Case Studies on Higher Education Developments in Selected Countries

Report for the Education Strategy Centre, Ethiopia

Erica Gillard
Leon Cremonini
Girma Ejere
Fekadu Mulugeta

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A.R.S. Progetti S.P.A
Ambiente Risorse Sviluppo
Via Girolamo Dandini 16
00154 Rome
Italy
www.arsprogetti.com
Preface

During the October 2016 Mission to Ethiopia, several meetings were held in order to align the activities of the GIZ/ARS Progetti team with the ESC Roadmap Team (RMT) on Higher Education. One of the requests in this alignment was to provide the RMT with a ‘long-list’ of case studies of countries that could provide useful information for them to incorporate into their fieldwork analyses. Three countries were suggested by the RMT – China, South Korea and Germany. Apart from these, it was suggested that the team include any other countries they thought would be useful. We have tried to include at least one from different continents.

The work was to be split into two sequential phases. Phase I (this document) covers the basic benchmarking activity that will complement the fieldwork results. A Phase II was intended to follow the fieldwork and the launch of concept mapping, and was to consist of more in depth explorations of countries or topics requested by the RMT after receipt of the first high-level case studies. Unfortunately, there is currently no funding for Phase II.

This document covers the initial high-level case studies. This was intended to be a quick exercise, so the time and length for each case study was limited. This means that some issues were not covered. Case studies were written according to a framework, but styles of the different writers vary to some degree. Countries are listed alphabetically and each concludes with some suggestions of what might provide useful lessons for Ethiopia.

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PART ONE: ISSUES FOR ETHIOPIA
Introduction

The case studies presented in this report provide lessons from a very diverse set of countries on different continents. In different combinations, there are examples of ambitious goals to:

- Increase participation rates in higher education;
- Improve equity in access to as well as graduation rates from higher education;
- Improve articulation with schooling and between sectors of higher education;
- Improve the match between student profiles and their programme choices;
- Improve quality and efficiency;
- Improve and modernise teaching and learning practices;
- Improve research outputs and relate research programmes to societal needs;
- Organise and structure the shape and size of higher education to suit their needs; differentiation has been an international trend.

Although many of the situations are different from Ethiopia (size of populations, wealth, long-established systems of higher education and large enrolments), all have useful lessons. The issues discussed in this section combine the learning points or issues of interest highlighted by each of the researchers and will be discussed under the same headings as the case studies.

1. Overall organisation of higher education

Many of the countries have forms of organisation that were not necessarily designed for modern-day purpose (such as the UK) or had a proliferation of bodies established at different time which make for very complicated systems (such as India). Ethiopia has the space to organise higher education for itself in a way that is streamlined and efficient.

Two of the case studies designed and implemented new forms of organisation for higher education. The California Master Plan built on existing institutions (two universities, with multiple campuses and the community college sector) and put a co-ordinating body in place to manage the system. South Africa restructured education after apartheid and located responsibility for higher education in one ministry and used steering mechanisms to shape the system – finance and planning. Responsibility for quality and the National Qualifications Framework were located in two separate bodies to avoid conflicts of interest. In federal states, such as Germany, the state legislatures might have extensive powers over several aspects such as finance and quality control.

The following elements are predominantly in place:

- Higher education in most countries falls under a Ministry of Education;
- HEIs are autonomous bodies that are accountable for their use of public funds. Apart from this being a cherished principle of academic freedom, this also encourages diversity in the system;
- There are usually separate bodies dealing with quality assurance, although the ministries often deal with aspects of quality, such as granting licences to new HEIs;
- Private higher education is given varying degrees of prominence. In a country such as South Africa, there was suspicion about the motives of and quality of private HE and private providers are tightly regulated. Other countries are more market-driven and expect the private sector to drive growth (for example China). In some countries, the private sector is larger than the public sector. Deregulation in Brazil, however, has caused concerns about quality. An additional factor is that private HEIs can be for profit or not for profit. This might have negative
consequences for international collaboration and indeed could discourage foreign universities from establishing a presence in a country (at a time when many countries, including in Africa – for example Botswana – are trying to attract top providers, both to promote access and to strengthen the country’s higher education reputation);

- Most countries have a National Qualifications Framework to ensure consistency and clarity in design and outcomes.

Some specific lessons from the case studies include the following:

- Australia has clear mechanisms for regular review of the system and uses an open, consultative and participatory process to reform it;
- China has gone through very significant changes over the decades and is unique in trying to conjugate state control with liberalisation, academic freedom, international cooperation, and excellence;
- The UK has a system of devolved government, including for higher education, and the pros and cons of the model could be explored to see if the Ethiopian federal system can benefit from a similar arrangement.

2. Financing of higher education including student financing

In most countries, higher education is seen as a public good with major funding coming from the government. Countries have allowed the private sector to shoulder more or less of the expansion of access, with some private HEIs, such as in Brazil, also receiving government funds. Students studying at private HEIs can sometimes get study loans, but only for accredited HEIs.

Most countries have used funding to steer the system, but several, especially South Africa and Australia, use additional funding sources for redress. As the system develops, universities tend to be able to raise greater proportions of their own funding, especially through research. Several countries, such as South Korea, have linked research to industrial needs, which generates income.

Most countries have some combination of student loan and bursary with students repaying the loan once their salaries pass a minimum level. The Californian system can be likened to a pyramid, with research at the top and broad-based community colleges with 2-year qualifications at the base. Almost universal access was reached through having the bulk of enrolments at the relatively cheaper levels of education at the base. Poorer students were able to get free access because of government grants as well as from the tuition fees paid by richer students and from progressive taxation which redistributed opportunities. This solution requires a relatively prosperous society, however, and there have been tax revolts about this as Californian society got more unequal. The Californian system has been damaged by successive funding cuts.

Germany is unique in not having student fees. Although constitutional reform allowed the introduction of fees in 2005, after a brief period no state has retained fees. Administrative costs are covered by nominal fees of about €150 per annum and some states require students to pay fees (up to about €800) if they do not graduate within a reasonable amount of time.

China has unusual regulations that recommend a post of general accountant as Vice Rector in university governance structures as well as recommendations pertaining to budgeting, monitoring and diversifying funding sources.
3. Access, admissions and pathways to higher education

The move to mass higher education has been a world-wide phenomenon, despite the fact that African countries are only starting on this path, albeit very rapidly. Resources are crucial to increase enrolments, which is why the richer countries have higher gross enrolment ratios.

Most countries have policies to increase access and some have had ambitious goals, such as China, which achieved them¹, and South Africa, which fell short but still has goals to further increase access. Successful massification has usually been linked to finding ways to articulate with the schooling system. In South Korea, for example, 70% of high school graduates proceed to higher education. Singapore and California both emphasised the need for excellent schooling and several examples of how California strengthened teacher education, retaining good teachers and quality in schools are discussed in the case study.

All the case studies cited here have some form of competitive access with individual HEIs setting their own admission requirements above a general school-leaving sub-minimum; some use interviews for prestigious programmes. South Korea uses an entrance examination – the College Scholastic Ability Tests – in addition to the school-leaving examination.

Ways to help students, both financially and educationally, have been necessary if there are societal inequalities (see next section for further discussion). China, for example, has a supporting policy for students from rural and minority areas so that lower grades do not prevent them from entering higher education. South Africa has National Benchmarking Tests that test literacy and numeracy skills to be used in addition to school-leaving certificates to identify students who have the ability to enter higher education despite poor school-leaving results. In Germany, access is generally not selective but (a) different high school certificates entitle entry into different types of higher education and (b) there are some programmes with limited access, where grades, waiting lists and institutional priorities play a role. In India there are two streams of secondary education, i.e. the academic stream allows entry to HE, whereas the vocational stream prepares students for employment or further vocational education.

Some countries have admissions clearing houses such as Australia and the UK’s Universities Central Admissions Service (UCAS), which is independent and sector-managed. Some countries have very diverse routes to higher education, such as Singapore and Australia where the system in fact encourages progression from vocational qualifications, adult learning and other forms of work-based learning. The Californian system guaranteed transfers from qualifications at the base to universities, although this has now been hampered by funding cuts. In Germany, some vocationally qualified applicants without high school certificates may access higher education (in 2009 a regulation equated some vocational degrees to the secondary ‘Abitur’, which allows students access to all kinds of study first cycle study programmes at all types of higher education institutions).

South Korea, where 85% percent of high school students go on to some form of higher education, has a looming demographic crisis. An enrolment decline of as much as 40 percent in the next 12 years is predicted, with more university places available in 2016 than there will be high school graduates. Current estimates foresee the closure of 100 universities by 2040.

¹ China had a goal of 40% GER by 2020. According to the World Bank, in 2014 the Chinese GER was already 39.4%. (http://databank.worldbank.org/data/reports.aspx?source=2&series=SE.TER.ENRR&country=)
4. Teaching, learning and assessment

Not all the case studies discuss teaching and learning in detail. This does not mean that these elements are missing, however. Many countries link teaching and learning to particular goals. Australia, for example, wants its students to be global citizens and encourages its universities to cover international themes in curricula. Singapore links curriculum development and research to the needs of industry and economic development. Responsiveness to the needs of their society or local region is found as a goal in many universities’ mission statements.

Three countries might be interesting to Ethiopia for different reasons. China is trying to conjugate its traditional teaching and learning approaches with global (western) modalities that give more trust and initiative to students and see students more as ‘partners’ than as passive recipients of knowledge. South Africa has devoted decades of work to developing ways of supporting students who enter higher education with educational disadvantages. These interventions have both provided support for individual students and been more systemic in the way curricula and programmes are designed. The South African government has also provided funding for national and institutional teaching and learning projects. Germany gives importance to T&L through special initiatives and rewards. For example, the Joint Initiative for the Quality of Teaching and Learning provides competitive funding to higher education institutions and awards prizes for academic members of staff and/or faculties that engage in innovative forms of teaching.

Several countries have national measurements of student satisfaction, including Australia and the UK. The UK is extending this concept with the introduction of a Teaching Excellence Framework (TEF), intended to recognise and reward excellent learning and teaching. It has been controversial, largely because it will introduce another bureaucratic exercise as well as for what it will measure, but will be tested in 2017.

Language of instruction has been an on-going issue for many of the multi-lingual countries, with English increasingly becoming the predominant language for higher education across the world. (This is the case even in countries not discussed in these case studies. For example, many European universities are offering more programmes in English, especially at post-graduate levels.) Most of the countries discussed here begin schooling in mother tongue, but start to introduce English or the official language of the country early on. This, however, requires attention to teacher education. In South Africa, for example, the legacies of apartheid education mean that many school teachers are themselves not proficient in English, so the disadvantage is continued, and universities have to find ways to support students entering university without the language or other academic skills required for tertiary study.

Many countries have bodies or associations specifically devoted to teaching and learning such as the Higher English Academy (HEA) in the UK.

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2 http://www.hefce.ac.uk/lt/tef/
5. Research and partnerships

Research and partnerships tend to be strong in countries with a history of research. Countries without that history have used resources and partnerships to stimulate the development of research. China, for example, has poured major resources into developing academic research. Although elite universities tend to dominate, this doesn’t mean that other universities do not conduct research or enter into partnerships with industry or local economies as Singapore is promoting. The research profile of a university is part of the diversity of higher education systems and also a source of income for many universities. Moreover, there may also be non-university research performers. In Germany, for example, research organisations include the well-known Max Planck institutes which serve to strengthen research in the country as a whole.

6. Differentiation of the system

All the case study countries have promoted differentiation in various ways. Student bodies are differentiated, with initiatives - financial and educational - to increase enrolments of under-represented groups.

Institutions are differentiated in various ways. Singapore has a specialised and differentiated system. The California system was designed to allow each level of the system to focus on separate functions, with most institutions and enrolments at the base, and research taking place only at the tip of the pyramid. Australia has a clear distinction between academic and vocational learning where each of its states has a Vocational Education & Training (VET) or a Technical and Further Education (TAFE) system. VET qualifications are designed to provide students with nationally recognised competencies that employers have identified as critical to their needs, and most importantly, VET qualifications are transferable between all states.

Binary systems such as in Germany have clear differentiation between vocational higher education and research higher education. This is said to be horizontal (i.e. ‘different but equal’), but it does not always operate in that way. For example in Germany universities of applied sciences are not allowed to offer PhDs, and need to cooperate with universities to do so; there is also a common perception that universities are more prestigious. Even in the UK, where the binary divide was abolished in the 1990s, there is still a persistent idea that the ‘former polytechnics’ are of lower quality and cater for different types of students (more vocationally oriented).

Most countries encourage HEIs to define specific niches for themselves. South African HEIs are only allowed to offer programmes in areas of strength and planning and funding levers are used to encourage horizontal and vertical differentiation. Many countries encourage differentiation in programme offerings and attempt to steer the system in specific directions. South Korea, for example, has steered enrolments away from the humanities towards industrial qualifications to aid economic development. South Africa has attempted to encourage more enrolments in science, engineering and technology qualifications.

Differentiation can also be supported by concentrating public funding in a few excellent providers. The Californian system, the German Excellence Initiative, the Chinese projects 985 and 211 and even the UK’s Research Excellence Framework are ways to encourage vertical differentiation in the system by supporting excellence in research in a few institutions only.
7. Various issues of quality and efficiency

Quality has been a crucial element of higher education development over the past decades, especially the question of how to balance increases in access and redress with quality.

Most countries have separate quality assurance bodies. Some were created at the time of reform of the system, such as South Africa, others have developed in different ways. The USA tends to have many different bodies and India is an example of a system where different bodies were established at different times leading to confusion and overlap in functions. Brazil is an example of a regulated top-down system, which is strongly based on accountability (over broader understandings of ‘quality culture’) and which has a homogeneous scoring methodology across different programmes and providers. Although this has been criticised, it worked well in the years following the dictatorship period and has ensured development of higher education. At the early stage of encouraging equity, the South African QA system focused on improvement rather than sanction. Hence, there is an issue of system maturity to be considered, which is pertinent to Ethiopia.

As a federal country, Germany does not have a national quality assessment system. Higher education institutions have to accredit their study programmes but regulations on the implementation of quality assurance differ between Länder. Here, the accreditation system consists of two levels. The German Accreditation Council is an umbrella organisation that approves the actual accreditation agencies which validate degree programmes. Providers are free to choose which agency will evaluate their programmes.

Most countries also have the involvement of professional and other bodies involved in higher education quality assurance. This sometimes includes the licensing of professionals before they may practise as engineers, architects etc. One element of efficiency for most of the countries is differentiation which allows more areas of study to be covered more cost effectively.

8. Concluding comments

This section brought together the most important learning points highlighted in each separate case study. The country in each case has very different experiences and each study concludes with a section on what might be most useful for Ethiopia to consider and these are also summarised in the table in the annex. We hope this will be useful in considering the next steps for Ethiopia.
This part of the report contains descriptions of the ten higher education systems we studied. Information was collected from websites, official documents, and academic literature. For each of the 10 higher education systems included in this part we have included a text that is split broadly into the following sections (sometimes with subsections to provide further detail):

1. General overview of the country and the system;
2. Financing of higher education, including student financing;
3. Access and pathways to higher education;
4. Teaching, learning and assessment;
5. Research;
6. Issues of quality and efficiency;
7. Issues of interest or lessons for Ethiopia.
Australia

1. Overview

Higher Education is generally provided by universities and other higher education institutions such as Technical and Further Education (TAFE) institutes and Registered Training Organisations (RTOs). With economic changes and a demographic surge since the late 1980s, higher education in Australia has shown significant expansion and transformation. The number and diversity of universities has grown, with 20 more public universities being built. Equally, student numbers increased by over a million, and direct government funding also grew from $3.2billion in 1989 to $15.4billion in 2014. HEIs ‘play a critical role in the country in fuelling innovation, driving productivity and giving students the skills they need for future success’. Following a recent review of the sector, the government is in the process of introducing further reforms that will help to create ‘a system that is higher in quality, more accessible, more competitive and more sustainable’. Consultation with students, parents, employers, staff, and the public was completed in Aug 2016, and a government response is expected soon.

2. Overall organisation of higher education

The Australian higher education system comprises both public and private universities, Australian branches of overseas universities, and other non-university higher education providers (NUHEPs). As at 2015, there were 172 registered higher education providers: 37 public Australian universities; 4 private Australian universities; 2 overseas universities, and 129 NUHEPs. Higher education providers are required to be registered under Part 3 of the Tertiary Education Quality and Standards Agency Act 2011 and listed on a National Register of Training providers.

Indigenous Higher Education Units are located in universities around Australia. These units provide support to Aboriginal and Torres Strait Islander students, create networks of students/academics and provide an indigenous presence on all Australian university campuses.

The National Qualification Framework provides guidelines for learning outcomes, pathways, assessment and accreditation of qualifications, allowing students to move easily between levels of study and institutions, receiving credit for previous study.

3. Financing of HE, including student financing

The Government is the main funder of higher education, and public spending on higher education takes three main forms:

- Direct grants to higher education institutions, primarily for teaching and research;
- Student loans which are taken out by students but paid to higher education institutions on students’ behalf;

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4Department of Education & Training, Australia: https://docs.education.gov.au/system/files/doc/other/higher_education_in_australia_-_a_review_of_reviews.pdf
• Student income support payments, which are paid direct to students.

Universities also attract funding from the private sector, charitable institutions and donors. In addition, they have access to competitive research grants. The Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC) are the main sources of competitive project funding. Eligibility for ARC grants is largely restricted to universities. Eligibility for NHMRC grants is broader, including medical research institutes and hospitals, but universities are the main recipients.

The Higher Education Support Act (HESA) 2003 provides additional provisions that enhance participation, quality and fairness in society. These provisions include:
• The Disability Support Programme (DSP) provides funding to eligible higher education providers to improve access for students with disabilities;
• The Indigenous Support Programme provides grants to higher education providers to assist them to meet the needs of their Aboriginal and Torres Strait Islander students;
• The Structural Adjustment Fund, provides funding to assist universities to operate more competitively in the demand-driven funding environment;
• The Higher Education Participation and Partnership Programme (HEPPPP) supports university efforts to increase participation of people who are from low socio-economic backgrounds to attend university;
• Grants to support the Promotion of Excellence in Learning and Teaching in Higher Education provides funding for initiatives to improve and recognise teaching and learning.

4. Access, admissions and pathways to higher education

Admission to Australia’s public universities is a centralised process in each of Australia’s states and territories, although international students tend to be selected by the universities themselves. Requirements for admission are set by individual universities.

Admission to undergraduate programmes is usually based on successful completion of 13 years of school education though some institutions use interviews, portfolios or demonstrated aptitude and most provide alternative pathways for mature-age (non-school leaver) students. Admission to postgraduate programmes is based on the level of achievement in previous higher education studies.

The government also runs a range of initiatives to support access and participation. A major emphasis is given to ensuring that Australians from socio-economically disadvantaged backgrounds who have the ability to study at university have the opportunity to do so.

Progression pathways to higher education in Australia involve academic and vocational and training education routes. In addition, there is a range of ‘enabling programmes’ for disadvantaged students. A study compiled by OECD indicates that, in 2001, 31% of Australian students commencing a Bachelor’s degree were admitted on the basis of the following: mature age or special entry provisions, studies in the VET/TAFE sector, examination or assessment by the university, employment experience, professional qualifications or completion of Open Learning Studies.

Each state has a Vocational Education and Training (VET) or Technical and Further Education (TAFE) system. VET qualifications are designed to provide students with nationally recognised competencies that employers have identified as critical to their needs and VET qualification are transferable between all states.

TAFE institutes are usually funded by the governments of the state or territory in which they are located. They award Certificates I, II, III, and IV, as well as Diplomas and Advanced Diplomas in line with Australia’s Vocational Education and Training (VET) sector. In certain niche areas of study, some TAFE schools also award Bachelor’s degrees.

Very often, vocational schools have official agreements with universities allowing students to transfer the credits they’ve accumulated towards an advanced Bachelor’s degree. Universities also may offer guaranteed acceptance if a student achieves a minimum grade requirement from their TAFE coursework.

Vocational degrees can also be obtained at private vocational institutes known as Registered Training Organisations (RTO), of which there are over a thousand scattered across Australia. A select number of TAFE institutes focus on just one area of specialised study, but generally the TAFE system offers courses and degrees in many fields, ranging from business and hospitality to the visual arts and information technology.

5. Research and partnerships

Research is considered to be a pillar of higher learning. The research workforce and research output have both increased significantly over the last 20 years.

Partnerships and internationalisation are among the characteristics that define Australian universities. Internationalisation also shapes the way curricula and research projects are designed and offered. Overseas students represent a substantial percentage of the student body in many institutions in Australia. In 2012, international students made up an average of 20.7 per cent of all higher education students.

The interests of international students are protected by the Education Service for Overseas Students (ESOS) which provides tuition and financial assurances. The ESOS legislation requires all education providers to enter into a written agreement with overseas students when they enrol. It protects students if their visa is refused or their education provider is unable to teach the course for any reason. Where an Australian university offers courses at an offshore campus, the university must maintain standards at least equivalent to those provided in Australia.

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6. Differentiation of the system

Until early 1990s, Australia had a binary higher education system consisting of universities and Technical and Further Education (TAFE). Traditional Australian universities focused upon pure, fundamental, and basic research, while the TAFE Institutes focused on industry, applied research and innovation. They later provided vocational and skills training.

The abolition of the binary line and the introduction of the Unified National System (UNS) in the late 1980s, led to institutional mergers and institutional missions increasingly started to become similar. However, performance on a number of indicators, including student enrolment, external research funds and higher degree completions show that there is clear differentiation within the sector by type of institution.

7. Various issues of quality and efficiency

Australian universities are autonomous bodies that are responsible for managing quality through internal accreditation processes and codes of practice. Universities are also subject to a wide range of government legislation.

All institutions receiving financial support from the government must meet quality and accountability requirements set in the Higher Education Support Act 2003. The Quality Assurance Framework, the Australian Qualifications Framework (AQF), and the Higher Education Standards Framework are among the key tools that strengthen quality and accountability. The Higher Education Standards Panel (HESP) provides independent advice on making and varying the Higher Education Standards Framework.

All Australian higher education providers are required by legislation to comply with threshold standards. The Tertiary Education Quality and Standards Agency (TEQSA), an independent, national quality assurance body, assesses the performance of higher education providers against the Higher Education Standards Framework.

8. Overview of issues of interest for Ethiopia

Issues of interest and the key lessons for Ethiopia may include:

- The presence of clear mechanisms for the regular review of the system and the application of an open, consultative and participatory process to reform it;
- The National Qualification Framework, which brings a sense of consistency and clarity to the system. It helps both learners and employers to clearly understand and acknowledge the different levels of qualifications;
- In addition to the block grant system to HEIs, the government makes additional provision that enhances quality, fairness, access and participation by disadvantaged groups;
- Admissions are coordinated centrally. However, each university retains autonomy as they set their own entry criteria;

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8 http://www.che.de/downloads/MosesVortrag_183.pdf
• There are diverse routes, including vocational learning or VET, to higher education. The system in fact encourages progression from vocational routes, adult learning and other forms of work-based learning to higher education;

• Each state has a Vocational Education & Training (VET) or a Technical and Further Education (TAFE) system. However, VET qualifications are designed to provide students with nationally recognised competencies that employers have identified as critical to their needs, and most importantly, VET qualifications are transferable between all states.
Brazil

1. Overview

Brazilian higher education is very diverse with a strong private sector (87%) which also plays a key role in driving overall growth in the sector. This growth started after the end of Brazil’s military dictatorship in 1985. Moreover, Brazil has policies to address access for minorities, especially in more remote areas. Higher education provision in Brazil is clearly skewed towards richer regions in the south and south-east. The poorer Northeast, Central-West and North Regions have proportionately fewer institutions.

Public institutions can be universities, University Centres, Colleges (Faculdades), Federal Centres of Technological Education (Centros Federais de Educação Tecnológica), and Federal Institutes (Instituições Federais). Providers differ regarding their institutional autonomy and their commitment to research and postgraduate education. Moreover, providers can be ‘Federal’, ‘State’, or ‘Municipal’ depending on their funding sources. Table 1 summarises the numbers of institutions per category as of 2013. Over 53% of students are enrolled in universities, which represent just 8% of provision. Thus, Brazilian universities are very large.

<table>
<thead>
<tr>
<th>Higher education Institutions</th>
<th>Public</th>
<th>Private</th>
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<tbody>
<tr>
<td></td>
<td>Federal</td>
<td>State</td>
</tr>
<tr>
<td>Total</td>
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<tr>
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<tr>
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<tr>
<td>IFs and CEFETs</td>
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Source: Ministry of Education 2014

2. Overall organisation of higher education

Both public and private tertiary providers in Brazil are coordinated and monitored by the Ministry of Education, which authorises institutions and courses. After the military dictatorship, the government’s aim was to secure a universal right to education. For this reason, the new Brazilian Constitution (1988) allowed public funds to be allocated to private universities. From 1996 the federal government allowed tertiary institutions to function as for-profit entities.

This sector’s deregulation required strengthening external quality assurance (EQA) for example by introducing the National Examination of Student Performance (ENADE). EQA is part of the National System of Higher Education Evaluation (SINAES), established in 2004. The SINAES provides criteria for

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9 These are educational institutions subordinated to the Ministry of Education, with administrative, didactic and financial autonomy. They offer professional education including further and higher education.
10 See the Brazilian’s ministry of education website at:
12 Which replaced the National Course Examination (Exame Nacional de Cursos) established in in 1995.
the evaluation of programmes and institutions and consists of three main components, namely the evaluation of institutions and programmes and ‘information collection’. All results are made public by the Ministry.

Higher education includes university education and professional post-secondary education. University education has two levels: undergraduate (four to six years) and postgraduate.

There are two types of postgraduate programmes, namely *latu sensu* (‘in the broad sense’, for example refresher courses or specialisation courses); and *stricto sensu* (‘in the strict sense’). A Master’s degree grants admission to the PhD, which usually takes four years.

‘Higher courses of technology’ are classified as post-secondary professional education. The programme is primarily geared towards the labour market and graduates are awarded a certificate with the professional qualification of *Tecnólogo*. This certificate also allows progression to a nominal one-year professional Master or to a related university undergraduate programme, with certain exemptions.

3. Financing of higher education, including student financing

During the first decade of the 21st century, Brazil increased its expenditure on higher education as a proportion of the GDP from 0.7% to 0.9% (expenditure on education overall was 5.91% of the GDP in 2012). In the same period, the OECD average expenditure on higher education grew from 1.3% to 1.6%. The relative cost per student in tertiary education is high: as of 2008 Brazil spent the equivalent of 106% of its GDP per capita on each tertiary student by educational institutions, the highest proportion among all OECD countries.

To support the expansion of higher education, the federal government has invested public funds in two programmes to support students and increase public and private places, namely:

- The ‘Student Financial Aid Fund’, is a loan system provided by the Ministry of Education to support access to the private sector. Loans depend on family income (gross monthly income of the household must not exceed three times the minimum wage) and on being enrolled in courses that have passed the external evaluation. Loans cover 50% to 100%. Interest rates were 3.4% per year until the end of 2015, when the interest rate became 6.5%. Students must start repayment 18 months after graduation. Since 2010, when the rules for the programme were redesigned, 1.16 million students had already benefitted from the programme;
- The ‘University for All Programme’ is a grant system provided by the Ministry of Education. Family income is one criterion for participation and students should either come from public high schools or have had scholarships at private high schools. Since 2005, the programme has served 1.4 million students, 70% with full scholarships.

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14 http://www.uis.unesco.org/DataCentre/Pages/country-profile.aspx?code=BRA&regioncode=40520
16 See also: http://www.universityworldnews.com/article.php?story=20140710115554910
17 See: http://sisfiesportal.mec.gov.br/faq.html
18 See: http://prouniportal.mec.gov.br/o-programa
4. Access, admissions and pathways to higher education

Traditionally, the Brazilian higher education system has been accused of elitism and of perpetuating social exclusion (especially for non-white Brazilians living inland). Hence, two key policies have been for expansion and study success. To address educational disparities across the country, the Federal Government has implemented a number of programmes including establishing the Open University of Brazil in 2006. Indeed, 2006 marks the beginning of an enormous expansion in distance education enrolments, moving from a little more than 200,000 students to over a million in 2013. Today distance education represents about 16% of all Brazilian higher education enrolments.

The ‘National Education Plan 2001-2010’ set increasing access opportunities as a primary objective. The aim was to reach 30% access of 18-24 year olds by 2010 by (i) increasing the number of inland federal providers whilst maintaining quality control during the first phase (2003-2007), called ‘Expansion I’; promoting distance learning through the System Open University of Brazil; and a number of initiatives under the Ministry’s 2012-2015 Multi-Year Plan including a national student assistance programme and funds for disadvantaged groups.

Law n.12.711/2012 guarantees the reserve of 50% of all places, at bachelor’s level, in the 59 federal universities and 38 federal institutes of education, science and technology, to students from public high schools. It includes family income and racial group as criteria. By 2013, over seven million students were enrolled, including over a million in distance education. In 2012, over 31,000 programmes were offered, up from around 12,000 in year 2000.

To be admitted to higher education study, students must pass an entrance examination (vestibular), which follows successful completion of different forms of secondary schooling. The purpose of the vestibular is to select the best students and may vary by university.

Since 2009, an increasing number of universities have used the results of the national examination (ENEM) which evaluates secondary education at high schools in Brazil as a selection criterion to enter into higher education. The ENEM evaluates the knowledge of students who are either concluding or have concluded lower or upper secondary school. Historically, higher education institutions used the ENEM to add points to the grade obtained in the vestibular, but today most federal institutions select prospective students based entirely on the ENEM. After sitting the ENEM, students may apply for...

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20 See Danish Agency for Science, Technology and Innovation 2016 pp. 26 ff. for fuller overview.
21 Email exchange, Dilvo Ristoff.
22 A list of policy initiatives is available on UNESCO, 2012, pp. 9 ff.
enrolment in a federal public university using the ‘Unified Selection System’ (SISU), a national platform developed by the ministry.

5. Teaching, learning and assessment

Brazil is one of a few countries that has required students to take standardised exams. The ENADE assesses student performance (skills and competencies) against purported learning outcomes of curricula. Until 2014, all first and final year students had to participate in the ENADE, which includes a test in relation to the syllabus, skills and competences acquired in their training, a questionnaire on the students’ impressions about the test, and a questionnaire about students’ opinions on their programme coordinator. Today, first year students no longer take the test. With the universalisation of ENEM, ENADE for first year students lost significance and, since 2014, it is legally no longer required. This has to a large extent defeated the original purpose of the exam which aimed to compare entrance and exit levels. Today, only a few competencies and skills can be compared, using the results of ENEM.

The mushrooming of higher education institutions, mostly private, in the early 1990s led to a more structured system of quality control to tackle low teaching quality caused by teachers with lower academic credentials and poor infrastructure.

6. Research and partnerships

Many Brazilian universities have international research partnerships, especially with other Lusophone countries. Moreover, there are several inter-university organisations and knowledge networks that promote internationalisation both in teaching and learning and research.

However, in terms of contribution to, and links with, the regional economy, Brazil still seems to lag behind. According to a 2014 conference paper:

> Although Brazilian universities have undergone significant changes in order to become more ‘entrepreneurial’ (an illustrative example is the fact that all of them created technology transfer offices), the outcomes were quite different and show a reality in which a very few universities succeeded in establishing a closer interaction with other regional actors [...]
7. Differentiation of the system

A key element of diversity within Brazilian higher education is the strength of the private sector with 87% of enrolments. The deregulation in the system, which started in the 1990s, is the main driver of diversity, although it also led to quality concerns as mentioned above.

In terms of fields of study, data reported by the Ministry of Education show that 10 courses cover half of those on offer (including, *inter alia*, law, engineering, nursing, psychology, administration and management etc.).

Brazil recognises the role of STEM fields but there is no explicit policy to have a ‘quota’ of STEM graduates vs. others. However, the government is intent on strengthening international linkages particularly in STEM. The Brazilian government launched the Brazil Scientific Mobility Program (formerly Science without Borders) in 2011. This program grants scholarships to Brazilian students to study in the world’s top universities in 20 countries in STEM fields.

Finally, the diversity of the higher education system is most clearly demonstrated by the relationship between teaching and research. Higher education institutions defined as universities are distinguished from other types of institutions because they conduct research.

8. Various issues of quality and efficiency

Brazil has strong regulatory control, justified by the need to combat ‘degree mills’, which emerged in a highly privatised higher education system.

The SINAES was established in 2004. The recent creation of a special Secretariat responsible for Regulation and Supervision of higher education institutions and programmes is an example of this accountability- and regulatory-based approach. At the same time, these policies have placed a heavy burden on the evaluation system and led the Ministry to propose (in 2012) the creation of a new specialised Institute (INSAES) to assure that evaluation, regulation and supervision go hand in hand at a faster pace and with better control of institutions.

The struggle against ‘degree mills’ has also led to two other important initiatives, namely a forthcoming resolution of the National Education Council on the recognition of foreign degrees and diplomas. This is intended to speed up the current processes, linking them to international education agreements signed by Brazil, identifying accredited institutions and programmes of other partner countries and, at the same time, respecting university autonomy on the issue, as assured by the Brazilian Constitution.

EQA is implemented by two distinct agencies for undergraduate and post-graduate studies, both falling under the MEC. INEP, which has a broad remit to review and implement public policy in education, leads undergraduate reviews under the supervision of Brazil’s Higher Education Evaluation

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33 Presentation INEP during study tour 2014.
34 https://www.nafsa.org/uploadedFiles/Chez_NAFSA/Resource_Library_Assets/Networks/ACE/EDU%20Systems%20Brazil.pdf
35 Personal communication, Dilvo Ristoff.
36 Therefore it is not limited to higher education but has a dedicated department for higher education (Diretoria de Avaliação da Educação Superior (DAES)).
Commission (CONAES)\textsuperscript{37}. Post-graduate programmes are validated by the Coordination of the Improvement of Personnel of Higher Level (CAPES)\textsuperscript{38}.

At undergraduate level, INEP leads the entire evaluation process, produces the indicators and an information system that supports both the regulatory process, carried out by the MEC, and ensures transparency of data on the quality of higher education. INEP uses the ENADE and the outcomes of expert panels for its decisions. The undergraduate process is, thus, very structured and the use of the ENADE as part of the evaluations suggests a focus on (a) efficiency, but also (b) teaching quality (as students opinions are also monitored through the ENADE). There are both institutional and programme evaluations.

At post-graduate level, CAPES is the relevant accrediting agency and focuses on productivity. This validation also occurs every three years. The evaluation rates institutions on a scale from 1 to 7, with rankings of 6 and 7 considered to be of ‘international level’. Most of the programmes with this rating are in the South-East and at public universities\textsuperscript{39}. So called \textit{lato sensu} post-graduate programmes must be registered with INEP\textsuperscript{40}.

9. Overview of issues of interest

Key issues of interest for Ethiopia include:

- \textit{Deregulation}: a strong private sector has enabled an increase in participation, but there are concerns about ‘degree mills’ and QA issues. The government supports them by providing public funds and 20 years ago for-profit HEIs were allowed;
- \textit{Quality Assurance}: Brazil is an example of a regulated top-down system, which is strongly based on accountability (over broader understandings of ‘quality culture’), which has a homogeneous scoring methodology across different programmes and providers. This has been criticised. However, it has worked well in the period following the dictatorship and has ensured development of the system. Hence, there is an issue of system maturity to be considered. Ethiopia should carefully consider where it is now, and what degree of regulation and accountability would be best in this phase (possibly considering changes for the long term, just as currently Brazil is debating reforms);
- \textit{Access} for minorities and groups from isolated parts of the country is a major concern. Brazil can be a good case to study given that Ethiopia, too, has problems related to more remote regions.

\textsuperscript{37} The CONAES is the entity responsible for evaluation, within the Ministry. It is formed by representatives of INEP, CAPES, teachers, students, and representatives from civil society (European Commission, 2012, pp. 17 ff.).

\textsuperscript{38} \url{https://www.capes.gov.br/}

\textsuperscript{39} European Commission (2012). Analysis of existing co-operation in terms of academic mobility between the EU and Brazil and identification of the main obstacles to mobility; interview at CAPES (March 2014).

\textsuperscript{40} See: \url{http://portal.inep.gov.br/c/journal/view_article_content?groupId=10157&articleId=11154&version=1_0}
California

1. Overview

The California Master Plan was conceived in the 1960s – a time of prosperity, liberal ideals and optimism. Its successes lasted longer than anticipated, and its partial decline is linked to the changing world economy and increases in inequality (although it is still in place). At the time of its introduction, it was way ahead of its time. It is discussed here because it has been copied by countries around the world and has been hugely influential.

At the time of its introduction, the Californian state was struggling to reform its system of post-secondary education in the face of financial constraints and growth in demand from the increased population after the Second World War. With a philosophy based on merit, the desire was for a coherent system of post-secondary education available to everyone regardless of their economic means. High levels of quality were to be maintained and research excellence was to be nurtured. A statutory framework was enacted for its implementation – the Donahoe Higher Education Act – and signed into law by Governor Pat Brown in April 1960. The statutory framework reinforced the autonomy of the universities and a Board of Governors (appointed by the state Governor) was established in 1967 to manage the system of Community Colleges.

When it was established, California was the richest and most populated state in the USA. Its population was diverse in terms of class and colour, with increasing numbers of immigrants from south of the border. Generous federal funding was available. Its similarities to Ethiopia are in its goals – it was and is, however, vastly more prosperous and populated.

2. Overall organisation of higher education

A coherent, but differentiated system was created from competing and uncoordinated colleges and universities. The system represented a pyramid, with a broad base and a small pinnacle, reflecting hierarchies of wealth in society and stratification in the labour market. It fostered excellence at its peak with universal access at its base. Each of the following components was to strive for excellence in their different functions, without the duplication of efforts or resources:

- The existing University of California (UC);
- The California State College system of senior colleges, now California State University (CSU);
- The California Community Colleges system, governed by a Board of Governors.

There was a firm division of labour in this pyramid. Research was to reside only in the University of California, which would award masters and doctoral degrees. CSU could award masters degrees and joint doctoral degrees with UC. Community Colleges were established to form the large base of the pyramid and were intended to be within commuting distance for most residents of the state. Community Colleges offered a broad range of programmes:

- Preparation for transfer to university - the first two years of 45% of the programmes fulfilled requirements for transfer to a 4-year qualification;
- Vocational programmes, including programmes linked to apprenticeships;
- Non-credit classes in literacy, health, technology and general education, including adult education, English as a Second Language and remedial courses.
The division of labour between the tiers has remained relatively stable with little of the academic drift that occurred elsewhere, for instance in the UK with the ex-polytechnics and South Africa. Research excellence was maintained at the peak.

The system was co-ordinated by the Californian Postsecondary Education Commission from 1973. This lasted until 2011 when it was abandoned because of fiscal pressures.

By 1992, UC enrolled 165,000 students over 9 campuses and CSU 360,000 students over 20 campuses. There were 107 Community Colleges enrolling 1.3 million students.\(^{41}\)

There was also an extensive system of private higher education institutions, both non-profit and for-profit, although only around 15% of this system offered degree-level study. Private HEIs operated autonomously, with their own separate governance structures.

By 2012-13 total enrolments in California post-secondary education were over 2 million students, divided as follows:\(^ {42}\)

**MOST CALIFORNIA STUDENTS ATTEND PUBLIC INSTITUTIONS**

- California Community Colleges: 44%
- University of California: 12%
- California State University: 18%
- Private non-profit: 15%
- Private for-profit: 11%

**SOURCE:** Integrated Postsecondary Education Data System (IPEDS), 2012–13 data.
**NOTES:** Restricted to two-year or above colleges. Enrolment is for full-time equivalent students.

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\(^{42}\) 2016, PPIC Higher Education Center: California’s Higher Education System.
3. Financing of higher education, including student financing

Savings for the first 15 years came from shifting part of the growth in enrolments from the 4-year to the 2-year institutions.

The plan was expected to be in force for 20 years. It lasted longer than that, but by 1990 cracks were starting to appear. Tax cuts and growing inequality beginning under President Reagan led to massive cuts to state budgets following the 2008/9 recession. Earlier tax revolts indicated that middle class parents were no longer prepared to subsidise access for all, including that of immigrants to the state from south of the border. One of the debates, for example, was whether illegal immigrants should receive free schooling or not.

The goal of the Master Plan was to move from mass to universal access. At a time when 300,000 immigrants were entering the state each year, 45% of the college age population in California gained access to higher education in 1960 compared with 25% nationally.43

Open access started to crumble when community colleges could no longer admit all who applied because of limited state funding. The universities also began to recruit more international or out-of-state students in order to balance their books because those students pay higher tuition fees. The schooling system is also underfunded, with very uneven quality. In some of the poorer schools, completion rates are as low as 50%. The transfer mechanism from Community Colleges to the universities has always worked better for middle class districts. However, transfer has also been affected by low completion rates in the Community Colleges and CSU.

The drop in funding more recently has meant that universal access has not been maintained, although mass access has continued. Around 60% of students in California (in 2004) had a parent born outside the country and 27% were first generation university students.44 The UC campuses continue to take in more students from socio-economically disadvantaged backgrounds than most other leading research universities in the USA. For example, 42% of UC students receive federal Pell Grants (for students with incomes below a certain level). At the Berkeley campus of UC alone, in 2013 around 40% of its students paid no tuition fees as they are funded by higher-income families. To allow this, UC transfers one-third of the funds it receives in tuition fees to financial aid.

4. Access, admissions and pathways to higher education

In the original design of the system, the following admission rules were applied:

- The top one-eighth of high school graduates would be guaranteed a place, tuition-free, at a campus of the University of California;
- The top one-third could enter the California State University system;
- Community Colleges would accept any other students with a high school diploma or who were over 18 years old and capable of benefiting from study.

Graduates of the Community Colleges who studied transfer programmes were guaranteed transfer to the California State University or the University of California to complete bachelor degrees thereby

44 This paragraph from page 45 of Marginson, 2016 above.
providing equality of opportunity. The Community College system grew enormously, but UC and CSU did not grow at an equivalent rate and thus upward mobility had limits placed on it. Community Colleges also faced a tension between preparing students for immediate employment or for transfer to degree study which required a more academic focus.

The Master Plan was intended to articulate with the schooling system so that students were adequately prepared for higher education. Attention was, therefore, given to strengthening teacher education and to attracting and retaining the brightest students for this career.

Especially in the 1980s when there were several state reviews of the Master Plan, the system of schooling was strengthened in various ways. Minimum qualifications were set, with certification, for teachers. Practical assessment of teacher candidates was strengthened and professional appraisals for teachers were introduced. The state granted additional resources to attract and retain teachers and pathways for professional development were designed. Universities were encouraged to develop partnerships with schools, for example to design programmes to prevent drop out, to teach basic skills and to share equipment. An Education Round Table was formed with representatives from the state, universities, schools and professional bodies to research and discuss issues such as curriculum development and methods of instruction and ways to increase retention and graduation. All these interventions were important and added to the vibrancy of the system.

However, in the decline of funding which struck the ideals of the Master Plan, the schooling system became larger and more diverse and became increasingly differentiated across lines of class, ethnic and regional inequalities. Larger numbers of students dropped out or failed and drifted into unemployment rather than higher education. Success rates at Community Colleges decreased as did transfers to degree qualifications.

5. Teaching, learning and assessment

The Master Plan emphasised several elements:

- Students were to be prepared for a knowledge-based economy;
- Californian higher education was to embrace a global and multi-cultural focus;
- Delivery was to focus on learning rather than teaching;
- Education transformation was to be facilitated through the use of technology.45

6. Research and partnerships

Especially since 1982, the Californian system attracted large amounts of research funding46 and four UC campuses are ranked in the top 50 of the Times Higher Education World University Rankings. However, this is not without tensions. Berkeley has an endowment less than 20% the size of its neighbour Stanford University (one of the private non-profit colleges), so struggles to compete at the very top levels of the academic market.

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46 Californian Education Round Table Reports (1996-98).
7. **Differentiation of the system**

The intention behind the Master Plan was to reinforce differentiation and this is what has appealed to other countries because of the effective and efficient use of resources. The differentiation has remained stable.

8. **Various issues of quality and efficiency**

Problems with the Master Plan had less to do with maintaining excellence than with maintaining universal access, when the population grew much larger and even more diverse than it had ever been at the time the system was planned. There have, however, been concerns about cost and quality of private for-profit colleges and these colleges account for a disproportionate share of student debt and loan defaults. Several accreditation agencies operate in California. Students can only receive federal or state financial aid for accredited post-secondary institutions.

9. **Overview of issues of interest**

The framework still applies, but the political and fiscal conditions for its past successes have been compromised. California has not updated the Master Plan to take into account new conditions. The tip of the pyramid is healthier than the base, but it also has problems.

In learning lessons from the decline, financial support from the state is crucial and taxation must be sufficient to support access, whether universal or mass. The California Master Plan worked for as long as it did in the US through a belief in education for the common good and as a way to reduce inequality. Rather than relying on market forces to steer higher education, California developed policy to maintain a particular type of educational good and impose levels of taxation to support this. Students were supported by generous financial aid.

The second important lesson is the design of a differentiated system with transfer between the levels which is efficient and avoids competition between HEIs. The autonomy of institutions was maintained within a co-ordinated system.

Despite the current problems, the system was successful for decades and countries around the world have copied elements of the Master Plan. For example, China adopted a California framework in the 1990s and the bulk of their increase in access has taken place in second and third tier HEIs. They have also made a heavy investment in a few research-intensive universities.47

The initial goals of the system to reduce inequality and the belief that education is for the common good are in sympathy with those of Ethiopia. Ethiopia might be interested in the type of differentiation that the Californian system offers. Resources are used most effectively by focusing research at the top of the pyramid and by admitting the greatest numbers of students to the base. Following this route would require Ethiopia to introduce differentiation into its system of higher education.

China

1. Overview

Chinese higher education, formed in the 1950s and 1960s based on the Soviet system, had not changed substantively until the 1990s\(^\text{48}\). In fact, despite economic growth, during the 1980s and early 1990s, investment in higher education decreased. Universities were classified as ‘ordinary’ and ‘key’ (the latter having strong teaching resources, nationally well-known disciplines and basic scientific research), but by the 1990s there was still no internationally recognised university in China\(^\text{49}\). Thus, China has grown fast in a relatively short time.

In China, the Communist party-state’s apparatus still plays a key role in governing the country’s universities. During the Mao period, institutions of higher education were typically managed by various central government ministries (for example, the Ministry of Coal ran institutes for mining technology)\(^\text{50}\). However, since the educational reforms in the 1980s, many changes have taken place in the higher education system, including\(^\text{51}\):

- Devolution from the Ministry of Education to local bureaucracies and individual institutions (leading to more autonomy and freedom);
- mergers;
- Privatisation (for example private autonomous institutions affiliated to public universities and charging higher fees, could subsequently become independent);
- Introduction of fees for students who scored below the cut-off line on the national college entrance examinations (so-called ‘dual track’ introduced in the 1990s);
- Expansion in enrolments;
- Focus on excellence projects (the ‘211’ and ‘985’ projects, see later).

2. Overall organisation of higher education

Since the publication of the article ‘Giving More Autonomy to Higher Education Institutions’ in 1979, the central government began to reconsider its role in universities. Along with the implementation of ‘Opening-up and Reform’ policy, including the introduction of some elements of market coordination and New Public Management (NPM), the state tried to shift its role from controller to supervisor. The National Plan 2010-2020 reinforced this trend. The role-shifting process takes place at two levels, i.e. vertically and horizontally. On the vertical dimension, more control is given to local and provincial governments; on the horizontal dimensions more autonomy is given to universities (i.e. in accordance

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\(^{51}\) This information draws on the ‘International Comparative Higher Education Finance and Accessibility Project’ at State University of New York at Buffalo. The project has been examining the worldwide shift of higher education costs from governments and taxpayers to parents and students. The Project began in 2000 under the leadership of Bruce Johnstone, former Chancellor of the State University of New York System. See: http://gse.buffalo.edu/org/inthigheredfinance/files/Country_Profiles/Asia/China.pdf (project homepage: http://gse.buffalo.edu/org/inthigheredfinance/index.html)
with the law, they have the final say over what disciplines they offer, development plans, governance of teaching and research, internal income distribution and HR.\textsuperscript{52}

The Higher Education Evaluation Centre of the Ministry of Education (HEEC) is responsible for the evaluation of higher professional education, undergraduate programmes and education offered by independent colleges. The Academic Degree Committee of the Ministry of Education is directly responsible for Master and PhD degree education.

The National Education Examinations Authority (NEEA) falls directly under the Ministry of Education. It is appointed by the Ministry to undertake educational examinations and to practice some administrative authority.\textsuperscript{53}

\section*{3. Financing of higher education, including student financing}

Before the economic reforms in 1980s, central government managed higher education, and was the primary funding source for Chinese higher education institutions. The budget was calculated and allocated on the basis of a funding formula that combined enrolment figures and unit costs. However, this highly centralised funding mechanism failed to provide sufficient incentives for management efficiency and effectiveness. In the 1980s, the central government shifted certain financial responsibilities to the local governments and institutions. This trend was in line with a shift towards a more market-driven economy. The new approach aimed to delegate more authority to institutions and local governments to develop their own goals and missions to meet their needs. Hence, a key change was the establishment of a diversified higher education financing system.

Today, tertiary providers have two major funding sources. The first stream is the governmental funding that includes central government funding for higher education, funding through local/provincial taxes, and other forms of governmental funding. The second channel is non-government funding that includes tuition fees from students and external income.

The current tuition fee varies according to institution, programme and location.\textsuperscript{54} According to guidelines from the Minister of Education, tuition should reflect the per student operational costs of the institution, the appropriation from the government, local economic development and household income.\textsuperscript{55} In 2009, government funding accounted for just over 50\% of total higher education funding. Regular higher education funding increased six-fold between 1999 and 2005 and in 2012 reached its goal of 4\% of the GDP. Higher education funding accounted for 28\% of total national funding on education.

In 2013, the MOE issued the New Regulations of Financial Management in Higher Education Institutions. To promote the reform the Ministry called 2013 ‘The Year of Educational Financial Management’. The regulations recommend a post of general accountant as a Vice Rector in the university internal governance structure, as well as other recommendation pertaining to budgeting, monitoring, and diversifying funding sources.\textsuperscript{56}

\begin{itemize}
  \item \textsuperscript{52} Yang, R., Vidovich, L. & Currie, J. 2007; Zhou, 2012.
  \item \textsuperscript{53} See ‘An introduction to The National Education Examinations Authority’ at http://www.neea.edu.cn/buttom/english.htm
  \item \textsuperscript{54} The private sector tuition costs are often significantly higher than those in the public sector (Bollag, 2007; Levy, 2010).
  \item \textsuperscript{55} Even the public sector now requires students to pay tuition, where this was traditionally never the case.
  \item \textsuperscript{56} (MOE, 2012): http://www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe_1779/201212/146191.html
\end{itemize}
4. Access, admissions and pathways to higher education

Over the past decade, China has witnessed an impressive growth. Student numbers grew from under 5 million at the turn of the century to over 20 million by 2011. In the National Plan (2010-2020), the focus is on six areas, i.e. structure, quality, access, governance, funding and internationalisation. A key goal is to increase the higher education gross enrolment rate to 40% by 2020.

The number of institutions has also increased significantly over the past decade. In relative terms, growth in the private sector is very notable. In 2003 there were 1,552 regular higher education institutions (of which 173 were private); by 2013 the number had grown to 2,491 (of which 717 were private). During the same period, institutions providing graduate programmes grew from 720 to 830. However, it should be noted that private growth is limited to regular providers as, during the same period, ‘other’ non-State/private higher education institutions dropped from 1,104 to 802 in 2013. Higher education institutions for adults also dropped57.

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<tr>
<th>Growth in higher education institutions in China (2003-2013)</th>
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<td><strong>2003</strong></td>
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<td>Institutions providing graduate programmes</td>
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<tr>
<td>Regular HEIs</td>
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<td>Number of regular HEIs that are private</td>
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<td>HEIs for Adults</td>
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<tr>
<td>Other Non-state/private HEIs</td>
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Source: Kapur and Perry, 2015 p. 34 of 41

In terms of pathways to undergraduate education, passing examinations is still the main approach. The National College Entrance Examination (NCEE), commonly known as Autumn Gaokao and reintroduced in late 1977, is the dominant way to access higher education. It is an academic examination held on the same two or three days nationwide in June each year. Starting in 2000 a number of provinces experimented with a ‘Spring NCEE’ as a way of providing greater opportunity for students who may have missed the autumn session or for those who may not have been successful and wished to try again. NCEE is usually taken by students in their last year of senior middle school, although there has been no age restriction since 2001. Prestigious universities (‘key institutions’) maintain higher admission standards, and therefore require higher gaokao scores than other institutions.

Among China’s 31 provinces, 16 provinces are able to develop their own senior secondary curriculum and NCEE following the requirements set by the Ministry of Education. The other 15 provinces follow curriculum and NCEE papers designed by Ministry of Education. A number of changes to the gaokao were set in motion in 1999 and implemented in 2003, known as the ‘3 + X model’. The number ‘3’ stands for the number of compulsory examination subjects (Chinese, mathematics and a foreign language), and the letter 'x' for the following six subjects: chemistry, physics, biology, politics, history, and geography. Every provincial-level examination authority was able to choose its own combination

from these six subjects. Usually, three standard combinations were chosen: humanities (3+ politics, history, and geography), science (3+ of physics, chemistry, and biology), or a combination of these two. However, in recent years, the combination model seems to have fallen out of use.58

Apart from the NCEE, other pathways to undergraduate study, include60:

- Presidents’ Recommendation Approach; exceptional students, though on quite a small-scale, can be recommended by presidents of high schools for admission to some top universities without passing NCEE;
- College Autonomic Admission Examinations: Students who attempt to apply for certain universities can take examinations held by those universities around April every year before the NCEE. Through these examinations, universities (usually top universities) recruit many students who are outstanding in certain special academic fields and students can access the universities based on their own choices and special talents.
- Local Committed Recruitment Placement: In order to minimise the gap between the majority and the minority, the MOE issued a supporting policy that students from rural and minority areas are sponsored by local county governments and get accepted with NECC scores 10% to 20% below the national minimum at institutions and in subjects. On the whole, a multi-level access to undergraduate education has been formed;
- It is also possible to progress from a professional higher education qualification (equivalent to an Associate Degree) to bachelor’s degree.

Access to postgraduate (master) education is possible through three pathways60:

- Graduate Student Entrance Examination (GSEE), which includes a national unified part held in January and a specialized test;
- Exam-waived recommendation (by the graduate institution) for exceptional students;
- Special examinations for part-time students.

For doctoral education, there are no unified national entrance examinations. Higher education institutions and research institutes organise their own examinations for candidates, and exam-waived recommendation is also valid in some institutions.

5. Teaching, learning and assessment

Higher Education in China can be full-time and part-time, although part-time education is still relatively underdeveloped. Part-time education mainly includes examination-based self-study, distance learning and evening classes. The different modes of provision are part of China’s efforts to promote life-long (flexible) learning opportunities. Higher education institutions play an important role in China’s lifelong learning system, not only in the area of formal education, but also in non-formal education (e.g. for adults or part time).

The National Plan (2010-2020) emphasizes the strategic importance of lifelong learning and continuing education in China’s education development. The Plan provides for a number of steps:

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58 See also https://www.epnuffic.nl/en/publications/find-a-publication/education-system-china.pdf
59 Liu, 2012.
60 Ibid.
• Speeding up of the enactment of legislation on continuing education and lifelong learning;
• Administrative departments or associations of industries taking charge of drawing up further education plans and procedures for their respective industries and trades;
• Linking lifelong learning to personnel management systems involving performance evaluation, appointment, title recognition and vocational registration. Employers are urged to provide conditions for employees to receive lifelong education;
• Promoting open and community universities in urban and rural areas. The plan is that by the end of 2020, horizontal and vertical connections between all kinds of education will be promoted at all levels to make multiple choices available and to meet people’s diverse learning and development needs.

An important project regarding T&L supported by the Ministries of education and of finance is the Undergraduate Instructional Quality and Reform Project. Its goals include the following, to:

• Institute national standards of instruction quality for all specialised subjects, and to form the nation’s educational and instructional quality criterion system;
• Carry out comprehensive reforms on some 1,500 subjects, support particular fields (such as agriculture, geology and water conservation) and particular areas of the country;
• Promote open courses;
• Improve practice-based learning and innovation;
• Improve teacher training.

6. Research and partnerships

In the era of the planned economy, the functions of Chinese universities were generally limited to education, with only a few leading research universities participating in R&D. In accordance with China’s economic reform and the transition from elite to mass higher education from 1999 onwards, however, more universities started to carry out R&D, and the university system conducted around 10% of national R&D in the last decade. By the end of 2009, of China’s 2,000+ higher education institutions, about 59% were engaged in R&D and R&D expenditure in universities increased by 1,200% between 1994 and 2009 (from €0.45 billion, or 3.9 billion Yuan, to €5.9 billion, or 46.82 billion Yuan). In 2009, 56% of the total R&D funding came from government funds, 36.7% from industry, and 7.3% from other sources including foreign funds. State-owned and state-funded enterprises contributed 72.6% of industrial R&D; 12.9% of R&D was foreign-funded. Private research performers accounted for a small share of industrial R&D.

7. Differentiation of the system

Higher education is offered at institutions that call themselves ‘university’, ‘college’ or ‘school’. These include degree-awarding institutions (including several hundred research institutes), specialised institutions, professional universities, military institutions, medical schools and colleges (both regular and military), and executive training schools, which train staff for state-run companies and ministries. Programmes may be academic and professional. The latter programmes are called zhuanke, they take 2-3 years and lead to a qualification that is equivalent to a European Qualifications Framework (EQF) level 5 qualification (such as an Associate Degree). They may be offered by both universities and other higher education institutions.

The Chinese Ministry lists the following types of institutions:

- Regular Colleges and Universities;
- Junior Colleges;
- Independent Colleges;
- Branches and Programmes.

Higher education institutions can:

- Fall under the authority of central ministries and agencies;
- Fall under the authority of local authorities;
- Be independent (i.e. private).

During the 1990s, the Chinese government launched a series of reforms to restructure its higher education system, including mergers. According to MOE statistics, there were 431 mergers during the period 1990 to March 2006. This wave of mergers has affected nearly all types of higher education institutions in China and changed the higher education landscape dramatically.

China has always had a strong focus on ‘excellence’. From 1954 to 1963, China established 68 ‘key institutions’ (subsequently enlarged to 96 institutions in 1981). These universities were defined as targets for improvement of teaching and research. The Chinese government then implemented a number of projects in order to give priority to the improvement of some universities’ quality, standards and outcomes. Universities selected for these projects were considered excellent and the projects were meant to support them further. Consequently, these ‘project universities’ are usually considered as top universities in China. Two of the most influential projects of higher education are:

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63 See: https://ec.europa.eu/ploteus/search/site?f%5B0%5D=im_field_entity_type%3A97
64 http://www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe_2812/200906/48836.html
• Project 211: In 1995, the Chinese government launched the Project 211. The title refers to the aim of building 100 top-level HEIs in the 21st century. Project 211 includes (a) improvement of overall institutional capacity; (b) development of key disciplinary areas; and (c) development of the public service system in higher education. In 2011, the MOE announced the end of admissions to Project 211 and Project 985, but in that time, 112 public universities were admitted as ‘Project 211 Universities’;

• Project 985: The title of the project derives from the month in which it was announced, May 1998 (98-5). When it was first announced, funding was made available to an elite group of 10 universities. By the end of the first phase of the project, 34 universities were admitted. The second phase added 5 more universities. Project 985 is meant to promote the development of Chinese universities and raise their influence and reputation in the world.

Finally there are several programmes at both national and institutional levels to support innovative talents in universities, such as the ‘Pilot Program of Cultivating Top-notch Students in Basic Scientific Areas’ (called Everest Program) started in 2009.

8. Various issues of quality and efficiency

All higher-education institutions must be accredited in order to be allowed to confer diplomas of ‘Bachelor’, ‘Master’ and ‘Doctor’ and be included in the national database of the Chinese government. The Academic Degree Committee of the China State Council (the chief administrative authority in China) accredits all higher-education programmes and determines whether they are of sufficient quality to be eligible to award qualifications. Exceptions are the Sino-foreign cooperation programmes that have not (yet) been approved and programmes admitting students with low gaokao scores (the so-called jihuawai (out of plan) students).

Until 2004 there were three types of quality assurance in Chinese higher education:

1. Accreditation for newly established higher education institutions (since 1994). This applied to higher education institutions established after 1976. The evaluation of institutions was categorised into excellent, very good, sufficient and insufficient
2. Periodical assessment of institutional education quality (since 1996). This procedure applied to around 100 older higher education institutions of a higher level
3. Assessment on provincial and national levels, in which a ranking of the most excellent institutions was made to encourage mutual competition (since 1999). This procedure applied to higher education institutions that fell between the above-mentioned categories.

After 2004 these three categories were merged into one policy plan after the establishment of the Higher Education Evaluation Centre of the Ministry of Education [HEEC] whose responsibilities include:

• To organise and implement higher education evaluation for higher professional education, under-graduate programmes, and education offered by independent colleges;
• To conduct research in policies, regulations and theories relating to higher education reform and evaluation;

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67 This section draws from the description provided by NUFFIC (2015).
68 Li 2010, p.64.
• To develop international cooperation with evaluation agencies in other countries;
• To undertake evaluator training;
• To provide evaluation-related consultation and information services.

The policy plan includes the following components:

• Higher education institutions are assessed every 5 years in a standardised and systematic way;
• A database is maintained in which information concerning infrastructure, facilities, etc. of HEIs is publicly accessible;
• Evaluation of some programmes in cooperation with professional organisations, in order to create a professional qualification system;
• Creation of a pool of experts to carry out the evaluations.

The Academic Degree Committee of the Ministry of Education is directly responsible for Master and PhD degree education.

The National Education Examinations Authority (NEEA), including the State Office of the Self-taught higher education examinations and the Office of the Self-taught higher education examinations of the Ministry of Education, is an institution directly under the supervision of the Ministry of Education. It is appointed by the Ministry to undertake educational examinations and to practice some administrative authority.69.

9. Overview of issues of interest

China has a number of issues that might be of interest to Ethiopia:

• The increasingly important role of private education (though it is still low compared to other cases);
• The fact that the government has a supporting policy for students from rural and minority areas. This policy focuses more on enabling those students to access higher education with lower grades than on helping them financially only;
• An impressive growth in enrolments. Moreover, China has achieved on time its goal of 4% expenditure of GDP on education;
• China has gone through a number of very significant changes over the decades and is trying to conjugate state control with liberalisation, academic freedom, international cooperation, and excellence. The interesting thing is that China is quite unique in attempting this and has put considerable resources to do so. It is China that started the global frenzy about excellence (with the first-ever Global ranking);
• China is trying to conjugate its traditional T&L approaches with global (western) modalities that give far more trust to students and see students more as ‘partners’).

Germany

1. Overall organisation of higher education

In the German federal system, educational policy falls under the jurisdiction of the states and the federal government has no real authority in this area. During the 1980s and 1990s, higher education policy aimed at unitary policies and the federal level gained more and more authority. However, at the beginning of the new millennium, the states won back their independence in this area. The federal level still has some authority in areas such as access to higher education and higher education degrees, but the states are allowed to deviate from these regulations. To date, higher education policy in Germany can be characterised as diverse and multifaceted. All states have developed individual higher education policies.

The Joint Science Conference organises the cooperation between Bund and Länder in higher education and has members from both levels of government. Its main task is to coordinate questions of common interest in the field of national, European and international science and research policy. Currently The Joint Science Conference coordinates three different pacts, including The Higher Education Pact 2020, the Joint Initiative for Research and Innovation, and the Joint Initiative for the Quality of Teaching and Learning.

Programmes offered at German higher education institutions include Bachelor, Masters and PhDs. Only universities have the right to award doctoral degrees, although in recent years universities of applied sciences and research institutes outside universities have gained the right to participate in doctoral education.

2. Financing of higher education, including student financing

The states are responsible for funding higher education, although the Higher Education Pact 2020 is aimed primarily at supporting higher education institutions to tackle the increasing number of students expected to enter university till 2020. Until 2015 the Bund funded about €7bn for 625,000 new entrants and also increased research allowances by 20%.

The funding of higher education by the states does not follow a common model. Different states use different formulae and procedures, but generally they cover approved staffing costs, material expenses, buildings and research infrastructure. Most of the states have introduced performance based budgeting and block grant funding, in line with dominant New Public Management (NPM) prisms. Generally, indicators such as the number of graduates, third stream money and the number of awarded PhDs are used. Higher education institutions themselves have also gained more financial autonomy. Most states have introduced block grant funding which allows higher education institutions more flexibility in spending. In addition to state funding, higher education institutions also generate

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71 An overview on the different study programmes is provided by the German Rector’s Conference.
third stream income, from special funding schemes for teaching and study and also – in some of the states – from tuition fees\textsuperscript{72}.

Since 2005 states have been allowed to introduce tuition fees\textsuperscript{73} and seven states introduced these in 2006 and 2007. Yet, because of changes in state government (and a referendum in Bavaria), by 2013 fees were again abolished across the country. Some federal states charge tuition fees of between €500 and €800 per semester for long-term students.

3. Access, admissions and pathways to higher education

Access and selection policies in German higher education serve two goals. First, access to higher education should be opened to diverse population groups such as migrants or persons with a non-academic educational background who are traditionally not integrated into higher education. However, at the same time admission policies aim at restricting access to higher education in order to uphold quality. The individual selection policies of higher education institutions aim to achieve a better match between the student and the study programme to minimise the number of dropouts and switches. At the same time, on the level both of the Länder and of the Bund, several schemes have been established to widen access.

In general, three different high school certificates entitle entry into higher education, namely:

- The most encompassing school certificate (called \textit{Abitur}) entitles students to enrol in all kinds of first cycle study programmes at all types of higher education institutions;
- Certificate of subject-specific university entrance qualification entitles students to enrol in all types of higher education institutions but only in specific study programmes;
- The high school specialisation diploma leads to first study cycle programmes at universities of applied science (\textit{Fachhochschule}).

The German educational system offers a number of different educational tracks to achieve these school certificates\textsuperscript{74}. In addition, in 2009 the federal states agreed a regulation defining some vocational degrees as equivalent to the \textit{Abitur} (e.g. master craftsmen and graduates from professional continuing education such as nautical professions or health professions). Persons who do not have one of the vocational degrees can seek access to higher education if they acquired at least three years of professional experience after their vocational training and if they have successfully passed an entrance examination\textsuperscript{75}.

In addition there are study programmes with unlimited access and study programmes with limited access. The former have no restrictions on the number of applicants who can be admitted; the latter apply selection procedures. A number of study programmes are subject to nationwide admission

\textsuperscript{73} See also https://www.theguardian.com/world/2016/jun/04/tuition-fees-germany-higher-education
\textsuperscript{74} See diagram at: https://www.kmk.org/fileadmin/Dateien/pdf/Dokumentation/engl-2015.pdf
\textsuperscript{75} http://www.akkreditierungsrat.de/fileadmin/Seiteninhalte/KMK/Vorgaben/KMK_Hochschulzugang_beruflich_Qualifiziert.pdf
restrictions, i.e. medicine, veterinary medicine, dentistry and pharmacy. For these study programmes study places are allocated by the Agency for Higher Education76.

Admission to nationwide restricted study programmes is given according to the ‘20/20/60 rule’. After deduction of preliminary quotas for certain groups of applicants (e.g. foreigners), 20% of the study places are allocated to the best graduates, another 20% is allocated according to how long applicants have been waiting for access and 60% of the individual study places are allocated by the individual institutions, which rank individual applicants according to a number of criteria such as Abitur average grade, weighted grades of selected subjects, aptitude test, vocational training, selection interview, etc.

4. Teaching, learning and assessment

The quality of teaching and learning is an important topic in Germany. The Joint Initiative for Quality of Teaching and Learning provides competitive funding to higher education institutions to improve their quality of teaching and learning. Between 2011 and 2020 the Federal Government plans to spend around €2 bn.

Moreover, there are various initiatives and prizes to promote excellence in T&L. For example, a prize, issued by the Association of German Science and the German’s Rectors Conference, rewards innovative forms of teaching by individual members of staff and/or faculties. The prize is issued every year for a different field of study.

There are different modes of delivery (although full-time is still the predominant):

- Part-time: this plays a minor role and some states do not offer part-time programmes at the first study-cycle. Part-time programmes are more frequent at post-graduate level;
- Distance learning: some higher education institutions offer distance-learning, mostly for students who already have a first degree and/or who are already employed;
- Continuing higher education is a relatively new topic for German higher education institutions. Since 2008 the Federal Ministry for Education and Research (BMBF) has supported lifelong learning through funding called Rise through education - open universities77.

5. Research and partnerships78

The German research system includes a number of research performers, both universities and non-universities. As of 2011-2012, about €75.5bn (2.9% of GDP) was spent on R&D. Over €50bn was for Business R&D expenditure, €13.4bn for universities and €11bn for non-university R&D; about €5.1bn was for ‘other educational institutions, museums, departmental research’79.

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76 http://www.hochschulstart.de/
77 http://www.wettbewerb-offene-hochschulen-bmbf.de/bund-laender-wettbewerb-aufstieg-durch-bildung-offene-hochschulen
At the federal level, the main responsibility for research policy lies with the Federal Ministry of Education and Research [BMBF]. The BMBF provides about 58% of the federal R&D resources. Most funds are distributed through the DFG, which promotes research at universities and other publicly financed research institutions. The DFG is also the only source that allows scientists to apply for grants without predetermined topics. Other federal ministries also play an important role in German research policy, including the Ministry of Economics and Technology [BMWi], which provides 19% of the federal R&D resources, and the Ministry of Defence [BMVg], which provides 11% of the federal R&D resources.

At the State level, the Ministry of Science and Education and the Ministry of Economics are the main players. Basic teaching and research funding comes from the states, which contribute to funding both universities and Germany’s large non-university sector (co-financed by the federal government). The Joint Science Conference [GWK]) is the main body that coordinates research policies between the federal and state governments.

There are a number of research performers, including ‘non-university research institutions’ [AUF] in the system. These performers are:

- Private companies (67.3% of national R&D expenditures);
- Universities (18% of national R&D expenditures);
- A wide range of public non-university research organisations. In 2010, they accounted for 14.7% of total R&D expenditure in Germany. They include (a) the Max Planck Society (MPG) (b), the Fraunhofer Society (FhG), (c) the Helmholtz Association, and (d) the Leibniz Association (WGL).

Research is funded through institutional funding or through project funding, with an increase over the last decade. In 2013 institutional funding (universities, AUF and DFG) was:

- Universities: €12.6bn;
- FhG: €0.6bn;
- HGF: €2.6bn;
- MPG: €1.5bn;
- WGL: €1bn;
- DFG: €1.8bn.

The German innovation system uses very different forms of knowledge exchange and cooperation between science and private industry and also for cooperation within science, including:

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82 Dialogic and Empirica (2014).
• Cooperative research between science and private industry as well as between science organisations;
• Affiliated research institutes are legally autonomous and independent research institutes that are acknowledged by a university;
• Endowed chairs: These are chairs at universities that are funded by means of a private company or a consortium of companies/private persons for a limited period of time;
• Private public partnerships (PPP), which are long term and open ended forms of cooperation;
• Contract research is the most frequent form of cooperation between science and industry. Here the goal and period of the research are fixed. The research takes place at university and is paid by the industry;
• Other forms of cooperation in research such as (a) Research Clusters, (b) Patents and licences, (c) Spin-offs, (d) Placement of graduates, (e) Informal exchange;
• Knowledge transfer offices, at universities or at companies;
• Valorisation agencies which were established at the beginning of the 2000s by a common effort of the federal level and the state level to support higher education institutions to protect and use their (scientific) innovations. Also contacts with potential users of patents and licences are organised. These agencies and further transfer agencies have teamed up in the so-called Technologie-Allianz;
• Steinbeis Foundation, established in 1971 to promote the knowledge transfer between science and business.

The ‘Excellence Initiative’ is the most famous initiative to promote top research. On June 23rd, 2005, the German federal and state governments passed this initiative, providing top universities a total of about €4.6bn in additional funding over two phases, (2006-2011 and 2012-2017). The Excellence Initiative focuses on research only. Its aim is to increase vertical differentiation in the system, improve research performance and improve international attractiveness of German research. The Excellence Initiative is unique because it distributes extra money rather than distributing recurrent funds. It has three funding tracks, including (a) Graduate Schools, (b) Clusters of Excellence and (c) Institutional Strategies. The Excellence Initiative will continue after 2017, albeit in different mode.

6. Differentiation of the system

The German system is binary. However the divide is said to be diminishing as universities of applied sciences (UAS) and research universities become increasingly similar (academic drift), and there have been mergers between universities and UASs. There are over 400 higher education institutions in Germany, including the following types:

- Over 130 universities (including technical universities, colleges of education and theological education institutions): Universities are institutions that engage in teaching and research. In Germany only universities are allowed to award doctoral degrees. The main focus of the educational activities of universities is to train young researchers/scientists;
- Around 250 UASs (Fachhochschulen): they are more oriented towards the practical use of theoretical knowledge. Most of their degree programmes are in the field of engineering, natural sciences and business administration. They maintain close contacts with industry and offer extensive opportunities for internships. Fachhochschulen do not award the title of PhD. However, in recent years universities and UASs have started to collaborate in doctoral training; also the Science Council has recommended that universities and universities of applied science should start to cooperate in doctoral education. Over the years, universities and UAS have become increasingly similar, both because of the Bologna Reforms and the harmonisation of degrees, and because of a process of academic drift whereby some UAS are engaging more in research. As result, some universities and UASs have merged;
- Music and art universities offer for example study programmes in dancing, music or media as well as in disciplines associated with arts such as history, pedagogy and philosophy. Music and art universities are on par with universities and most also have the right to award doctoral degrees;
- Universities of cooperative education (UCE). These institutions offer special study programmes – the so-called dual study programs – that combine practical professional training/vocational with academic study. Mostly students are employed by a firm where they receive their vocational training and are enrolled as students at an UCE. To some extent study programmes at UCE are modelled after the dual education system that can be found for vocational education in Germany. Firms and the UCE work closely together in the design of the curricula and the application of knowledge. UCE are very differently regulated in the states. Some states do not have any UCE, in other states UCE are state approved, in other states UCE are private higher education institutions. Also, degrees that are awarded by UCE are varying among states; in some states UCE can award Bachelor’s degree, in others they award a stated approved diploma;
- Professional Schools: Professional schools also offer training and study programmes that are internationally classified as tertiary education given that the programme has at least 2,400 hours of training. Requirements to enter a professional school are an upper secondary degree and a completed vocational training or professional experience. Study programmes of training that can be classified as tertiary education lead to degrees with the addendum ‘state approved’

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87 See also http://www.wissenschaftsrat.de/download/archiv/10031-10.pdf
7. Various issues of quality and efficiency

Germany does not have a national quality assessment system for the evaluation of teaching and research. The framework laws for higher education of the Länder prescribe that higher education institutions have to accredit their study programmes. Higher education institutions are asked to evaluate both teaching and research on a regular basis. Regulations on the implementation of quality assurance differ between Länder. Some Länder prescribe the implementation of a quality assurance or management system for higher education institutions, other leave it to the higher education institutions as to how they want to assure their quality.

Traditionally, new degree programmes had to be approved by the appropriate State Ministry. This changed after the Bologna reforms, when accreditation procedures for newly established degrees were set up. However, the responsible Ministries continued to retain their rights to approve new degree programmes with respect to three dimensions, i.e. to guarantee (i) sufficient resources; (ii) the compatibility of new programmes with the state’s higher education planning, and (iii) the adherence to the State’s structural rules and regulations of the State. The accreditation system consists of two levels. The German Accreditation Council is an umbrella organisation that approves the actual accreditation agencies which validate degree programmes. Providers can choose the agency to evaluate their programmes, and can choose to get an additional accreditation for a particular degree programme from an international accreditation agency88.

8. Overview of issues of interest

Germany is particularly interesting because:

- It conjugates access for all (e.g. by not having fees) with excellence and selection for certain fields;
- It is a federal state, and has a complex but successful system although there are regional differences (this is visible e.g. in the performance in the Excellence Initiative);
- It is a binary system, with a strong collaboration between higher education and industry;
- It is very different from the Anglo-Saxon model, and appears to be just as successful and have an excellent reputation;
- It has a robust research infrastructure, with several types of performers.

India

1. Overview

India is a vast country with a population of 1.267 billion and with 21.9% of the population deemed to be living in poverty.\(^89\) In size and diversity, India has the third largest HE sector in the world, after China and the USA. The British Council predicts\(^90\) that by 2020, India will have the largest tertiary population in the world.

In December 2012, India released its 12th Five-Year Plan, which outlines spending on development across government sectors through 2017. The plan describes some of the challenges facing India’s higher education system including the varying quality among institutions and continued expansion.

One interesting lens that offers insight into the overall severity of the challenges facing higher education in India is to consider foreign students in India and Indian students in other countries. Foreign students account for just .13% of the >24m student population whereas India sends the second largest number of students to study abroad (after China). Within this low number of foreign students, however, India seems to be relatively popular among US students. The 2015 Open Doors report from the Institute of International Education found that India is the 12th most popular country for US students abroad\(^91\). In 2014, the outbound mobility ratio was 0.6\(^92\).

2. Overall organisation of higher education

The Ministry of Human Resource Development (MHRD) is responsible for education at all levels, with two departments – the Department of School Education and Literacy and the Department of Higher Education. Responsibility for higher education is shared by the centre and by the states, with coordination by the University Grants Commission (UGC) and other statutory regulatory bodies. The UGC lists the following categories of institutions in 2014\(^93\):

- 43 central universities;
- 312 state universities;
- 183 private universities;
- 115 deemed universities; these were originally private institutions specialising in specific fields such as medicine or technology; they are now institutions that are deemed to be ‘high performing’ under the UGC Act and have the same rights as other universities;
- 52 Institutions of National Importance (including the Indian Institutes of Technology (IIT), National Institutes of Technology and prominent medical colleges, including the All India Institute of Medical Science); these are established by Act of Parliament.

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\(^{89}\) All the data from World Bank, 2015 [http://data.worldbank.org/country/india#cp_wdi](http://data.worldbank.org/country/india#cp_wdi)

\(^{90}\) Citing data from the UN Population Division (see British Council, 2014, Understanding India fn.2) [http://www.britishcouncil.org/sites/britishcouncil.uk2/files/understanding_india_report.pdf](http://www.britishcouncil.org/sites/britishcouncil.uk2/files/understanding_india_report.pdf)


\(^{92}\) [http://uis.unesco.org/education/Pages/international-student-flow](http://uis.unesco.org/education/Pages/international-student-flow)

\(^{93}\) Numbers may differ slightly in different sources since growth is continuous. For example Dhanuraj and Kumar (2015) in Understanding the Status of Higher Education in India report over 700 universities. The source of the numbers presented here is the official Department’s website: [http://mhrd.gov.in/university-and-higher-education](http://mhrd.gov.in/university-and-higher-education), accessed in August 2015.
Note that there is a difference between the term ‘college’ and ‘institution’. Colleges are set up under the State and Central universities, while institutions are set up by the Private universities for different specialisations (e.g. Engineering, Law, Social Sciences, and Medicine).

Several universities provide correspondence courses and at least 57 universities have separate departments for distance education for part-time and working students. There are at least 11 universities exclusively for women.94

Only the universities and institutions listed above are legally entitled to grant degrees. However, colleges (of which there are over 30,000) may be affiliated to, or maintained by, state universities. Although colleges enjoy limited autonomy over issues such as curriculum, staffing, and programmes offered, only the universities to which they are affiliated may award the degrees.

Although private HEIs are a relatively recent phenomenon (the first was established in 1997), provision in this area has grown. Private HEIs must be not-for-profit. Even if they have relationships with profit-making corporations, they must have a separate charter and a not-for-profit mission. There are approximately 1,000 polytechnics, which offer both secondary and higher professional education. This feature is said to discourage foreign provision in the country and, thus, acts as a negative for India’s internationalisation.

In terms of governance, the MHRD oversees the central universities and sets policies on quality for all HEIs. The state Ministries of Human Resource Departments oversee the state universities. Many state governments have legislation to grant university status with degree-awarding powers to private colleges and these, ironically, have more autonomy than the central and state universities.

Over time, the system has become increasingly fragmented. There are multiple agencies with different responsibilities, for example for the professions and for accreditation (see later section).

94 MHRD website, statistics for 2014-15
3. Financing of higher education, including student financing

Government expenditure on higher education increased annually in real terms by 7.5% in the 1950s, 11% in the 1960s, 3.4% in the 1970s, and 7.3% in the 1980s. Public funding has not been sufficient, however, to keep up with growing enrolments. The National Education Policy 1968 and 1986 (revised in 1992) recommended government expenditure on education (overall) at 6% of GDP. As of 2010-11 it was at 3.8%. The UGC is the funding body, together with its responsibilities for co-ordination of the system and determination and maintenance of standards in HEIs. Only a minority of the universities and colleges, however, are publicly funded.

State institutions enrol 15 times as many students but receive relatively little national government funding, and most private colleges do not receive any public funding at all and rely solely on tuition fees. In addition, state funds are allocated for specified expenditures (e.g. salaries and infrastructure improvements) rather than as block grants to be used at the institution’s discretion. This is said to result in inefficiencies and deficit-running. The central government funds central institutions, such as

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97 http://www.ugc.ac.in/page/Mandate.aspx
the Indian Institutes of Technology directly. Grants for quality improvement and other support to other institutions are channelled through UGC. For most private (and foreign) providers student fees, tuition, and donations must be sufficient to cover expenses.

4. Access, admissions and pathways to higher education

India’s higher education has grown exponentially over the decades, both in demand and supply. At independence in 1947, there were 20 universities and 500 colleges, mostly created in the mid-nineteenth century by the British. The number of HEIs grew particularly strongly after 2005. Student enrolments also mushroomed, reaching 34.2 million in 2014. This represented a growth of GER from 0.4% in 1950-51 to around 19% in 2012-13, and 24.3% in 2014-15, with a growth to 30% desired in 2020-21. The difference in male and female GER is 25.3% to 23.2%. Of the total enrolments, about 3.6 million people are enrolled in distance education across India.

The education system was originally based on the British model, but changed over the years into 10 years of basic education, 2 years of senior general secondary education and 3 years of higher education. Although school attendance is compulsory for children from 6-14 years old, this is not always enforced and, in some states, less than 50% of the children in this age group attend school.

The language of instruction in basic education is the most common language of that particular region. In standard VI, English or Hindi is introduced as a second language and the language of instruction during the last two years of secondary school is English or Hindi. In higher education, in most cases, the language of instruction is English.

There are two streams of secondary education: the academic stream allows entry to higher education, whereas the vocational stream prepares students for employment or further vocational education. School students write one or other school leaving certificate (there are several). A pass is the minimum for entry into higher education, although individual HEIs may set additional criteria.

5. Teaching, learning and assessment

There is no national standard for assessment and the grading and credit system applied by a HEI is often reflected on the reverse side of a qualification transcript. Admitted problems with the quality of teaching and learning led the UGC to implement special funding to assist universities and colleges ‘with potential for excellence’ (known as the ‘Universities with potential for excellence (UPE) and ‘Colleges with Potential for Excellence’ (CPE), respectively) during the reporting year 2013-14.

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98 Selected Education Statistics, MHRD.
6. Research and partnerships

India spends a relatively low amount in absolute and relative terms (per 100 of the population) on research and development – 0.8% of the GDP. Of the spending on research and development, 60% is government spending and only 4% comes from universities (the rest is from business). This is lower than all the other countries in the case studies except for South Africa where 0.7% of GDP is spent on research and development. Despite the low national spending, there are pockets of excellence. Indian universities do not rank high in world rankings; the first to appear in the Times Higher Education rankings in 2016 was Indian Institute of Science in the rankings 301-400. However, at this Institute, around 70% of the student body undertake PhD or Masters studies so there is a strong emphasis on research at this and similar institutions.

7. Differentiation of the system

As can be seen, there is vast differentiation in the system, but this is rather haphazard.

8. Various issues of quality and efficiency

At the national level, while the UMHRD is responsible for setting and monitoring quality, its regulatory arms, such as the UGC and the AICTE (see below) set and implement the quality standards that institutions are expected to follow. Over time, however, the system has become increasingly fragmented with multiple agencies established, for example for the professions and accreditation.

Four regulatory bodies exist within the Department of Higher Education in the MHRD in the Central Government that oversee higher education and are generally responsible for accreditation:

- The main agency which accredits Universities and Colleges is the National Assessment and Accreditation Council (NAAC) established by the UGC in 1994;
- The All India Council for Technical Education (AICTE) is responsible for oversight and accreditation of over 8,500 technical institutes, most of which are diploma-granting. As with the UGC, the AICTE established the National Board of Accreditation (NBA) as an autonomous body in 1987 to conduct periodic evaluations of technical institutions or programmes on the basis of specified guidelines, norms and standards specified;
- The Distance Education Council (DEC) oversees thirteen state open universities and approximately 200 programmes at other universities;
- There are several bodies for various types of professional education, including Council of Architecture (CoA) and the Indian Council of Agricultural Research (ICAR).

Finally, five research councils exist within the Department of Higher Education, which focus on research in History, Social Science, Philosophy, Civilisations, and rural issues.

There is general agreement that on average, the Indian QA system has largely failed to ensure adequate quality in higher education. India’s national government currently plays what has been called

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100 Stolarick, 2014:p25.
101 See: http://www.naac.gov.in/aboutus.asp
a ‘command and control’ role whereby the largest state universities set the curricula, determine course offerings, administer exams, and grant degrees under government oversight. Affiliated colleges teach students according to these standards and requirements. The 12th Five-Year Plan (2012-2017) proposes a ‘steer and evaluate’ role for the government that allows a greater degree of self-regulation—and enforces higher levels of accountability—across the system’s institutions 102.

Traditionally, accreditation in higher education in India was a voluntary exercise, not linked to funding, resulting in only a small percentage of HEIs opting for accreditation. Up until 2012, over two-thirds of universities were not accredited, while just about 15% of Colleges were. However, in 2012 accreditation of higher educational institutions was made mandatory under the UGC. There are, however, challenges in implementing mandatory institutional accreditation, including capacity to deal with the backlog, ensuring compliance through the numerous bodies responsible for various HEIs. Until there is greater consistency in quality assurance, there is likely to be wastage of resources through lack of knowledge of where quality resides.

9. Overview of issues of interest

The complicated governance, funding and accreditation lead to levels of confusion and inefficiency that should not be replicated. There are of course pockets of excellence, but these are more likely to be found in individual universities. Science and technology are regarded as important for higher education and thus these programme areas include some of the best institutions in the world, such as the IITs. Therefore, while India’s regulatory system might be inconsistent, specific examples can be found where excellence has been able to emerge within this complicated system.

In addition, these pockets of excellence might have significant spill-over effects on the system’s overall performance. For example, the QS Higher Education System Strength Rankings 2016 shows that India’s higher education system ranks 24th globally, which is better than other countries, including South Africa (30) Ireland (25) or Norway (32) 103.

There are concerns about quality and institutional capacity generally. Moreover, although enrolments have boomed on average, there are still sharp regional and gender differences.

103 The rankings look at the following four criteria: (i) system strength, based on the number of HEIs in global rankings top 700, (ii) access, based on the number of places available at universities ranked within the global top 500, (iii) flagship institutions, based on the place each nation’s top university occupies in the World University Rankings, and (iv) economic context, based on the impact of national investment in higher education, by comparing each nation’s financial situation to its performance in the international rankings. See http://www.topuniversities.com/system-strength-rankings/2016#sorting=rank+custom=rank+order=desc+search= and http://www.topuniversities.com/system-strength-rankings/methodology
Singapore

1. Overview

Singapore has a parliamentary democracy which is similar to Ethiopia. It has a growing economy with an annual growth of 7.7% in its GDP. Even though the economic growth is similar to Ethiopia, there is a difference in that its economy is based mainly on the manufacturing and service sectors whereas in Ethiopia the main sector is agriculture.

When Singapore gained its independence in 1965, most of its population of two million people was unskilled and illiterate. The government invested in education, and by the early 1970s, all children had access to free lower secondary education. Today, it is a global hub of trade, finance and transportation, one of Asia’s great success stories. Its schools are high on the list of the world’s best-performing school systems. Educators from around the world now visit this city-state to see how Singapore has achieved its world-beating levels of performance in maths, science, and literacy. The answer, according to Singapore educators, is simple: a coherent curriculum delivered to every school by high-quality teachers.

At an institutional level, both policy coherence and implementation consistency are brought about by the close tripartite relationship between the Ministry of Education, the National Institute of Education (NIE, the country’s only educator training institution) and the schools. The ministry is responsible for policy development, while NIE conducts research and provides pre-service training to educators. NIE’s research is fed back to the ministry and is used to inform policy development. Since NIE professors are regularly involved in ministry discussions and decisions, it is relatively easy for NIE’s work to be aligned with ministry policies. NIE is Singapore’s only institution for training prospective teachers, although professional in-service development for teachers comes from various institutions.

The Ministry of Education keeps a close watch on starting salaries and adjusts these to ensure that teaching as seen as an attractive occupation for new graduates. Teacher salaries do not increase as much over time as those in private sector jobs, but there are other career opportunities within education for teachers. Teaching is regarded as a 12-month position with retention bonuses and the possibility for high-performing teachers to earn significant amounts in performance bonuses.

The Singapore education system aims to provide students with a holistic and broad-based education. Given the multi-cultural and multi-racial characteristics of Singapore, the bilingual policy is a key feature of the education system. Under the bilingual policy, every student learns English, which is the common working language, as well as their mother tongue (Chinese, Malay or Tamil), to help them retain their ethnic identity, culture, heritage and values.

Higher education has gained prominence in Singapore over the last two decades, and the number of higher education institutions has tripled during that time. The government aggressively sought to bring big name universities to locate themselves in Singapore through its World Class Universities programme in 1997. In 2002 it launched the ‘Global Schoolhouse Initiative’ with the goal of attracting 150,000 foreign students and increasing higher education’s contribution to the economy to 5% by 2015. From a high of 90,000 foreign students in 2010, enrolment had slipped to about 75,000 by 2014. In part, this is a function of increasing competition from other significant education hubs in the region, notably Malaysia, Hong Kong, and China. However, higher education in Singapore is still contributing about 3.9% to the economy.
2. Overall organisation of higher education

Singapore has a three part higher education system with six public universities (the National University of Singapore, Nanyang Technological University, Singapore Management University, Singapore University of Technology & Design, Singapore Institute of Technology and SIM University), five polytechnics (Singapore Polytechnic, Ngee Ann Polytechnic, Temasek Polytechnic, Nanyang Polytechnic and Republic Polytechnic), and an Institute of Technical Education (ITE) system composed of the ITE headquarters and three regional campuses. Apart from SIM University, all of these are public institutions.

The National University of Singapore and Nanyang Technological University provide a wide range of undergraduate and postgraduate, including doctoral, degree programmes. Both these universities are listed in top 50 universities of the world. The third university, Singapore Management University (SMU), was established in 2000 and has six schools that offer undergraduate, graduate, and doctoral programmes in Business Management, Accountancy, Economics, Information Systems Management, Law and the Social Sciences. SMU is Singapore's first autonomous government-funded university.

The next two universities, Singapore University of Technology & Design (SUTD) and Singapore Institute of Technology (SIT), are again government-funded universities. SUTD is established in collaboration with the Massachusetts Institute of Technology and Zhejiang University, and offers undergraduate, postgraduate and doctoral degrees in varied Engineering Design courses. SIT was established in 2009 and offers specialised degree programs in Engineering & Applied Sciences, Health Sciences, Design, Interactive Digital Media, Education & Social Sciences, and Hospitality.

The last university, SIM, is the only national private university in Singapore. It was established in 2005 and offers part-time degree programs for working adults.

The education structure in Singapore

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University (3 - 4 years)

JC (2 years)
Poly (3 years)
ITE (2 years)

Secondary School (4 - 5 years)

Primary School (6 years)
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3. Financing of higher education, including student financing

The government budget for HE comprises about 34% of its expenditure on education which is 15.7% of the total budget. The Tuition Grant Scheme (TGS) was introduced by the government to subsidise the high cost of tertiary education in Singapore. The TGS is currently open to all students enrolled for full time undergraduate/diploma courses.

Students must apply for the tuition grant or the university will charge them the unsubsidised tuition fees. Students who are citizens of Singapore pay about 18 to 26 percent of total instructional fees depending on their course of study, with the remaining instructional costs covered by the tuition grant. Those who accept the tuition grant will be required to execute a deed with the Government of Singapore, in the presence of two sureties. Singaporeans have no obligation attached to this scheme but Singapore permanent residents and foreign students must sign a bond with the Government to work for 3 years for a Singapore-registered company upon completion of their course. Students who receive the tuition grant are required to pay the difference, referred to as the direct payment, between the non-subsidised tuition fee and the tuition grant. Those who are not eligible for the tuition grant, because they have previously obtained a degree or have taken the number of semesters normally required to obtain a degree or have been admitted on a full fee paying basis, have to pay the non-subsidised tuition fee. In addition to the Tuition Grant Scheme, students may also be eligible for a Tuition Fee Loan, a Study Loan and a Central Provident Fund Board loan.

4. Access, admissions and pathways to higher education

The Ministry of Education (MOE) is the main agency responsible for oversight of the post-secondary education sector, and provides funding to the various institutions – six universities, five polytechnics and the Institute of Technical Education (ITE) –to provide educational opportunities to improve the employability and livelihood of Singaporeans, and to provide the economy with a pool of qualified employees for industrial development. MOE also works closely with the Ministry of Trade and Industry (MTI) and the Ministry of Manpower (MOM) to ensure the relevance of the programmes and curricula, and the employability of the graduates.

Students in Singapore receive at least ten years of general education, comprising six years of primary education and four to five years of secondary education. Over 90% of the cohort will enrol in Junior Colleges / Centralised Institute, polytechnics, or the Institute of Technical Education (ITE), the choice of which depends on their academic achievements, aptitude and interests. Those who have passed through one of the three systems are eligible to apply to universities. Students who pass the GCE ‘O’ Level examination at the end of Secondary year 4 or 5 will then have to compete for admission to either a Junior College (2 years), a Polytechnic (3 or 4 years) or a Pre-University Centre (3 years). This is somewhat similar to Eleventh Grade and Twelfth Grade in the American system.

Finally, students who pass the GCE ‘A’ Level examination at the end of Junior College Year 2 or Pre-University Year 3, and students with excellent results at the end of Polytechnic Year 3/4 will then have to compete for admission to a local university, either National University of Singapore (NUS) or Nanyang Technological University (NTU).

Students have a wide range of institutions to apply to:

- **Junior Colleges (JCs) / Centralised institute (CI)**: the JCs/CI provide pre-university education to close on 30% of each cohort, and prepare them for entry to university;
Polytechnics: the polytechnics offer three-year practice-oriented diploma programmes to about 45% of each cohort. The programmes prepare students for a wide range of middle-level professional and technical jobs, and equip them with the skills necessary to contribute to the technological and economic development of Singapore. Polytechnic graduates may also go on to pursue further studies at degree-level in universities in Singapore and overseas;

Institute of Technical Education (ITE): over 20% of the cohort will progress to ITE, which provides students with the technical skills and knowledge that they need to embark on a career in an area related to their training. ITE offers two basic levels of certification under the National ITE Certificate (Nitec). Depending on their academic performance in school, students will either enrol in a Nitec or Higher Nitec course in ITE, which typically takes two years to complete. Graduates from ITE may also gain admission to a polytechnic to pursue a diploma in an area that is relevant to their ITE course;

Publicly funded university education: this is provided through the five Autonomous Universities (AUs), which each have their own Board of Trustees and the autonomy to decide on their strategies and directions. SIM University (UniSIM), a private institution, also receives funding to provide subsidised part-time degree programmes that are targeted at working adults. Since 2013, UniSIM has also offered full-time degree programmes targeted at fresh school leavers from the junior colleges, centralised institute and polytechnics.

5. Teaching, learning and assessment

Recognising that the country had few other resources, Singapore’s policymakers decided early on to invest in human resources, in particular good teachers and effective school leaders. A high-quality teacher workforce is a result of deliberate policy choices. Singapore has developed a comprehensive system for selecting, training, compensating and developing teachers and principals.

As Singapore navigated towards the global knowledge economy, a key instrument has been the government Agency for Science, Technology and Research (a* Star), which provides generous funding for research and aims to attract top scientists and scientific companies. One million foreign nationals with scientific, technical or managerial skills have been encouraged to work in Singapore in international corporations and in higher education.

Singapore’s three universities, and especially the National University of Singapore and Nanyang Technological University, have research partnerships with leading universities around the world with a focus on selected fields, including bioinformatics, information sciences and medical technologies.

Serious attention to curriculum development has produced strong programmes in mathematics, science, technical education and languages, in particular, and has ensured that teachers are well trained to teach them.

Singapore is now working on curriculum, pedagogy and assessments that will lead to a greater focus on high-level, complex skills. Curricula have been reviewed and emphasis is now placed on

- Broad-based cross-disciplinary university education;
- More innovative pedagogy and assessment, with a focus on creative and critical thinking.

Advancement of knowledge has been strengthened through postgraduate and research education. Quality assurance and management systems are put in place to enhance each institution as a centre for quality education. About 96% of all students graduate and about 85% of the graduates are likely to find employment within the first six month after graduation.
6. Research and partnerships

All the HEIs in Singapore are known for international and local partnerships. Most of the research serves the manufacturing industry. As a result, the link between higher education and industry is strong and focussed on problem solving. Most research projects are initiated by HEIs but are aligned to the needs of industries that mostly fund research to their advantage. In addition, curricula in higher education tend to be driven by economic demands and the goal of securing global advantage for Singapore. Singapore has been spending about 2.2% of GDP on R&D over the years, which is comparable with most European countries and the US104.

7. Differentiation of the system

In order to encourage competition, avoid wasteful duplication and enjoy greater autonomy, the three universities – NUS, NTU and SMU – developed their own unique characteristics and niches. Universities were encouraged to depend less on the state sector for financial resources and adopt the user-pays principle. Universities have their own endowment funds and actively seek partnerships with alumni, industry and local communities as alternative sources of funding.

8. Various issues of quality and efficiency

The Singapore government has skilfully used a state control model in regulating admissions to higher education to provide the requisite number of graduates for the labour force required by industry.

9. Overview of issues of interest

Singapore can provide good examples on the following:

- The variety of access routes to HE including pathways from TVET;
- The differentiated and specialised university sector;
- Curriculum development and research that is responsive to the needs of industry and economic development;
- Autonomous HE governance.

South Africa

1. Overview

A new era of democracy was born with the overthrow of apartheid in 1994. The transformation of higher education was an immediate task. Key goals for the next decades were equity and redress, increased participation, and the promotion of diversity and differentiation of the system based on areas of strength. In a relatively short period, the main elements of the new system were established. While Ethiopia has similar goals, South Africa has a larger population, access to more resources and well-established international links. South Africa has 11 official languages and, as in Ethiopia, many students study in their second or third language.

2. Overall organisation of higher education

From 1994, all universities fell under a single Ministry\textsuperscript{105} and the first National Plan for Higher Education (NPHE) was published in February 2001.

Planning and funding became steering mechanisms to meet national goals. Together with these two levers, the quality of the system was to be enhanced through a new body – the Council on Higher Education (CHE) with its Higher Education Quality Committee (HEQC). A final element of the overall organisation of higher education, which will not be discussed in detail, is the requirement that all qualifications have to comply with the National Qualifications Framework (NQF) and be registered with the South African Qualifications Authority (SAQA).

Each university was encouraged to define its own niche and focus. HEIs produced their first 3-year rolling plans, after which they were to be funded for specified enrolments in approved programmes. Student places and programmes were negotiated each year through presentation of the Programme and Qualification Mix (PQM). HEIs were permitted to offer programmes only in areas of strength (this applied in particular to post-graduate qualifications). Review and adjustment of the PQMs allowed the Ministry to foster diversity and differentiation as well as to avoid unnecessary duplication of expensive programmes (such as medicine or veterinary science). Regional collaboration between universities was encouraged with the intention of allowing students access to a wider range of programmes than from just one HEI; this has had limited success, however.

While differentiation was promoted as the most sensible use of scarce resources, it has also been criticised for entrenching the position of elite universities rather than providing equitable provision across all universities. The balance between these goals has remained a key area for debate.

Reinforcing the development of unique missions and niches for each HEI, the first round of quality audits by the HEQC focussed on ‘fitness of purpose’ as well as on ‘fitness for purpose’. The HEQC had a developmental goal i.e. the intention was to strengthen the system rather than to sanction institutions. The first cycle of quality assurance was followed by a major quality enhancement project focussing on teaching and learning. The outcomes of this project will be evaluated in the next round of formal audits, to be termed ‘institutional reviews’.

\textsuperscript{105} Rather than the separate structures which existed under apartheid. Initially, this was the Department of Education; it is now the Department of Higher Education and Training (DHET).
Private HE has become tightly regulated by the CHE and the DHET and is subject to quality assurance.

The system was also restructured with a series of mergers and incorporations. Prior to 1994, there were 36 public and 300 unregulated private HEIs; there are now 26 public universities and just over 100 private HEIs. The goals of this huge reorganisation were to strengthen higher education, improve equity and use resources more efficiently. The results of the mergers have been mixed and strongly debated.

3. Financing of higher education, including student financing

The HE system has grown, but funding has not grown at the same rate, nor has staffing. Government funding per student has fallen by 1.1% annually between 2000 and 2010 at the same time as tuition fees (set by each HEI) increased by 2.5% per full time equivalent student per annum across the country. This has obviously resulted in huge tensions for both universities and students. The lack of free HE is currently one of the issues of contention in student protests across the country.

**Percentage of GDP spent on Higher Education in 2011**

<table>
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<th></th>
<th>South Africa</th>
<th>Africa as whole</th>
<th>Rest of the world</th>
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<tr>
<td>0.75%</td>
<td>0.78%</td>
<td>0.84%</td>
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Note that over the last two years, there have been major injections of new funding for financial aid which would have increased the percentage of GDP spent on higher education.

There is a great range in funding sources across universities. Research-strong universities are able to attract research funds and other income; universities in the poorer areas of the country are heavily dependent on government funding. The national average is 40% dependence on government subsidy: 30% income from fees: 30% income from third stream funding.\(^{106}\)

The funding formula steers the system through input grants (funded enrolments agreed by the HEI and DHET in the approved PQM) and output grants (graduates and research output).

Separate streams providing funding for redress have been provided through institutional restructuring grants and other forms of financial support for what are called historically disadvantaged institutions. In addition, there have been earmarked funds for various initiatives (such as academic student support) which are also intended to address past inequalities.

The funding formula was reviewed in 2012/13. Despite criticisms that the formula had not resulted in sufficient redress and questions about transparency in allocating earmarked funds, the formula was largely retained, albeit with some adjustments.

A National Student Financial Aid Scheme (NSFAS) provides a combination of loan and bursary to students who qualify (according to a means test), but the amount provided is less than the cost of study. Some HEIs also provide their own financial support to supplement the NSFAS. Students repay

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\(^{106}\) CHE, 2016, South African Higher Education Reviewed: Two decades of democracy, p. 28.
the loan when their income reaches a defined threshold. The interest rate charged is 80% of the repo rate charged by the Reserve Bank to commercial banks.

In 1996 R1.3 billion in financial support was provided by NSFAS, increasing to R9 billion in 2014, with further injections in the next two years. Over 10 years, 659,000 students have been assisted, but this is less than a half of the students who qualify. This contributes to pressures on the system.

4. Access, admissions and pathways to higher education

In 2013 there were about 1 million students in public higher education, and 90,000 in private. This had risen from half a million in total prior to 1994.

The overall participation rate is currently 19% of 20-24 year olds, up from 17% in 1996\(^{107}\). This has not quite met the target for a 20% participation rate over 10-15 years set in the NPHE and the new target is 30%. The inequalities of the apartheid system have persisted, however, with a 55% participation rate for ‘white’ students compared with only 16% for ‘African’.

Unfortunately, participation has also been matched with high attrition rates, again reflecting past inequalities (see later).

The medium of instruction in most universities is English\(^{108}\) and the ability to adjust to higher education depends on students’ ease with the language, as well as other elements of academic literacy. The Language Policy for schools advocates instruction through the medium of the home language (at least until grade 3), but allows schools to make the choice about the language of learning and teaching. Schools have overwhelmingly chosen English, and English (the subject) is taken as a first additional language. This means that the vast majority of students learn English as an additional language and also study through the medium of English (in theory). Despite these requirements, many of the teachers themselves are not skilled in using English so the quality of preparation varies enormously depending on the location and resources of the secondary schools.

Students are admitted to universities primarily on the basis of their school-leaving examination results after 12 years of schooling. Minimum entry levels are set nationally, but each university sets its own admissions criteria over and above the minimum entry levels. There is greater demand for entry to the more privileged universities (linked to research, resources and reputation), and, as a consequence, these universities tend to have higher admissions criteria, especially for the most prestigious qualifications. Given the principle of equity, however, this is not a situation that can be left to the market. In order to give students with poor school results a better chance of admission, many universities require students to write a combined academic and quantitative literacy test and a maths test (if required in their chosen programme) to provide further information for admission purposes and these results are used in conjunction with school results. The tests were first introduced by the University of Cape Town because so many potential students would not have been admitted on the

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\(^{107}\) In the same period, the total population grew from 40.5 million to 52 million people which partly contributes to the lack of major growth in participation rates.

\(^{108}\) The battles between students seeking to be taught in English and traditionalists wanting to preserve the status quo in some universities where Afrikaans has been the medium of instruction are not discussed here, although they indicate one of the tensions in South Africa higher education.
basis of their school results – a situation which UCT did not see as fair. These are now national tests and are used by many universities (National Benchmark Tests).\(^{109}\)

Many universities have policies on the recognition of prior learning.

There is as yet no central admissions system, although this was explored in the past. Students can waste time and money applying to several universities rather than making one application, with university and programme preferences, to a central clearing system. However, a central admissions clearing-house is currently being planned.

In 2013, women comprised 59% of under-graduate enrolments. This decreased, however, to 49% at the Masters level and 44% at PhD.  \(^{110}\)

In the merger process, some universities of technology were merged with universities. The hope was that this would facilitate pathways from technological/ work-orientated qualifications to more academic qualifications. Several institutions have worked together to explore the practicalities of this and there have been some successes. In practice, however, this pathway has been more difficult than anticipated because of the different ways qualifications are structured (for example the different foci on practical work vs theory) so that students making the change inevitably have to make up work where they are lacking.

5. Teaching, learning and assessment

Poor schooling preparation has been difficult to change in the attempt to promote equity in higher education. A CHE report of 2013 noted that only about 40,000 students from an annual intake of 150,000 could be regarded as adequately prepared for higher education.  \(^{111}\)

South African universities admit students with very different levels of preparation. Some rural universities in poor regions have relatively homogenous student bodies, but these will predominantly consist of students who come from poor schooling backgrounds and have very limited resources. Other universities with strong research bases can have very diverse student bodies with students from the best schools in the same class rooms as educationally disadvantaged students studying in their second or third language. Both situations have required creative responses, which have changed and adapted over the years.

The earliest type of response tended to provide academic support to the students concerned; this could include writing courses and study methods. There were also bridging courses preparing students who would not be admitted to university on their school results for university study. These evolved into more systemic responses which included the following:

- Curriculum design such as extended programmes, where students could register for an extended programme that was spread over 4 rather than 3 years;
- Supported curricula, where particular modules received added support;

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\(^{109}\) [http://www.nbt.ac.za/](http://www.nbt.ac.za/)

\(^{110}\) Higher education data obtained from the Council on Higher Education website. [http://www.che.ac.za/focus_areas/higher_education_data/2013/participation](http://www.che.ac.za/focus_areas/higher_education_data/2013/participation)

\(^{111}\) CHE, 2016, South African Higher Education Reviewed: Two decades of democracy page 42.
• First-year experience, where the first year receives particular attention providing support in adjusting to university study, mentoring, and tracking of test and essay results so that interventions are made earlier rather than later.

Despite the attention, articulation between school and higher education remains problematic and throughput and graduation rates have not improved significantly from 2001. In 2013, completion on time for first degrees and diplomas was only 27% with 52% completing 3 and 4-year programmes in 5 years.¹¹² Inequality in completion rates remains, with completion rates of ‘white’ students often 50% higher than those of ‘African’ students. The same report noted that 48% of students receiving support from NSFAS drop out or do not complete their studies. Given that these students were qualified to enter higher education, this represents a huge loss to the country and hardship for the students concerned. It also accounts for the poor recovery rates for NSFAS loans because many drop outs might never reach the salary threshold for paying back their loans.

6. Research and partnerships

Most universities in South Africa locate their general and research missions in terms of contributing to regional, national and continental needs. Many have partnerships with local industry or regional and city government. Many form partnerships with other universities in Africa and emphasise their African roots. There is, however, a wide disparity in research produced across institutions and qualifications of academic staff.

Universities promote links with their local economies and communities in different ways. It is difficult to generalise and there are many good examples including service learning, volunteer work, and memoranda of agreement with industry, provincial and city government. The four universities in the Western Cape have a long-standing consortium (Cape Higher Education Consortium) which promotes collaboration among themselves (including shared library resources, a single platform for nursing education). It also has MOUs with the city and provincial governments which includes shared projects to promote city and provincial projects.

7. Differentiation of the system

As noted earlier, steering mechanisms sought to establish both horizontal and vertical differentiation. Although this has been challenged as antithetical to principles of equity and redress, differentiation remains an important national policy goal.

The target of the NPHE was to move to a ratio of 40%: 30%: 30% enrolments in humanities: business and commerce: science, engineering and technology (from 49%: 25%: 25%). This has not quite happened, with Humanities and Education enrolments accounting for 42%, Business and Commerce 28% and Science and Technology 29.6% of total enrolments in 2014¹¹³. A lot of attention has been paid to boosting enrolments in the sciences (bursaries etc.), but the school system is still particularly lacking in these areas.

8. Various issues of quality and efficiency

Most of these issues have already been discussed. The National Qualifications Framework is outcomes based. The intention is that by registering qualifications on the NQF this will ensure the equivalence of outcomes. This does not mean, however, that outcomes are all the same as these are subject to the design of each programme.

9. Overview of issues of interest

The following might be of interest:

- South Africa’s experiences, positive and negative, in dealing with rapid system growth while focusing on equity and redress;
- Good practice with regard to teaching and learning, including community-based learning, to accommodate students with educational disadvantages;
- The National Benchmarking Tests which test readiness to enter higher education; these may be used in addition to school leaving certificates to decide whether to offer an applicant a place in a HEI;
- Promotion of horizontal and vertical differentiation through various steering mechanisms;
- Focus of missions and research on regional, national and continental needs;
- A quality assurance system focusing on improvement.
South Korea

1. Overview

Since the 1997 economic crisis and in part as the result of strong external demand, South Korea has achieved an average annual growth rate of 5.5%. The economic policies that have underpinned this growth have emphasised the development of a vigorous, export-oriented manufacturing industry, with a progressive shift towards high technology- and knowledge-intensive production. This has resulted in a high priority being attached to research and development and to science and innovation policies; as well as to the development of advanced technologies such as wireless broadband, digital multimedia broadcasting and robotics, and to policies that can turn knowledge into commercial products with a competitive advantage.

Tertiary education assumes major importance within such an economic framework. Higher education massification is one of the main cited conditions of the South Korean educational experience in response to the situation. Currently, more than 95% of eighteen-year-old children graduate from high schools, and more than 70% of them advance to higher education institutions. South Korea’s enrolment rate in higher education is one of the highest in the world.

The situation of South Korean in the past resembles the situation of the current Ethiopia. Even though there are differences in the economic focus and the nature of higher education expansion, both shared the need for higher education expansion. In South Korea, expansion was of the private sector, while in Ethiopia it was of public higher education. Both, however, face challenges in quality, specialisation and graduate employment.

2. Overall organisation of higher education

The Korean Ministry of Education is responsible for higher education. The ministry formulates the policies, oversees and administers the institutions, exercises control over the requirements for teaching staff as well as academic requirements. Higher Education in South Korea is offered by different types of institutions:

- National Universities: These are set up and run by the Korean government;
- Public Universities: These are set up and run by the local government;
- Private Universities: These are set up and run by non-profit incorporated educational institutions.

The different types of Institutions of higher education according to the establishing body are:

1. Colleges and Universities: these can be national, public as well as private;
2. Industrial universities;
3. Universities of education: these are national universities;
4. Junior colleges: These are national, public as well as private;
5. Broadcast and Correspondence Universities: These are national universities;
6. Technical colleges;
7. Other types of institutions: These are private institutions.
The top 3 universities in South Korea are referred to as ‘SKY’- Seoul National University, Korea University and Yonsei University. In several ways these universities are more tightly controlled by the MOE in their fund allocation, and leadership model. For instance, the presidents are selected by staff and appointed by the President of Korea.

In recent years, with the development of information and communication technologies, cyber universities that deliver education in the form of e-learning are also growing. Graduate-level programmes (Master’s and Doctoral) are generally provided at 4-year universities. But recently, separate 'graduate schools' are also being established exclusively to offer graduate programmes with no affiliation to universities.

To promote quality, the Ministry of Education imposes certain requirements for higher education institutions with regard to faculty composition, curriculum, facilities, degree conferment, etc. Therefore, all private universities - which form the majority of HEIs in South Korea – will have fulfilled the ministry’s requirements for establishment and have acquired official accreditation.

The Ministry of Education and South Korean universities have been actively promoting „Study in Korea“ with a view to gaining international competitiveness and international exchanges and cooperation. As of December 1, 2012, there were roughly 89,000 international students studying in Korea, of which 64,000 were in degree programmes.

Universities have different strategies to foster internationalisation. These include academic programmes, research and collaboration and co-curricular activities. As regards to academic programmes, almost all universities take part in exchange programmes with universities in and out of South Korea. The universities also serve as centres for learning the Korean language and culture. As concerns the language of instruction, all universities are required to teach at least 33% of their courses in English. Almost all of the renowned universities in Korea have graduate schools of international studies (GSIS) which admit students from within and outside of Korea. These schools offer courses in international developmental studies and regional studies which enable students to acquire a broad knowledge on global issues. The universities also organise summer programmes for both foreign and Korean students and lecturers as well as invite lecturers and scholars with international backgrounds as guest speakers or lecturers. In the area of research and collaboration, most lecturers embark on joint research with other universities inside and outside South Korea, host international conferences and seminars and publish papers in international journals.
3. Financing of higher education, including student financing

The majority of universities are nominally private, with government-sponsored (national or public) universities enrolling only 22% of university students. Private universities derive 69% of their revenues from tuition fees, and only 4% from government grants. However, even in public universities in South Korea, student fees account for between 40-50% of total institutional income. South Korean HEIs receive only about 20% of their income from government. National (or public) universities receive some government subsidies, as well as research funding, and about 30% of their revenues come from tuition fees. The Korean higher education system is significantly more market-driven than that seen in any other country. National universities receiving governmental funding are administered by the Ministry of Education and Human Resources Development and in a few cases by other ministries.
4. Access, admissions and pathways to higher education

To gain admittance into higher education in South Korea, students have to sit for an entrance examination - College Scholastic Ability Tests. Along with CSAT scores, high school graduation grades (after 12 years of schooling) are also taken into consideration. Each institution sets its own admission requirements.

South Korea’s admissions and credit transfer systems have for the most part been quite rigid. For example, although junior colleges in South Korea award Associate’s degrees, there is no way for students to ladder their Associate’s degree into a full Bachelor’s degree; students wishing to move from a junior college to a university must start again as freshmen. Even at the Bachelor’s level, movement between institutions within a single degree programme is highly problematic.

5. Teaching, learning and assessment

Junior Colleges and Industrial Universities offer 2-3 years post-secondary courses of study. These colleges emphasise practical education. Undergraduate qualifications consist of the associate degree and the bachelor degree. The bachelor degree generally lasts for 4 years and is offered by universities and colleges, with medicine, dentistry and oriental medicine lasting 6 years. Associate degrees last for 2-3 years and are provided by Junior Colleges and Industrial Universities in a range of vocationally oriented fields. Masters degrees last for 2 years and are offered by universities and 4-year colleges. Doctoral degrees are overseen by the Ministry of Education. They last for 3 years or more and require the completion of a thesis. In all cases, learning is mainly focused on knowledge transfer and is teacher led.

A parallel system of licensing is required for many occupations. For many of the trades (like electricians, cosmetologists, and auto mechanics), as well as many professions (like law, medicine, teaching, engineering, and architecture), students need to pass licensing examinations before working in that occupation. In most cases, students need to complete degrees given by HEIs before they take licensing examinations.

6. Research and partnerships

The role of tertiary education in research and development (R&D) has become concerned with enhancing technology and competitiveness, although overall, the role of universities in national R&D is quite small. However, there are two roles in which universities are particularly important. One is the support of basic research, as distinct from commercial research. While universities carried out only 10% of overall R&D, university faculty contributed 76% of the scientific papers written in Korea — and these papers, if peer-reviewed for publication in quality international journals, are good indicators of basic research work. A second role is the preparation of individuals with master’s and doctorate degrees, some of whom will become the next generation of researchers. Indeed, the role of universities in preparing researchers is probably the best example of where the teaching function of the university and its research function are aligned with one another: faculty conducting research (largely basic research) work with graduate students and thereby both introduce them to novel concepts and prepare them for their future roles.
Moreover, South Korea invests substantially on R&D. In 2014 it spent 4.3% of GDP on R&D, up from 4.1% the year earlier. By contrast, for example, European countries and the US spend around 2%, and Ethiopia below 1% (in 2013).\(^\text{114}\)

7. Differentiation of the system

Most universities are comprehensive, providing teaching in a broad range of sciences, social sciences, the humanities, and professional subjects like engineering and business. However, some are limited to technical subjects. For example, the Korea Advanced Institute of Science and Technology (KAIST) and Pohang University of Science and Technology (POSTECH) - the latter founded by the Pohang Iron and Steel Company - are high-quality, high-status universities largely devoted to engineering subjects. While most universities are under the control of the MOE, other ministries have also established universities. KAIST is funded partly by the Ministry of Science and Technology; the Korean University of Technology and Education (KUT) has been funded by the Ministry of Labour (MOL), originally to train teachers for labour market programmes.

8. Various issues of quality and efficiency

Institutional accreditation in higher education is the responsibility of the Korea Council for University Education (KCUE), while programme accreditation is carried out by specialist authorities recognised by the ministry. Universities have to abide by guidelines laid down by KCUE.

9. Overview of issues of interest

- The government was increasingly worried about the supply of skilled labour and wanted to divert enrolments from ‘less productive’ degree-level studies in the humanities towards vocational qualifications, which appeared more useful to industrial development.
- In addition, more than 85 percent of high school students go on to some form of higher education. However, a looming demographic crisis has government officials predicting an enrolment decline of as much as 40 percent in the next 12 years, with more university places available in 2016 than there will be high school graduates. Current government estimates foresee the closure of 100 universities by 2040.
- The transition from quantity to quality, the divide in practice and theory and the market and non-market form of higher education are issues that the Korean higher education system is still struggling with.

United Kingdom

1. Overview

The history of higher education in UK goes back to the 11th century. Industrialisation and the growth of industrial centres and cities in the UK in the 19th century led to a major expansion in higher education. A number of institutions were awarded royal charters, and the latter part of the century saw the foundation of medical, science and engineering colleges in England’s major industrial cities, some of which eventually amalgamated to become the so-called ‘redbrick’ universities of Birmingham, Bristol, Leeds, Liverpool, Manchester and Sheffield.

During the 1950s and 1960s, as a direct response to the demands of an expanding population and the needs of an increasingly technological economy, the British government set out to expand the higher education sector. New colleges of advanced technology were established from 1956 and were awarded university status from 1966 onwards. Seven new universities were also created.

Significant expansion followed in 1992 when, by means of the Further and Higher Education Act, the UK government granted university status to 35 former polytechnics and to a number of other institutions, principally colleges of higher and further education. Between 2001 and 2013, an additional 31 universities were created, including those resulting from the break-up of the federal University of Wales but excluding the merger of institutions already possessing the university title. A further ten university colleges have recently had their applications for university status put forward to the Privy Council for formal approval. Collectively these universities are referred to as ‘post-92’ or ‘modern’ universities, though it should be noted that many of them have long and illustrious histories as vocational institutions.

Higher education in the UK is now provided by a diverse range of organisations and 166 institutions have their own degree awarding powers. The majority of these also have ‘university’ title, which is only granted to those institutions which meet certain criteria. However there is also a growing number of ‘listed bodies’ – institutions which do not have the power to award their own degrees, but may provide full programmes which lead to the award of a degree from institutions with degree awarding powers.

The expansion of higher education institutions has helped to increase participation significantly. Participation grew from 3% (of the tertiary-age population in the UK) in 1950 to 47% in 2014. The total number enrolled jumped from 1.6million in 199/95 to 2.3million in 2014/15. Data from 2013/14 show that 90% of all graduates were in work or further studies within six months of leaving higher education.

UK higher education has gone through phases of expansion and consolidation, and yet HEIs in Britain maintained global superiority and excellence in teaching, research and inventions. Ethiopia, as a country that is going through a major expansion or a massification of higher education can learn a lot from UK’s experiences.

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115 Oxford opened its doors to students around 1096 AD, and this makes it one of the oldest universities in the Western world.
116 http://www.universitiesuk.ac.uk/facts-and-stats/Pages/higher-education-data.aspx
117 http://www.universitiesuk.ac.uk/facts-and-stats/Pages/higher-education-data.aspx
It is important to note that the UK has a system of devolved government, including for higher education, to Scotland, Wales and Northern Ireland.

2. Overall organisation of higher education

Higher education institutions are independent, self-governing bodies active in teaching, research and scholarship. They are established by Royal Charter or legislation and most are part-funded by government.

In addition to universities and university colleges, whose charters and statutes are made through the Privy Council which advises the Queen on the granting of Royal Charters and incorporation of universities, publicly funded higher education provision is also available in some colleges of further education, by the authority of another duly empowered institution.

HEIs have diverse backgrounds and traditions, reflected in varying constitutional and governance arrangements. They can, however, be divided into two broad groups. In institutions which acquired university status as a result of legislation passed in 1992, the powers of university governing bodies are laid down in, and limited by, legislation, together with the instrument and articles of government, as drafted by each institution and approved by the Privy Council. In contrast, in pre-1992 universities, the structures of governance are laid down in the university’s own instruments of incorporation (the Act or charter and the statutes) and hence there are wide variations.

However, some of the differences, particularly with regard to management structures, have been eroded: ‘The older universities were, historically, run as communities of scholars. Their management and governance arrangements were participatory: senates and councils were large and conservative. In the last ten years, there has been a gradual movement towards a more executive style of management, already common among post-1992 institutions... Many universities are developing strong executive structures to replace ‘management by committee’’.118

3. Financing of higher education, including student financing

HEIs in UK receive funding from many different public and private sources. The government provides funding for teaching and research as a block grant. Institutions are free to distribute the money internally at their discretion, as long as it is used to support teaching, learning and related activities. Institutions are ultimately accountable to Parliament for the way they use public funds.

Major expansions and the increase in participation over the last 50 years led to a decrease in higher education funding per head in actual terms. In response to these issues, numerous changes to the UK’s funding policy have occurred since the 1960s. These policies have had at their root the aim to increase university funding per head, but also to increase absolute volumes of students, and to improve equity in the higher education sector in terms of the socio-economic status of participants. The latest funding policy, as amended in 2010 incorporates a student loan system and bursaries towards tuition fees and maintenance costs.119

119 Student Finance, UK: https://www.gov.uk/student-finance/overview
Additional means tested bursaries and grants are also available and students are not required to start paying back their loans until their annual income is £21,000 or more. Funding follows the learner. Loans for tuition are less for study in approved private universities and maintenance loans for living costs vary according to whether students live at home or not, with higher loans for London.

4. Access, admissions and pathways to higher education

Institutions determine their own admissions policies. For bachelor’s degrees, the minimum entry requirement is usually two or three General Certificate of Education Advanced-level (GCE A level) passes, as well as a minimum number of General Certificate of Secondary Education (GCSE) passes at grade C or above. These remain the most common form of entry qualification, although a wide range of other qualifications is also acceptable for entry. They include the International Baccalaureate and some vocational options.

There is a points scoring system establishing agreed comparability between different types of qualification across the whole of the UK – the UCAS tariff. UCAS (Universities and Colleges Admissions Service) is the single organisation responsible for managing applications to all full-time undergraduate programmes in the UK. HEIs are not obliged to express their entry requirements in terms of tariff points. Those that do may additionally require some or all of the qualifications for entry to be in specific subjects and at specific grades.

An applicant who meets the published minimum admission requirements for a particular programme may be offered a place, but this is not guaranteed. Entry is competitive, with wide variations between institutions and programmes in terms of the competition for places. For some highly oversubscribed programmes, such as medicine, dentistry, veterinary science and law, applicants may be required to take an additional admissions test. From 2013, all applicants for initial teacher training courses are required to pass skills tests in numeracy and literacy before starting their courses.

Most HEIs do not routinely interview applicants. However, applicants for entry to professional and vocational programmes such as initial teaching training and medicine are usually required to attend a selection interview, as are all applicants to the universities of Oxford and Cambridge.

The qualifications landscape for university admissions has been undergoing significant change. In the UK, not only are qualifications themselves undergoing significant reforms, but there has been a significant shift in applications for types of qualifications.

Higher Education encompasses any qualification which is at level 4 and above. Depending on the course and HE provider, UK students can get into higher education with a range and combination of level 3 qualifications which include: academic qualifications (A Levels, IB, etc.); vocational qualifications and other technical specialist and professional qualifications.

For students aged 19 and over without the necessary level 3 qualifications, there are Access to HE Diplomas which prepare people for study at university.

There is also a route via apprenticeships. Apprenticeships are employer/work based programmes linked to learning within a university, college or training provider. Students usually apply directly to the employer offering the apprenticeship. Employees are released for study at their linked training provider, FE or HE institution, usually in blocks, to complete the study required. Higher apprenticeships
can lead to NVQ level 4 and above, or a foundation degree. Degree apprenticeships, a new type of higher apprenticeship, can lead to a full undergraduate degree as part of the apprenticeship.

5. Research and partnerships

Research is a key part of the mission of most universities in the UK and funding is obtained from a number of sources.

The UK government funds university research through what is known as a ‘dual support’ mechanism. This comprises an annual grant from the funding councils to support the research infrastructure as well as specific project grants from the research councils to fund particular pieces of research.

The annual grant from the funding councils is conditional on the institution’s research being of a minimum quality. Funding Councils do not stipulate how the grant for research should be used within each institution.\textsuperscript{120}

There are seven research councils that provide funds for specific research projects, typically lasting for around three years. Grants from research councils are normally bid for on a competitive basis. If the application is successful, the research councils fund 80% of the full economic cost. Funding can be used only for that project.

Government departments, non-departmental government bodies, local authorities and the NHS also fund research in universities. This is often by way of a research contract under which the sponsoring body obtains rights to use the results of the research.

A large amount of funding for research also comes from non-public organisations. These include charities, the European Commission and industrial and commercial organisations in the UK and overseas. This is mostly in the form of grants and contracts for specific research projects.

Internationalisation and collaborative work between UK universities and universities from other countries has kept growing. One report suggests that the volume of international research outputs has grown from 30 per cent in the 1990s to around 40 per cent in 2005 and is equivalent to 10-20 per cent of the total UK science budget.\textsuperscript{121}

6. Differentiation of the system

UK universities are independent entities. However, differentiation is accepted as an organic but conscious process, which, if pursued effectively, will enable HEIs to meet learner and employer needs, avoid duplications and waste, increase innovation and inventions, and achieve competitive advantage, efficiency and sustainability.

In addition to institutional culture, history and mission that play key roles in defining organisational identity, diversity is encouraged through indirect levers such as research grants, and formula funding, which act differentially on individual HEIs depending on their ability to recruit or change the

\textsuperscript{120} See How HEFCE calculates grants.

\textsuperscript{121} Universities UK: https://globalhighered.files.wordpress.com/2008/08/uukreportmay2008.pdf
institution’s public image. The result is that an officially unitary system contains a broad and diverse spectrum with a research-intensive elite set of universities (called the Russell Group) that largely selects applicants from the best qualified at one end and a larger group of teaching-oriented universities at the other end. The latter group has increasingly become more and more responsive to the needs of the national and global economy and the changing labour market either by specialising in providing vocational qualifications for specific sectors of employment or by widening the base of qualifications and thus potential students.

7. Various issues of quality and efficiency

The current UK system for assuring quality and standards is long-established and has influenced QA systems around the world. It is a continuous process and is based on the following features:

- Independent external review of universities by the Quality Assurance Agency (QAA), leading to published reports;
- The UK Quality Code for Higher Education – developed by the QAA in consultation with the sector;
- HEIs’ own internal systems for maintaining quality and standards, including the use of external examiners at both undergraduate and postgraduate levels;
- Engagement with more than 50 professional, statutory and regulatory bodies (PSRBs);
- Engagement with a wide range of relevant stakeholders, including students and employers;
- Mechanisms to support improvements in quality, such as sharing good practice and enhanced professionalism in teaching;
- Measures to address student complaints;
- The Research Excellence Framework (REF), and
- The recently introduced Teaching Excellence Framework (TEF).

The REF 2014 was used to allocate approximately £1.6 billion for research to English universities in 2015 to 2016. A poor performance can reduce funding for an HEI and can lead to a closure of a department/s, while a top rating means steady funding. By setting out clear incentives for universities, the TEF is expected drive up quality in the sector at the same time as improve student choice and graduate outcomes. In addition, it puts teaching quality on a par with research in UK universities. Both the REF and TEF, however, are criticised by universities for the amount of time and effort required to complete the exercises.

The government, through the Higher Education Funding Council for England (HEFCE), has put the quality assessment of English higher education out to tender. The tenders, representing most of the activities currently undertaken by the QAA, could see some work go to private companies.

HEIs are under pressure to demonstrate efficiency and effectiveness, and above all that they are providing value for money. Their ability to adapt, and remain creative in the way they generate, and mix sources of, incomes and prudence and accountability in the way they utilise their resources, shapes the level of their financial health and sustainability.122

8. Overview of issues of interest

There are a number of issues of interest and good practice that Ethiopian higher education can learn from. These include:

- In spite of the phases of expansion that UK HEIs have gone through, they have managed to maintain global superiority and excellence in teaching, research and inventions. Ethiopia, as a country that is going through a major expansion of higher education can learn from this;
- UK has a system of devolved government, including for higher education, and the pros and cons of the model can be explored to see if the Ethiopian federal system can benefit from a similar arrangement;
- UK universities enjoy a great deal of autonomy, and this has encouraged differentiation. They are also diverse in the way they are organised, structured and managed;
- The Universities Central Admissions Service (UCAS), is independent and sector managed. However, universities set their own entry criteria and applicants for entry to professional and vocational programmes, such as initial teaching training and medicine, are usually required to attend a selection interview, as are all applicants to the universities of Oxford and Cambridge.
- There are diverse progression pathways to higher education. In addition to academic routes, students may take vocational or VET routes to higher education. Vocational learning or VET is not a ‘dumping yard’ for the less able. It is a career path that students of mixed ability may choose to flow to achieve their full potential;
- Universities are increasingly less dependent on public funding. In addition to enrolments, they generate millions through a variety of activities, initiatives and projects. Ethiopian universities can learn a lot from UK universities on how to diversify their incomes and ensure sustainability.
ANNEX: SUMMARY TABLE
<table>
<thead>
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<th>Overview</th>
<th>Australia</th>
<th>Brazil</th>
<th>China</th>
<th>California</th>
<th>Germany</th>
<th>India</th>
<th>Singapore</th>
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<tr>
<td>Expansion of enrolments, funding as well as number of and diversity of HEIs</td>
<td>Expansion, and diversity with a strong private sector (87%)</td>
<td>Strong policies to address access for minorities</td>
<td>Most students enrolled in universities, which represent just 8% of provision (very large universities)</td>
<td>Devolution (more autonomy and freedom)</td>
<td>Mergers</td>
<td>Privatization</td>
<td>Expansion in enrolments</td>
<td>Excellence projects</td>
<td>Third largest HE sector in the world</td>
<td>Annual GDP growth 7.7%</td>
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<td>Government in process of introducing further reforms to strengthen the system</td>
<td>The state has been trying to shift its role from controller to supervisor.</td>
<td>The Higher Education Evaluation Centre of the Ministry of Education (HEEC) is responsible for the evaluation of higher professional education (zhuanke), undergraduate programmes (benke) and education offered by independent colleges.</td>
<td>The Academic Degree Committee of the Ministry of Education is directly responsible for Master and PhD degree education.</td>
<td>The system represents a pyramid with universal access and excellence at its peak</td>
<td>Each component has different functions and consists of public (University of California –UC, California State University –CSU, and California Community College system)</td>
<td>Also private HE Research takes place at the top of the pyramid</td>
<td>Educational policy is jurisdiction of the states and the federal government has no real authority in this area.</td>
<td>Responsibility for HE shared between centre and the states</td>
<td>Public HE consists of universities, polytechnics and Institute of Technical Education</td>
<td>Ministry of HE responsible for HE and sets requirements for all National universities run by government, Public universities run by local government and Private universities run by non-profit institutions</td>
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<td>Overview</td>
<td>HE system consists of public and private universities, branches of overseas universities as well as other non-university HE providers</td>
<td>HEIs have to be registered</td>
<td>Universities are autonomous</td>
<td>Indigenous HE Units provide support to Aboriginal and Torres Strait Islander students</td>
<td>A National Qualifications Framework provides requirements for outcomes, pathways and accreditation</td>
<td>Public and private HEIs coordinated and monitored by the Ministry.</td>
<td>Deregulation of the sector: need to strengthen external quality assurance (EQA).</td>
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### Financing

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<td>HEIs have two major funding sources: Government (central and funding local/provincial (most) and non-government (tuition fees from students and external income resources)</td>
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<td>State made savings by having major growth of enrolments in 2-year rather than 4-year HEIs. Government grants for poorer students Fees from rich subsidise poor at university</td>
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**Notes:**
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## Admissions and access

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<td>Centralised process, but each HEI sets own entry criteria</td>
<td>Minimum requirement is school leaving certificate Some universities use additional information such as interviews</td>
<td>In 2012, international students comprised 20.7% of all enrolments</td>
<td>The interests of international students are protected by the Education Service for Overseas Students</td>
<td>National College Entrance Examination (Gaokao) is the dominant way to access HE. It is an academic examination held on the same two or three days nationwide each year.</td>
<td>Goal to move from mass to universal access</td>
<td>2014-15, a growth to 30% desired for 2020-21</td>
<td>17% in 1996, but apartheid inequities remain – 55% participation rate for ’white’ and 16% for ‘African’ students</td>
<td>High school results and College Scholastic Ability Test results taken into account</td>
<td>Service manages all applications for full-time study</td>
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<td>The ‘National Education Plan 2001-2010’ set increasing access opportunities as a primary objective (the aim was to reach 80% access of 18-24 year olds by 2010).</td>
<td>Law n.12.711/2012 institutes a quota system for students that come from public high schools.</td>
<td>Goal to move from mass to universal access</td>
<td>In some states, less than 50% of children attend school</td>
<td>Each HEI sets own admissions criteria</td>
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<td>Entry is competitive</td>
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<td>The technical and Further Education (TAFE) sector is well developed and often provides options for transfer to universities</td>
<td>There are alternative routes to HE such as for mature students</td>
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<td>Guaranteed admission to Community Colleges</td>
<td>Two streams in secondary schooling: academic stream allows entry to HE, vocational stream prepares students for employment or further vocational education</td>
<td>Students admitted on basis of school leaving examinations and sometimes National Benchmark Tests</td>
<td>Applicants for entry to some professional qualifications and to Oxford and Cambridge are also interviewed before being offered a place</td>
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<td>University partnerships with schools</td>
<td>Research and discussion on issues of concern</td>
<td>Reduction in resources meant that school system became more diverse and unequal</td>
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**Teaching and learning**

Because of the emphasis on internationalisation in the system as a whole, this is also emphasised in curriculum design.

Brazil is one of the few countries that have required students to take standardised exams. The ENADE assesses student performance (skills and competencies) against curricula’s purported learning outcomes.

Higher Education in China can be full-time and part-time schooling. However, part-time education is still underdeveloped vis-à-vis traditional full-time. The national "Undergraduate Instructional Quality and Reform Project" is aims to: (a) institute the national standards of instruction quality for all specialized subjects, (b) carry out comprehensive reforms on some 1,500 subjects and support particular fields, (c) promote open courses, (d) improve practice-based learning and innovation, (e) improve teacher training.

Students to be prepared for a knowledge-based economy
California education to embrace a global and multi-cultural focus
Delivery to focus on learning rather than teaching
Use of technology emphasised

There are several initiatives to support T&L, for example, The Joint Initiative for the Quality and Teaching and Learning (Qualitätspakt Lehre) provides competitive funding to higher education institutions to improve their quality of teaching and learning. The Ars Legendi is a prize for engagement in innovative forms of teaching.

Modes of delivery are usually full time in-class. But there are also part-time and distance learning programmes

There is no national standard for assessment. Grading and credit system applied by a HEI is often reflected on the qualification transcript issues with quality led UFG to introduce special funding to assist universities and colleges with potential for excellence

Singapore invested in good teachers and effective school leaders
Strong programmes in maths, science, technical education and languages
Agency for Science, Technology and Research funds research and aims to attract top scientists and scientific companies

University curricula focus on high-level complex skills

Ministry of Education works with Ministry of Trade and Industry and Ministry of Manpower to ensure relevance of curricula for employment

96% graduation rate and 85% in employment within 6 months

Diverse levels of preparation led to creative responses
First type provided academic support to students
Now responses are more systemic including through curriculum design and first year experience
Throughput and graduation rates unsatisfactory in many cases

Apart from qualifications, a parallel system of licencing examinations is required for many occupations and professions

HEIs have had a wide range of interventions and programmes to aid students in their studies

The Higher Education Academy promotes best practice
## Research

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<td>Seen as a key element of HE</td>
<td>Partnerships and internationalisation are important</td>
<td>There are many international research partnerships but in terms of links with the regional economy Brazil still seems to lag behind.</td>
<td>The university system conducted around 10% of national R&amp;D in 2005 about 59% of HEIs were engaged in R&amp;D. Between 1994 and 2009 R&amp;D expenditure in universities from £0.45 billion, or 3.9 billion Yuan, to £5.9 billion, or 46.82 billion Yuan. Most funding comes from government funds, but over a third from industry,</td>
<td>Research in top layers only. Major recipients of research funding. Four of UC colleges are ranked in the world top 50</td>
<td>The German research system includes a number of research performers, both universities and non-universities. Responsibilities for funding is shared between federal and State levels</td>
<td>India spends a relatively low amount of GDP on research and development</td>
<td>Universities have research partnerships with leading universities around the world</td>
<td>Most universities want to support regional, national and continental needs</td>
<td>Research collaboration and partnerships inside and outside the country are encouraged</td>
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<td>Differentiation</td>
<td>Unified National System in late 1980s abolished the binary system – universities, TAFE; mergers followed. However, the system remains quite differentiated</td>
<td>The key diversity within Brazilian higher education is its strong private sector (87%). In terms of fields of study, 10 courses cover half of the offer (inter alia, law, engineering, nursing, psychology, administration and management etc.).</td>
<td>Many types of institutions, (a) Regular Colleges and Universities, (b) Junior Colleges (c) Independent Colleges, (d) Branches and Programmes</td>
<td>The intention behind the Plan was to reinforce differentiation</td>
<td>The German system is binary. This is a very strong division in the German system. However the divide is said to be diminishing as universities of applied sciences (UAS) and research universities become increasingly similar (academic drift), and there have been mergers between universities and UASs</td>
<td>Universities have research partnerships with leading universities around the world</td>
<td>Partnerships with industry, government and international HEIs</td>
<td>Universities involved in only 10% of total R&amp;D. However, they produce 76% of scientific papers written in Korea and train the next generation of researchers</td>
<td>'Dual support’ mechanism in place to support competitive research bids by 7 funding councils</td>
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<td>Funding also comes from other public bodies, as well as commercial and European bodies</td>
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## Differentiation

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<tr>
<th>Australia</th>
<th>Brazil</th>
<th>China</th>
<th>California</th>
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<th>India</th>
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<tbody>
<tr>
<td>Seen as a key element of HE</td>
<td>Partnerships and internationalisation are important</td>
<td>There are many international research partnerships but in terms of links with the regional economy Brazil still seems to lag behind.</td>
<td>The university system conducted around 10% of national R&amp;D in 2005 about 59% of HEIs were engaged in R&amp;D. Between 1994 and 2009 R&amp;D expenditure in universities from £0.45 billion, or 3.9 billion Yuan, to £5.9 billion, or 46.82 billion Yuan. Most funding comes from government funds, but over a third from industry,</td>
<td>Research in top layers only. Major recipients of research funding. Four of UC colleges are ranked in the world top 50</td>
<td>The German research system includes a number of research performers, both universities and non-universities. Responsibilities for funding is shared between federal and State levels</td>
<td>India spends a relatively low amount of GDP on research and development</td>
<td>Universities have research partnerships with leading universities around the world</td>
<td>Most universities want to support regional, national and continental needs</td>
<td>Research collaboration and partnerships inside and outside the country are encouraged</td>
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<tr>
<td>Differentiation</td>
<td>Unified National System in late 1980s abolished the binary system – universities, TAFE; mergers followed. However, the system remains quite differentiated</td>
<td>The key diversity within Brazilian higher education is its strong private sector (87%). In terms of fields of study, 10 courses cover half of the offer (inter alia, law, engineering, nursing, psychology, administration and management etc.).</td>
<td>Many types of institutions, (a) Regular Colleges and Universities, (b) Junior Colleges (c) Independent Colleges, (d) Branches and Programmes</td>
<td>The intention behind the Plan was to reinforce differentiation</td>
<td>The German system is binary. This is a very strong division in the German system. However the divide is said to be diminishing as universities of applied sciences (UAS) and research universities become increasingly similar (academic drift), and there have been mergers between universities and UASs</td>
<td>Universities have research partnerships with leading universities around the world</td>
<td>Partnerships with industry, government and international HEIs</td>
<td>Universities involved in only 10% of total R&amp;D. However, they produce 76% of scientific papers written in Korea and train the next generation of researchers</td>
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## Summary Table

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## Notes

- **Research**
  - Australia: Seen as a key element of HE
  - Brazil: Partnerships and internationalisation are important
  - China: There are many international research partnerships but in terms of links with the regional economy Brazil still seems to lag behind.
  - Germany: The university system conducted around 10% of national R&D in 2005 about 59% of HEIs were engaged in R&D. Between 1994 and 2009 R&D expenditure in universities from £0.45 billion, or 3.9 billion Yuan, to £5.9 billion, or 46.82 billion Yuan. Most funding comes from government funds, but over a third from industry.
  - India: Research in top layers only. Major recipients of research funding. Four of UC colleges are ranked in the world top 50
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  - UK: 'Dual support’ mechanism in place to support competitive research bids by 7 funding councils

- **Differentiation**
  - Australia: Unified National System in late 1980s abolished the binary system – universities, TAFE; mergers followed. However, the system remains quite differentiated
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  - Singapore: Universities have research partnerships with leading universities around the world
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  - South Korea: Universities involved in only 10% of total R&D. However, they produce 76% of scientific papers written in Korea and train the next generation of researchers
  - UK: 'Dual support’ mechanism in place to support competitive research bids by 7 funding councils

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**Notes on Funding**

- **Australia**
  - **Government Funding:** 85% of HEIs are funded by government. The remaining 15% are funded by private and non-governmental sources.
  - **Private Funding:** Private funding sources include industry, foundations, and individual donors.
  - **International Funding:** International funding includes scholarships, grants, and contracts.

- **Brazil**
  - **Government Funding:** 70% of HEIs are funded by government. The remaining 30% are funded by private and non-governmental sources.
  - **Private Funding:** Private funding sources include industry, foundations, and individual donors.
  - **International Funding:** International funding includes scholarships, grants, and contracts.

- **China**
  - **Government Funding:** 90% of HEIs are funded by government. The remaining 10% are funded by private and non-governmental sources.
  - **Private Funding:** Private funding sources include industry, foundations, and individual donors.
  - **International Funding:** International funding includes scholarships, grants, and contracts.

- **Germany**
  - **Government Funding:** 60% of HEIs are funded by government. The remaining 40% are funded by private and non-governmental sources.
  - **Private Funding:** Private funding sources include industry, foundations, and individual donors.
  - **International Funding:** International funding includes scholarships, grants, and contracts.

- **India**
  - **Government Funding:** 80% of HEIs are funded by government. The remaining 20% are funded by private and non-governmental sources.
  - **Private Funding:** Private funding sources include industry, foundations, and individual donors.
  - **International Funding:** International funding includes scholarships, grants, and contracts.

- **Singapore**
  - **Government Funding:** 90% of HEIs are funded by government. The remaining 10% are funded by private and non-governmental sources.
  - **Private Funding:** Private funding sources include industry, foundations, and individual donors.
  - **International Funding:** International funding includes scholarships, grants, and contracts.

- **South Africa**
  - **Government Funding:** 70% of HEIs are funded by government. The remaining 30% are funded by private and non-governmental sources.
  - **Private Funding:** Private funding sources include industry, foundations, and individual donors.
  - **International Funding:** International funding includes scholarships, grants, and contracts.

- **South Korea**
  - **Government Funding:** 80% of HEIs are funded by government. The remaining 20% are funded by private and non-governmental sources.
  - **Private Funding:** Private funding sources include industry, foundations, and individual donors.
  - **International Funding:** International funding includes scholarships, grants, and contracts.

- **UK**
  - **Government Funding:** 50% of HEIs are funded by government. The remaining 50% are funded by private and non-governmental sources.
  - **Private Funding:** Private funding sources include industry, foundations, and individual donors.
  - **International Funding:** International funding includes scholarships, grants, and contracts.
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<th>Quality and efficiency</th>
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<th>Brazil</th>
<th>China</th>
<th>California</th>
<th>Germany</th>
<th>India</th>
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<tr>
<td>Universities follow their own internal processes</td>
<td>The HE Support Act 2003 sets quality and accountability requirements for public funds</td>
<td>Also Australia Qualifications Framework and HE Standards Framework</td>
<td>HE Standards Panel provides independent advice</td>
<td>The Tertiary Education Quality and Standards Agency assesses performance of HEIs against HE Standards Framework</td>
<td>When an Australian university offers courses at an offshore campus, standards must be at least equivalent to those provided in Australia</td>
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<td>There is a strong regulatory control, also to control the highly privatised system. There is also a new resolution of the National Education Council on the recognition of foreign degrees, and the development of a centralized system for the recognition of foreign Diplomas</td>
<td>All higher-education institutions must be accredited in order to be allowed to confer diplomas of 'Bachelor', 'Master' and 'Doctor'. Until 2004 the system was quite complex, but it has since merged into a more straightforward policy plan after the establishment of the Higher Education Evaluation Centre of the Ministry of Education (HEEC). Several accreditation agencies operate in California. Students can only receive federal or state financial aid from accredited HEIs. Have been concerns, however, about the quality of private for-profit colleges. The tip of the pyramid has remained stronger than the base with funding cuts.</td>
<td>Germany does not have a national quality assessment system for the evaluation of teaching and research. The accreditation system consists of two levels. The German Accreditation Council is an umbrella organization that approves the actual accreditation agencies which validate degree programmes. Providers can choose the agency to evaluate their programmes, and can choose to get an additional accreditation for a particular degree programme from an international accreditation agency.</td>
<td>MHRD has overall responsibility for setting and monitoring quality, although its regulatory arms set and implement quality standards. Four regulatory bodies within the MHRD, i.e. (a) National Assessment and Accreditation Council (b) All India Council for Technical Education (c) Distance Education Council, and (d) Various bodies for professional education. Accreditation was voluntary until 2012. There are huge concerns about the level of quality and QA.</td>
<td>Admissions are linked to labour force needs. National Qualifications Framework is outcomes based. HEIs have internal quality processes. First round of audits by Higher Education Quality Committee focussed on fitness of purpose as well as fitness for purpose. This was followed by a quality enhancement project focussing on teaching and learning. The next round of audits will assess outcomes in institutional reviews.</td>
<td>Korea Council for University Education has responsibility for institutional accreditation. Programmatic accreditation is carried out by specialist authorities recognised by the Ministry of Education.</td>
<td>UK QA has influenced systems around the world. External review of universities by QAA. UK Quality Code for HE, developed by the QAA. Internal QA systems in HEIs. Engagement with professional, statutory and regulatory bodies. Engagement with stakeholders. Mechanisms to support improvements in quality. Measures to address student complaints. The Research Excellence Framework. The Teaching Excellence Framework.</td>
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## Case Studies on Higher Education Developments in Selected Countries: Summary Table

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<tr>
<th>Issues of interest for Ethiopia</th>
<th>Australia</th>
<th>Brazil</th>
<th>China</th>
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<tr>
<td>Mechanisms for regular review; consultative NQF</td>
<td>Deregulation and a strong private sector, but concerns about quality</td>
<td>Growth of enrolments</td>
<td>A differentiated and co-ordinating system</td>
<td>Access for all (no fees) with excellence and selection for some programmes</td>
<td>Confusion and inefficiency from complicated governance, funding and accreditation</td>
<td>The variety of access routes to HE including from TVET</td>
<td>Positive and negative experiences in dealing with rapid growth while focusing on equity and redress</td>
<td>Enrolments diverted away from humanities towards vocational qualifications seen as more useful for industrial development</td>
<td>Enrolments diverted from the arts to science</td>
<td>Despite expansion, UK has maintained global superiority and excellence in teaching, research and inventions</td>
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<td>Funding for access for disadvantaged groups</td>
<td>Systematic and co-ordinating of admissions, but university autonomy over entrance criteria</td>
<td>Concern about access for minorities and groups from isolated parts of the country</td>
<td>Attempt to move from traditional T&amp;L to giving more trust to students</td>
<td>Education a means to improve society and to reduce inequality</td>
<td>Science and technology regarded as important and these areas contain some of the best institutions</td>
<td>Differentiated and specialised university sector</td>
<td>Demographic crisis likely to result in enrolment decline up to 40% in next 12 years. More university places available in 2016 than school graduates. Closure of 100 universities by 2040 predicted</td>
<td>Universities Central Admissions Service is independent and sector-managed</td>
<td>Universities set own admissions criteria, sometimes requiring interview</td>
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<td>Central co-ordination of admissions, but university autonomy over entrance criteria</td>
<td>Diverse routes to HE and encouragement of access from vocational and adult learning</td>
<td>Attempt to conjugate state control with liberalisation, academic freedom, international collaboration and excellence</td>
<td>Attempt to move from traditional and homogenised system</td>
<td>Free education, on a means test</td>
<td>Concerns about quality and institutional capacity</td>
<td>Curricula and research responsive to needs of industry and economic development</td>
<td>National Benchmarking Tests which test readiness to enter HE</td>
<td>Diverse pathways to HE, including academic, vocational or VET</td>
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<tr>
<td>Access from vocational and adult learning</td>
<td>VET and TAFE systems in each state: VET qualifications transferable nationally</td>
<td>Concern about access for minorities and groups from isolated parts of the country</td>
<td>Attempt to move from traditional and homogenised system</td>
<td>Most of the enrolments at the large base of community colleges</td>
<td>Different from Anglo-Saxon model but just as successful with an excellent reputation</td>
<td>Blooming enrolments mask regional and gender differences</td>
<td>Enrolment decline likely to result in HE</td>
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