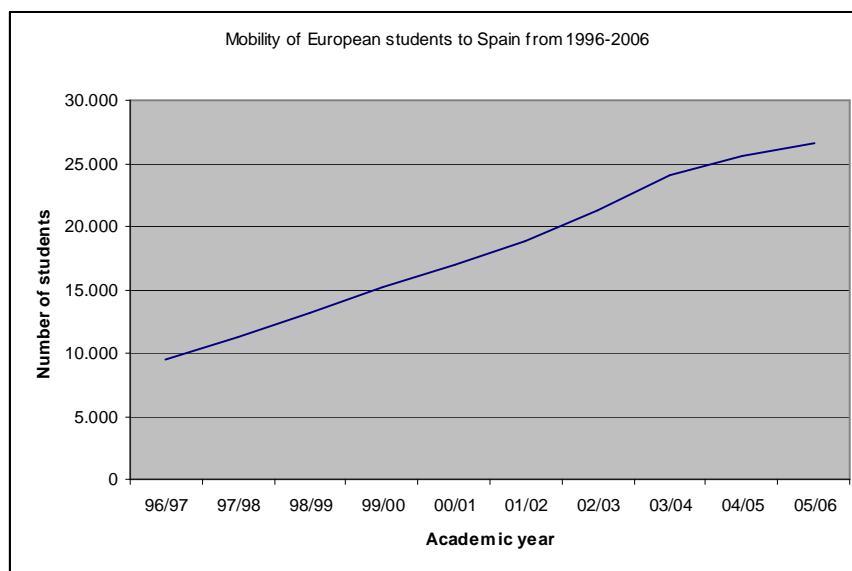


Table 1: Mobility of European students to Spain from 1996-2006

Sources: National Erasmus Agency (see reference)

As for the rise in the enrolment of mature students (over 30 years old) the 2005-2006 report on the Spanish university system by the Ministry of Education² indicates that 35,5% of the students enrolled in graduate studies are over 25 years and out of these 13,5% are over 30 years old. In third cycle programmes 24,2% are over 30 and 14,2% are over 40 years old. The tendency is a rise in the number of students over 25 and 30 years old. The latest figures indicate that in the past ten years the number of students over 30 has doubled.

(This data excludes non-official programmes which would increase the number of students over 30 currently enrolled in Spanish universities).

In terms of the third significant improvement in the Spanish higher education system, the production of scientific articles, the data indicates that the number of scientific articles produced has more than tripled since 1990.

² Ministry of Education and Science report (see reference).

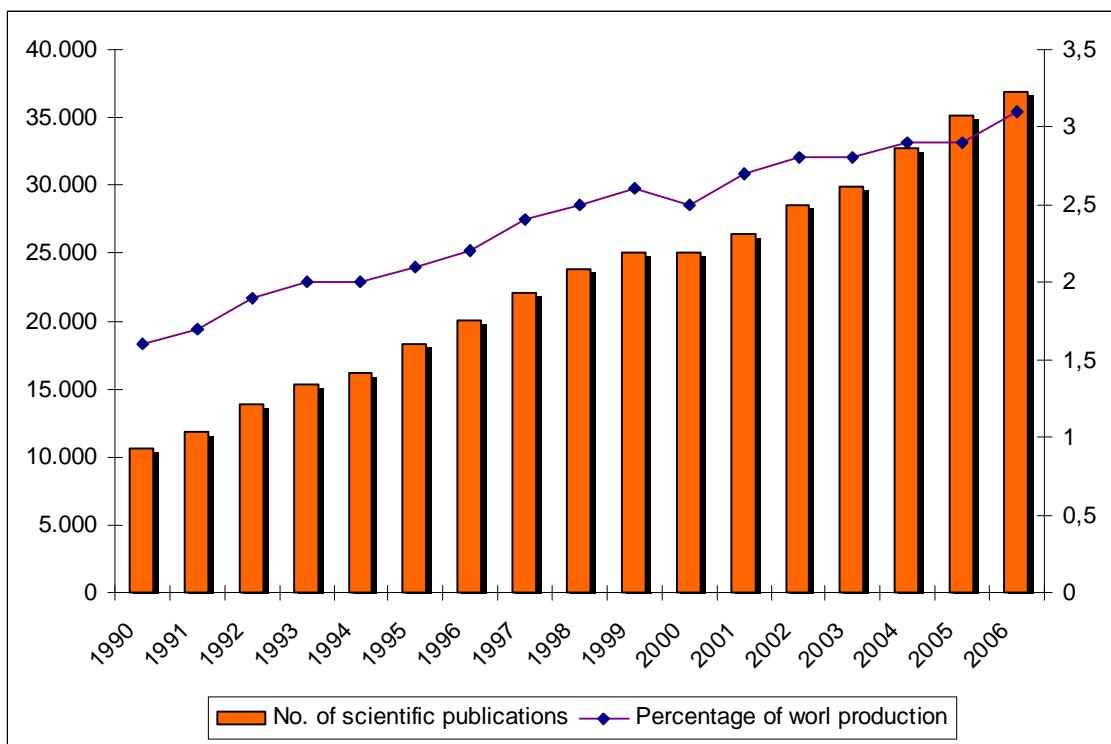


Table 2: Number of Spanish Scientific Publications³

In Catalonia, the research production of scientific articles has increased by nearly 70% in the past decade and now represents 2,5% of the total production of the EU-15. In 2006 the Catalan contribution to the overall scientific production for Spain was over a quarter.

Other areas where Spanish higher education has improved but to a lesser extent are:

- a) the percentage of outgoing students to other European countries (for whole degrees and parts of a degree)
- b) the number of patent applications (per million of population)

4 Effects of the reforms and other explanations of improved performance

Although it is difficult to establish causal relationships between policies and posterior performances, in this section the three major areas of improvement in the Spanish higher education system (see Section 3) will be related to some of the important policy developments.

Enrolment of mature students

It is believed that the improvement regarding entry rates of older students (aged 25-45) and the increase in the number of mature enrolment (students aged 30 +) is

³ Of work carried out in Spanish institutions and published in Science Citation Index (SCI) journals, in which at least one author belongs to the institution. Sources INE (2007) through the EU SCI Search. ISI (CINDOC). Ministry of Science and Innovation (see reference).

related to the labour market's need for higher qualified workers. Spain and specifically Catalonia have responded to this need by providing quality e-learning opportunities through the National Distance University (UNED) and the Catalan Open University (UOC) as well as a wider choice of lifelong learning programmes.

In addition, a demographic change in the Spanish population in the past years which has meant a decrease in the number of students entering university has led institutions to be more proactive in attracting students from non-traditional age groups.

Lastly, according to the annual report by the Ministry of Education this is due to an increase of students who combine studying with work and take longer to finish their degrees.

European students

Spain is the number one destination for students in the Erasmus mobility programme. Increasing the number of incoming European students in Catalan public universities for part or whole degrees appears as an objective of the Catalan regional government and is included as an improvement variable in the formula funding. This financial incentive may partly explain the increasing number of European incoming students to Catalan higher education institutions. Nevertheless it must be noted that there has been an important increase as well in international students (non-Europeans and specifically from Latin America) especially in postgraduate programmes.

Research articles

The improvement in the production and publication of research articles is believed to be related to a number of factors, two of which derive from the above mentioned reforms.

Firstly, the rise in the amount of competitive funding from European, national and regional grants targeted at research as well as the increase in the overall public investment in higher education in Catalonia have provided more resources for research activities. The Catalan government committed itself to an annual increase in resources for research partially as a response to the Lisbon Goals. With this budget increase measures of accountability and efficiency have been introduced.

Secondly, research outputs are used as indicators for objective-based funding mechanisms (such as the ones in place in Catalonia) and other financial incentives. For over two decades professors and researchers have been given financial incentives for their research productivity and research performance is a requirement for promotion to tenured positions. Since 2005 the Catalan government has also rewarded individual researchers for their productivity by providing those that meet the national requirements with an additional financial incentive.

Alternative interpretations of improved performances

Improved performances are not per se the result of reforms in governance and funding. Existing, non-changed arrangements may also ‘explain’ the improved performances. Also other policies or contextual factors can ‘explain’ improved performances. Some of these alternative interpretations to the performance improvements discussed above are presented here.

There has been a cultural change within Spanish academics and in Spanish higher education in general. Recent global events and developments such as the increased ‘interconnectedness’ of societies and economies, the promotion of the European Higher Education Area (EHEA), the continuous involvement of the European Union in the higher education and research sectors, and the notion that research and (higher) education are at the base of successful knowledge economies have all placed universities and their activities in a key position - and as a focus point for many regional and national pressures. Higher education institutions in Catalonia, such as the Autonomous University of Barcelona (UAB) and the Pompeu Fabra Universitat (UPF) have also adopted specific policies and actions to improve strategic institutional performances and increase their overall national and international visibility (see the case studies in Section 6).

Regarding the number of European students enrolling in Spanish universities it is believed that quality of life, the Mediterranean climate, the attraction of learning Spanish, the ‘Barcelona brand’ and other external factors have been major contributors to this improvement. Additionally institutions have been putting particular effort into attracting international and European students and in designing internationalisation strategies which could partially explain this increase also.

The productivity of research has a number of alternative explanations. Firstly, a very important initiative in this direction was the creation of the Research Centres in the year 2000 which are legally and financially independent from universities allowing for greater flexibility and dynamism. They have been very successful in attracting internationally recognised talent and in increasing research output. At the start of 2008, of all the grants awarded to young researchers under the Advanced and Starting Grants programme of the ERC, over 60% of those granted in Spain went to Catalan researchers from universities and research centres.

Another important measure was the creation of the ICREA (Catalan Institute of Research and Advanced Studies) programme. ICREA has enabled the recruitment of more than 222 international level researchers with the aim that they will develop their careers in Catalonia. It has been able to do so with a contract system differentiated from university civil service conditions and with considerable flexibility (recruitment, salary, conditions of service, etc.). The ICREA programme represents a highly innovative new approach in Spanish higher education and science.

International rankings and their emphasis on research productivity have also augmented institutional pressures on research outputs. Finally, but not least, European policies seeking to promote the European Union as an excellent and world competitive knowledge economy together with the open method of coordination have encouraged research productivity.

5 Institutional case studies

Autonomous University of Barcelona

The Universitat Autònoma de Barcelona (UAB) is a public research-oriented comprehensive university born during the last years of Franco's regime (1968). The founders of the university aimed to create an institution based on the four principles of autonomy: freedom to select teaching staff, admission to all students (within its capacity – *numerus clausus*), freedom to create its own study plans and finally freedom to administer the university's resources. These objectives have had to be adapted to different national and regional regulatory frameworks.

The UAB has a strong international orientation, with over 30 per cent of its post-graduate students coming from abroad. In addition, the institution is very active on the international stage by being a member of numerous networks such as the European Consortium of Innovative Universities (ECIU). It participates in a wide range of European higher education programmes (Erasmus Mundus, Tempus, Comenius, etc.) and has recently opened a recruitment and information office in Shanghai. The UAB strives for quality of teaching, learning and research and has a strong social commitment that is present throughout its activities.

The main characteristics of the university are:

Undergraduate students	29,098
Postgraduate and continuing education students	11,044
Foreign students	2,139
PhD dissertations	393
Teaching and research staff (3,004 full-time equivalent)	3,813
Budget (2007)	384.9 million Euro
Administration and services staff	2,166

There have been two major developments in recent times in the UAB:

- the 'new academic career' policy;
- the creation of the UAB Research Park.

The so called ‘new academic career’ policy is a response to the European University Association (EUA) institutional evaluation by which it was detected that a new generation of teaching and research staff will gradually need to take over as the seniors (and founders) of the university retire in the coming years. The initiative was approved by the Governing Council in 2006. The UAB opted to plan and design a strategic system by which this inevitable gradual replacement would take place with the aim to guarantee higher teaching and research quality for the future. The university sought to attract high quality staff to ensure the competitiveness of the institution and to continue fostering excellence and quality which has been a hallmark of UAB in the Spanish higher education system.

The implementation of the ‘new academic career’ has the promotion of doctoral and post-doctoral mobility as one of its main objectives. The rationale is threefold. Firstly to ensure that UAB doctoral and post-doctoral students spend some time abroad or in another Spanish university. Secondly to attract national and international talent for doctoral and post-doctoral positions (there is a specific provision for competitive funding for these positions). Finally it will reduce the tendency to recruit PhD students who have studied at the UAB and permit the university to have a wide range of high profile expert and well connected teaching and research staff to select from.

Four top universities in Spain created the A4 Alliance: UAB, Pompeu Fabra University (UPF - see next case study), Autonomous University of Madrid and Carlos III University.

Among other areas of collaboration these universities have signed a PhD exchange programme for the ‘new academic career’ initiative.

As for the second major development, the creation of the UAB Research Park, the main aim was to foster high profile research activities and a strong link to industry and the private sector. The UAB Science and Technology Park was inaugurated in 2007.

The UAB Science and Technology Park (PRUAB) includes all of the research centres and consortia specifically involved in research on the UAB campuses. They were created with the aim of meeting specific needs in important areas of research. These centres include some that belong to the UAB and others that work in collaboration with other universities and with businesses, as well as with the Spanish Council for Scientific Research (CSIC). Although the centres work as independent units, they maintain strong links with the rest of the UAB network (faculties, department and services), mutually complementing each other in a unique multidisciplinary environment.

In addition to UAB departments and research groups, the Park includes research institutes and centres, business incubators, R&D departments and science and technology services.

The university is comprised of three campuses (Bellaterra, Sabadell and Sant Pau) giving it a distinct character from the rest of the Catalan universities. There are 15

faculties and schools delivering 78 undergraduate degrees, 92 master programmes, 85 PhD programmes and 302 lifelong learning courses. Each faculty is organised in departments which are the smallest units in charge of organising and developing research. They are created according to areas of scientific knowledge and group together the academic staff for the specialist subjects belonging to each of these areas. The UAB also has a series of university institutes that are responsible for providing scientific research or artistic creation and specialist teaching. Some of these institutes belong to the UAB, others are inter-university, and others are simply affiliated to the UAB.

In addition to the above the UAB created in 1994 the School for Postgraduate and Continuous Education, now named Graduate School, with the aim of having one entity to coordinate and manage all postgraduate studies in the UAB. This is a distinct structural feature of the UAB in relation to other Catalan universities and represents a strategic decision to foster postgraduate education.

The university has a complex set of governing bodies including the Senate, the Governing Council, the Governing Team, the Consultative Board, the single member bodies (Rector, Vice-Rectors, Deans, etc.) and the Social Council. These follow the general governance structure of Spanish universities described earlier.

Although the Spanish regulatory framework does give freedom to institutions to organise themselves internally, quite a few of the internal governing structures such as the Governing Council, Senate, Social Council are still regulated (composition, structure, etc.) by the national or regional University Acts. Hence there is little space left for real internal governance autonomy.

Funding and resource allocation

As discussed earlier, public higher education funding is responsibility of the autonomous regions. Since 2002 the Catalan government has used objective-based funding mechanisms with the following structure:

- Fixed funding, equal for all universities, covering the minimum structural expenses necessary for their operation.
- Basic funding, which provides resources for their ordinary academic activity and related operating expenses. Based on common objective parameters.
- Derived funding, for expenses deriving from employment of teaching and research staff.
- Strategic funding linked to quality objectives in relation to university strategy.
- Competitive funding, for certain measures, particularly research, determined by the Ministry of Universities, Research and the Information Society (DURSI) and affecting all universities simultaneously.

The amount of funding based on the achievement of specific objectives makes up around ten per cent of the total budget.

The budget of the UAB increased from over €180 million in 2002 to over €313 million in 2008, mainly due to the commitment of the Catalan government to increase public investment in higher education.

The internal allocation of resources for teaching is based on the amount of teaching units (courses) offered and follows a standard procedure. Internal allocation of resources for research is based mainly on competitive calls. It must be noted that most research funding comes from competitive European, national and regional sources.

The impact of governance and funding reforms on the UAB

It is believed, at an institutional level, that while governance and funding developments in Spain and Catalonia over the past decade have had some effects on the university, institutional planning and strategies are the main reason for improvements in the overall performance of UAB.

As mentioned already, the freedom to create and design new degrees is still too recent to evaluate, although so far the approval process that all new degrees must pass is perceived as too bureaucratic and uniform.

The programme-contracts used in Catalonia for higher education, with some objective based indicators are understood as a positive measure but not enough to make a real effect in performance.

The increased importance of competitive and targeted funding for research activities and teaching quality is seen as a reason for improvement, especially in the production of research, although in conjunction with other external factors.

The three major performance improvements detected at a system level, namely the rise in number of 'mature' enrolment, the number of European students and the increase in publication of research articles, have some institutional explanations.

The rise in number of 'mature' students in the UAB is related to an institutional strategy aiming at attracting postgraduate students for Master degrees, PhD programmes and Lifelong Learning courses. In the case of Lifelong Learning programmes there is, in addition, a financial incentive as the tuition fee is a revenue source for the university.

Internationalisation is an overall objective for the UAB which in turn is strongly linked to promoting the institution as a quality destination for international students in mobility schemes, which, at a graduate level, mainly correspond to the Erasmus mobility programme. In addition, this institutional objective is related to the formula funding indicators mentioned earlier.

With respect to the production of articles, apart from regional and national incentives, the UAB defines itself as a research intensive university seeking research excellence. Although there is no specific research strategy for the overall institution,

there have been minor institutional incentives (prizes) to promote research productivity.

Pompeu Fabra University

The Universitat Pompeu Fabra (UPF) is a relatively small public institution born as a Social Sciences and Humanities university, but which has evolved into a multi-disciplinary institution and now offers programmes in Social Sciences, Humanities, Health and Life Sciences, Communications and Information Technologies. UPF was created by the Catalan regional government in 1990 with the aim to train professionals and citizens who are responsible and committed to civic values, and to contribute towards the development of research.

In the past few years it has been particularly active in implementing the Bologna Process and adapting to the European Higher Education Area (EHEA). It is the Catalan public university with the most degrees adapted to the EHEA and the third in Spain.

Some characterising data of the university⁴:

undergraduate students	8.437
postgraduate (masters and doctorates, official and specific to UPF)	students 2.992
teaching and research staff (812 full-time equivalent)	1.304
undergraduate courses	22
masters (official and specific to UPF)	90
doctoral programmes	9
Administration and services staff (2007-2008)	635
Foreign students (in relation to total UPF students)	6,4 %
PhD dissertations (2007-08)	77
Budget (2009)	€ 131.5 M

The university is committed to following a model based on the following principles:

- An urban university, actively involved in the city's activities and the rehabilitation of historic buildings.

⁴ Data from UPF, academic year 2006-2007, unless otherwise indicated.

- A quality public university.
- Innovative and up-to-date curricula that include work placements for all degree courses.
- Full-time studentship. This is the best way to learn and the shortest route to graduation.
- A personalised study environment for students.
- Internationalisation. Studying abroad and gaining personal and academic experience are high priorities at UPF; more than 2,400 UPF students have spent periods studying at other universities all over the world.
- New technologies. Integrated on-line and virtual teaching and learning methodology, as well as on-line administration processes.
- Quality services and facilities.
- High quality doctoral programmes.
- Lifelong Learning education.

Like the UAB, the Pompeu Fabra University has a strong international dimension. It has an institutional internationalisation strategy and some important accomplishments in this area already:

- 6% of undergraduate students are from abroad
- 33% of official masters' students are from abroad
- Study Abroad Programme: 905 students (2007-2008)
- 32% of graduates have undertaken study periods abroad
- 12% of the teaching staff are from abroad
- 25% research assistants are from abroad
- 40% of teaching staff have studied/worked abroad

The evolution of international students in PhD programmes also indicates that the UPF is becoming more international.

2001/2002	2002/2003	2003/2004	2004/2005	2005/2006
28,67%	35,80%	43,63%	43,90%	47,20%

Table 3: Foreign students taking doctoral courses / the total UPF doctoral students (%).

In the past decade there have been three major developments at UPF: the 'new academic career' policy, increased competitive performance in some specific fields and the high employability rates of graduates.

Firstly, like UAB, UPF also introduced the institutional policy of the 'new academic career' by which PhD graduates must complete their post-doc in another university (national or international). This initiative is complemented with the provision of competitive funding for national or international post-doc scholars and is meant to avoid teaching and research staff from spending their whole careers in one institution. With UAB, the UPF is also part of the A4 Alliance.

Secondly, regarding the competitive performance at an international level in the fields of Economics, ICT (linked to audiovisual communication) and Biosciences the UPF has been particularly successful in winning competitive research funding. In the first call of the ICREA ACADEMIA programme ten high profile researchers were recruited to the UPF (25% of all awards in Catalonia). In addition five Starting Grants (21% of Spain) and 4 Advanced Grants (31% of Spain) went to researchers from the UPF Group⁵. Furthermore the UPF appears second in the ranking on productivity by the Ministry of Science and Innovation (first in ISI articles and publications and third in R&D projects). The number of research projects awarded funding has also increased and for the academic year 2008 a total of over €9 million was awarded from national and European programmes. Another indicator of this success is that more than the 80% of the professors work on research projects.

Finally, one of the principles of UPF is to foster graduate employability and in this area the UPF has seen important results. 57% of UPF graduates finish their degrees in the expected time or one year more (the average in Catalonia is 27%). The graduate employment rate is 92% (among the 2004 cohort). Among this cohort, 68% work in a permanent contract and 60% hold positions related to their studies.

Structure of the university

Despite the fact that the Spanish regulatory framework does give freedom to institutions to organise themselves internally, quite a few of the internal governing structures such as the Governing Council, Senate, Social Council, etc. are still regulated (composition, structure, etc.) by the national or regional University Acts. Therefore the main structure of the Pompeu Fabra University is very similar to the Autonomous University of Barcelona, and the other Spanish higher education institutions.

Probably the most distinct feature of the Pompeu Fabra University is the role of the departments. The university opted for a strategic internal organisation by having few departments and giving them a prominent role in teaching and research. Each department provides teaching units to more than one faculty. This structure and the size of the institution permit the Governing Team to holds periodical meetings with deans and heads of departments that enable them to participate in institutional policies and strategies.

Funding and resource allocation

UPB is funded through the same regional government funding mechanisms as UAB. The annual budget has increased from €52 million in 2000 to over €131 million in 2009 once again mainly as a result of increasing levels of public expenditure on higher education in Catalonia.

⁵ The UPF Group includes the university, its faculties and departments, as well as the Research Centres and Parks linked to the university.

The internal allocation of resources for teaching is based on the amount of teaching units (courses) offered and follows a standard procedure. Internal allocation of resources for research is based mainly on competitive calls. It must be noted that research activities receive most of their funding from European, national and regional sources.

The impact of governance and funding reforms on the UPF

The main developments or changes at the system level as outlined earlier and an increased focus on funding, curricula and quality issues have influenced the UPF. Nevertheless UPB's perception is that these changes at a system level are just a small part of the reason behind institutional performance improvements. It is believed that the institutions, whether individually or as part of the Catalan Association of Public Universities (ACUP), are the major factors responsible for the improvements.

The increase in overall funding for universities, the targeted funding for the improvement of research and teaching quality and the increased importance of European, national and regional competitive funding grants, are seen as important elements behind the rise in research production of the UPF. The creation of the Research Centres is also regarded as an important step forward for Catalan research productivity and excellence.

The establishment and consolidation of the national (ANECA) and regional (AQU) quality evaluation and accreditation agencies has introduced a quality culture internally in the institution. Quality evaluation mechanisms form part of the strategic planning and a specific unit (Studies, Planning and Evaluation Unit) was created to administer and implement the internal quality evaluation policies.

Like at UAB, Pompeu Fabra University welcomed the opportunity to create and design its own degrees. However this freedom has come with a heavily bureaucratic process by which new degrees have to be approved (ex-ante accreditation by the ANECA) and a rigid application procedure that fosters uniformity has reduced the level of freedom expected.

Regarding the three major performance improvements detected at a system level, there are also some institutional explanations for them.

Firstly, it is believed that the national improvement in the enrolment of mature students does not correspond to UPF case regarding graduate and master courses. The institutional objective is to have full-time students entering directly from secondary school. Nevertheless, the offer of Lifelong Learning education by the UPF could contribute to the overall performance indicator.

Secondly, as at UAB, internationalisation in the last years has become a strategic institutional aim, strongly related to UPF's strive for excellence and to appear in the international rankings. In addition to the regional objective that appears in the

funding formula designed by the regional government, UPF is actively promoting student international mobility.

Finally, the university was born as a Social Science higher education institution and a few years later introduced Life and Health Sciences and Information Technologies. This is perceived as an investment towards research productivity and prestige.

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Ministry of Innovation and Science : www.micinn.es

Spanish Rectors' Conference : www.crue.org

University Acts:

LOMLOU (2007)

LOU (2001)

LRU (1983)

LUC (2003)

List of people interviewed

Màrius Rubiralta	Secretary General for Universities, Ministry of Education
Federico Gutiérrez-Solana	President Rectors' Conference (CRUE)
Joan Roca	Director General for Research, DIUE
Josep Ribas	Director General for Universities of the DIUE
Josep M. Vilalta	Executive Secretary of the Catalan Association of Public Universities (ACUP)
Javier Barà	President of the regional quality agency of Catalonia (AQU)
Joaquim Coelho	Representative of the Business sector and President of the Social Council of the University of Barcelona
Maria José Saura	Trade Union Representative
Oriol Arcas	Representative of the AEP student union
Guillem Prat	Representative of the AJEC student union
José Ginés-Mora	Professor of Higher Education, Institute of Education, University of London

Autonomous University of Barcelona

Maria Rosa Pujol	Dean of the Faculty of Education
Jordi Bartrolí	Dean of the Faculty of Sciences
Silvia Piqueras	Former Strategic Planner
Gustau Folch	Former Financial Manager
Joan Subirats	Representative of the Government Council
Santiago Guerrero	Head of Financial issues

Pompeu Fabra University

Albert Carreras	Faculty of Economics Dean
Jordi Pérez	Faculty of Health and Life Sciences Dean
Francesc Abad	Head of Studies, Planning and Evaluation Unit
Pere Torra	Vice-Manager for Teaching
Daniel Serra	Vice-rector for Economy, Information Resources and Institutional Relations

Governance and Funding Reform in the European Higher Education Area

National system analysis of Sweden⁷⁹

1 Introduction

This report summarizes the main changes and reforms concerning governance and funding in the Swedish higher education system from 1995 to 2008, as well as their impact on the functioning and overall performance of the system.

The report is based on recent literature on Swedish higher education, document analysis of recent higher education policies, questionnaire data obtained from a national expert on Swedish higher education, data on higher education system performance in Sweden compiled by CHEPS, and interviews with decision makers and leading higher education researchers in Sweden, who were asked to provide their view on the impact of governance and funding reforms on system performance. The report also contains two institutional case studies – Uppsala University and the University of Gothenburg. The purpose of the case studies was to gain a more in-depth analysis of the impact of governance and funding reforms, institutional governance and funding arrangements and link between reforms and performance at institutional level.

The report is divided into six sections. Section 2 provides background information about the Swedish higher education system, and section 3 provides an overview of reforms and changes concerning governance and funding in the Swedish higher education system from 1995 to 2008. Section 4 provides an analysis of the available indicators and other relevant sources of information on system performance, particularly focusing on the areas where there is an improved performance in the Swedish higher education system. Section 5 examines the main impact of the reforms and the extent to which these have contributed to the observed changes in performance. Section 6 presents the two Swedish case studies, whilst the final section 7 provides a summary and discussion of the findings.

2 Governance and funding in the Swedish higher education system

Background information and key data on the Swedish higher education system

The Swedish higher education system currently consists of more than 50 higher education institutions; 36 of them are government-funded institutions. Of the government-funded institutions, there are 14 universities, 15 university colleges and

⁷⁹ Report has been written by Taran Thune with assistance from Bjørn Stensaker and Elisabeth Hovdhaugen, all at NIFU STEP – The Norwegian Institute for Innovation, Research and Education www.nifustep.no

7 independent colleges of fine, applied or performing arts. There are three private universities or colleges (Chalmers University of Technology, Stockholm School of Economics and University college of Jönköping) and several smaller private higher education institutions entitled to award specific first level degrees (Högskoleverket 2008).

The higher education system is unitary, and includes academic, professional and vocational programmes, but in terms of age, size, programmes offered and research intensity the institutions of higher education are very varied. The ten largest higher education institutions enrol more than $\frac{3}{4}$ of the total student population. In 2007, Sweden implemented the three-cycle structure as an adaptation to the Bologna process, and higher education is divided in three levels: bachelor, master and doctoral level.

In 2007, 322,000 individuals were registered in first and second level programmes. Participation in higher education has increased dramatically over the last 60 years, but declined slightly between 2003 and 2007. Participation is now increasing slightly again, mainly in the 19-22 age group. Initial participation in higher education is high as 44 percent of a given age cohort have begun studies in higher education by the age of 25. 60 percent of students in first and second level programmes are women. In 2007 there was approximately 17 000 active doctoral students, but the number of entrants to third level programmes has been declining by 25 percent since 2003 (Högskoleverket 2008).

All institutions of higher education receive some permanent resources for research and have a research mandate, but only the universities as well as five university colleges provide doctoral level training (the colleges and "new" universities only provide third level programmes in certain areas). In 2007, total revenues for research and third level programmes amounted to 25 billion SEK in 2007 and 82 percent of revenues for research came from the public purse – albeit more than half of public funding for research is distributed on competitive basis. The ten largest higher education institutions carried out more than 90 percent of research activities in the sector in 2007.

Governance and funding of Swedish higher education

The public higher education institutions in Sweden are formally government agencies under the jurisdiction of the government and parliament (Riksdag). They are therefore subject to general rules and regulations that apply to all governmental agencies, but there is also a special regulatory framework for higher education, laid down in the 1993 Higher Education Act and Higher Education Ordinance. The private higher education institutions are only bound by the first chapter of the Higher Education Act, and there are separate laws and regulations for the private institutions. Private institutions have to comply with general quality requirements to retain the entitlement to award degrees and to receive public funding for courses and programmes (Högskoleverket 2006).

At national level, the responsibility for higher education and research is divided between several ministries and several state agencies. As compared to other countries, the ministries in Sweden are fairly small and state agencies carry out many of the tasks that ministries do in other countries. The Ministry of Education and Science has the overall responsibility, but there are four state agencies that also have responsibility for higher education: The National Agency for Higher Education (Högskoleverket), the National Admissions Office for Higher Education (VHS), the National Board of Student Aid (CSN) and the Swedish Agency for Networks and Cooperation in Higher Education (NSHU) (Deen 2007, Högskoleverket 2006). The National Agency for Higher Education is the central agency for higher education in Sweden and is responsible for quality assurance, accreditation, recognition of international qualifications and providing analysis and statistics concerning higher education in Sweden. The International Programme Office and the Swedish Agency of Advanced Vocational Education are other state agencies with relevance for higher education, and there is currently four public research funding bodies (the Swedish Research Council, Swedish Research Council for Working Life and Social Research, the Swedish Research Council for Environment, Agricultural Science and Spatial Planning and the Swedish Agency for Innovation Systems).

The operational expenditure of higher education totaled 47 billion SEK in 2007 or 1.53 percent of Sweden's GDP (Högskoleverket 2008). Higher education is mainly publicly funded as 88 percent of revenues to higher education come from the public purse. 65 percent of revenues come from direct government funding to the institutions. Direct government funding takes the form of state grants distributed on a triannual basis, and allocations are based on per capita amounts per student (full time equivalents) and full-time performance for the different disciplines. Private funding has been around 11-12 percent in recent years. Tuition fees for individual students are currently not permitted. Direct governmental allocations for research and third level programmes presently contain a performance-related component, where 10 percent of direct government allocations are distributed based on performance criteria.

Institutional governance in Swedish higher education

The Swedish higher education system is quite decentralized in the sense that the Swedish higher education institutions are responsible for much of the decision-making, especially concerning day-to-day operations of the institutions. The system of governance implemented in the mid-1990s is based on steering by objectives and monitoring of results, where the government puts down the overall objectives and where the institutions have the responsibility for ensuring that activities are carried out in the best possible manner (Högskoleverket 2006) and to report results back to the governmental agencies. Institutions are responsible for the following issues:

- Organization of the higher education institution into units, divisions, decision-making bodies
- Organization, structure and content of studies and programmes

- Programmes to be offered, admission criteria and number of places in each course
- Research focus and methodologies
- Internal resource allocation
- Staffing and salaries
- Annual budgets
- The award of degrees to students
- Premises and equipment

At the institutional level, the governing board is the highest decision making body. The external members of the governing board are appointed by the Government, and represent the majority of the board representatives. The vice chancellor is responsible for the management of the institution. The higher education institutions have the right to determine their own governance structures, budgets and internal resource allocation (Högskoleverket 2006).

3 Reforms in governance and funding since the mid 1990s

In Europe, Sweden can be seen as an “early adopter” of governance and funding reforms, that has since swept European countries. Reform elements such as decentralization, management by objectives, quality assurance, accountability and performance based funding were implemented in the early 1990s and represented a complete overhaul of the governance and funding system (Edwall 2007). Since then, several “minor” reforms of governance and funding have been implemented. These changes represent further extensions of the system implemented in 1993, but no radical overhaul of the system. However, in 2007 a new initiative for reforming governance and funding of higher education started, with a renewed focus on increasing the autonomy of higher education institutions. Below, the major and minor changes in governance and funding in Swedish higher education since the early 1990s will be briefly described.

Reforms during the 1990s

In 1993 a reform of higher education (referred to as the “freedom for quality reform”) implemented by the non-socialist coalition government represented a fundamental change in the governance and funding of higher education in Sweden. And the basic governance and funding arrangements that exists in Swedish higher education today (described above) was implemented in the 1993 to 1995 period. The new model of governance as regulated by the 1993 Higher Education Act and Higher Education Ordinance represented a radical decentralization of authority from state to institutional level, management by objectives, increased focus on reporting on results and evaluation of quality, and performance-based funding of higher education (Deen 2007, Vetenskapsrådet 2008). The basic governance and funding arrangements (as described above) was implemented as a result of this reform, and represented a clear break with the past when higher education in Sweden was tightly state controlled.

In 1995 governance of higher education at the national level changed as a result of the establishment of the new National Agency for Higher Education, and with it the implementation of a national system of quality assurance.

In 1997, a law amendment to the Higher Education Act determines that higher education institutions are by law obligated to interact with their surroundings and to transfer knowledge to external constituents. Increasing focus on industrial and social relevance of research (Vetenskapsrådet 2008) was stressed in allocations for research. Also in 1997, several changes were made in process of determining the state budget. These changes implied more detailed result-specification and follow-up, also allowing all higher education institutions to be granted funding for research. Also in 1997, the government created a new definition of "university". Three institutions are given the title University in 1997 and three colleges are made universities in 1999 (Vetenskapsrådet 2008).

In 1998, several law amendments were made to the Higher Education Act concerning the composition of higher education institutions' boards of governors. Amongst other things, it was decided that the vice-chancellor should not be the chairperson of the board (Vetenskapsrådet 2008). This decision was however revoked in 2007.

In 1999, new rules for employment, recruitment and promotion of academic staff were introduced, with increasing focus on pedagogical qualifications in addition to academic merit. The government could no longer determine staffing issues in higher education and the particular "security of employment" for university professors are removed. University Colleges no longer need permission to hire professors (Vetenskapsrådet 2008).

Reforms from 2000 to 2008

In 2000/2001 the government put focus on improving the coordination of research policy and research funding. Four new funding bodies for research were established (as described above)

In 2002, increasing focus on strategic management and the strategic role Boards of Governance are expected to play

In 2007, law amendments to the Higher Education Act concerning the composition of Boards of Governance are made. Higher education institutions are given the responsibility to decide upon the size and composition of the board. The government no longer appoints the majority of the board members. Moreover, in 2007, Sweden implemented the three-cycle structure (bachelor, master and doctoral levels) and a new higher education credit system, in accordance with the Bologna process. Also in 2007, the national quality assurance system was modified. A revised and "simplified" model of quality assurance was implemented in line with the European Standards and Guidelines for Quality Assurance - adopted as part of the Bologna process.

Ongoing processes and new reforms envisaged

In 2007 a process of inquiry began to investigate further development in governance of higher education, further extending the autonomy of public higher education institutions in Sweden. The governmental report “Inquiry of independent seats of learning” (SOU 2008:104) proposed that all public HEIs shall be transformed from state organizations to autonomous organizations with a special public law status. This will entail that the institutions can engage in activities they presently are not permitted to, such as receiving donations, own properties, set up enterprises and cooperate with other public and private institutions. Staff will no longer be governmental employees and the reform envisages an “energetic” and strategic role for the institutional leadership as the institutions themselves will decide upon their own strategic programme and academic profile. Public funding will continue, but funding will gradually be based on multi-annual contracts. The new model will probably replace the existing Higher Education Act in 2011, but the informants are still quite skeptical as to whether this reform will become implemented in the proposed form.

In 2009, a new system for state funding of research has been implemented, gradually introducing performance-based funding for research. In 2009, 10 percent of new state funds for research is allocated based on quality indicators. Quality will be measured by means of two criteria – bibliometric statistics (publications/references to publications) and level of external research funds (<http://www.sweden.gov.se/sb/d/10086/a/114033>). Several of the informants are highly critical to this system in its present form. According to our informants, the government is also currently working on a reform of the funding system for higher education with the aim to further strengthen the quality of higher education.

This system will further strengthen the tie between the quality and performance of the institutions and the funding system.

4 Performance improvements in Swedish higher education

In the governance and funding reform project, the performance of national systems has been measured based on the following indicators:

- Access: enrolment rate and net entry rate.
- Lifelong learning: mature enrolments and share of new entries above 25.
- Graduation: educational attainment of the population (25-34) and graduation rate.
- Employability: relative earnings and relative employment rate.
- Mobility of students: students from abroad and students studying in other countries.
- Research output: scientific articles and patents.
- Capacity to attract funds: HERD from private funds and from abroad and contributions from private households.

- Cost effectiveness: expenditures per students (in Euros and PPPS).

According to the database compiled from international datasets, Sweden show improved performance in the 2002 to 2006 period on three of the dimensions selected for the study: Access, graduation rate, student mobility and capacity to attract funds. On the other dimensions, performance has not improved or as decreased slightly in the time period investigated.

In the 2002 to 2006 period, there was increase in *graduation rates* in Swedish higher education by 37 percent (according to the radar charts). The term graduation refers to the number of students that complete a degree in a given year. According to Högskoleverket (2006, 2008), graduation has increased significantly in Swedish higher education institutions since the early 1990s (about 45 percent in ten years). Increased graduation is explained by several factors, partly due to increased participation in higher education, but also due to the fact that many students are awarded more than one qualification. In the area of *access*, the Swedish higher education system shows an improvement of about 9 percent in the period 2002 – 2006. The peak was in 2003, and since then the number of registered students has declined slightly. According to Högskoleverket (2008), it is mainly students under the age of 25 that has increased their participation in higher education. Further growth is expected until about 2010. The number of first qualifications awarded was almost 43.000 in 2006/07, and about 40 percent of a population cohort has been awarded a higher education qualification. 66 percent of all qualifications are awarded to women and increasing numbers of people who are awarded a qualification have at least three years of higher education (Högskoleverket 2008). In the time period, almost all areas of study showed increased graduation rates. Of all who enter higher education in Sweden, 64 percent graduate.

Graduation rates are highest for professional study programs (e.g. nursing) where qualification is necessary for entering into the profession. In such programs, the graduation rate is about 80-90 percent. This trend of increased graduation rates seems to have changed since 2006/2007, as the number of qualifications awarded in Sweden is now decreasing for the first time in about 15 years. The main reason, according to Högskoleverket (2008) is that the number of students entering higher education in Sweden is decreasing.

Concerning *mobility*, the percentage of incoming students from other European countries increased by 12 percent from 2002 to 2006, and there was an increase in 13 percent of Swedish students studying in other European countries (according to the radar charts). According to Högskoleverket (2006), there has been a considerable increase in student mobility to and fro Sweden over the last 15 years. In 2006/2007, more than 25 000 Swedish students were studying abroad, and this figure has been relatively stable since the late 1990s. About 20 000 of them study abroad on their own initiative and 5000 study abroad as part of an exchange programme. For the most part Swedish students study in other European countries, particularly UK, Spain and Denmark. The vast majority of students who study abroad do so for a

shorter period of time (one or two semesters) but increasing numbers of young Swedes take complete programmes abroad – particularly for programmes like medicine or veterinary medicine which are hard to get admission to in Sweden.

The number of students travelling to Sweden has risen threefold in the last ten years, and there are now more students coming to Sweden than Swedes studying abroad. According to Högskoleverket, there has been an annual increase of about 13 percent each year since the late 1990s. About 28 000 students or 7,3 percent of the student body in Swedish higher education were international students in 2006/2007. 11 000 of these students came to Sweden as part of international exchange programmes, which has more than doubled the last decade (*ibid*). Exchange students are mainly European students, are the largest countries were Germany, France, Spain, Finland and Italy. Amongst the students who came to Sweden on their own arrangements, 60 percent were European and 30 percent from Asia. The major countries of origin were China, Finland, Pakistan, India and Iran. Many of these students study technology, and Swedish universities that specialise in technology increasingly recruit students from other countries.

The final dimension where there is an improvement in Swedish higher education in the period 2002 to 2006 is *ability to attract funds*. This dimension is made up of three indicators and Swedish higher education shows increased performance on all three in the time period 2002-2006: There has been an increase in private contributions to higher education by 35 percent. R&D funding from business and industry has increased by 27 percent and R&D funding from international sources has increased by 48 percent. As seen above, in 2005 about 88 percent of total revenues in higher education institutions in Sweden come from public sources. In 2005, public funding for higher education was made up of direct state support to the institutions (65 percent), external public funding (funding from research councils, and state agencies) (15 percent) and other public R&D funders (EU, research institutes, public non-state organizations) (7 percent). 13 percent of revenues came from private sources in 2005 (Högskoleverket 2006), about half of it from private foundations and the private non-profit sector. According to Högskoleverket, external revenues in higher education increased by 26 percent from 1997 to 2007, but the rise in revenues occurred mainly in the beginning of this period. Since 2005, external revenues have decreased on from 2005 to 2007, private funding decreased by two percent (Högskoleverket 2008).

In terms of funding for R&D and postgraduate programmes, 79 percent of funding came from various public funding agencies where as 21 percent came from private sources (private foundations, firms and other private funder) in 2005. These data indicates that rise in external funding (private, EU and contributions from private households) happened early in the given period, and that since 2005 this has slowed down again.

In the areas of mature enrollment, employability, research productivity and cost-effectiveness, Sweden has not seen much improvement since 2002, and even has decreased somewhat. In terms of *mature enrollment*, 1/3 of all Swedish students and 20 percent of all new students are above 30 years of age (Högskoleverket 2006). In

the last years, participation in general has decreased and particularly for older students – probably due to favorable labor market conditions due to a positive economic development. In terms of *employability* (measured by relative earnings and unemployment rates of tertiary education degree holders), Sweden shows a slight decrease in graduate premium. However, the unemployment rate for tertiary degree holders in 2007 was low (about 3 percent) and unemployment rates had decreased during since 2002. Higher education graduates also established themselves faster in the labor market in 2006/2007 than in 2004/2005, due to improvements in the labor market during this period. Research productivity shows a decreasing pattern with respect to number of patent applications filed and a minor positive development with respect to number of papers. Decreasing research productivity might have something to do with slightly decreasing level of funding for research in higher education, particularly in new universities and university colleges (Högskoleverket 2006). Finally, on the dimension *cost effectiveness*, there has been almost no development in Sweden during the 2002 to 2005 period.

5 Effects of the reforms and other explanations of improved performance

Overall impact of reforms implemented from mid 1990s to 2008

In general, Sweden was an early reformer of higher education and initiated a number of measures already in the early 1990s. The reforms have led to quite a few changes in Swedish higher education, first and foremost to more alignment to market. The aim of these reforms was to create more autonomous and strategic higher education institutions, and replace more direct state steering with more indirect governance arrangements. According to our informants, the reforms in governance and funding that occurred in the early/mid 1990s had a fundamental impact on the Swedish higher education sector. The resource allocation system in particular, where the institutions of higher education receive state funding based on enrolment levels and performance has made the institutions very attentive to these issues. The internal governance and resource allocation systems have been changed in accordance with the state allocation system. The informants also claim that the institutions have become very concerned with performance and that the internal governance and leadership have been strengthened, to efficiently manage and allocate resources internally. An increasing bureaucratization of the institutions in terms of rapid development in administrative positions is also seen as a result of the reforms.

The second major influence on the sector in this time interval has been the development of a national quality assurance system, which have made the institutions much more aware of quality issues in education and research and have lead to the development of internal capacity for quality management.

The informants also point to an increasing separation of higher education and research policy in this time period. Due to rapid expansion of higher education and governmental allocations based on number of students, a number of institutions and departments are becoming “teaching only” institutions. At the same time, research

policy and funding in the last years have focused on selecting and funding outstanding research environments. The informants are worried that this trend will undermine the principle of research-based teaching in Swedish higher education. Another effect of the reforms is that there is less money allocated to undergraduate education in real terms. According to the informants, this represent a challenge to quality as it has specifically led to less student-time with professors/academic staff.

Impact on selected performance indicators

Overall, the informants think that the increase in performance (particularly external funding, increased graduation rates and increased mobility) is probably explained more by other initiatives and factors external to the higher education system, rather than governance and funding reforms. The main reasons, according to the informants, is explained below.

Capacity for attracting external funding

The increase in R&D funding from international sources, and from business and industry, is related to several changes in research funding in Sweden. The 'opening up' of the system in 1997 resulting in all HEIs being eligible for research funding is believed to have improved research collaboration between HEIs and business and industry – especially in a regional perspective. Changes in the research funding have in addition some significance as long-term block grants in the last decade has been partly replaced by shorter project grants with an instrumental aim perhaps more attractive also for business and industry, and with the establishment of "triple helix" consortia where universities, public research/innovation agencies and private companies join forces to create "centres of excellence". As part of this "triple helix" process, Sweden has also prioritised the establishment of "industry-PhDs" co-funded by universities/private business. Several informants also argue that the pluralistic structure of research funding in Sweden (a number of independent research foundations), have made the research funding system more dynamic. Not least it is argued that HEIs have "learned" how to attract funding from various funding sources, and that they have become more adaptive. This "adaptiveness" might in turn have made the sector more attractive for both international funding, and funding from domestic business and industry. With respect to the increase in expenditure on R&D from international sources, it is also pointed out that internationalisation of research has a long history in Sweden, and is closely related to very knowledge-intensive industries in the country.

Also, according to the informants, the Swedish government has increased public resources for research significantly the last few years. As a result, more institutions and environments have developed their research capacity and quality, which also has enabled them to compete for external research resources. In the universities particularly, capacity for attracting international research funding has increased, and the institutions have developed support structures for academics applying for EU research grants.

The informants find the increase in private contributions to higher education quite puzzling, and even doubt this as tuition fees is currently not allowed in Sweden. The increase in the contribution from households to HEIs could be a result of increased competition in the market for continuing/life-long learning. Sweden has witnessed a number of private providers entering into this market the last decade, and this has also resulted in an increased competition for older students. Existing universities and colleges have managed to offer attractive products in this market, but can only take fees for educational programs from companies, not individuals.

Increased graduation rates

The increase in graduation is related to five developments. First and foremost, participation rates in higher education increased rapidly in the 1990s. Almost 50 percent of each age cohort now attends higher education in Sweden, and this expansion in the time period was partly due to the negative economic situation in Sweden in the 1990s. Higher participation has lead to increased graduation rates. Secondly, following the implementation of the Bologna process most of the studies are organized in programs, instead of single courses. Most education program also has a stronger connection to the labour market than they had before. This might also lead to increased graduation rates, but the informants are unsure about this link. Third, it is seen as an effect of a more professional leadership of HEIs. Statistics have shown that Swedish HEIs for years had a very poor graduation rate. Several universities have launched measures ensuring their students to formally complete their studies, and to make the institution 'look better' in the overall statistics. Forth, the government has also reduced the time students are eligible for student support. This may have triggered more students to graduate. Last, several informants also mention that the labour market has been very favourable the last 6-8 years, and that many students have wanted to finish their studies because of good prospects for getting a job.

Increased mobility

The increase in students going abroad is surprising many informants as the policy debate in Sweden is focused on the need for more Swedish students to go abroad to study. Most informants think that an increase in the number of students going abroad is linked to a change in the student support system enabling them to take money received through the student support system "abroad". According to our informants, the increase in international students coming to Sweden has been much more dramatic, with an annual growth of about 13 percent the last years. Now, about 25 percent of all new entrants to higher education in Sweden are international students. According to the informants, Sweden is an attractive country for international students due to high quality research and educational environments and free public education. The informants claim that there are discussions on implementing tuition fees for students from outside the EU, and that may also have future consequences for the general debate on tuitions fees for students in public education. A report on consequences of the introduction of tuition fees and plans for a new, improved quality assurance system will be published later (probably in 2009).

6 Institutional case studies

Beside the recent reforms bringing Sweden more in line with the Bologna process, reform activity in Sweden has been rather modest the last decade. This is due to the fact that the country was an early mover with increasing institutional autonomy. The performance effects noticed at institutional level is mainly seen as a result of the 1993-reforms. The two institutional case studies – the University of Gothenburg and the Uppsala University have been selected for an in-depth analysis. The case-studies focus on three main issues:

- Governance and funding structures and recent policies and initiatives at the institutional level
- Areas of performance at institutional level
- Link between national governance and funding reforms, institutional initiatives and institutional performance

The case studies are based on analysis of documents (institutional strategies, annual reports, information on institutional web-sites) and interviews with key actors in the two institutions.

University of Gothenburg

The University of Gothenburg (GU) is one of the largest universities in Sweden with about 50000 students (25000 FTE students) and a staff of over 5300. The university is a comprehensive university organized in eight faculties and 57 departments. It accommodates a broad spectrum of disciplines including arts, education, science, law, medicine, social sciences, humanities, odontology, business studies and information technology. Within a number of fields, the University plays a leading role nationally and internationally, and also has a clear regional profile with a “living tradition of active cooperation with the community” (Strategies for Research and Education 2009-2012). In relation to the current study, GU has been selected based on the following performance dimensions: abilities to attract external R&D funding, increased graduation rates and commitment to lifelong learning.

6.1.1 Present governance and funding arrangements

Swedish universities are public organizations and part of the state – as such they are state agencies regulated by the Higher Education Act and Higher Education Ordinance of 1993. According to this Act, internal governance arrangements are made up by a University Board of Governors, with the overall responsibility of the University and responsibility to make important strategic decisions, including decisions relating to resource allocation and internal governance. According to University of Gothenburg's system of decision making (Göteborgs universitet 2006) the University of Gothenburg is characterized by an extensive decentralization of authority. The Vice-Chancellor is responsible for implementing the decisions made by the board and is responsible for the running operation of the University. Each faculty at the University of Gothenburg is headed by a Faculty Board who is responsible for

research, education and collaboration with society and industry within their academic fields, including issues of research/education policies/strategies, resource allocation and recruitment policies, and has the overall responsibility for education at bachelor, master and doctoral levels. Each faculty is run by a Dean, who has responsibility (delegated from the Rector) for decisions concerning personnel, resource allocation, infrastructure and administration as well as implementing decisions made by the Faculty Board. According to the respondents, the University of Gothenburg is a highly decentralized institution and where the departments are responsible for the majority of decisions in research and education. The institution is thus quite fragmented, the institutional policies the last years has focused on stronger integration across the departments and disciplinary fields.

The University of Gothenburg had revenue of 4.6 billion SEK in 2008 – a slight increase from 2007. Direct state funding comprises 67 % of the revenues and 34 % external funding and other income. Of government funding, 60 percent is for undergraduate studies and 40 percent for research and doctoral education. Funding for undergraduate studies follows the governmental procedures based on annual remunerations based on full time equivalents, which gives the institutions relatively little freedom of action for making priorities and allocation resources for undergraduate education. The national system for allocating resources is also used internally, where the faculties have yearly targets in terms of number of FTE students and receive funding based on these numbers. The current strategies for education and research, “awaits” the governments new policies that will increase the institutions autonomy for allocating resources for educational programs in ways that fits their strategic priorities and focus on interdisciplinary focus.

Resource for research and doctoral level programmes are also allocated based on national principles, where each faculty receives a part of the direct state funding for research. The levels of funding each faculty receives is based on historical principles set in 1993, but recently a new system of performance based funding has been introduced for allocation of research resources. 10 percent of the state funding for research is allocated by the faculty boards based on bibliometric analyses as well as level of external funding. This has lead to a redistribution of resources internally, shifting resources from for instance the humanities to social science, business studies and educational sciences.

6.1.2 Recent institutional policies

The latest strategic plan (2007 to 2010) and strategy for research and education (2009-2012) indicates overall vision, strategic priorities and chosen policy instruments for the University of Gothenburg. Increased collaboration internally and externally, stronger focus on strategic priorities within research and education, and renewed focus on leadership are among the key tools for increasing quality and competitiveness of the University of Gothenburg (Strategies for Research and Education 2009-2012). According to the informants, stronger integration across the departments and stronger focus on research has been the two most important goals

for the University leadership the last few years. In 2006 and 2007 several organizational changes occurred to strengthen integration and leadership of the institution.

In terms of integration and collaboration, the University of Gothenburg puts strong focus on increasing interdisciplinary collaboration between the academic departments/faculties, increased strategic collaboration with other higher education institutions regionally (particularly with Chalmers university who have developed a new IT University as a joint venture with GU), nationally and internationally, and increased collaboration with society, including business and industry. The University of Gothenburg has a "distinct social profile" and emphasizes the social and economic relevance, and the role of being a "visible social actor" (*ibid.*). In line with the ambition of being an open and socially involved university, the University of Gothenburg has a strong tradition of adult education.

Increased focus on internal collaboration is related to the focus on strategic priorities in research and education. The University has identified five research and education environments (called profiles) that are interdisciplinary, strong research and educational environments in an academic sense but also "strong in relation to the requirements of the surrounding community" (*Ibid.*, p. 22): Health, Culture, Environmental Science, Democracy and Social Development and Knowledge Formation and Learning.

Renewed focus on leadership is another key focus in the current strategic plan and strategies for research and education. The documents envisage a new leadership model or leadership culture at the university, where the leadership is gaining a more prominent role in terms of making strategic priorities, resource allocation and quality control of the institution. Quality management is a key word and institutional and faculty quality audits are to be supported by developing performance indicators. Resource allocation is seen as an important control instrument in the active management model. The coordination process resembles the one put down at national level, where the faculties are given annual assignments from the university management, which are developed into operational plans, which again are evaluated and used as a basis for next year's assignment. According to the informants, the University has sought to redistribute resources internally, so that new areas receive more resources and build up more competences for research (such as arts, educational sciences and the new IT faculty). The university has implemented several ways of redistributing resources and has implemented a part performance based funding model for research. The University has generated an economic surplus the last years, and these resources are used to develop the institution, for competence purposes, recruitment etc, distributed based on applications from the departments.

6.1.3 Areas of increased performance at GU

The Strategic Plan 2007 to 2010 also includes a brief overview of key developments at the University from the mid 1990s; and first and foremost the University of

Gothenburg has had a rapid expansion in student numbers from 1996 to 2006. The university now has a policy of "no more increase in student numbers", but receive many applicants for most study places. The student numbers (in terms of full time equivalents) have remained stable for the last three years, whereas graduation rates have increased the last three years (Årsredovisning 2008). In certain disciplines there has been an increase in study places, such as in medicine. In 1998 a total of 2898 qualifications were granted at undergraduate level, and in 2007, 4752 qualifications were granted.

With respect to attracting research funding in general GU has seen an increase in funding of 14 percent in the period from 2004-2008. While the university received about 3.200 MSEK in state grants in 2008, it also managed to obtain 1465 MSEK in external funding. The success in obtaining external funding is often related to the fact that the internal resource allocation has mainly been based on indicators such as success rates in external research competitions, publication rates, etc. Hence, external success has been a key for matching internal funding and attention. Although this has undoubtedly paid off, the university is worried that too much emphasis on external success can affect future innovation negatively as external success often is dependent on historical achievements.

The university has consistently worked to strengthen the concentration of research in various areas, and has initiated several collaborative projects with other universities in the region, and with business to strengthen research areas where the university has less capacity (economic/academic) to offer. However, the last few years direct governmental funding has increased by 30 percent from 2004 to 2008, whereas external funding has increased by 6 percent. According to the document Strategies for Research and Education, the University is worried about the relative competitiveness of the University of Gothenburg in attracting external funding, and will seek to strengthen overall funding for research as well as external research funding in the current strategy period. To strengthen the university's capacity in securing international research funding, the university developed an "EU office" to support individual applicants for EU research funding. The university will seek to strengthen this work in the coming years.

GU has had an emphasis on life-long learning since the establishment of the institution, and the fact that half of the student population is not full-time students is an indication that the university is focusing on offering flexible study programmes and courses. In 1997 the university established the Grundtvig Institute with a special responsibility for adult education, and the university have a number of course offers for people in business and industry, but also for the public sector (teacher education in particular). One example of recent initiatives is the establishment of GRUC – a collaborative capacity-building initiative between GU and the regional authorities on teacher education. In this case, informants do believe that national policy initiatives have been important for the establishment of such initiatives.

6.1.4 Effects of national and institutional reforms/policies on performance – respondents views

The informants stress that the 1993 reforms in governance and particularly funding has made a fundamental impact on higher education in Sweden. The national system of resource allocation, to a high degree influences both research and education at the University of Gothenburg. The national systems are also mirrored at the institutional level, even though the University has tried to adopt the system and redistribute resources based on internal strategies. Thus, this reform has had a fundamental impact on all aspects of higher education institutions in Sweden, and has certainly has a major influence on the funding and governance of the University of Gothenburg. According to the informants the reform was implemented in an incremental manner and has only recently been implemented in all parts of the university. Today, however, the informants claim that the University can best be described as a “market oriented system at all levels”. The national quality assurance system has also had an impact on the institutions who has to develop and monitor the quality of the institutions and programs.

The increase in external funding for research is partly due to resources being available from the EU, foundations etc, but the University also focuses on it and has recently developed measures to strengthen the University's efforts in securing external resources for research as well as strengthening research in general. The University of Gothenburg has a long tradition for interacting with the regional business and industry as well as the public sector, and to a larger extent than other Swedish universities receive funding from regional private and public organizations as well as foundations. The university has worked consciously with their external surroundings for years, and have developed an Innovation Center and a Center for Intellectual Property Rights, and offer educational programs in entrepreneurship. In the health sector they have formed a larger “region” (Västra Götalandsregionen) that contribute resources to the university and provide training opportunities for students and probably also employment. The rise in external funding is seen as a result of many years efforts on part of the University.

The informants point to several factors for explaining increased graduation rates. With the implementation of the new degree structure (bachelor – master - PhD) more students are now enrolled in programs, rather than taking a number of individual courses. The faculties decide on whether to offer courses or programs, but since faculties are remunerated based on performance, the faculties have quickly adapted to new program structure. The programs are more linked to actual career destinations than traditional academic education, which have led more students to complete the degrees and graduate from the programs. According to the informants, faculties who have implemented full programs experience a graduation rate of about 95 percent. The students also prefer the new programs and the informants think that increased graduation rates is also due to the need for higher qualifications on the labor market.

Uppsala University

Uppsala University (UU) is a large comprehensive university with more than 40000 students (about 20000 FTE students). It is organized in nine different faculties, and with a strong focus on research. Founded in 1477, Uppsala University is the oldest university in Scandinavia⁸⁰.

6.1.5 Governance and funding arrangements

Like all Swedish universities, the top decision making body responsible for all of the universities activities at Uppsala University is the University Board – called the “Konsistorium”, where as the operative responsibility for the University is held by the Vice-Chancellor. The majority of the University board members is external and is assigned by the Ministry of Education. The leadership of Uppsala University in addition to the Vice-Chancellor consists of a deputy vice-chancellor, a university director, three vice rectors and a dean – each responsible for different disciplinary domains. There is also an Academic Senate that functions as a consultative panel for University management with representatives of teachers and students.

Uppsala University is divided into three disciplinary domains (Arts and Social Sciences, Medicine and Pharmacy, and Science and Technology) and a Faculty of Education. Each domain is headed by a Disciplinary Domain Board chaired by a Vice-Rector. Domain Boards have the overarching responsibility for activities within the Disciplinary Domain within the guidelines set up by the University Board and the Vice-Chancellor. The Domain boards are made up by faculty and students. Research and education activities are further organized into nine faculties, each headed by a Faculty Board (there are separate faculty boards for faculties within the Arts and social science domain. In technology and science and medicine and pharmacy the domain board and the faculty board is the same). Faculty boards are responsible for research priorities and quality of education and research programs at the faculties.

Uppsala University had a revenue of 4.5 billion SEK in 2008 – a slight increase from 2007. Increase in revenue come from different sources; direct state funding for undergraduate education, graduate education and research has increased but income from external sources has also increased in the last four years. In 2008, 61 percent of the revenues came from direct state funding and 39 percent of revenue from external sources and other income (Annual report 2008). In undergraduate education 86 percent of income is from direct state funding, where as 50 percent of income in research and graduate education is from direct state funding.

Funding for undergraduate studies follows the governmental procedures based on annual remunerations based on of full time equivalents and a performance premium,

⁸⁰ The leadership Uppsala University declined to participate in this study. The report is written based on documents and information available at the institutional website and interviews with key academics at Uppsala.

which gives the institutions relatively little freedom of action for making priorities and allocation of resources for undergraduate education.

6.1.6 Recent institutional policies

Uppsala University is a strong research university, which also in its goals and strategies focuses on strengthening its position as an “outstanding research university” and focuses on its tradition and heritage as “a seat of learning” (Uppsala Universitet 2007). Its overall ambition is to strengthen its position as a world-leading university, with focus on high quality research and education. In its present strategic plan, it is the strong research position, “first-class education” and traditional academic values that are emphasized.

In terms of recent institutional policies, the document “Strategies for Research and Education at Uppsala University” provides description of key changes that has occurred at Uppsala University the last few years and current strategies. The document highlights the following issues: The implementation of a new quality program in 2008 and the institution wide evaluation of research in 2007, adaptation to the new degree structure, increasing collaboration with other institutions and with other organizations in the “surrounding community” as well as emphasis on strategic priorities and profiling of the University’s areas of strength.

Uppsala University has for the last years implemented a new quality program and has also initiated a systematic institution-wide assessment of research quality. Uppsala University focuses on a systematic and integrated approach to quality assessment and enhancement, where quality work is an important part of the university leadership’s responsibility (Uppsala University 2008). According to the Swedish higher education law, the faculty boards are formally responsible for quality assessment of research and education in their disciplinary domains, but responsibility is also delegated to the department level headed by prefects. In 2007, the university initiated an institution-wide assessment of the quality of research and third-level (doctoral) education, which has been important for quality enhancement and strategic priorities in research.

Adaptation to new degree structure and increased internationalization and international collaboration are other important policies at Uppsala University. In a recent Swedish assessment of internationalization work at Swedish HEIs (Högskoleverket 2008), Uppsala University ranked first. The university particularly emphasizes international research collaboration and has an explicit aim of increasing the proportion of EU funding for research, and has developed support structures for this. Uppsala University also stress collaboration with other Swedish universities as well as interaction with business and industry and the surrounding community, and has developed infrastructure for supporting innovation and commercialization efforts (Uppsala University 2007)

The 2007 research assessment revealed that Uppsala University has “many world-class research teams”. In all the four disciplinary domains at Uppsala University so-

called “profile fields” were identified, that is academic fields that were seen as particularly successful in the 2007 research assessment. In addition five areas were identified as particular “areas of strength” where the University has a leading international position: Renewable energy, peace, security and democracy studies, functional and comparative genomics, drug development and brain function and dysfunction. The University Board decided that 75 MSEK in research funding should be allocated to strategic research priorities, based on the outcomes of the 2007 research assessment (Uppsala 2007).

6.1.7 Areas of improved performance at UU

To provide an indication of the importance of external funding at UU, about 50 percent of research conducted is funded by such sources, and this percentage has risen during the last decade. There are several factors mentioned as important in contributing to the success of the university in obtaining external funding. First, most informants do acknowledge that the status and position of UU as a prominent research institution is of major importance. Second, the university has also systematically supported academic staff in securing external funding through various organizational means e.g., by setting up a number of research secretariats assisting researchers in application processes and in the running of projects. Hence, the university has managed to professionalise the administration of this process. Third, the university has over the years systematically tried to identify areas of excellence in research with the aim to establish more comprehensive and integrated research initiatives.

In terms of graduation rates, the number of students at bachelor and master level has remained stable in the 2005-2008 period, as has the number of graduates at this level. Graduation at third-level programs has dropped in the same period.

In the life-long learning area, UU has a long tradition for offering a variety of courses and study programmes for those requiring more flexible learning paths. As with GU, one can also find initiatives at UU trying to establish more regional cooperative schemes together with regional authorities. The most prominent example can be found in teacher training, and the informants agree that in this initiative, national policies have also been of importance. Also in the life-long learning area have organizational measures been taken, and with respect to more commissioned offerings a special unit has been set up – Uppsala University Education. In the latter case, offers are developed for the open education market – especially in business, leadership training, and various technological subjects.

6.1.8 Effects of national and institutional reforms/policies on performance – respondents views

According to the informants at Uppsala, the national reforms in governance and funding have had a significant impact at Uppsala University. Impact is seen particularly on how resources are allocated internally. Increased focus on leadership and increased bureaucratization of the university is also attributed to the national

reforms. The last few years, institutional policies at Uppsala University has focused on research, and particularly the need for better integration across the faculties and research environments and the need to make strategic research priorities. According to the informants, these initiatives were partly a response to Uppsala's lack of success in competing for national centers of excellence in research.

7 Summary and discussion

In Europe, Sweden can be seen as an “early adopter” of governance and funding reforms that has since swept European countries. Reform elements such as decentralization, management by objectives, quality assurance and performance-based funding were implemented in the early 1990s. Since then, several “minor” reforms of governance and funding have been implemented, such as performance based funding for research, altered status and composition of the University Board. Also, Sweden has implemented a new degree structure to align the country with the European Bologna process. Policy overviews and key informants in Sweden do however claim that the reforms in the early 1990s are the most important premises for governance and funding of Swedish higher education today. A recent initiative for increasing the Universities autonomy by altering the “governmental agency” current status of higher education institutions has recently been proposed, but informants are still skeptical as to whether or not this will be implemented.

In terms of system-level performance, there have not been radical developments in the time period that this study covers. Access to education and the level of participation improved a lot in the 1990s, but declined between 2002 and 2008. Graduation rates has improved by 37 percent in the 2002 to 2006 period, partly due to increased participation, implementation of educational programmes following the Bologna adaptation, increased focus on employability, and due to student demand and labor market demand for higher qualifications. In terms of the national reforms, performance-based funding and the Bologna adaptation might partly explain increased graduation rates, but also external factors. Mobility is another area of increased performance, particularly inward mobility. Sweden has focused on increasing internationalization and has sought to foster internationalization by funding students who take education abroad. Developments have however been more positive in terms of inward mobility, and might be partly related to education policies but also the Bologna adaptation, as well as external factors.

Sweden also shows positive developments in terms of the capacity for attracting external funding (from business and industry, international sources and private households). This is probably not due to national governance or funding reforms, as the Swedish government has only recently implemented a performance premium for universities who succeed in attracting external resources. First and foremost, it is probably due to more resources being available for R&D and that more HEIs have built up R&D capacity (all HEIs now receive some funding for research from the government). Direct funding for research from the government has risen more than external funding the last few years, due to national policies for strengthening

research capacity in Swedish higher education institutions. Increasing international funding for R&D is probably also due to increased R&D capacity, and the institutions have also developed support systems to stimulate this development. The Swedish government has also focused on the establishment of “triple helix” consortia where universities, public research/innovation agencies and private companies join forces, which also has lead to increased funding from business and industry. Increased contributions from private households is linked to initiatives in lifelong learning, and about 1/3 of the student population are mature students.

The two case studies of Uppsala University and University of Gothenburg indicate that the changes in governance and funding at the national level, has had a fundamental impact on governance and resource allocation at the institutional level as well, particularly funding for undergraduate education, although adaptations are made. Both institutions have recently implemented resource allocation for research based on performance criteria, and both focus on identifying strategic research priorities. The University of Gothenburg has made several policies aiming at better integration of the institution and collaboration with the surroundings, which they also have a long tradition for. Uppsala University focuses on strengthening their position as an excellent research university, and increased performance in external research funding and funding from international sources can be seen as a result of this. At Gothenburg, increased performance in external R&D funding and graduation rates is partly attributed to governmental reforms, particularly increased R&D funding from the state and the Bologna adaptation. At Uppsala University, performance improvements are seen first and foremost in capacity for attracting external funding, which the informants explain by the prominent position Uppsala has as a research university, rather than an effect of national reforms.

Overall, in Sweden it seems that governance and funding reforms have had a significant impact on the higher education sector and also for the internal governance and resource allocation in the institutions. The areas of improvements as found in the CHEPS dataset is related to significant policy changes in Sweden, but overall reforms have been modest in the 1995 to 2008 period, as has improvements in the national system performance.

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List of interviewees

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Governance and Funding Reform in the European Higher Education Area

National system analysis: Switzerland¹

1 Introduction

This report summarizes the main changes in governance and funding in the Swiss higher education system during the previous ten years, as well as their impact on the functioning and overall performance of the system.

It is based on existing literature on Swiss higher education and on extensive documentary analysis, as well as on a set of about 15 phone interviews to decision-makers in Swiss higher education (names of the interviewed people can be found at the end of this document), who were asked to provide their view on the impact of the reforms on system performance.

The report is divided into four main sections. Section 2 presents a summary overview of reforms in Swiss higher education governance and funding, while section 3 analyses the available indicators on system performance and qualifies them based on in-depth knowledge of the system. Section 4 examines the main impacts of the reforms and the extent to which these have contributed to changes in performance, while section 5 draws a final assessment by the authors themselves.

2 Reforms in governance and funding over the last ten years

The Swiss higher education system comprises 19 public higher education institutions (HEIs), divided in two sectors, universities (ten Cantonal universities and two Federal Institutes of Technology) and Universities of Applied Sciences (seven public UAS). Moreover, there are a few institutions recognised by the Confederation under the University Act, as well as two private Universities of Applied Sciences and 14 universities of teacher education (OECD, 2003), which are considered as a third type of HEI (even if very similar to UAS). Both types of institutions have a research mandate, but the UAS mandate is oriented towards applied research and transfer and the UAS research intensity is much lower than for universities (Lepori, 2008); UAS do not have the right to award PhDs.

At the national level, the governance of the system is organised according to two main dividing lines, between universities and UAS and between federal and cantonal competences (Perellon and Leresche, 1999, Lepori, 2007). The ten Cantonal

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universities are under the sovereignty of their home Canton and ruled by a Cantonal law, while the two Federal Institutes of Technology (FIT) in Zurich and Lausanne are under federal competence and rules through the federal FIT act. In the UAS domain, the Confederation has a general competence under the federal UAS act, while the institutions themselves are cantonal (in most cases being ruled through intercantonal agreements).

The Swiss University Conference (SUC) is the main national coordination body for higher education policy where both Confederation and Cantons are represented; however, it has no binding competences concerning the individual institutions. The two rectors' conferences (Conference of Rectors of Swiss Universities – CRUS - and Conference of Rectors of Universities of Applied Sciences – KFH) have an important role to develop joint positions and planning in the higher education sector. Finally, at the federal level, competence for higher education is divided between the State Secretariate for Education and Research (cantonal universities and support to basic research through the Swiss national Science Foundation), the Council of Federal Institutes of Technology (governance of the whole FIT sector) and the Federal Office for Professional Education and Technology (UAS and support to applied research through the Swiss Innovation Promotion Agency KTI).

The organization of Swiss HEIs strongly depends on cantonal specificities. All universities (including federal institutes of technology) have a rector or a president that has seen his/her power increased in the last 20 years, but this strongly varies from Canton to Canton (FIT presidents are much stronger). For a number of cantonal universities, the main strategic body is still the cantonal government, while others have a university council which decides on an overall strategy (it is mostly composed of external members). The importance of the academic community (as well as deans and faculty council) is rather high and most Swiss universities keep a traditional disciplinary organisation. Overall, change in the last ten years has been in the direction of strengthening central university authority and reducing direct intervention of the State, while leaving at the same time a large autonomy to the understructure concerning education and research, but change has been gradual and in terms of speed very different from Canton to Canton.

Most UAS have a director (non-academic) with political and management functions, supported by a central administration; the main decision-making body is a council composed by representatives of the involved Cantons and of external stakeholders. UAS have a central management, composed of the directors of departments, that takes care of most operational decisions. Overall, the political influence on UAS is stronger and their governance is more top-down and similar to public bureaucracies compared to Cantonal universities.

Reforms in higher education governance

The governance arrangements underwent a number of important reforms since the mid-'90. While the reforms described below have been gradual and partial, their

aggregate outcome has been to profoundly redesign the governance structure of Swiss higher education (Lepori and Fumasoli, 2008).

- *The creation of the Universities of Applied Sciences.* The UAS federal act of 1995 laid the basis of the transformation of the existing tertiary education institutions with professional orientation into Universities of Applied Sciences with a broader mandate including professional higher education, applied research and technology transfer to the regional economy. On this basis, in 1997, seven public UAS were created covering the different Swiss regions and, in most cases, Cantons. In the following years, UAS progressively integrated most domains of professional education and nowadays these institutions account for about half of the first-year enrolments at the bachelor level. Moreover, they rapidly developed significant research activities especially in technology and informatics and became a major actor in the collaboration with private companies. Since the year 2007, UAS can also offer to a limited extent master studies in selected domains (Lepori, 2008).
- *The reform of the federal act on cantonal universities* and a new agreement between Cantons and Confederation on the cooperation concerning Cantonal universities. The new act released in 1999 provided a framework for cooperation between Confederation and Cantons in steering Cantonal universities and entitled the SUC of stronger competences concerning the coordination of the system, accreditation and evaluation of quality (with the creation of the Swiss assurance quality OAQ). A relevant evolution in this respect has been the development of international quality evaluation procedures for teaching and increasingly also for research at the level of individual HEI (with, partially, the support of OAQ).

While in a few areas the SUC has received binding competences, as well as substantial financial resources to promote cooperation, in most cases cooperation has been based on consensus and on reaching a minimum agreement between all involved partners (although lacking strong sanctions in case of non compliance). Moreover, the new act gave an official role concerning university planning to the CRUS, which in fact has become a major actor in the (bottom-up) coordination of the universities themselves, for example concerning the introduction of the Bologna model.

The strengthening of the CRUS (as well as of KFH for UAS) is also related to a general professionalization of the office of university rector, which made them stronger actors in the higher education landscape. Other major changes introduced by the University act are the new funding system for cantonal universities and the funding of strategic cooperation projects (see below).

- Autonomy of higher education institutions There have been significant reforms in the last ten years in the relationships between the State and HEIs, as well as in their internal governance. These reforms went in the direction of

strengthening central university authority and reducing direct intervention of the State, while maintaining at the same time the historically large autonomy of the understructure concerning education and research. The process is more advanced for the FIT domain, which enjoys historically a very large autonomy from the Confederation, and has been reinforced through the revision of the FIT act of 1991. Most university Cantons adopted in the last ten years new university laws reducing the regulation and leaving more autonomy to university administration (Fumasoli, 2007). Since the mid-'90s, all universities and FIT produce strategic plans, although impact and level of detail are different from case to case (Fumasoli, 2009). Deregulation has taken place especially concerning administrative matters like hiring personnel, salaries and management of the budget, but is less concerning strategic aspects like the choice of the main activity domains. Moreover, since the late '90, HEIs are requested to produce 4-year strategic plans; their role in the institutional development differs widely from case to case, but overall their importance has certainly increased during the last decade.

The UAS also underwent in the last ten years a process of reform that transformed them from conglomerates of regional schools into higher education institutions with a specific profile and central governance; this process has been actively promoted by the Confederation, but has taken place at very different speeds in different UAS. At the same time, UAS are subjected to a much more detailed federal regulation (for example concerning finances) and, usually, to stricter political control from the Cantons compared to universities.

Reforms in the funding of higher education institutions

The funding system of higher education is strongly dependent on the fragmented governance of the system and thus there are different funding flows for the various types of institutions (universities vs. FIT vs. UAS) which even differ between individual institutions. However, the overall system can be characterized as follows (Lepori, 2006, Filippini and Lepori, 2007):

- A dual system with about $\frac{3}{4}$ of core funding (jointly for research and education) and $\frac{1}{4}$ of third-party funding (mostly for research); funding from private companies is relevant in some areas of research and postgraduate education (economics), while funding from households through tuition fees is negligible (except for the University of Lugano).
- A funding model for core funding which is a mix of historical allocation for cantonal subsidies, and formula-based allocation for federal subsidies for Cantonal universities and which can be characterized as weakly competitive. For UAS, the funding model is essentially based on the number of students, with fixed tariffs for each domain, with a small additional allocation for research activities.

Despite the differentiation of sources, there is still a rather strong control of the host Canton for its cantonal universities, while the FIT enjoy a much larger budgetary autonomy since they receive most of their resources from a federal block grant with very few conditions attached.

There have been a number of relevant changes in the last ten years.

- Overall, an increase of the share of project funding in the total budget. This is the result of an explicit policy at the federal level of providing additional resources for research through funding agencies (especially the Swiss National Science Foundation - SNF), while keeping stable core funding. HEI should then be pushed to some improvement of the efficiency of education and to achieve some reduction of the costs per student (Conseil Fédéral, 2007). Recently, an overhead to SNF projects was introduced; but the amount is still rather small (6% of the grant, to be increased up to 20% in the next years). This represents a significant political signal that project funding should cover at least a share of the full costs incurred for research.
- The new rules for federal subsidies to cantonal universities introduced through the University act of 1999. Formerly, federal subsidies were based on incurred costs, since the year 2000 they are based on the number of students (70%) and on the project funding grants (30%). Especially the research part is highly relevant since it increases pressure towards getting project funds. Funding for UAS has also changed towards formula-based allocation both for cantonal and federal resources based on tariffs per students (or ECTS credits). Moreover, at the end of the '90, the revision of the intercantonal agreement on students brought a substantial increase in Cantonal contributions for students studying in other Cantons.
- The introduction of a specific instrument (through the Swiss University Conference) to finance large-scale cooperation programs between Swiss HEIs to promote cooperation between different institutions, restructuring, and the development of research and teaching in specific areas. This includes also a number of programs to coordinate the development of research in strategic areas (nanosystems; system biology; public health; public administration).

On-going processes and new reforms envisaged

While the reforms in the last ten years have profoundly modified some central elements of the old system of governance of Swiss higher education – especially through the introduction of a second university sector and through the increasing interdependencies at national level, breaking the traditionally strong cantonal divide -, these have been by and large partial and based on a trial and error process, rather than on an overall strategic vision. This is in line with the decentralised and consensus-based character of Swiss higher education policy.

These reforms have introduced some tensions in the system. Three of them are particularly evident:

- a) The tension between universities and UAS, both in their legal status, rule systems and responsible bodies on one side, and increasing interdependences on the other side, both concerning education (introduction of UAS master, students' transfer opportunities between the two sectors) and research. At the time of creation of UAS in the '90s, the two higher education sectors were considered as clearly separated and subjected to distinct regulations; in the last decade, interdependencies and overlaps have emerged and, increasingly, the two types of institutions are nowadays seen as part of a single higher education system.
- b) The tension between the conception of a national system where individual HEI both compete and cooperate and the lack of a common system of governance (at the level of political decisions) and of rules (for example concerning funding) generated by the coexistence of federal and cantonal jurisdictions.
- c) The tension between the conception of strategic autonomy of HEI, promoted partly by international competition and the need of a clearer positioning, but also explicitly through federal policies, and the will of many Cantons to keep strategic oversight on their home universities, largely based on specific regional and local interest. The latter tension was repeatedly a source of conflicts between Cantonal governments and university rectorates (with some rectors leaving their office also for this reason).

To address these issues, a new higher education act, which should provide a regulatory framework for the three types of HEIs has been discussed since the beginning of this century. Its foundation was laid down with the approval in 2007 of a new article in the federal constitution stating the principle of the collaboration between Confederation and Cantons in higher education. A draft of the new act was released in autumn 2007 for consultation, but it met strong criticism concerning the reforms proposed for the first two issues (relationship between UAS and universities; balance of power between Confederation and Cantons). The federal government sent to the parliament a new draft act in June 2009: the main proposed novelties are the creation of joint governance bodies for higher education at the national level, a common accreditation system for all HEIs (currently the system is very different between universities and UAS), the definition of framework conditions for joint planning of high-cost domains (like medicine), and of some common principles for HEIs' core funding (definition of standard tariffs per student, even if not binding, and of a fixed overhead for research).

3 Performance improvements in Swiss higher education

In the governance and funding reform project, the performance of national systems has been measured along the following dimensions and using the uniform international indicators (see technical file for the precise definitions):

- Access: enrolment rate and net entry rate.
- Lifelong learning: mature enrolments and share of new entries above 25.

- Graduation: educational attainment of the population (25-34) and graduation rate.
- Employability: relative earnings and relative employment rate.
- Mobility of students: students from abroad and students studying in other countries.
- Research output: scientific articles and patents.
- Capacity to attract funds: HERD from private funds and from abroad and contributions from private households.
- Cost effectiveness: expenditures per students (in Euros and PPPS).

Relevant indicators include the absolute value of the indicators, either compared to the average of the countries in the sample or the change in the indicator value between the years 1998, 2002 and 2006. Of course, these indicators provide only a partial view of system performance and, hence, we will comment on them below.

According to these indicators, the Swiss system fares well above the average of European countries in most indicators and reaches excellent levels especially for its research output; only indicators concerning access to higher education are below the European average. This quantitative analysis is shared by all respondents to our interview. Overall, changes in the period 2002-2006 have been limited, as may be expected for a system for which evolution has been rather gradual.

Also among our respondents there was a general feeling that the system kept its strengths, but the weak areas have not been really addressed. The main area of significant change concerns access to higher education, where a strong increase took place between 2002 and 2006.

The performance is particularly good concerning research output (patents and scientific papers). The data show that Switzerland kept this leading international position in the considered period, both concerning science and innovation. This appraisal is confirmed by other studies, considering also impact factors, like a recent bibliometric analysis of Swiss research (SBF Staatssekretariat für Bildung und Forschung, 2007). Also, the Swiss system receives excellent scores concerning innovation (Switzerland ranks also at the first place in most indicators of the European innovation scoreboard. However, some respondents emphasize that these indicators are mostly focused on sciences, which are a traditionally strong domain of Swiss universities, whereas the conditions in human and social sciences – both concerning research and education - are much more difficult (Bundesamt für Bildung und Wissenschaft (BBW), 2002).

The Swiss system fares also rather well in terms of educational attainment of the population and graduation rates, while access to higher education (entry rates and enrolments) is well below the European average. This is largely explained by the very specific structure of Swiss education, where the separation between the general and professional track takes place already at the secondary education level and there is a well-developed post-secondary education sector outside higher education, delivering

professional diplomas. Most of our respondents consider that this is a strength rather than a weakness of the Swiss system, which enables an early directing of students to the form of education best suited to their capacities. It avoids producing too many university graduates that may not be easily absorbed by the labor market. This is confirmed by completion rates (graduates vs. new entrants) which are well above the European average.

Indicators concerning access to higher education display a strong increase during the considered period, even if entry rates are still well below the European average. Partially, this is a statistical effect due to the transfer of professional curricula from ISCED 5B to ISCED 5A (all UAS curricula are in ISCED 5A), as well as a 'tertiarization' of a number of domains in professional education, like teacher training, previously included in the upper secondary level; however, even in this case, this resulted in a substantial upgrade of the curricula. One may argue that the creation of UAS marked the transition of Switzerland towards mass higher education.

Indicators concerning employability and earnings have to be considered also as very favorable and, despite increased access, these indicators have kept their very good level during the considered period. Much of this good performance is related to the good situation of the labor market (low unemployment rates overall); absolute unemployment rates of higher education graduates are the lowest in whole sample and, overall, university graduates find a workplace rather easily and quickly (latest available data show that, one year after graduation, 95% of higher education graduates were professionally active. Graduates from newly-created Universities of Applied Sciences found also their way to labor market rather easily and this has to be considered as a major success of this reform.

However, from the interviews, two critical areas emerge. Firstly, in Switzerland there is still a strong stratification of university access according to the parents' social status and this phenomenon has hardly changed in recent years; a major problem in this respect is the lack of a unified system of student grants (each Canton having its own rules). A second area of concern is that the high level of development of research can be sustained only through a massive influx of foreign researchers: about half of the PhD students and of the professors in Swiss universities have a foreign passport. This is particularly critical in sciences and engineering, where the number of undergraduate students stagnates since about two decades and, especially, the attractiveness of these domains for female students is very low.

Finally, indicators on cost efficiency display a very high cost per student, both if the normalization is done using Purchasing Power Parities (PPPs) or the GDP per capita (as a very rough measure of national wealth). Most of our respondents agreed that Swiss universities are comparatively well-funded, but maintain that this high level of costs is mainly explained by high levels of quality in research, in education (for example low number of students per professor, at least in sciences) and in the overall infrastructure, rather than by inefficient spending. Cost per student slightly decreased during the considered period.

Also, the capacity of attracting non-public funding sources is rather low if compared with other countries, especially concerning the contribution of private households. Except for the University of Lugano, tuition fees are kept at a nominal level and there has been no significant change in this respect in the last decade (probably because the system is sufficiently well-funded from public sources).

4 Effects of the reforms and other explanations of improved performance

Overall, our respondents agree that the impacts of these reforms of Swiss higher education have been significant, but provide a very differentiated view: some reforms, like the creation of UAS, have been very important at the system-level, while others, like the stronger autonomy of universities, have also had a significant impact on the understructure level. It seems also rather difficult to establish a link to changes in system-level performance.

Creation of Universities of Applied Sciences

All our respondents agree that the creation of UAS has been a major reform with wide impact on the Swiss higher education system. Impact at different levels and in different directions: Firstly, UAS contributed to improve the cooperation with SMEs and the transfer of research results to the economy, an intended main objective of the reform (even if the aggregate impact on the innovation performance of Swiss economy is less clear, since this reform has little impact on multinational companies). Secondly, UAS helped to enlarge the access to higher education and to broaden the opportunities of students that chose a professional track at the secondary level. Before UAS, these students had to end their education with a postsecondary professional diploma and had no possibility to gain access to higher education; now they can get access to a UAS and, in some cases, a university masters in the same field. This is a welcome correction to a system which requires an early choice between an academic and a professional track (at an age of 14-15 already). Moreover, UAS graduates at bachelor level experienced good access opportunities to the labour market.

Thirdly, UAS introduced more diversity and competition in higher education. As one of the respondents affirmed, UAS are more flexible especially concerning education in practice-oriented domains and, in these areas, successfully took on some of the activities carried out previously by universities. The organizational and cultural change of UAS during the last decade – from professional schools to higher education institutions with a research culture – is seen by most respondents as a successful process, but some respondents remark that there is a large difference in resources and research quality between UAS and universities.

Changes in the governance and regulatory framework

According to our respondents, changes in the regulatory framework – through the reform of the federal and cantonal laws – had a certain impact on higher education,

but more gradual and limited than one would anticipate. In many cases, cultural changes – for example in conceiving that it is important to grant autonomy to HEI – were more important than regulatory reforms.

Overall, changes went more into the direction of reinforcing the role of intermediary bodies – for example SNF and CRUS – than towards a stronger State steering and coordination of the system (which was made difficult by tensions between Confederation and Cantons).

However, there is a general feeling that the reforms brought some more dynamics in the system, promoted competition, but also cooperation between HEIs to share different tasks. The national cooperation projects financed by the Swiss University Conference favoured some joint tasks and restructuring, but their impact has been reduced by the fact that federal funding was limited in time. The reinforcement of governance bodies (Swiss University Conference, Conference of Rectors) has also had a positive impact: for example, the wide introduction of the Bologna model (even if realised in a bottom-up process) would not have been possible without their stronger role. Also, for universities, the new accreditation organ had a positive impact in promoting an internal evaluation culture and making quality assurance procedures more systematic.

Increasing autonomy of HEI

Increasing autonomy of HEI and a stronger role of the rectorates is seen as a major trend, with positive impacts on the systems: universities are more free to set their priorities and there is more competitiveness among them. A stronger profiling of individual institutions is seen as the major outcome (rather than a reduction of costs).

However, according to our respondents, there are very strong differences between individual HEIs in this process. The two Federal Institutes of Technology have a large degree of independence (under a performance contract with the Confederation) and this gave them the opportunity to profile as leading international research universities (largely freed from national constraints). The situation in Cantonal universities is very different, some of them have a rather large autonomy, others are still under rather strict control from the Canton. Beyond legal arrangements, a major limiting factor for autonomy of a Cantonal university is the proximity between the university and their home canton (unlike Germany, Cantons host only a single university and, in some cases, one UAS); reform in cantonal university laws providing more formal autonomy should then not be overestimated.

Changes in funding systems

Most of our respondents agree that changes in the funding system did promote some stronger competition between institutions, but also at the level of individual research groups; as one respondent put forward, there is now a more healthier competition in the system than previously. Moreover, new funding instruments have been created to

promote collaboration and national networking (especially in research), beyond the traditional division between core funding and investigator-driven project funding: these include for example the SNF National Centres of Competence in Research, cooperation projects of the Swiss University Conference and some national programs in specific areas.

However, this reform is seen more as a change of degree than a fundamental change in orientation, since principles of quality in research funding allocation have always been very strong in the Swiss systems especially through SNF. However, for core funding, the change from cost reimbursement to the definition of standard rates per student is, at least conceptually, considered to be a very relevant change (and this will be even important in case this principle is introduced in the new higher education act as the benchmark for educational funding).

According to many respondents, what has been introduced is a kind of “controlled competition”, where there is an attempt to find a balance between competition and cooperation, leaving to each higher education institution its own place and taking into account political balance (in a country where regional issues are very important). In a way, this is leading to an implicit (and self-agreed) definition of a specific portfolio for each HEI through mutual arrangements (rather than through pressure from the State). By and large, coordination in research has been managed through networks including different centers distributed throughout the country (but not necessarily in all HEIs).

The overall appreciation is that funding reforms certainly contributed to the differentiation of the system and to a clearer positioning of individual institutions; moreover, they helped also to maintain the good quality of university research (thanks especially to the strengthening of the SNF). However, these measures probably did not lead to a reduction of costs, although this was never an objective of the reforms. Some respondents considered that this soft approach to competition is sustainable only if the current high level of funding can be maintained in the future, otherwise strong tensions will emerge.

Other factors of influence

Most respondents emphasize that two other factors strongly impacted on the system during the last ten years. Firstly, a phase of rather high public deficits at the end of the '90, which meant that resources for research and higher education stagnated and did not keep pace with the increase of the number of students (especially in the university sector). The situation has significantly improved since 2000 thanks to better public finances, as well as a higher political priority for research and higher education; however, at least at the federal level, the policy is to increase competitive funding for research, but not general funding per student.

Secondly, the introduction of the Bologna reform had substantial impacts not only on the level of curricula, but also on the strategy of HEIs and the overall system functioning and is perceived by many respondents as the main change driver during

the last decade. In a context of high diversity of curricula, where the facto changing of university curricula was impossible because of different organizations and regulations, Bologna is enabling students to make a change of study domain and of institution between bachelor and master.

Thus, there is some understanding that, while bachelors are an educational product for the local market, masters can be offered to a wider public; this is also leading to the diffusion of specialized masters and to a wider use of English at master level (for example in the FIT). Masters are thus a specific domain where individual HEI try to specialize themselves, with also a view on the development of research (ETH Zurich set a goal of having 50% of its undergraduate students at master level to reinforce its positioning as a leading international research university).

A second system-level impact of Bologna relates to the relationships between universities and UAS. The reform has been introduced in both sectors, but until 2007 UAS offered only UAS bachelors, with a different status than university bachelors, which in principle would not allow access to a university master. However, transfer possibilities have been created (in terms of number of credits to be added) *inside the same domain of studies* (general access to university masters with UAS bachelors remains excluded). Moreover, since 2007, UAS are allowed to offer master studies in a limited number of sectors provided they have sufficient research capacity in the domain. As in some other European countries, Bologna is thus a chief factor promoting the integration between the two sectors: the whole debate on the binary structure has to be seen also in this context.

5 Final discussion and appraisal

When looking at the impact of reforms in governance and funding on system performance, one has to first consider the specific situation of Switzerland, whose research and higher education system is historically one of the best worldwide. Some factors which might help to explain this strength are the very high level of funding – Swiss universities have been historically very successful in mobilizing different types of public resources, building also on the complementarity between federal and Cantonal funding -, a strong research tradition in universities, related also to the high degree of academic autonomy and to the central role of the Swiss National Science Foundation, and, finally, the clear distinction between professional postsecondary education on the one side, and university research and education on the other, which avoided overcrowding research universities with undergraduate students.

Thus, with a few exceptions, the issue for Swiss higher education policy is not to improve performance, but rather to maintain this excellent level in face of increasing international competition, as well as the pressure for broader access to higher education. Performance indicators considered in this report show that this was by and large possible and this view is shared also by our respondents.

A look at the reforms in the last ten years shows that these have been more important than usually admitted, even if implemented in a trial and error process and in a largely gradual way; however, they have really modified the overall structure of the system; moreover, the process is far from being complete as the draft new higher education act released in June 2009 clearly shows.

The overall assessment is that these reforms did contribute to keep the excellent international position of Swiss higher education, without altering its fundamental characteristics; thus, some stronger autonomy of individual HEI and the introduction of elements of competition also in institutional funding (and not only for research projects) promoted more dynamics in the system and pushed HEI to look for a better positioning in the national and international context. However, competition has been moderated by the relatively large share of core funding and the explicit promoting of inter-institutional cooperation and thus concentration and stratification of the system has been by large avoided.

Of course, this approach has been possible only in the context of comparatively high investments in research and higher education. Reduction of costs has never been an explicit goal of public policy in this context. Further, soft coordination through intermediary organizations – especially the two conferences of rectors – is likely to be a feasible approach only in (small or medium-sized) countries with a strong consensus-based culture.

Further, the creation of Universities of Applied Sciences was a highly successful reform which helped address two recognized weaknesses of the systems, namely support to small and medium enterprises and access to higher education (the domain where the chosen indicators show the largest progress). Again, the reform has to be seen as a correction of the Swiss system rather than a radical change of direction: thus, with UAS a clear separation between professional and general education has been maintained, avoiding the risk of overcrowding research universities, but at the same time professional curricula have been upgraded to higher education and suitable switching possibilities to universities for the best students have been created.

From a European perspective, the (successful) Swiss case bears then the lesson that, at least for the best placed countries, reforms in higher education need to build on the national strengths and thus need to be tailored to the special national conditions, even if some general principles might have general value (like strengthening the autonomy of individual institution or introducing some more competition).

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List of interviewees

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Dr. Philipp Bauer

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Andrea Blättler

Executive committee of student trade union (VSS/UNES) and ESU

Dr. Mauro Dell'Ambrogio

State Secretary for Education and Research

Ruth Dreifuss

Former Minister of Home affairs (incl. Education and Research) 1993-2002

Dr. Christine Flitner

In charge for Education, VPOD-SSP (Public service trade union)

Dr. Barbara Hearing

**Member of the European Research Area Board (ERAB), member of the ETH board,
former member of the Swiss parliament (1990-2007)**

Prof. Dr. Dieter Imboden

President of the Swiss national foundation

Dr. Nivardo Ischi

Former Secretary General, Conference of the Swiss Universities

Dr. Ingrid Kissling – Näaf

Director of the Innovation promotion agency

Dr. Charles Kleiber

Former State Secretary for Education and Research 1997-2007

Prof. Dr. Antonio Loprieno

President of the Rector's Conference of the Swiss Universities

Dr. Mathias Stauffacher

Secretary General, Rectors' conference of the Swiss Universities (CRUS)

Dr. Peter Stössel

In charge of Education and Innovation, SwissMEM

Silvia Studinger

Head of Universities unit – State secretary for education and research

Dr. Raymond Werlen

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Governance and Funding Reform in the European Higher Education Area

National system analysis: Turkey¹

1 Current Situation and Reforms

The Higher Education Law of October 1981 (No. 2547) regulates the entire tertiary education system in Turkey. The law made significant structural changes in the functioning of the system by integrating all the higher education institutions (HEIs) under the institutional body of universities. Another crucial evolution, which was granted with the Constitution of 1982, was the authorisation of non-profit foundations to establish HEIs. The first private university was founded in 1984.

The Law No. 2547 designates two administration bodies in the field of tertiary education: The Higher Education Council (YOK) and the Inter-University Council (UAK). YOK is a corporate public body which coordinates and observes the major activities of universities. The General Board of YOK consists of 22 members whose composition is as follows:²

Seven members selected by the President of the Republic, preferably from among former Rectors and distinguished professors,

Seven members selected by the Council of Ministers, from among distinguished, high-ranking civil servants, either active or retired (with the approval of the Ministry of Justice and their personal consent in the case of judges or prosecutors),

One member selected by the Chief of the General Staff,

Seven professors selected by the Inter-university Board from among non-members of the Board.

The UAK is formed by the rectors of all universities, one professor elected by the senate of each university and one professor elected by the Turkish General Staff. Its main responsibilities include the coordination, evaluation and counselling on the educational, research and publication activities of the universities, the preparation of regulations, and the designation of the rules regarding doctorate status and associate professorship examinations.³

According to the Higher Education Law, rectors manage universities. In addition, the senates and the board of directors are the administrative bodies of the universities. Rectors act as chairmen of the university boards. The procedure for the nomination

¹ Technopolis Group Turkey

² Regulation of YOK Organisation and Working Procedures , 1987

³ The Higher Education Law No. 2547

and appointment of rectors was changed in 1992. According to the new procedures, the YOK elects three nominees from the six candidates elected by faculty members. The President of the Republic appoints one of the three nominees as the rector for a period of four years. The deans are also appointed by the YOK from among the three professors nominated by the rector.

The senates of universities adopt resolutions on the principals of the education, scientific research and publications activities of universities. The university administrative boards assist rectors on administrative and budgetary issues.

The actual autonomy of Turkish universities is very limited as the government or YOK control central elements such as the budget and its allocation, admissions of students and the number of internal allocation of academic and administrative staff.⁴ The main responsibilities of the YOK, *inter alia*, include the following:⁵

To prepare short and long-term plans for the establishment, development, and realization of educational activities of the higher educational institutions;

To present to the Ministry of National Education proposals or views on the establishment, and, if necessary, unification of newly established universities,

To make decisions directly or on the basis of proposals made by universities concerning the opening, unification, or closing down of faculties, graduate schools and schools of higher education within a university and to convey the above decisions to the Ministry of National Education for appropriate action in due course,

To fix, in a balanced ratio, the positions of professors, associate professors, and assistant professors in universities on the basis of variable factors,

To decide on the maximum yearly student intake into each academic program after examining related factors

To arrive at a decision concerning the proposals of higher education institutions concerning the fees to be charged to the students in each academic year.

To present to the Ministry of National Education opinions and proposals concerning the institutions of higher education to be established by foundations

According to the Higher Education Strategy of Turkey issued by the YOK in 2007, the transition from the centralised system to decentralised management can be accomplished by improving the quality process. As regards the quality assurance, the 'Regulation for Academic Assessment and Quality Improvement at HEIs' was enacted on 20 September 2005. The regulation determines the principles of assessing and improving the quality of education and research activities and administrative services at HEIs, as well as the approval and recognition of their level of quality

⁴ TUSIAD (2008), Higher Education in Turkey: Trends, Challenges and Opportunities, p. 28

⁵ The Higher Education Law No. 2547

through an independent external assessment, which is conducted every five years. It also regulates the internal assessment of academic activities and administrative services of HEIs. Internal assessments are carried out annually since 2006. The results of both the internal and external assessments are open to the public yet external assessments are not compulsory.

The independent 'Commission for Academic Assessment and Quality Improvement in Higher Education' (YODEK) was formed in accordance with Article 5 of the Regulation. The Commission is responsible for maintaining and organizing the activities related to academic assessment and quality improvements at HEIs within the provisions set forth by the regulation.

Turkey has made progress in the area of student participation in governance with the enactment of the 'Regulation for Student Councils of HEIs and the National Student Council of HEIs' enacted in September 2005. According to this regulation, university students take active part at academic and administrative meetings of HEIs and are represented at national and international level through the national student councils. It provides students with a complete bottom-up organisational power in the most democratic manner. However, under the existing Higher Education Law, student representatives do not have the right to vote.

According to the Higher Education Law, the annual state budget of each university is designated by the Parliament with very specific earmarked budget figures, which is a line-item budget. The other income sources of the public universities can be grouped into three categories: income from the services provided by the university, student fees and research fund. As in the case of the annual budget allocations, the use of these three income sources are subject to specific laws, rules and regulations, which leave less flexibility to universities. The main difference between other income sources and state budget is that in the case of other sources it is possible to transfer the unused amount to the next fiscal year, while the unused amount from the state budget should be transferred to the Treasury.

The self-generated incomes of universities are collected under revolving funds in line with the principles established by each university and approved by the YOK. At least 35 % of the income accruing to the revolving fund, which is established by the contributions of the teaching faculty members of all the individual units (teaching, research, practice), is allocated to the provision of the various needs of that particular unit, including materials, equipment, research projects, etc. The remaining portion is divided among the relevant teaching faculty members and administrative personnel.⁶ The private universities have financial autonomy although they receive partial public support based on certain criteria. They create their own income sources independently, the largest amount being earned from student fees.

With the 'Public Financial Management and Control Law' (No. 5018) enacted in December 2003, a governance change that has also influenced the public universities

⁶ The Higher Education Law No. 2547

took place in the state budgetary system. Since 1 January 2007, state funds are allocated to the public universities according to their performance-based budgets. According to the law, the budget allocation for universities is provided in quarterly instalments based on an agreement between the YOK, the Ministry of Finance and the State Planning Organisation (for the investment budget) and with the ratification of the Parliament. The Law No. 5018 has also brought a change in the administration of the income generated by the universities themselves. According to Article 15 of the Law, these incomes are registered as self-incomes in the budgets of HEIs and the registered amount is used according to the proposed plan for how to use the income in excess of the estimated amount or how to fill in the deficit in relation to the expected amount. The implementation of the new Law is closely followed by the public universities, as it may result in a decrease of the state contribution to the total budget of universities where self-generated income is high.⁷ Budget preparation and implementation processes of universities will experience a noteworthy modification starting from 2010. According to the draft Budget Preparation Guide of 2010–2012, the budgeting level of universities will be cost items, like personnel and research, instead of units, like faculties. Hence, universities will not be required to divide their main cost items into university units during the budget preparation stage. This new approach was induced by the concerns of the university administrations relating to financial autonomy. The new budgeting regulation will bring financial flexibility to higher education institutions to some extent.

2 Performances and Background Variables

Turkey experienced improved performances in the areas of access, graduation and lifelong learning. According to the chart below, 95% increase is observed in net enrolment rate over the period 2002-06. Net entry rate was increased by 53% in the same period. Percentage of the population aged 25-34 with tertiary qualification increased by 18% and graduates per 1000 population aged 20-29 rose by 59% in the period 2002-2006. The biggest improvement was seen in the area of mature enrolment. The number of students aged 30 years and older as a percentage of total enrolment increased by 365% and 268% in ISCED 5 and ISCED 56 programmes. Patent applications to the EPO by priority year at the national level per million of inhabitants increased by 43% as well. In addition, the percentage of higher education R&D expenditure financed by the business sector has slightly improved with an increase of 9% between 2002 and 2006.

On the other hand, a decrease is observed in the performance of both inward mobility (by 50%) and outward mobility (by 24%) between the EU-27, European Economic Area (EEA) and candidate countries. University students with an origin of EU member states and candidate countries in Turkey have increased from 2,799 in 2003-2004 to 2,963 in 2006-2007. In spite of this positive development, the inward mobility ratio has decreased due to significant progress in total enrolment in the country.

⁷ Bologna Process National Report (2006), 2005-2007

Total enrolment increased from 1,972,662 to 2,342,898 between these respective periods.⁸ For the same reason, the upward trend in the number of students leaving Turkey to study in EU member states and candidates countries does not lead to an increase in outward mobility ratio. The Turkish students willing to study abroad generally prefer the USA and European countries (in particular Germany, France and the UK) while Turkey mostly attracts students from the Asian countries.⁹

According to the European Innovation Scoreboard, participation in lifelong learning is moving up from 1% in 2000 to 2% in 2006, which constitutes 14% and 21% of EU average for the respective years. The workforce participating in lifelong learning is an area which requires further improvements.

Turkey performs well in the number of scientific and technical publications, increasing its number of publications by scientists from 2,333 in 1995 to 21,779 in 2007 and raising its place from 34 in 1995 to 18 in 2007 in the world ranking.¹⁰ While the rate of increase in the 1995-2007 is extraordinary, the performance is not satisfactory compared to OECD average, considering scientific publications per million populations.¹¹ Mainly due to the weak regulatory framework, which creates disincentives for academics to commercialise research results through various means including collaborating with the private sector, the potential remains untapped.¹²

Although the employability trends are not available for Turkey in the chart above, according to the World Bank, the educated young people tend to have slow transitions from school to work with high unemployment rates. For youth 20-24 years of age, the unemployment rate in 2003 for those with tertiary education is almost 40% compared with just over 15% for those with a primary school education and almost 25% for youth with a secondary education.¹³ According to the 2007 data of the TURKSTAT, the annual higher education employment rate was 78.6%.

Another missing data in the above chart is the expenditure per university student. According to the OECD, Turkey achieved progress in higher education spending by increasing the proportion of higher education in GDP from 0.9% in 1995 to 0.93% in 2004.¹⁴ GDP spending on higher education ratio jumped to 1.09 % in 2005, yet it is not sufficient since the Lisbon agenda targets this ratio to be 2%.¹⁵ It will be very optimistic to expect Turkey to increase its tertiary education spending ratio in GDP substantially, since the priority is given to the primary and secondary education levels. Expenditure per university student also showed substantial increase between 1995 and 2007, rising from \$3,427 to \$6,113. Despite this considerable progress, per

⁸ OSYM Statistics 2003-2004, 2004-2005, 2005-2006

⁹ Eurybase - Turkey - (2007/08), p.159

¹⁰ The Scientific and Technologic Council of Turkey (TUBITAK) Statistics

¹¹ OECD Science and Technology Outlook 2008, p. 159

¹² Erawatch country report 2009: Turkey, p. 19

¹³ World Bank (2007) Vol. 1 p. 16

¹⁴ The Council of Higher Education (YOK) (2006b)

¹⁵ TUSIAD (2008), p. 7

student expenditure in public universities has remained at a third of the OECD average.¹⁶

According to the OECD, percentage of higher education graduates from engineering, manufacturing and construction decreased from 13.3% in 2000 to 9.4% in 2006. The ratios were again downward in the fields of life science, physical sciences and agriculture. On the other hand, the graduation rate jumped from 27% to 38.7% for the specified period in social science, business, law and services. The same downward trend in science and engineering (S&E) enrolment is relevant also in OECD countries, yet the decrease was not experienced as sharp as in Turkey.

While Turkey's S&E graduates ratio was higher than OECD average in 2000, it was 2.5% lower in 2006.¹⁷

The GERD as a percentage of GDP in Turkey is low compared to developed countries. The latest R&D survey conducted by the TURKSTAT covers 2007. It shows an increase in GERD since 2000 (from 0.64 to 0.76% in 2006). The universities are the highest performers of R&D in the country. HERD represents 48.2% of GERD in 2007.

The demographic profile of Turkey presents a potential window of opportunity for Turkey to build up the skills of its labour force. There are more young people in Turkey than ever before—about 20 million youth between the ages of 10 and 24. Moreover, the share of young people will continue to rise and will peak in the year 2020.¹⁸ According to recent demographic projections, the total population of the higher education age cohort (19-22 years of age) will be 5,077,000 in 2025. This figure is significantly below that for 2005, which were 5,477,000. Thus, in the coming two decades, Turkey will most probably have much more suitable environment to make structural reforms that improve the quality of higher education system, since the quantitative demand is not expected to be as stiff as today.¹⁹

3 Effects of the Reforms

The 'Regulation for Academic Assessment and Quality Improvement at HEIs' and the 'Regulation for Student Councils of HEIs and the National Student Council of HEIs' stand out as the most important developments in the Bologna Process of Turkey in terms of governance. The improvements are very recent and their impacts are expected to be seen in the near future. As also confirmed by the interviews, it is not possible to link above mentioned improvements to these regulations.

Although the procedures and measures brought by the 'Regulation for Academic Assessment and Quality Improvement at HEIs' helped the development of a culture of quality and leads to a change in the management of HEIs which recognises the

¹⁶ OECD, 1996; 1998; 2004; 2005; 2006; 2007, Table B1.1a and B1.1b, p 186-187

¹⁷ OECD (2008), Table A3.4a. p 89

¹⁸ World bank (2007) Vol. 1 p. 3

¹⁹ Barblan Andris, Guruz, Kemal and Erguder, Ustun (2008), Higher Education in Turkey, p. 141

importance of internal quality assurance procedures in the services they provide, it is difficult to refer it as a reform due to the following:

Absence of mandatory external assessment mechanism is a drawback of the regulation, since it harms the effectiveness of quality assurance and reliability of external accountability. However, some engineering faculties use external quality assurance practices to demonstrate their quality in the areas of competitive advantage. The Accreditation Board of Engineering Technology (ABET), an internationally recognised body in the field based in the United States, and the Association for Evaluation and Accreditation of Engineering Programmes (MUDEK) are the two organisations which implement external quality control in the Turkish universities.

The MUDEK was awarded the license for external assessment of engineering programmes on 15 November 2007 and accredited as an independent external quality assurance agency. As of 1 July 2009, MUDEK has accredited 76 engineering programmes in 15 different universities. In addition, there are two more sectoral agencies (for health and architecture programmes) which applied to the YODEK to become independent national accreditation agencies.

Another drawback of the 'Regulation for Academic Assessment and Quality Improvement at HEIs' is the YOK's involvement in quality oversight, and its link to both universities and government through its membership. The YOK sets a framework of requirements and oversees YODEK, which accredits quality assessment organisations. Moreover YODEK is not independent from the universities as it is formed by the academics, and includes one student representative as a stakeholder. This structure could cause concerns with regard to quality judgments since the European Standards and Guidelines (ENQA) states that agencies should be independent to the extent both that they have autonomous responsibility for their operations and that the conclusions and recommendations made in their reports cannot be influenced by third parties such as HEIs, ministries or other stakeholders.²⁰ Ideally, the central body of a national quality assurance system should include representatives of professional bodies such as chambers of commerce or industry, employers associations and the unions.

There are also problems encountered in the enforcement of the regulation. First, while feedbacks from students and various stakeholders are collected regularly in terms of evaluation of teaching, these interventions are not systematic. There are even differences between the faculties of the same university in the evaluation questionnaires which makes comparison of outcomes really difficult. Second, students cannot see the impacts of their evaluation. For the active involvement of academic, administrative staff and the students to the new quality procedures, regular feedbacks on actions taken in response to evaluations should be provided. Third, the lack of efficient data collection system prevents the universities to assess

²⁰ ENQA (2005), p. 25

its activities and to remedy weaknesses through actions. Global information system is needed in order to have accurate indicators to evaluate the objectives.²¹

The majority of HEIs have already completed their self-assessment reports. It is planned that the process will be completed and the first internal assessment of all universities as well as the external assessment of some will be completed and published before 2010.²²

In Turkey, the most important regulation in the funding system is the enactment of the 'Public Financial Management and Control Law' (No. 5018) in 2005, which initiated the performance based budgeting system in the public universities. The Law brought medium term perspective to the budgetary system with the budgets prepared for more than one year. The offices in charge of expenditures have reorganised and their responsibilities have expanded. Deans have become mandatory of payment. The 'Strategy Development Departments' established in the universities in the scope of the new Law started to make the pre-auditing and disbursement of the expenditures instead of the Ministry of Finance. In addition, preparation of strategic plans, mission and vision statements, strategic targets and performance indicators by universities initiated a cultural change. Getting familiar with these concepts, universities tend to work in the context of specified plans, control their outputs, and keep their statistical data in a more systematic way. The needs of the universities, like need for new departments and new staff requirements emerge more clearly with the development of strategic plans.

The Law No. 5018 regulates the state contribution to the budgets of public universities. Other than the state budget, public universities generates some of their income by themselves under the name of revolving funds from endowments, tuition fees, contract research, use of land owned by the universities, income generating community services like university hospitals and continuing education services. According to the Law, the Ministry of Finance regulates the amount raised for revolving funds in accordance with the strategic plans of universities. According to the interview results, universities are not pleased with this new system since they lose their flexibility of using income they generate.

The introduction of the Law 5018 is too recent to determine the effectiveness of its actual implementation at universities. However, given the overall regulatory setting, it seems that the provisions are not sufficient to allow universities to make the best of their budgets in accordance with their strategic targets and identified needs. Yet again, as with the governance issue, the Law 5018 does not seem to aim at rethinking the system from a new viewpoint but only at changing some elements of the old system. Tightly regulated line-item principle budgets based on quarterly spending periods and impractical rules for the use of public funds lead to inefficient financial management and limit operational flexibility in universities. It is evident from the introduction of the new regulation under the heading of 2010 – 2012 Period

²¹ TUSIAD (2008), p. 65

²² Bologna Process National Report (2008), p. 25

Budget Preparation Guide, which is a consequence of the Turkish policy-makers' awareness of a need for change. It is expected to see the impacts of the new budgeting implementation, after 2010.

4 Institutional case studies

Hacettepe University, Ankara

5 Governance and Funding Structure

The Hacettepe University (HU) has in its origins in the Paediatrics Department that was established in 1954 as an affiliation of the Faculty of Medicine of Ankara University. Its mission is to train highly qualified individuals for the future of the country, and to supply its research, education and service outcomes for the benefit of the society through its scientific and aesthetic accumulation of knowledge under the light of universal values. The HU has about 30,600 students of which 2,600 are in masters and 1,500 are in doctorate programmes in 2008-2009 academic years.²³ It hosts about 800 international students. The HU carries out its activities with 13 faculties, 9 schools, 1 conservatory, 13 institutes, and 35 research and application centres. The health sciences as well as the excellent medical services provided by the University through its hospitals are the major sources of its social relevance and reputation. Most probably because of the high contribution to the revolving fund, the medical departments are dominant in budget, human resources and infrastructure. All the rectors have been elected from medical faculties so far.

In line with the Higher Education Law No. 2547, all state universities in Turkey have a uniform administration structure. Hence the HU's governance bodies are not different than the other public universities. Administrative bodies of the university include the President's Office, the University Senate and the University Administrative Board.

Financial sources of the HU consists of the revolving fund, rental revenues, secondary education and summer school incomes, tuition fees, conditional donations, and aids other than contribution from the Treasury.²⁴ The HU's 2008 budget was TL552,493,000 of which 48% is Treasury support, 51% is revolving fund and 10% is self-generated income and 1% is other income.²⁵ Self-income of the university represents approximately 62% of the total budget, implying a higher degree of independence from direct government funding than most Turkish universities. This ratio is expected to be higher in the future.²⁶ In 2006, the contribution of the Health Departments in the budget was 93.8%, which was followed by the Faculty of Dentistry (3.1%). All other departments contributed to the rest of the budget.²⁷ As

²³ Higher Education Council Student Selection and Placement Centre (OSYM) 2008-2009 Statistics

²⁴ Hacettepe University Strategic Plan 2007-2011, p. 41

²⁵ Hacettepe University 2009 Fiscal Year Performance Programme

²⁶ Hacettepe University Strategic Plan 2007-2011, p. 42

²⁷ EUA Institutional Evaluation Programme/Hacettepe University (2007), p. 8

the HU does not charge any additional significant overheads, most of the funds return to the department where they were generated.

Although the HU generates majority of its resources by itself, the current legislation does not allow it to use the resources with full autonomy. The budget of the HU originating from the Ministry of Finance is a line budget and the university cannot transfer the amount from one budget item to another by itself. According to the EUA Institutional Evaluation Programme Report, the detailed line budgeting system and the cumbersome rules for the use of public funds lead to their less efficient utilisation and to heavy and time consuming administrative duties. So far the newly introduced performance based budgeting required by the Public Financial Administration and Control Law No. 5018 does not seem to have any significant positive effect on this problem. Furthermore since the bureaucratic procedures are very heavy and payment holds uncertainty, the administrative rules for additional income generating activities (revolving fund) do not stimulate contract research or other service oriented activities.

6 Improved Performances of the HU

7 Research Output

The HU performs well in research output by increasing its scientific publications published in Science Citation Index (SCI), Social Sciences Citation Index (SSCI) and Arts and Humanities Citation Index (AHCI) from 871 in 2003 to 1,063 in 2007.²⁸ The 1,063 indexed publications of the HU academic staff in 2007 is well above than the number of publications of many universities in the world. 2,217 of 3,684 ISI Journal articles between 2000 and 2005, in other words 60% of the total scientific publications of the HU, belong to the medical sciences.²⁹ The HU's position in Leiden Ranking in terms of the number of publications is 116 in Europe for the period of 2000-07. The HU made the biggest contribution to the scientific publications of Turkey in the 1981-2006 period, with 17,094 publications constituting 9.54% of the total national publications.³⁰ The HU was listed in the 2005 Jiatong/Shanghai Global Ranking of the best 500 world universities.

A number of factors ranging from research budget of university to research governance structure play a role in the HU's research success. The HU implements a merit-based research support system, an internal system for funding research projects on a competitive basis. The system is defying all competition by the board of specialists under the Scientific Research Unit (SRU) and the other boards in the faculties and schools. This structure (composed of a high commission and three specialised commissions) seems to work well and in an independent way. The HU mainly relies on the individual research initiatives of the academic staff, but has

28 www.yok.gov.tr

29 Ozgen, T. and Demirel, I.H., 2005, Hacettepe University 1070-2005 Scientific Activities, October

30 TUBITAK ULAKBIM (2008), Turkey's Scientific Publication Map

formulated broad priority areas: social sciences, interdisciplinary and applied research.³¹ As noted in the HU Strategic Plan 2007-2009 although this is a good attempt, a research management system at the international standards has not been established yet. Therefore, there is need for a policy for science and an administrative structure which will intensively deal with routines of research activities for researchers to make them more concentrated on research activity itself, to increase international integration, and to systemise scientific research. In addition, in order to conduct high quality research, it is necessary to increase the quality of all kinds of data produced at the university, and to use measurement techniques and the models in international standards. For this, the infrastructure of the university should be developed constantly.³²

The number of research projects supported by the SRU increased especially over the recent years. While the number of university supported projects in the period 1984-2004 was 1,604, more than the half of it was realised (811) between 2004 and 2008.³³ As shown in Table 1, the overall research budget also increased considerably in the period 2002-08. Total scientific research budget exceeded TL37m in 2008. The funding structure of research shows that there is an increasingly important contribution from the HU revolving fund. The HU Revolving Fund Enterprise allocates 6% of its revenue to research projects.³⁴

Year	Revolving Fund	%	Funding from the state budget	%	TUBITAK* project support	%	EU project Funds	%	Total
2002	6,042,340	76.6	1,843,357	23.4	0	0.0	0	0.0	7,885,697
2003	5,710,206	70.0	2,451,428	30.0	0	0.0	0	0.0	8,161,634
2004	11,100,470	57.3	8,101,101	41.8	0	0.0	172,139	0.9	19,373,710
2005	12,685,919	74.9	2,617,845	15.5	1,170,520	6.9	457,958	2.7	16,932,242
2006	14,781,472	46.4	10,120,012	31.8	6,024,263	18.9	921,320	2.9	31,847,067
2007	12,988,161	43.4	6,855,175	22.9	5,533,386	18.5	4,569,451	15.3	29,946,173
2008	22,263,906	59.4	7,363,693	19.7	5,396,961	14.4	2,431,293	6.5	37,455,853

Table 1: HU Research Budget by the Sources of Funds between 2002 and 2008 (TL)

Source: Hacettepe University EUA Evaluation Report and Strategy Development

* The Scientific and Technological Research Council of Turkey

³¹ EUA Institutional Evaluation Programme/Hacettepe University /July 2007

³² Hacettepe University Strategic Plan 2007-2011, p. 31

³³ Hacettepe University 2004-2005 and 2007-2008 Annual Reports

³⁴ Hacettepe University 2007-2008 Annual Report, p. 59

In terms of research governance structure, within the framework of the new financial regulations, the SRU undertakes the supervision of all research projects including those financed by the Scientific and Technological Research Council of Turkey (TUBITAK). Thus, among the Turkish universities, the HU has designed an advanced and pioneering administrative structure for research activities in parallel to its mission. Regarding the institutional formation of the research management in Turkey, the HU with its research ethic committees is in a good position compared to the other universities. The research activities are open to ethical inspection and any violation is investigated seriously by related units. According to the HU Strategic Plan, such practices should be regarded as inspection mechanisms within the University and should be improved further.³⁵

8 Cost Effectiveness

Considering the cost effectiveness, HU is doing better than most Turkish universities in the public funding of its activities. Not only has the HU been able to keep total enrolments rather stable but per capita funding in US\$ has not decreased as has been the case of many Turkish universities who were forced to increase the number of students massively without proportional increase of the budget.³⁶

Number of Students	2002	2003	2004	2005	2006
Two-year Degree	3,531	3,995	3,486	3,010	2,973
Bachelor Degree (Up to 4 years)	3,306	3,032	2,632	2,466	2,368
Bachelor Degree (Up to 6 years)	19,094	19,698	19,442	20,121	20,713
Masters Degree	2,462	2,584	2,730	2,379	2,650
Doctorate	1,407	1,456	1,536	1,485	1,541
Total Student	29,800	30,756	29,826	29,461	30,245
Public Education Funding (US\$)	92,480,472	123,966,882	158,103,282	153,479,355	163,282,242
Funding per Student (US\$)	3,103	4,031	5,301	5,210	5,399

³⁵ Hacettepe University Strategic Plan 2007-2011, p. 31-32

³⁶ EUA Institutional Evaluation Programme/Hacettepe University, July 2007

*Table 2: Distribution of the HU Students by Degrees and Funding per Student**Source: EUA Institutional Evaluation Programme/Hacettepe University, July 2007*

9 National Higher Education Reforms and Effects on University

The Public Financial Administration and Control Law No. 5018 enacted on 2003, requires public administrations to prepare their strategic plans in a participatory way and to follow up their performances based on these plans. The HU started its first strategic planning activities in January 2004 in accordance with the decision (no. 2003/14) of the Higher Planning Board (“Programme and Budget Preparation for the Fiscal Year 2004”) which requires eight pilot public administrations including the HU to prepare their strategic plans in accordance with the Law 5018. Certain activities in the HU such as Total Quality Management, which was first started at the university hospitals in 2000 and then disseminated throughout the university in October 2003, and performance-based contribution payment from revolving fund have provided a basis for the pilot strategic planning process.

The HU applies a bottom-up approach in its strategic planning process. It aims to achieve the widest participation in strategic decision-making processes and to serve as an institutional learning and improvement process. In this context, strategic planning activities are carried out by each academic and administrative unit separately and strategic plans of these units, which form the basis of main strategic plan, are assessed by the Strategic Planning Committee. The academic and administrative units of the university prepare their strategic plans since February 2005 and they are all published in the university's web site so that they remain open to recommendations and opinions of all stakeholders. As part of the strategic planning policy, the HU decentralised its administration by transferring to each department the responsibility for spending public funding in its budget.

As a requirement of the Law No. 5018, the Strategy Development Office was established in January 2006. This office is responsible for preparing strategic plans as per the Law No. 5018 and is also the secretariat of the Strategy Development Committee.

According to the ‘Regulation for Academic Assessment and Quality Improvement at HEIs’ enacted by the Council of Higher Education (YOK) in September 2005, the HU initiated a programme to define an institutional framework for all quality development activities including the strategic planning process. In this respect, the ‘Hacettepe University Academic Evaluation and Quality Enhancement Board’ (HUADEKK) was created for quality development activities. The HU considers it as an opportunity for the institutionalisation of quality related efforts. Another unit which was established in 2006 by the University Senate decision is the Quality Office (HUKK). The Office acts as the secretariat to the HUADEKK, and is responsible for sustaining and coordinating quality enhancement projects in education, research and other activities.

Some useful implications of the new legislations, the Law No. 5018 and the Regulation for Academic Assessment and Quality Improvement at HEIs began to take place. The University started to systematically assess the current situation, evaluate the changes in the performance and develop mid and longer term strategies according to its targets. Annual self-assessment reports prepared in the scope of the Regulation for Academic Assessment and Quality Improvement at HEIs' helped the University see its accurate position and take necessary actions for further improvements. Despite these beneficial implications of the new legislations, it is difficult to link them to the high performance in research output and cost effectiveness. The HU's increased revolving funds as a consequence of the raised revenues from medical services and the research performance of its medical faculties has a direct influence on the research output. The cost effectiveness (i.e. increased funding per student) is the result of the stable number of students over the years and the increased funding of the government. The University's strategy is not expansionist; it aims to focus on quality with a limited number of selective students. Since the related legislations have started to be implemented recently, it is early to see their impacts on the performance of the HU.

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Middle East Technical University, Ankara, Turkey

10 Governance and Funding Structure

Middle East Technical University (METU) was founded in 1956 as a state university. Its mission is to reach, produce, apply and promote knowledge, and to educate individuals with that knowledge for the social, cultural, economic, scientific and technological development of the society and humanity. The University aims to achieve this mission by bringing teaching, research and social services up to universal standards. METU currently has about 23,000 students of which 4,100 are in masters and 2,400 are in doctorate programmes. It hosts about 1,430 international students from nearly 68 different countries studying toward myriad of academic degrees. METU has 40 undergraduate programmes within 5 faculties. Additionally, there are 5 Graduate Schools with 93 masters and 61 doctorate programmes and a "School of Foreign Languages" which includes the English Preparatory Department. 12 undergraduate programmes (including 1 international programme) are offered in connection with METU Northern Cyprus Campus.¹

In line with the Higher Education Law No. 2547, all state universities in Turkey have a uniform administration structure. Hence METU's governance bodies are not different than the other public universities. Administrative bodies of the university include the President's Office, the University Senate and the University Administrative Board.

Financial sources of METU consist of the funds provided by the Undersecretariat of Treasury, revolving funds and funds provided for the research projects through the Scientific and Technological Research Council of Turkey (TUBITAK) as well as international sources. As shown in Table 1, the majority of funds are provided from the Treasury. The Treasury support has been volatile over years, constituting 79% of the total budget in 2007. Between 2005 and 2007, the share of revolving funds in the university budget remained around 8%, while TUBITAK's share increased from 0.8% to nearly 10% over the same period. Funding per student was TL6,976 in 2007 as compared to TL7,511 in 2005. This shows the need for increasing the state funding for universities.²

¹ <http://www.metu.edu.tr/about/misguide.php>

² METU Self Assessment Report, 2007, p. 11

Funding sources	2005	2006	2007
Treasury support	176,725,890	165,899,899	176,893,798
Revolving funds	12,481,772	16,585,963	19,606,757
TUBITAK projects	1,707,028	14,712,420	22,494,872
International projects	4,075,084	4,916,550	6,015,140
Total	194,989,774	202,114,832	225,010,567

Table 1: Shares of Funding Sources in METU Budget between 2005 and 2007 (Turkish Lira-TL)

Source: METU Self assessment Report, 2007

11 Improved Performances of METU

METU prepared its Strategic Plan 2005-2010 with the aim to solve all problems faced in all areas and at all levels. The Plan specifies the priority areas which are significant in METU's achievements of its goals and concentrates on the issues that necessitate primary consideration in these areas.

Beginning from 2005, METU started to prepare its self-assessment reports annually to monitor the goals and strategies specified in the strategic plan. In these reports, the strong, sufficient and poor areas of the university are assessed; the necessary measures that should be taken against the unsatisfactory conditions are provided. According to the self-assessment reports of METU, improved performances are observed in the areas explained below.

12 University-Industry Cooperation

One of the METU's priorities is enhancing cooperation with industry through a variety of measures, such as the Research and Application Centres and its Technopark (METUTECH). In its strategic plan, METU set the goal of fostering deeper and broader interaction with the tenants of METUTECH. Some of the actions to achieve this goal include developing and financing of joint projects with the tenants in priority research fields; systematically organising brokerage events to bring academics and tenants together; and arranging study visits to the METUTECH for groups of students and creating opportunities for them to do their summer practice and find part-time jobs at tenant companies. As a result of these efforts, cooperation between METU and tenant companies of its METUTECH increased over the years as seen in Table 2. Experienced gained in this area is being shared in the international arena: Technopark development activities were initiated in Kyrgyzstan, Azerbaijan and Ethiopia with the protocols signed with METU.

	2003	2004	2005	2006	2007
Number of active joint projects	48	72	103	126	176
Number of total academics involved in joint projects	73	91	128	136	156

Table 2: Research projects between METUTECH tenants and METU

Source: METU Self Assessment Report, 2007

13 Mobility

Since its foundation as an international research university, METU has been the leading university in Turkey in terms of depth and breadth of international ties and the amount of funds generated from international research projects. One of the criteria of being an international university is the student mobility. The 'International Student Attaining Project' initiated with the leadership of METU in 2001 contributed to the increase in the number of foreign students.

METU placed the internationalisation vision in the Strategic Plan 2005-2010 through the goals of

- opening METU's educational programmes to international students,
- increasing services and support provided for international students,
- increasing the international nature/quality of the METU campus,
- making the participation of METU students in international exchange programmes a common practice, and
- harmonizing educational programmes with international standards/qualities.

To achieve these goals, the following strategies were defined:

- becoming a member of international associations and initiatives (EUA, EAIE, SEFI) in the higher education sector and effectively participating in their activities;
- effectively announcing and encouraging participation in student and faculty exchange programmes, primarily the EU exchange programmes;
- improving the promotion activities carried out towards target countries;
- reaching students in target countries through METU's e-learning programmes.

As a consequence of the internationalisation efforts, METU significantly increased the number of international students in the campus (Tables 3) as well as the number of students exchanged through ERASMUS and other programmes (Table 4).

Table 3: Total International Students in METU

	2000-2001	2008-2009	Rate of Growth
All universities in Turkey	16,656	18,720	12%
METU	831	1,240	49%

Table 3: Total International Students in METU

Source: Higher Education Council Student Selection and Placement Centre (OSYM) 2008-2009 and 2000-2001 Academic Period Higher Education Statistics

	Students sent abroad	Students hosted
2005	94	108
2006	217	119
2007	213	129

Table 4: Students exchanged in ERASMUS and other agreements

Source: METU Self Assessment Report, 2007

METU is a member of a number of associations and networks dealing with international education and exchange such as EUA, EAIE, IIE, GE3, CEASAR, SEFI, CIEE. The University also actively participates in AIESEC and IAESTE summer internship programmes. With 137 Erasmus agreements and 156 bilateral exchange and cooperation agreements with universities in wide range of countries, METU annually sends 350 students and 60 teaching staff and hosts 250 students and 50 teaching staff/researchers.³

Research Output

METU supports the setting in which research, creativity and student self-development can flourish. One of the criteria of the success of research activities is the number of publications. METU set goals and made plans in order to increase METU-based citations for all academic units. Strategies like increasing the number of awards granted for research outputs come up in the Strategic Plan. METU is progressing in the way of becoming a research-based international university with its improved performance in international research publications. The number of articles originated from METU published in the journals in the scope of SCI, SSCI and A&HCI increased from 658 in 2005 to 729 in 2007. The number of publications per academic increased from 0.97 in 2006 to 1.01 in 2007.⁴

The rise in the research funding also has a significant impact on the improved performance of the research output. The share of research in the total budget has jumped from 18% in 2005 to 31% in 2007. Every item constituting the research budget increased in the 2005-2007 period (Table 5). Especially the rise in the

³ <http://www.metu.edu.tr/about/misguide.php>

⁴ METU Self Assessment Report, 2007, p.36

TUBITAK funding received for research projects submitted by the University is noteworthy.

Finally, the improvements in the legislation regulating the EC funded projects positively influenced the amount of projects supported from international projects.

	2005	2006	2007
Revolving funds	10,387,762	14,305,651	17,572,965
Funds allocated for TUBITAK financed projects	1,707,028	14,712,420	22,494,872
Funds allocated for international projects	4,075,084	4,916,550	6,015,140
Treasury funding for research	19,517,175	18,490,030	23,175,100
Research Budget	35,687,049	52,424,651	69,258,077
Total Budget	194,989,774	202,114,832	225,010,567
Share of research budget in total budget	18%	26%	31%

Table 5: METU Research Budget by the Sources of Funds (TL)

Source: METU Self Assessment Report, 2007

METU puts efforts to increase the support provided by the Graduate Schools to the transformation of graduate theses into publications and products; to commercialise the research results, and to provide support for IPR protection through its technology transfer office.

The first attempt to transform research outputs of academics into patents and support their commercialisation was initiated in 2006 with the assistance of METUTECH. Five academics who wanted to benefit from this support participated in the initiative in the same year. By 2007 this number increased to six, and one patent application and seven industrial design registrations of METU academics were approved by the Turkish Patent Institute.

Along with the support to commercialisation of research outputs, METU defined a strategy to organise competitions and award programmes for the research carried out in an area demanded by industry with the support of the related industrial sectors. Another area of focus is to promote technology-based entrepreneurship among university students. For this purpose, METU organises a business plan competition (the so-called “New Ideas, New Businesses Competition”) annually since 2005 in the cooperation with METUTECH. The winning student team is supported to implement their ideas by creating a company in METUTECH.

Postgraduate Students

Due to fact that the number of postgraduate students is an important indicator for a research-based university, METU puts efforts to increase the number of research personnel, in particular the number of postgraduate students, in line with its Strategic Plan. METU increased the number and diversity of its postgraduate programmes and assumed the responsibility of raising academics both for the national and foreign universities. The 'Academic Raising Programme' which was initiated in 2001 has spread to 37 national and foreign universities.⁵ As a result of these attempts, the number of doctorate students jumped from 961 in 1999-2000 academic year to 2,328 in 2008-2009 with a 142% increase. As shown in Table 6, METU is far ahead of Turkey's average in the number of doctorate students. The number of masters students also increased significantly over years, from 3,204 in 2000-2001 to 4,010 in 2008-2009.⁶ University's strategy is not expansionist but to increase its research potential while giving quality educating to a limited number of selective students. Thus, the target of 30% of all METU students become postgraduate students has been reached.

Total Doctorate Student			
	2000-2001	2008-2009	Growth Rate
All universities in Turkey	21,739	35,669	64%
METU	961	2,328	142%
New Entrant Doctorate Students			
	2000-2001	2008-2009	Growth Rate
All universities in Turkey	4,827	7,622	58%
METU	289	484	67%
Doctorate Graduates			
	2000-2001	2008-2009	Growth Rate
All universities in Turkey	2,113	3,744	77%
METU	74	192	159%

Table 6: Comparison of total doctorate students in Turkey and METU

Source: Higher Education Council Student Selection and Placement Centre (OSYM) 2008-2009 and 2000-2001 Academic Period Higher Education Statistics

⁵ METU Self assessment Report, 2007, p. 5

⁶ Source: Higher Education Council Student Selection and Placement Centre (OSYM) 2008-2009 and 2000-2001 Academic Period Higher Education Statistics

The postgraduate students are involved in research projects in the University and prepare their theses out of these projects (Table 7). Thesis per academic increased from 1.1 in 2006 to 1.28 in 2007.⁷

	2005	2006	2007
Number of master theses	701	701	741
Number of doctorate theses	153	101	177
Total number of theses	854	802	918

Table 7: Number of theses in METU

Source: METU Self assessment Report, 2007

The Impact of the National Higher Education Reforms on METU

METU had begun its strategic planning activities before the Law No. 5018 -which requires every public administration and state university prepare and implement strategic plans- came into force in 2003. The 'Development Goals and Strategies of METU' prepared for the periods of 1995–2000 and 2000–2005 were the backbone of its strategic planning process. However, mechanisms for formal implementation of strategies have been not devised. In October 2001, METU initiated a self-assessment process that involved units at the levels of its Faculties, Graduate Schools and Schools (F/E/YO), and its Departments and Graduate Programs (EABD). To this end, 'Self-Assessment Committees' were established. The committees scrutinized the methods to be used in comparing, contrasting and unifying the self-assessment reports of the academic units, and the processes to be initiated in order to implement the outcomes of these reports. Optional models have been assessed in light of university-wide expectations, and consequently, it was decided that the self-assessment studies be transformed into a strategic planning process. The 'METU Strategic Planning Model' was approved by the University Senate in April 2002. The model provided opportunity for all academic units to directly participate in the planning and implementation processes in a manner which responded to the experiences, circumstances and attributes of METU. Studies to determine 'missions, visions, goals and objectives' and to suggest strategies in a bottom-up manner at the departmental level during the initial phase of the process were merged with the studies carried out at the level of faculties, institutes and schools, were eventually reflected to the university level. METU Strategic Plan 2005-2010 was prepared in the light of the reports submitted by the academic units.

7 METU Self assessment Report, 2007, p. 35

METU is a pioneer in Turkey in the external accreditation and international evaluation of its academic units. In 2001, METU applied to the European University Association (EUA) to go through an international evaluation process covering all units of the university. In addition to the Accreditation Board for Engineering and Technology (ABET) accreditation procedure in which all the departments of the Faculty of Engineering participated and successfully completed, certain departments of the Faculty of Arts and Sciences underwent international evaluation. It has been observed that these accreditation and external evaluation applications, which mainly focused on undergraduate education, have provided significant benefits to all academic units that have participated in the processes. With the introduction of the 'Academic Assessment and Quality Improvement Regulation' by the Council of Higher Education (YOK) on September 2005, the internal assessment of academic activities and administrative services of universities began to be carried out annually since 2006. The 'Academic Evaluation and Quality Improvement Board' (ADEK) was established in METU to coordinate the self-assessment activities as required by the Regulation. METU prepares self-assessment reports and publishes them on its web site annually since 2006.

Based on the interviews with the METU's President Office, recent reforms at the national level (the enactment of Law No. 5018, the introduction of 'Academic Assessment and Quality Improvement Regulation' and 'Regulation for Student Councils of HEIs' and the 'National Student Council of HEIs' in 2005) do not have an impact yet on the improved performance of METU achieved in the last years. The Law No. 5018 has not brought a noteworthy flexibility to the fiscal operations of the University and has not contributed to a more efficient and effective resource generation and usage. Since ADEK has recently been established, it has not yet become functional for performance assessment and performance-based budgeting yet.

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List of interviewees

Institution	Name
Suleyman Demirel University	Assoc. Prof. Dr. Ibrahim Attila Acar
Afyon Kocatepe University-Department of Public Finance	Assoc. Prof. Dr. Isa Sagbas
Ministry of Trade and Industry Medium Enterprises Development Organization	Dr. Mustafa Colakoğlu
State Planning Organisation	Selcen Altinsoy Cevlik
State Planning Organisation	Kamil Ayanoglu
TOBB University of Economics and Technology	Prof. Dr. Ihsan Sezal
Credit and Hostels Institut,ion (Kredi ve Yurtlar Kurumu)	Cigdem Eren
Isik University	Oktem Vardar
Ministry of National Education General Directorate of Higher Education (MEB Yüksekokretim Genel Müdürlüğü)	Dr. Huseyin Turker
Public Management and Audit Strategies Research and Development Centre Association (Yonetde)	Nazmi Gurkan

Bogazici University	Prof. Dr. Ali Baykal
Turkish Industrialists' and Businessmen's Association (TUSIAD)	Ebru Dicle
Sabancı University	Ustun Erguder
METU-Department of Industrial Engineering	Prof. Dr. Canan Cilingir
METU-Assistant to the President	Assoc. Prof. Dr. Irem Dikmen Toker
METU-President	Prof. Dr. Ahmet Acar
METU-Vice President	Prof. Dr. H. Nevzat ÖZGÜVEN
Hacettepe University-Strategy Decelopment Department	Murat Karaagac
Hacettepe University	Prof. Dr. Yuksel Kavak
Hacettepe University	Prof. Dr. Gulsun Baskan

14 Alternative Interpretations of Improved Performances

Turkey saw improved performances in the areas of access, graduation and lifelong learning in higher education. However, the interviewers do not think that there is a connection between the improved performances and the regulatory improvements in the last decade, since these regulations are very recent and their impacts have not been seen yet effectively. The general opinion is that the improved performances are the result of some demographic and economic trends. In addition new developments in the tertiary education and some political factors have a crucial effect on these improved performances, as explained below.

The total enrolments, including graduate and distance education programmes, increased from 1.3 million in 1996-1997 to 2.4 million in 2006-2007.¹²⁵ This corresponds to an increase of 85% in ten years. The gross enrolment ratio was 28.15% in 2003-2004. In 2006-2007, the gross enrolment ratio reached to 36.6% with full-time students accounting for nearly two-thirds of the enrolment, and students in distance education programmes representing the remaining third. The enrolment ratio becomes 20.1% for the same period if only the full-time programmes are taken into account.¹²⁶ This increase in the enrolment ratio was achieved due to capacity expansion in full-time programmes, distance education courses and evening programmes. About 40% of this expansion has occurred in open universities and evening/secondary programmes.¹²⁷ In terms of the share of distance education programmes in enrolment, Turkey ranks among the highest in the world. Estimates by the World Bank based on enrolments in the 1990s place the Open Education Faculty of Anadolu University second in the world after the Chinese Open University, and the Turkish higher education system in the second place after Thailand in terms of the share of enrolment in distance education programmes. Of total student enrolment, 18% of students were in formal postsecondary vocational programs, 42% in formal undergraduate programs, 35% in distance education programs, and 5% in graduate programs. Excluding distance education programs, 26% of students were in two-year postsecondary vocational schools, 65% in undergraduate programs, and 9% in advanced degree programmes.¹²⁸

The capacity expansion was needed to meet the tremendous demand increase in tertiary education. According to the data of the 'Student Selection and Placement Centre' (OSYM) of the YOK, the number of applicants which was 1,398,595 in 1997 reached 1,641,403 in 2007. The number of places available in full-time courses in the said years was 254,038 and 413,147, respectively.

Hence in the last ten years, the number of places has increased more than 1.5-fold, while the demand increase was less than 1.2-fold. 33 private and 41 public universities have been founded between the 1996-2008 periods. By 2008, the number

¹²⁵ OSYM Statistics (2006-2007)

¹²⁶ YOK Statistics (2003-2006), Ministry of National Education Statistics (2006-2008)

¹²⁷ World Bank (2007) Vol. 1, p. 11

¹²⁸ World Bank (2007) Vol. 1, p. 11

of public universities reached 94 and the number of all universities was 130 respectively.¹²⁹

It was given special emphasis to establish new universities outside the three big cities of Istanbul, Ankara and Izmir. In 1981, 15.2% of the full-time students were enrolled in higher education institutions outside of the three big cities. This ratio was 75% in 2005-2006. The corresponding ratios for the academic staff were 20.9 % and 64.6%, respectively, clearly showing the importance of the geographic spread of higher education across the country.¹³⁰ On the other hand, the respondents emphasized the decreasing quality of the higher education system due to insufficient financial resources and academic personnel against the rapid expansion of the bachelor courses.

In spite of the rapid capacity expansion in tertiary education, the Turkish higher education system can still meet only about a quarter of the demand for full-time higher education, as there has been an almost corresponding increase in the number of applicants. This wide gap between the demand for higher education and the number of places available in full-time programmes is the major driver for the student outflow from Turkey. As a result, the examination for higher education selection and accommodation still remains very competitive and continues to be a major issue.

The demand in tertiary education has increased due to the following factors:

The population structure: Turkey has a large young population, although its growth rate is decreasing steadily and shifting to older age groups. The country's total population was nearly 73 million in 2006, when the growth rate was 1.26%.¹³¹ The population distribution for 2005 was 28.3% of 0-14 year-olds, 65.8% of 15-64 year-olds, and 5.9% of persons aged 65 and over. The projected rates for 2010 are 26.9%, 66.9% and 6.2%, and for 2025, 22.7%, 68.5% and 8.8% for the respective age groups.¹³² These indicators show the enormous need for higher education provision.

The rise in the number of high-school graduates: This increase has been observed especially after the introduction of eight-year compulsory primary education in 1997. In spite of the increase in the last ten years, the enrolment and completion of secondary education are still low by international standards.

While the graduation rate in secondary education was 37% in 1995, it rose to 51% in 2006. However, this improvement is still not sufficient considering the OECD average of 83% in 2006.¹³³ The rates are lower for girls and for developing regions.

¹²⁹ DPT (2009), Expertise Thesis, The Evaluation of the Access to Higher Education and the Policy Recommendations for Turkey

¹³⁰ Barblan Andris, Guruz, Kemal and Erguder, Ustun 2008), Higher Education in Turkey, p. 73

¹³¹ OECD (2007b)

¹³² YOK (2006b) pp. 53-55

¹³³ OECD (2008), Table A2.2., p 66

The high number of students who retook the university selection and placement examination several times: The students who take this examination more than once is not low either because they did not perform satisfactorily on the initial one or they could not enter their desired academic programme on the first examination.¹³⁴

The shortcomings of secondary education: Secondary education remains insufficient to provide necessary competencies for the labour market. The students who do not succeed in entering a university programme may not have sufficient level of knowledge and skills to earn a living. Except for vocational schools, professional skills are not provided in the secondary education system which directs the students necessarily to higher education without any other choice.

While the increase in enrolment rate is generally related to the rise in demand, capacity enlargement of universities, diversification of programmes and foundation of new universities, the performance increase in attainment corresponds to the same factors. In addition, academic amnesty legislations which enable students to re-register to universities from which they have been expelled for reasons of academic inadequacy, contributed to the increase in graduation rate. The last academic amnesty legislation comprising the students expelled from 1995 to the legislation date was passed in October 2008. While the graduation rate in tertiary education was 6% in 1995, it reached 15% in 2006. In spite of the improved performance, Turkey still ranks well below the OECD average of 37%.¹³⁵

Although Turkey's focus is on expansion from an elite education system with low participation to a mass system with much higher access and participation and a greater diversity of educational programs and institutions¹³⁶ in order to meet the demand of young population, improved performance is observed in life-long learning rates. In addition to the existence of an open and distance learning university, life-long learning is present in most universities. The programmes for matures are offered either as a means to generate funding by providing them as a service to the external community, or for social reasons, or both. The programmes are shaped according to the demands of the potential participants. However, there are some concerns relating to the expensive course fees and the programmes' unaccredited nature. Another important factor in the improved performance is the expansion of distance education, which allowed much more working adults to continue their education. Moreover, the academic amnesty legislations fostered the upward trend.

¹³⁴ Mizikaci, Fatma (2006), p. 20

¹³⁵ OECD (2008), Table A3.2., p 87

¹³⁶ World Bank (2007) Vol. 1, p. 4

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Governance and Funding Reform in the European Higher Education Area

National system analysis: United Kingdom (England)¹

1 Introduction

This report aims to summarise the main changes relating to governance and funding in English higher education (not the UK, see note below) over the last ten or so years. It is based on face-to-face and telephone interviews with officials in the main public funding and policy agency for higher education, the Higher Education Funding Council for England (HEFCE); with officials of the main representative body for universities, Universities UK (the equivalent of the Rectors' Conference in many other European countries); and with a number of current and past university leaders and senior managers. It also draws on recent analytical literature on UK higher education. Two institutional case studies have informed this study, and are attached.

The English higher education system is large and diverse, being the result of both unplanned development historically, with the addition of more recent regionally and centrally planned elements. There are, accordingly, limits as to the applicability of the general claims that must necessarily be made in a paper of this sort.

2 Main reforms in governance and funding over the last ten years

The general picture as regards the governance and funding of higher education in England over the last ten years or so has been one of broad stability - albeit with a large number of government interventions as to detailed policy - and with a steady expansion of the system, supported by significant additional public and private resources.

England, and the UK as a whole, has a unitary higher education, following the merger of the polytechnic system (vocationally-oriented institutions under local government control – the so-called “public sector” of higher education) with the “autonomous” university sector, as a result of legislation in 1992. The number of universities has subsequently grown, as a number of colleges of higher education were able to achieve university status, with degree-awarding powers, once the traditional requirement that universities should have a significant research mission was modified in 1998.

A general policy aim in this period has been to correct a previous period of under-funding in the 1980s, in both revenue and capital budgets. National political control by the same party from 1997 to the present, combined with strong political

¹ Dr Paul Temple

leadership throughout that period, has allowed a relatively consistent policy trend to emerge so far as higher education is concerned - exhibiting more stability, and with less central intervention in operational matters, than in the schools or vocational education sectors, for example. The British higher education tradition of largely autonomous institutions, with public funds being allocated by non-political "buffer" agencies, has been, arguably, maintained, though in a diluted form. The expansion of the system, the larger sums of public money at stake, and the increased political salience of the higher education sector have all led to a far greater level of intervention by government than has historically been the case in England. As an indicator of this, prior to the 1988 Education Reform Act, there was little legislation of any kind directly relating to higher education; subsequently, legislation has become quite regular (the Acts of Parliament of 1990, 1992, 1994, 1996, 1998, and 2004: it should be noted that substantial parts of these enactments relate to new student support and fees arrangements). A relatively benign demographic situation, with rising numbers of 18-year olds and apparently improving school examination results, and particularly with more girls entering higher education, achieving better school examination results than boys and evening the gender balance, has also made expansion easier to manage.

(Note: this report focuses on England: the situation in other parts of the UK can be considered as being broadly similar, despite differences in Scotland and Wales following the establishment of devolved administrations in these areas in 1999, leading to changes in arrangements for student tuition fees and support, and more regional approaches to higher education planning. Nearly 80% of the UK's 169 higher education institutions are in England.)

Autonomy and competition

It will perhaps be useful to note here that all UK universities are legally independent institutions, with governing boards (which have lay majority membership and chairs, with the important exceptions, for historical reasons, of Oxford and Cambridge Universities) taking their own strategic decisions, awarding their own degrees, having responsibility for their own finances including the power to borrow money, employing their own staff, and owning or renting their own premises.

That said, the fact that, for every university, the government (in its various capacities as a purchaser of teaching and research) is the most important single client profoundly affects the ways in which they operate. It is important to note that this impact may not be as a result of government *education* policy: the National Health Service, for example, has important contracts with universities for nurse education, and changes to these contracts may have a larger short-term impact on a given institution than would education-driven changes applied through the funding formula managed by HECFE. (There is one small institution, the University of Buckingham, which has chosen not to receive financial support from public sources, although its students are eligible for financial support in the usual way.)

It is also important to note that the UK higher education system is a highly competitive one, as a result of the nature of the various funding regimes which operate within it, and which since the early 1980s have been designed with increased competitiveness – and thus, it is believed, increased efficiency – in mind. It is sometimes argued that, as a result, there has been a marked shift in attitudes within the higher education sector, from cooperative ones to more competitive ones in this period. In particular, government policies aimed at the concentration of research in perceived centres of excellence, using data from the periodic Research Assessment Exercises (RAEs), beginning in 1986, have increased competition (and, it appears from the data, productivity) in this area of academic work.

Student fees

The most significant single set of changes in the period under review has probably been associated with student tuition fees: first the introduction of a flat fee of £1000 by the incoming Labour government in 1997, which was relatively politically uncontentious (loans were available to meet the cost, and additional grants were made to poorer students to cover living expenses); followed by the politically highly-contentious introduction of variable student tuition fees (set at a maximum of £3000, since up-rated for inflation) in 2006. The variable fee was contentious because, apart from the higher rate, its variable nature pointed to the creation of an explicit higher education market, with “better” universities charging higher fees. It was argued that such a structure would discourage the entry of students from poorer families to these “elite” institutions, regardless of their academic ability. In response, the government pointed out that, while the previous, lower, fee level was payable by the student on entry to the university - “up-front” fees – the higher-level fee (the so-called “top-up fee”) would be paid to the university by the government itself, to be recovered through the income tax system once the student was earning above £15,000 a year. It can be argued that this made the system closer to a “graduate tax” than to a fee system. In the event, only a handful of universities initially charged less than the maximum rate (and some of these have now moved to the maximum rate): a market of sorts instead emerged in the form of a wide range of bursaries offered by universities, which in effect recycled some of their new fee income in order to encourage slightly different categories of applicants, or to try to manage subject choice.

The current debate in England is about the review of the fee structure required legally by 2010, and the possibility of raising the maximum fee level to perhaps £5000. It is believed by many in the university world that this fee level would lead to a more market-like environment: some regard this as desirable, while others do not.

University incomes have also been enhanced by a steady growth in the numbers of international (non-EU) students, paying fees set at around the full cost of provision. As there is no public subsidy involved, universities are free to recruit as many of these students as they choose. Total numbers rose from 109,900 in 1996/97 to 229,600 in 2007/08, an increase of 109% (and it should be noted that EU enlargement meant that some students who would have been counted as “international” in the

first set of data had become domestic students by the time of the second set; so actual success in attracting non-European students has been even greater than the numbers suggest).

3 Country performance and background variables

Our study indicates that the UK system performs particularly well in terms of student mobility; efficiency; and levels of educational attainment in the population.

The high student mobility score results from substantial student inflows from other EU countries and internationally. As noted, UK universities have important financial incentives to attract international students, and have developed sophisticated international marketing operations as a result. The English language is obviously an advantage for student recruitment: all three leading host countries for international students – the US, the UK and Australia – offer this benefit. For the UK, this has historically assisted in attracting students from the Indian sub-continent, from former colonial possessions in east Asia, and from anglophone Africa. It is now a benefit in attracting the new generation of Chinese students who have excellent English language skills. Students from other EU countries (as well as students from European countries outside the EU) are also attracted by the language environment, and also by the relatively short and intensive degree programmes on offer. Also, the fact that more UK universities score highly in international league tables than do the universities of any country outside the US, driven largely by research achievements, is often cited by academically-able international students as the main factor in their choice: the significance of league tables now can hardly be overestimated when considering international student recruitment, although clearly not all universities will benefit. Although EU students have to pay tuition fees that they might not have to pay at home, they obviously receive the same benefits in terms of loans as do UK residents.

Efficiency in UK higher education results from a number of factors mentioned above. The relatively high completion rates of most (though not all) institutions contributes to it, as does the expansion from the early 1990s, which, combined with a high level of in-built competition within the system, has encouraged efficiency gains: as a result, university managements increased staff:student ratios, reduced floorspace per student (from 14.7m² in 1992 to 8.5m² in 2001 - a 42% reduction despite an increase in student numbers of 8.2% over this period), together with other measures to reduce unit overhead costs which are possible in an expanding system. Again, the semi-autonomous nature of the universities is relevant here, as efficiency gains of the sort mentioned are captured to a large extent by the individual institution, rather than by the national budget (as is the case with efficiency gains in the health service, for example). University managements therefore have incentives to pursue them, even when they are temporarily unpopular, as they may provide the resources for desired new developments.

The levels of educational attainment again result from an expanded higher education system, with participation rates at just under 40% of the 18-30 year old population. This has grown from around 15% in the mid-1980s, and the achievement of this “universal” (rather than simply “mass”) level of provision has inevitably transformed the system. One significant factor here has been the “professionalisation” of occupations such as nursing, with a degree-level qualification now being regarded as the norm (following the pattern of teaching in the 1970s); this has also delivered new areas of growth for some institutions.

In terms of the other indicators that we have used in this study, the UK either outperforms or meets the European average: in terms of access; lifelong learning; employability; research output; and capacity to attract external funds. The explanation of the close to average score on the latter may be a technical matter of the way that student fee income is counted, as it is recovered by government through the income tax system rather than paid by the student to the university.

4 Effects of the reforms and other explanations of improved performance

Governance reforms

In England (and the UK) governance changes have been minor during the last decade: the last important set of changes in 1992 saw the English polytechnics (and their equivalents in Scotland and Wales) gain university status, with full degree-awarding powers (previously, they had been validated by a national council which possessed degree-awarding powers). This enlarged, unitary system arguably led to increased competition within it, as the distinction between “old” universities placed towards the lower ends of various league tables, and “new” universities at their upper ends, became less clear to potential students: competition for good students in this sector of the market is, accordingly, felt to have increased.

At the same time, the “new” universities took the lead in developing new curriculum offers in areas such as media studies and sports science, which became popular student choices in the expanding system. Some of these developments have been criticised, variously, as not being appropriate topics for university study (golf management), or for misleading students as to the degree’s value in gaining a job in the field in question (fashion design).

Increased competitiveness (or at least attempts to achieve it) was a feature of other aspects of UK public-sector life (schools, health) in this period, although it is arguable that the nature of the university system, with institutions making apparently similar course offers and much of the target market being geographically mobile, made it particularly sharp here.

The growing significance of commercially-published league tables in this period also led to sharpened competition, although some commentators see the changes made in order to obtain higher league table rankings as superficial or even damaging to underlying educational provision. League table construction was helped by data

newly-available from the RAE, the National Student Survey (NSS) and from the Quality Assurance Agency's reports (though none of these processes was designed with this in mind), as well a comprehensive set of institution-based performance indicators, allowing annual comparisons back to the 1990s.

Some of the post-1992 universities aimed to develop distinctive identities, to distinguish themselves from nearby "old" universities. Some, for example, emphasised their "business-facing" characters, with a range of activities including curriculum development involving local businesses, the establishment of science and business parks, and various knowledge transfer initiatives. These were supported by a new stream of public funding to encourage university-business interactions and knowledge transfer (now known as HEIF), and now a source of grant income in parallel to those for teaching and research (though, at £150m a year, much smaller).

As noted, UK higher education went through a period of great financial stringency in the 1980s, and it can be argued that this encouraged a range of entrepreneurial responses in universities (the "uses of adversity" argument) - made possible, it is widely believed, because of their institutionally autonomous nature - which led to more effective managerial structures and processes. This is viewed by some academics as amounting to an unfortunate undermining of the collegiality which, it is argued, contributed historically to the academic reputation of UK universities.

Other commentators believe that collegial university *governance* (with a focus on strategy, values and standards) is perfectly compatible with more effective and efficient *management*, the purpose of which is to deliver these objectives: this view is summed up in the saying that universities should not be like businesses, but should be more businesslike. (It is also argued that much of British business would be more successful if it adopted aspects of universities' collegial organisational models.) Some of the post-1992 universities, however, have moved away from the collegial traditions of the past – the supreme role of the senate in academic matters, for example – and have created structures of the kind more commonly found in business corporations, with executive directors (who may or may not be from academic backgrounds) answerable to a main board.

In both cases, for old and new universities, it can be argued that improved managerial effectiveness has been significant in supporting the relative strengths of UK higher education in mobility and efficiency. Student recruitment in competitive international markets demands well-organised, experienced marketing teams. Efficiency gains require planning and day-to-day implementation skills, while remaining in touch with academic goals and values. The management structures built up by UK institutions over the last few decades have been essential in both of these; and are directly related to the pattern of autonomous institutions operating in a competitive environment.

Funding reforms

In England, funding changes most significantly relate to the increased income streams available to universities from student tuition fees, paid direct to universities by government, to be reclaimed by it through the income tax system. (This method, incidentally, creates a possible disincentive to the government to allow universities to raise their fees, as it will mean a temporary increase in public spending, until such time (at least three years later, in many cases much longer) as graduates start to repay their loans at the higher rate.) Many university leaders feel that a maximum fee of around £5000 would create (unlike now) a real market, with universities offering a range of fees from the current level of £3000 upwards. It is not clear how potential students would react to this situation, as the higher fee would be payable by them after graduation. It is the case that the higher level of fees introduced in 2006 has now become accepted reality by potential students, and has had no noticeable deterrent effect on student recruitment, including those from poorer family backgrounds. Student applications for the 2009/10 entry are said to be running at a record high level.

This increased income to universities has given them some additional financial flexibility, allowing some real (above inflation) pay rises for staff, and increased borrowing for capital projects (some two-thirds of capital projects are funded from universities' own resources, in various ways).

Public research funding in the UK operates under the dual-support principle. The sums allocated to universities by the Higher Education Funding Council, known as "QR", are intended to provide a stable base of research capability, to allow research grants and contracts to be sought from other funders, public and private. QR is allocated through an algorithm based on the results of the most recent Research Assessment Exercise (RAE) – the results of the most recent one appeared in late 2008. A recent trend has been for money to be removed from the Funding Council's QR allocation, and transferred to the various subject-based Research Councils. The latter then fund the projects that they approve at a higher, "full economic cost" (FEC), rate. There is a continuing debate about the balance between QR and FEC funding for research – the argument being that without QR, some worthwhile research would not be undertaken as, for various reasons, FEC-level funding would not be available for it.

5 Institutional case studies

University of York

Methodology

The following data was collected in June and July 2009 to address the case study interview protocol:

- Institutional strategy documents from the last decade;
- Institutional Operating and Financial Statements from the last decade;

- Current institutional policy documents relating to governance and resource allocation;
- The QAA Institutional Audit (2003);
- Documents provided by interviewees (papers from Council/Senate and others relating to national reform and institutional policy).

Interviewees

The Chair of University Council

The recently retired Registrar

The Deputy Vice

The Director of Finance

The Director of Corporate Planning

Two Heads of Departments

The Academic Support Officer with responsibility for governance

Acronyms

CUC: The Committee of University Chairs

FTE: Full time equivalent

HEFCE: The Higher Education Funding Council for England

NSS: National Student Survey

NS

OFFA: The Office for Fair Access

RAE: Research Assessment Exercise

SMG: Senior Management Group at the University of York

TQA: Teaching Quality Assessment

QAA: Quality Assurance Agency

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The Higgs Review (2003): www.berr.gov.uk/files/file23012.pdf

Appendices

Appendix A: The University of York Plan 2009
2009)

Appendix B: The University of York Operating Review and Financial Statements
2008

Appendix C: Data outlining the University's growth

Appendix D: The University of York committee structure (approved November 2008)

Appendix E: Review of Council Effectiveness (paper tabled at Senate May 2006)

Appendix F: The Better Management business planning cycle

Exchange rate: 1 Euro = 0.8525 GBP

The University of York: Background

After 350 years of petitioning, the University of York was founded in 1963 with 200 students. It now has over 13,000 students and employs 2,889 FTE staff. The University comprises 30 departments and research centres and the support system for students is focused on eight colleges. The 2009 five principles underpinning the institution's ambitions: internationalisation, diversity, collegiality, excellence and sustainability. The University Plan and the Operating Review are attached as appendix A and B.

The 2008 RAE recognised York's world

departments rated in the top ten nationally. In 07/08, the institution received over €86.8m for research (€7.04m from the EU) and in 2004 York was rated the most efficient UK University on research output, achieving the highest research grant income per academic (HEFCE). In the last cycle of the TQA, York had the highest average score in the UK and the last institutional audit from the QAA (2003) commended York's teaching. The University attracts people from across the world and student mobility is high: 20% of academic staff and 20% of students are from outside the UK (6% of students from EU countries outside of the UK). Full time

undergraduates make up almost 75% of the student population and entry grades average 436 UCAS points. The University has had mixed success at recruiting students from widening participation target groups (currently 16.9% from NS 4

rate on undergraduate programmes is 89.7%.

Growth over the last decade

The institution has grown steadily over the last decade during a period of significant investment from the Government and tuition fee reform. The development of the academic portfolio and the estate has recently intensified with the €586.5m capital investment in Heslington East, which will eventually double the size of the campus. Interviewees observed that the University has been discerning about expansion, opting for a relatively small number of strong, viable departments without an intermediary faculty layer. Despite significant growth, the overall shape of the institution and the college structure remain. Proportionately, the institution's income streams have been steady over the last decade and the percentage of postgraduate students has been approximately 22% (15% part time). The proportion of overseas students has increased by approximately one percentage point annually over the last ten years. The financial position of the institution is relatively healthy with surplus as a percentage of income currently at 8.3% and a gearing ratio of 9.3%.

Data outlining the University's growth are attached as appendix C.

The principal changes highlighted in the interviews can be broadly categorised as follows:

- Expansion of the institution's academic portfolio, population, estate and international ambitions;
- Increased professionalisation of the University's management functions;
- Revised governance policies affecting the governing body, committee structures and SMG;
- Modification of the internal funding model and the associated planning and budgetary system.

National reforms affecting institutional policy

Final policy directives are rarely the institution's first contact with reform: consultation processes, facilitated by professional associations (including UUK and the 1994 Group), customarily help to shape national policy and aggregate the views of institutions. The primary exchange takes place through the Vice Chancellor's office and Senior Management Group, comprising the principal officers of the institution. Members of the group described their role as mediators between departments and the flow of national directives into the institution. The Deputy Vice (DVC) commented:

With some areas of policy, it is a clear transmission belt. QAA says here are the new benchmarking statements...Academic Support Office will scrutinise those things, check we're compliant and prepare a paper for Teaching and Learning Committee. Those sorts of things find their way into organisations very quickly...Other things get refracted through the prism...like policy on widening participation or employability...they have a weaker purchase and...our judgment decides whether it's in our students' interests and whether we should invest in it.

Where policy demands compliance, this is ensured through well procedures, regulated by increasingly professional management teams. Specialist areas lead on new legislation within the field of their professional expertise, and the Planning Office coordinates the extensive data returns to HEFCE. It was widely accepted that the reward for compliance was commensurate with the resource deployed to meet the escalating demands: the DVC considered that the accountability regime was 'the trade off for the University's autonomy'. Interviewees were concerned about acquiescing to reforms which might impact more significantly on the University's core business, including policy relating to the expansion of the sector. Staff referenced the institution's performance in relation to student mobility to/from the EU, but this was perceived to be an intrinsic advantage of well executed academic endeavours. Staff documented the University's contribution to widening access in higher education

colleges in the region and its student bursary scheme is documented as part of its Access Agreement with OFFA.

The low progression rate of disadvantaged students to the most competitive universities was largely attributed to disparities in students' attainment prior to university admission and the varied quality of careers guidance. York has developed its use of contextual data in student admissions policies (supplementing the

information available through the UCAS process), partly in response to the Government's social mobility and widening access agendas. Internal policy attempts to balance academic excellence and egalitarianism, with interviewees observing that compromising the former is not necessary to realise the latter. There was a pervading sentiment that the University should serve the Government's needs, but not be servile to them. The recently retired Registrar (henceforth the Registrar) commented:

There is a clear academic mission...focused on the core business...The University won't try to be something it isn't...we have been responsive to national policies that matter, but not to the extent that our core values have been compromised.

Tuition fee reform has afforded greater financial flexibility, but has also had some unwelcome effects on the teaching dynamic with students. An economic market in the sector was not observed, but it was recognised that variable institutional bursaries have generated notable disparities in the levels of support available for some students. Alongside these specific policy areas, interviewees were also keen to discuss systemic issues with reform over the last decade. One Head of Department noted:

Day to day changes in HEFCE and the RAE just blow things around in the wind and academics won't move on that basis. If...the role of universities is to mass educate the populous, to provide industry with solutions to their problems on a three year time scale, then we're in trouble. The system is never designed to do that...My plea would be that reform looks forward...twenty to fifty years for universities...It needs to go back to long termism and proactive reform...If you did that, my god would the community deliver for you time and time again, without question.

The discourse between the University and national reform is particularly fertile in relation to governance and funding. There is a complex interaction between specific reforms and the way that they penetrate the institution. While governance structures calibrate the internal and external influences which provoke executive responses to national policy, the structures themselves are also the subject of national reform.

Institutional policy and enhanced performance: governance

The University's formal governance structure, emanating from its Royal Charter, is typical of the sector. Council (with a lay chair and lay majority) has ultimate responsibility for the institution's affairs and complies with CUC guidance (2009). It is supported by an extensive committee structure, which also engages Council's lay members. Senate is responsible for the academic activities of the University, but interviewees considered that other committees (including Council) were more effective mechanisms for engaging the academic community in management policies. The Court, comprising almost 100 "ambassadors", offers its advice on matters which it considers appropriate for the well structure is attached as appendix D.

The institution welcomed a new Vice Chancellor in 2002 and a new Registrar (chief administrative officer) joined the following year. Interviewees documented an incremental shift to the current status, climaxing in the review of Council effectiveness in 2006. The two primary outcomes were a reduction in the size of Council and a clarification/reduction of the committee structure. The internal policies responded to contemporary national directives and good practice (CUC), but internal factors were perceived to have underpinned the changes. The review of Council (approved by Senate, 2006) is attached as appendix E.

Interviewees agreed that formal external scrutiny from Council was key to the efficient functioning of the institution and advocated the governing body's increased focus. The process of Council sanction applies self proposals are prepared with boardroom scrutiny in mind and personnel are required to present significant decisions in a transparent and considered manner. Council was perceived to add particular value to the financial management of the University; most lay members were able to input significantly into this familiar territory. The Director of Finance commented:

From [a] rather minimalist position, councils have become more professional. There has been a lot of external pressure for them to get a grip...The key is to have people who...have taken decisions and commercial risks and who know...how to get the best out of the people who are running the operation...It's made me more conscious of the need to communicate...our nascent plans and inherent strategies in a more explicit form. That process has been positive.

Council's scrutiny of the executive was perceived to be increasingly important in the context of a parallel reduction of the committee structure. This was executed to clearly locate decision making with accountable individuals, rather than with committees. The emphasis on the executive control of individuals also corresponded with the increasing professionalisation of the institution's management functions. The Director of Finance continued:

The increasing alertness of Council and the...management processes, I expect they have been produced interactively...the structure of the management processes at the University [are] managed more professionally. You have a group around the VC who used to be advisory...to a group which looks much more like the executive board of a business...The word management, which is a word that wouldn't have been heard 20 years ago, is now common currency. It's no longer tenable to say that universities cannot be managed.

The Registrar discussed the link between national reforms and the local policies on governance:

The key is to use a committee system for things which really benefit from that deliberative process...A lot of what I did with other colleagues was working out where decisions should be made...[The VC] wanted [a university that was] bigger, better, more money, more students, more research, more profile...The change that

happened at York during my time at the University is more to do with that ambition for the University than it was to outside influence...The governance reforms were just common sense and it was long overdue, some of the stuff that was going in the pre

organisation with proper safeguards and transparency...[the] notion of management...has changed...the distinction is sharper.

It was observed that policy directives have moved institutions to more corporate modes of governance and management. Public sector reforms in governance have been underpinned by private sector policy, epitomised by the Combined Code (2009) and influential reports such as Higgs (2003) and Turnbull (revised 2005). The Director of Finance noted that HEFCE reforms had improved local efficiencies, asserting that increased professionalism is enhancing the strategic freedom of academic departments, rather than restricting it. Policy reforms had also been prompted by initiative from within the sector.

[The funding council] have set external reporting standards and put auditing structures in place that...in order to be able to respond to them, [universities] have had to have good quality systems...The Funding Council had a very important role in getting universities to adopt professional standards, the most important of which was getting them to start reporting their financial affairs in pretty much the same way as a corporate would...The sector played an important role in doing that itself...it's a combination of things, but all pointing in the same direction, all of which have moved universities towards becoming more professional, more effective, more aware.

The DVC provided some insight into how the executive mode of decision making, with the locus of control at SMG, is contributing to the institution's overall efficiency. SMG is privileged by swift access to institutional information and the internal socio

administrative constituents of the group manage upwards through representation, and downward within their divisions. SMG are best positioned to link overall strategic direction with the mobilisation of operational activities. The DVC noted:

The pruning of the committee structure and clarification of the roles of committees has...brought about more executive decision making...with accompanying benefits and costs...The speed of decision making [is] helped by repositioning decision making from committee to executive groups. We haven't got there yet in terms of real Cabinet decision making, but it's much more professional than it was...A lot of decision making involved tacit knowledge, depending on people knowing how things are done...words in corridors. That works quite well when you are small and lots of people have been around for a long time, but as you grow...that starts to break down...the old way of doing things wasn't fit for purpose...The sort of thing we have to deal with now, from HEFCE, from the Government...HE has much more responsibility to relate to...more stakeholders than ever before...we have had to professionalise. That's had advantages and disadvantages, because we [are] more distant from the community from which we have come. As you get bigger, you want more professionalism...but then what you need more than ever are those informal

networks and those committees which involve people, because people are more distant. It's a real contradiction.

Conversations about governance highlighted the overarching struggle to reconcile growth with traditional modes of operation. The two notions were not perceived to operate in conflict, but interviewees were resolute that the institution should hold on to its founding ideologies of collegiality and academic rigour. A governance apparatus for developing tighter networks of communication in an expanding institution might be the introduction of a faculty structure. The Chair of Council commented:

We have taken a decision to structure the executive management [so] that all of the Departments report in to the VC and DVC, which is just about sustainable at this size of university. Virtually all the support functions report to the Registrar, [he] is like the operations director of the University...That gives two things. It has short and open lines of communication and secondly, the VC and the DVC are heavily involved in selection procedures...if you can attract the right professors into open and short communication structures, then you'll probably get the best research and teaching capabilities...if you have a faculty structure underneath, you won't get that. The thing that we do differently that contributes to improved performance the organisational structure which allows the key officers to focus on and influence the academic performance...of departments and the interflow between them.

The Registrar's comments highlighted the ongoing debate about governance structures at York:

Some of the departments are too small...The departments were fairly uniform...but there is bigger difference now and some cannot survive on their own in today's budgeting and funding situation, so If you have got a faculty structure of some sort, then you can massage those smaller areas into something bigger.

Academic staff were unsettled by the prospect of a potentate Dean, rather than by the principle of a prospective faculty layer.

Institutional policy and enhanced performance: internal funding models

The University's ambitious expansion programme is liable to entail a significant increase in debt, which could rise to €175.95m. The primary institutional risks derive from the aspiration to grow. Strategies to ensure financial security are critical as pay reforms, public expenditure cuts and volatile international student markets (affected by revised visa regulations) exacerbate financial risk. The DVC acknowledged that the whole sector is susceptible to these exogenous factors, but that York was 'quite vulnerable at a time of serious investment'. The Registrar described the shift in funding regime at the institution:

One of the most significant changes I saw brought in was the new planning and budgeting model, which has...a strong articulation between planning and funding and also, within that, the development of management competencies amongst...Heads of Department...Now what you've got is much more of a sense

of...the overall strategy, here's how we fit, this is what we are going to do...making people more responsive and at the same time more accountable...It was to do with growth and ambition. You can't make things happen unless you know what your budget is and you know what tools and resources you have at your disposal...It was about encouraging departments...to have the vision themselves, not to wait for it to come from somewhere else.

Implementing the new funding model (termed Better Management) has taken place over a number of years, moving incrementally towards universality through a series of pilots and reviews. It was introduced in 2006 in dialogue with the internal policy reforms on governance and the two systems are entwined. Departments are now credited with their total income and are directly responsible for the majority of expenditure, with freedom to hire. Approval for new posts is part of routine departmental business, provided it is consistent with local budgets and plans. Departments function within the constraints imposed by contribution targets, which accrue departmental funds to provide for central services. Contributions are informed by historical data and weighted coefficients relating to teaching load, research activity and other indicators. Departments can abate their contribution through exceptional performance against a range of non aligned with the University plan.

The internal policy responds to Government reforms calling for transparency and accountability, but the primary driver for devolving financial control was the desire to improve the University's operating margin to fund capital investment. As a result of increased exposure to the financial environment, departments are exercising increased pragmatism in their own operations to realise efficiencies. It is also anticipated that more strategic flexibility at local level will enhance departments' ability to exploit opportunities relating to the University's third stream activity. Increased local autonomy also correlated with the need to alleviate onerous approval routines at the centre

Senior managers and senior committees should focus on strategic issues rather than operational issues. If you give departments authority to replace posts or hire between posts and cash, you clear a lot of that business out of the way...and they are also closer to the action.

The associated planning and budget cycle has introduced a process to regulate and support business planning in departments. The Better Management business planning cycle is attached as appendix F.

The process has fostered increased professional links between support and academic departments, underpinned by an improved online management information system. The academic community cited the improved relations as particularly advantageous, with administrators generally sensitive to significant variations in departmental size, staffing profile, management styles and budget composition. Academics were anxious about some inconsistencies, and staff in large science departments were

particularly concerned that budgetary autonomy did not extend to large capital expenditure.

The Vice Chancellor has basically got it right...they understand by and large what a resource allocation model must not do
 disciplinarity...I have a great deal of local flexibility, but not with capital investment.
 It's a flaw...not allowing a head of department to make decisions about the sustainability and long term future of the department...I have a complete free hand here, but I am completely tied down here.

It was not clear from the interviews whether limiting capital expenditure was a principle of the system, or a corollary of significant investment in the new campus.
 The DVC speculated on the trade
 tying up...a lot of our investment in a particular initiative, it means we can't do certain other things, which means [we might lose] competitive advantage...in some areas.'

The model is not one of simple decentralisation. The Director of Finance discussed the balances at play:

There has been a shift to the centre, but for the centre to make effective use of that power, we've had to get the right authority down to the Departments...they are in the best position to make optimal decisions about the allocation and use of resource. This isn't about the centre telling the department what to do. The centre makes decisions about what the department needs to...and could achieve, so we...know what aggregate result we want...all of this is in the context of giving them the information which enables them to do a better job. That's an internal driver: we want to be a more efficient organisation and make the best use of the resources we have got, and access additional resources...

we've moved from a recognition that...we are very good at research and teaching to the observation that if you are going to stay good at research and teaching and improve you have to get the money right...Stable HEFCE audit processes have ensured we know our business [and] the RAE was important and introduced rigour and strategic focus by providing a more rational model which used incentives.

There was some concern about the weighting of research impact measures in the Research Excellence Framework (replacing RAE), aggravating worries about the Government restructure which places the sector under the auspices of the Department for Business, Innovation and Skills. However, the reforms associated with the national allocation of government funds for teaching and research were considered to underpin the internal allocation model. The move to output based RAE funding has enhanced the institution's ability to distribute resources strategically, and helped clarify the relationship between activity and reward. Institutional managers have been equipped with rational underpinnings for their own financial models. The Chair of Council commented:

Better management should enable us to allocate resources...transparently...against a clear economic model...There might be some propositions that are accepted which don't yield stunning financial returns, but they should have clear financial targets [achieving] something for the University in terms of positioning, or research, or grants in the future.

It was acknowledged that the full efficiency benefits of Better Management would be realised longer term. The process has equipped the institution with strategic levers to navigate future turbulence. The Chair of Council continued; 'It...has given the University a methodology to deal with issues that may arise...a tool for dealing openly with government funding cuts'. Transparent and rational resource allocation should help neutralise political bargaining and suspicions about opaque financial policies, but the revised allocation model risked provoking new collegial debate. The DVC explained:

As we have professionalised, we have become more professional in our resource allocation...Before it was...more opaque, but somehow maybe people felt more part of that process...even though [now] it's more transparent and more fair...departments have more responsibility for those budgets [and] their expectations of understanding the processes have gone up in proportion to their level of responsibility...even though it's more clear...they find it less transparent. It's a wonderful paradox.

National reforms and sustaining success

Interviewees consistently cited the people as the primary reason for the institution's success. In executive modes of management, effective leadership is synonymous with effective decision making

nimble way as well, that's why having the system populated by good people means that you can make effective, responsive decisions'. The core activity of the institution has remained largely unchanged, but national reforms and local ambition have developed the University's ability to capitalise on its academic activity through professionalised management structures, increased strategic focus and a matured knowledge of the business at hand. The Director of Corporate Planning encapsulated the recent trend in institutional policy

Institutional success is ultimately down to individual academics pursuing their own academic interests within a framework which supports that delivery in such a way that the benefit is not purely to the individual but to the Department and the University.

Asked to evidence the causal link between national reforms over the last decade and the institution's successes, the DVC felt that the full consequences of the local structural reforms in governance and finance were yet to transpire.

The jury's out on the effect of the new structures, because we haven't had enough timeline...the governance structures we had did not get in the way of success...and

we've yet to know whether the new ways of working...will help to consolidate that success.

The Chair of Council concluded by noting a critical factor affecting the University's ongoing success.

We do believe that the future for a research where you sit internationally, not on where you sit in the UK...It enhances the long term sustainability of the University...All aspects of the University life are influenced by a much wider set of parameters.

Growth at the University of York is liable to influence the institution's relationship with national reform, as local policies are required to account for expanding operating boundaries and an increasingly diverse set of stakeholders.

London South Bank University

London South Bank University (LSBU) is a large post-1992 university with over 23,500 students. It began life as the Borough Polytechnic Institute, and its main campus is situated in Southwark, in inner-south London. The university offers a vocationally orientated course portfolio, equipping students with relevant and practical employment skills and supplying employers with a skilled workforce. LSBU is committed to maintaining close links with industry and the local community. The institution has a vision of being a leading United Kingdom university for professional education, giving students the chance to become what they want to be. A new Vice Chancellor and Chief Executive joined the university in April 2009.

Method

One individual face-to-face interview was conducted with each of four interviewees in July and August 2009: one pro-vice chancellor, two faculty deans and the former head of institutional strategy. No members of the Finance Department were available for interview. The interviews lasted from between forty-five minutes to ninety minutes, and were not tape-recorded.

Case study format

The case study is structured around the nine terms of reference suggested for discussion with interviewees. The interviewees' individual responses have been anonymised, and are summarised in the form of a group response under each area heading.

Data on the UK shows that it does well in terms of student mobility, efficiency, and attainment. However, it is questionable whether the university does perform well in some of the areas listed above. Two possible reasons are:

The profile of the student cohort.

LSBU offers a high proportion of professional courses which aim to produce skilled, employable graduates. However the university is limited by the nature of the students it receives, who represent high levels of risk. It is not that the student body is unwilling to achieve, rather that there are other barriers to achievement. For example mature part-time students form a high proportion of the student body. They are likely to have concerns beyond their courses which may potentially interfere with or interrupt their studies, such as employment obligations, family responsibilities, relationship demands and financial pressures. A high proportion of the full-time undergraduate population is recruited through the annual clearing process, and represents applicants who have not achieved their target grades for other university destinations.

Changing ideas about the scale and scope of the institution.

Deciding how big the institution should be, and making a long-term commitment to that decision, is critical. Resources are strained to the limit. The unit of resource per student is stretched. There is pressure on the staff: student ratio, which has increased sharply in recent years. Pressure on resources also affects the physical resources of the university. There is little money to refurbish teaching rooms, which in turn impacts on the student experience: there is a correlation between academic endeavour and the physical environment. Stretched resources also affect the university's ability to produce statistics quickly.

It is important to have a clear vision and strategy for the institution, as there is no financial cushion against failure. Students' well-being is the first priority, and increasing the percentage of their societal attainment. LSBU is a local university, and the image it presents is anchored within the area and community it is based in. Despite its low position in national higher education league tables, members of the local community do not generally perceive the university as being of poor quality, rather seeing it as the kind of institution that will potentially admit them into higher education

A recovery plan for an institution is in one sense a healing document. Developing strategy involves playing a long game, and concerns the building of values. It requires an holistic review of how things should work together, reconciling different perspectives and managing tensions. Open and honest dialogue with staff during the consultation period is a priority.

When LSBU was on the Higher Education Funding Committee for England's (HEFCE) 'at risk' register in the past, morale and levels of engagement were deflated.

Recovering from that position can be likened to a journey. It involved building the self-confidence that the university could deliver, with the result that students started to return and a small financial surplus accumulated. When the institution moved off the HEFCE radar there was less activity around institutional strategy because of this reduced pressure. At points of the lifting of pressure from any institution there is

a risk of organisational drift. The strategy work that has been done in the past forms a platform for the institution's development in the future.

Access

LSBU is concerned with issues of access, diversity and outreach, and seeks to project itself as a higher education institution that is not 'stuffy'. The university should be holistic in its admissions policies rather than aiming for homogeneity in the classroom. It is the output that counts, and it is important to recognise applicants' potential.

However it is also important to ask the question underlying the ideal of access: access to what? What is the university giving students access to? One possible answer is access to failure. The university may be taking on students that it cannot help, becoming in effect a remedial university. Within the commitment to access is a buried issue about progression. For a variety of reasons relatively few students on a typical undergraduate course progress through their studies cleanly. Many students' experience is cluttered with failure. Linked to this is the issue of poor retention rates.

Lifelong learning

The focus for lifelong learning should be on skills and techniques. The role of LSBU alumni already in the professions could be strengthened to enable them to contribute to areas of lifelong learning with current students.

Employability

The university seeks to provide an academic environment informed by practice, leading to professional jobs for its graduates.

Research

There is a conflict between teaching and research. It is difficult for institutions to be good at both, and the constant separation of the two into an oppositional relationship is problematic. There should be less tension about teaching versus research, and greater clarity. Research activity at LSBU should focus on pragmatic problem-solving, and pedagogic research should have priority.

'Pure' research is an extra for an institution such as LSBU. However where pockets of excellent and internationally recognised disciplinary research do exist, collective discussions about retaining and maintaining them should take place within their home faculties.

Student mobility

The university is Bologna compliant, but it may be underperforming in the area of student mobility. The inflow of international students to LSBU is good, but the outflow of LSBU students overseas is poor. This may be because a proportion of the student body is not socially, culturally or financially well-equipped to take this step.

Attracting external funds

Extreme expenditure of effort is necessary to apply for resources, for example in the area of employer engagement and the area related to the pockets of further education

students within the university. Tendering processes are complicated, returns are uncertain, and links and funding transfers between the national and the institutional level can become bogged down.

Success or failure in these areas is not connected only to the nature and performance of the student body, but is also linked with leadership and management styles in relation to managing staff performance. Leadership means taking difficult decisions, and not being afraid to adopt a directive approach.

A person occupying a leadership position does not have to be a leader in everything him/herself. S/he should know when to delegate, and then trust colleagues to take responsibility within a framework of regular monitoring. A key factor in improving institutional performance is caring for the careers of staff.

In performance managing staff, for example through the university appraisal system, an informal and humane approach is helpful, inviting people to adopt a course of action rather than dictating that course to them. Intelligent staff development is about recognising people's aspirations, facilitating their movement into the four areas of scholarship classified by Boyer (1990)*: discovery, integration, teaching and application. Practising scholarship entails pursuing all four of these activities.

As regards the governance of the LSBU, the senior executive team has a minority of members with a background in education. In order to get the balance of governance processes and structures right, there must be some academic content and drive. There is a risk of over-concentration on the control of resources rather than on academic development. The university needs people in senior positions who have 'done the job', that is had some prior teaching and managerial experience in education.

At the institutional level the funding structure of LSBU is about management accounting. Within faculties there is a devolved budget system. Running this system successfully comes back to an issue of management. It is important that staff receive clear information and know the lines of operation and control for money. Within some faculties there are discrete cost centres with a devolved budget for each subject. Figures are circulated to the senior faculty team on a monthly basis. This exercise functions as a tool to manage staff expectations and set targets, and is based on the values of trust, transparency and evidence. Whether staff are happy or unhappy with the figures relating to the performance of their own sections, they cannot avoid taking responsibility for these results because the statistical evidence is clear and in the public domain. Such a strategy defuses potential unhappiness, and contributes to collective agreement about how resources are used. It is a feature of an inclusive management style.

A lack of focus on attracting endowment funding separates the United Kingdom from the United States of America. It is a cultural conviction in the United Kingdom that education should be free.

Major changes over the last decade include the formation of the Quality Assurance Agency, alternative funding models, the introduction of tuition fees, a steep increase in student numbers, and changes in the subject areas which students choose. The latter swings in student preference are difficult to predict, and are market-led. For example, there has been a reduction in courses in modern languages and in computing, but other new areas have expanded.

In the area of *finance policies*, the maintenance of a year on year surplus is linked with transparency, the timely availability of data, and regular meetings and monitoring of resources.

In the area of *governance policies*, it is helpful to take a retrospective view of the last ten years and evaluate what has worked. There has been an increased push from HEFCE to make boards of governors accountable for their institutions. For example, this manifests itself through the resources and activities of the Committee of University Chairs (CUC) and the Leadership Foundation, which are sources of support and guidance on matters of governance. The advice of the CUC has strayed into territory formerly reserved for the executive: one example is its prescriptive tone concerning key performance indicators.

The governing body is a non-executive board, unlike in the business world where a board of governors comprises both executive and non-executive members. Its members are largely not from a higher education background, and there is no job description for governors.

The relationship between the board of governors and the university is managerially focused, and less aware of what higher education and a university are. This difference in perspectives can create tension rather than harmony between the board of governors and the executive if the executive believes that the governors have strayed into the area of management. The board of governors should focus on formulating key performance indicators and broad strategic aims, and articulating goals and targets rather than seeking to implement them. Decision-making and implementation are slow processes, and are the proper sphere of the executive. The governing body should be remote and detached in terms of operational functions. It would be constructive to see a stronger emphasis placed on the non-executive role of governors, that is their function of being visionary and challenging. Their role is one of motivating and supporting the executive. If the governors move into the area of the executive this is to the detriment of the overall reflectiveness and capacity for self-examination of the institution.

It is uncertain whether the governors have a sufficient understanding of the kind of students the university is dealing with in order to inform their interpretation of LSBU's position in the league tables. There are limitations to a 'one size fits all' approach to evaluating universities' performance, and it is important to find a way of demonstrating and measuring the 'added value' factor that LSBU contributes to its students.

The university might consider having paid professional governors rather than recruiting individuals who are endeavouring to give something back to the community through their involvement in higher education. Unpaid governing bodies are never in a position to act as executives, and the probable result of such action is conflict with the actual executive. The chair of the board of governors is important in terms of shaping the board's style of operation and influence within the university.

Unless there is a clear central steer from within the institution, the impact of reforms in the national higher education system in general within the university tends to be weakened and momentum is lost.

There is a lack of clarity nationally and politically in the United Kingdom about what universities are for. The fast-changing relationship between government and higher education has moved from being one of partnership to one of government imposing decisions on the higher education sector. There is a trend towards increased inflexibility, and an unwillingness to allow institutions to be different or have their own way of doing things. The hidden subtext of this tension might be a movement towards privatisation, with the Russell Group universities funding themselves. National higher education policy is inherently flawed because the most powerful universities have the most powerful voices, and there is such diversity in higher education institutions. Members of the Russell Group will have completely different agendas from those of post-1992 universities. Examples of reforms in the national higher education system in general which are linked to institutional performance are:

The establishment of an Employer Engagement Unit. It is not yet clear whether this is linked to improved institutional performance.

The Teacher Quality Enhancement (TQE) policy, which is funded by HEFCE, has contributed to institutional performance in initial teacher training (ITT) and teacher accreditation.

The Research Assessment Exercise (RAE) has improved the research profiles of individual academics.

In the late 1990s post-1992 institutions became the main instrument for realising government policy on widening participation. National policy on widening participation in higher education has translated into a widening participation premium for LSBU.

An example of a mooted potential reform in the national higher education system in general which will affect the measurement of LSBU's institutional performance is set out in the *House of Commons Innovation, Universities, Science and Skills Committee Students and Universities Eleventh Report of Session 2008-2009*, published in August 2009. The Report expresses concern about comparability of standards between institutions across the higher education sector. It suggests that if these

inconsistencies persist, the Quality Assurance Agency should be abolished and replaced by a new organisation to police the sector.

Effects of governance reforms:

One example of governance reform in the national higher education system is the introduction of institutional audits. However there is concern about whether doing things in a particular way necessarily improves the student experience. It is possible to comply with a policy without necessarily establishing a link with higher performance. The link between the mechanisms of the Quality Assurance Agency and high institutional performance is debatable. There is a risk that form rather than content is being audited.

Sometimes there is improved performance despite rather than because of national higher education policy.

Effects of funding reforms:

The current funding system favours young, full-time students. LSBU's main area of business is older students, many of whom study part-time. This affects the university's access to pockets of funding reserved for undergraduates in the traditional age-group. The steep rise in tuition fees is a deterrent for some potential applicants.

The recent (2009) suggestion by the current Higher Education Minister that students who live at home might not have to pay fees will affect LSBU's income if it comes into effect, unless the government reimburses the university with the consequent shortfall in fee revenue.

6 Conclusions

It can be argued that England's higher education system is still working-through the major structural change that followed the 1992 abolition of the binary line between the vocational polytechnics and the existing universities. This change coincided with a large and rapid increase in student numbers, driven by government manipulation of the funding model. For many institutions, particularly the former polytechnics and the "old" universities with less secure academic and financial situations, these changes led to an unstable financial environment, often requiring substantial internal restructuring as the institution tried to focus on new activities and new markets. The impacts of government policies were thus dealt with in different ways by different institutions.

The two case studies presented here offer perspectives on how institutions at the two "ends" of the UK higher education spectrum, at least as presented in the commercially-published league tables, are experiencing the policy environment described in this paper. It is noteworthy that York, a successful research university with a strong financial position, is able to somewhat distance itself from government policy requirements, at least in the short-term; whereas it is apparent that LSBU's entire viability is, essentially, dependent on short-run government policy decisions.

Thus, although it formally has the same degree of autonomy as York, in practice its autonomy is strongly circumscribed by its position in the competitive UK higher education market.

One conclusion here, then, may be that changes in national policies as regards institutional autonomy in matters of governance and finance may be more significant for some institutions than for others. If the institution's market position means that it has no real room for manoeuvre, then it will remain an essentially "state" institution, whatever the larger policy aims.

List of Interviewees:

- **Mr S Egan, Deputy Chief Executive, Higher Education Council for England**
- **Mr P Clark, Head of Policy, Universities UK**
- **Professor M Shattock, formerly Registrar, University of Warwick**
- **Professor M Taylor, Professor of International Finance, University of Warwick**
- **Ms F Owen, Registrar and Secretary, University of Hull**
- **Ms R Crehan, Dean of the Arts, Thames Valley University**
- **Ms A Priest, Pro-Vice-Chancellor, Nottingham Trent University**
- **Mr A Whalley, Director of Administration, Faculty of Biomedical Sciences, University College London**
- **Ms F Tolmie, Director of Undergraduate Programmes, Kingston University**