

# Regional Policy Implications of the Entrepreneurial University

Lessons from the ECIU

---

## WORKING PAPER 04/2019

**DOI:** 10.3990/4.2535-5686.2019.04

Available at <https://runinproject.eu/results/working-paper-series/>

### **Lisa Nieth**

Regio Twente (NL)

Centre for Higher Education Policy Studies (CHEPS) - Faculty of Behavioural, Management & Social Sciences – University of Twente (NL)

✉ [l.nieth@regiotwente.nl](mailto:l.nieth@regiotwente.nl)

🐦 [@lisa\\_nieth](https://twitter.com/lisa_nieth)

### **Paul Benneworth**

Department of Business Administration – Western Norway University of Applied Sciences (NO)

Centre for Higher Education Policy Studies (CHEPS) - Faculty of Behavioural, Management & Social Sciences – University of Twente (NL)

✉ [paul.benneworth@hvl.no](mailto:paul.benneworth@hvl.no) | [p.benneworth@utwente.nl](mailto:p.benneworth@utwente.nl)

🐦 [@heravalue](https://twitter.com/heravalue)



### **Abstract**

The chapter contributes to the literature and discussions on the regional engagement of universities, providing empirical evidence on academic engagement and how these academics can be motivated and encouraged by regional policy. The chapter specifically asks the question how do entrepreneurial universities create (or do not) frameworks which enable purposive actions by academic actors acting as institutional entrepreneurs to participate in regional development outcomes. The chapter draws upon case studies of three universities all recently actively promoting regional entrepreneurship activities in various ways at the institutional level. This chapter identifies the key tensions and dynamics of the entrepreneurial university's behaviour to propose a first reflection on how regional policy can be both supportive and steering for institutional entrepreneurs. The chapter concludes that because the connections between institutional entrepreneurs and regional partners are vital to collaboration undertaken – regional policy should devote more resources to building these critical links.

**Keywords:** Institutional entrepreneurs, Entrepreneurship, Academics, Universities, Regional Policy

**JEL:** I23, L26, O2, O3, R11, R58

# Regional Policy Implications of the Entrepreneurial University

LESSONS FROM THE ECIU

---

## Contents

Abstract.....	2
Introduction.....	4
Background .....	6
Individual Institutional Entrepreneurship Processes.....	16
Factors Affecting Regional Institutional Entrepreneurs' Behaviour? .....	25
Concluding Discussions: Creating Regional Policies that Support Academic Institutional Entrepreneurs .....	29
Acknowledgements .....	32
References.....	33

## Table of Figures

Figure 1 - Activities by Institutional Entrepreneurs (after Sotarauta and Suvinen, 2016) .....	9
--	---

## List of Tables

Table 1 - Factors that encourage and discourage university institutional entrepreneurs .....	26
Table 2 - Potential policy interventions to better support university institutional entrepreneurs .....	30

### **Introduction**

It is increasingly common to assert that growing policy demand for universities to be more relevant and to make their knowledge more widely available to society and that there is a new kind of university emerging in which creating societal contributions is a core institutional element (Alain & Redford, 2014; Benneworth, 2014). It is widely agreed that this involves shifts in the ways that universities take decisions, the ways that universities agree on which kinds of activities they should pursue, universities' internal cultures that promote external engagement, and the support infrastructures provided to encourage these interactions. Clark (1998) made this distinction in proposing the idea of the entrepreneurial university, in which these various governance elements would reinforce and coordinate activity to promote university entrepreneurship efforts. The idea of an entrepreneurial university has been complemented with other alternative visions for how universities may deliver societal missions, but the idea has undoubtedly retained a strong appeal, something that this volume underlines.

But we see in the enthusiasm for the idea of the entrepreneurial university, often driven by a desire to promote a particular set of economic benefits from university, a failure to engage properly with another characteristic of the university, that of a 'loosely coupled community'. Despite the fact that universities have undoubtedly become more centralised in terms of their governance and management in recent years, they remain knowledge institutions, and the knowledge processes that are often referred to by simple names such as teaching and research are often distinctive and even unique sets of activities reflecting both local circumstances but also the nature of the object under consideration (Benneworth, Pinheiro, & Karlsen, 2017). What holds for teaching and research also holds for universities' societally-

# Regional Policy Implications of the Entrepreneurial University

## LESSONS FROM THE ECIU

---

oriented knowledge processes, what Laredo (2007) referred to as the 'Third Mission', and in particular to entrepreneurial activities around universities. In their rush to create policies and support structures to build university entrepreneurship and engagement, there has been a tendency to focus on extremely economically restrictive versions of what it means to be entrepreneurial (often related exclusively to creating a high-technology venture), ignoring the manifold other knowledge practices and processes through which entrepreneurship can potentially be developed.

We therefore contend in this chapter that university entrepreneurship strategies reflect the ways that the knowledge communities within universities have the potential to be entrepreneurial in their existing knowledge activities. Consequently, we propose to consider the ways in which individuals undertaking entrepreneurial activities within their knowledge processes shape the wider institutional environment and support structures for entrepreneurship, considering these individuals as institutional entrepreneurs. In particular, we consider the ways in which university institutional entrepreneurs attempt to create new activities to respond to regional knowledge needs, addressing particular problems that businesses face in accessing university knowledge, and the ways in which these individual acts of institutional entrepreneurship can concatenate into a broader process of institutional change, building entrepreneurial universities from the bottom-up. We specifically ask the question *how do entrepreneurial universities create (or do not) frameworks which enable purposive actions by academic actors to participate in regional development outcomes.*

To answer this question, we develop a conceptual framework to explore these acts of institutional entrepreneurship by university-based knowledge practitioners, in

# Regional Policy Implications of the Entrepreneurial University

## LESSONS FROM THE ECIU

---

seeking to incorporate regional partners in their teaching, research and third mission activities. We explore this framework drawing on case studies of three universities which have all recently been active in seeking to promote regional entrepreneurship activities in various ways at the institutional level. We highlight three efforts made by these institutions to develop more generalised institutional infrastructures that support regional entrepreneurship activity, pointing out that these efforts can be successful but at the same time policy interventions can create tensions for institutional entrepreneurs by making it harder for them to construct these activities in ways that meet both university and regional needs. We conclude by contending that a new approach is needed to understand the ways in which universities contribute via entrepreneurial processes to regional innovation-based development, and recommend that policy-makers develop more nuanced instruments and tools to empower institutional entrepreneurship rather than attempting to instrumentally channel and direct it towards regional ends.

### **Background**

#### *Regional Innovation Ecosystems, System Failures and Filling the Gaps*

Today, universities are seen as important innovation and knowledge capital creators and circulators (Yigitcanlar, 2010), expected to contribute to their immediate surroundings by enhancing its innovation capacity and thereby spurring economic development (Arbo & Benneworth, 2007). Within the discussion of how innovation is spurred between diverse partners, the regional innovation system (RIS) approach has received attention, emphasising that knowledge and innovation is created and interchanged between different institutions and actors within two subsystems, the knowledge generation and the knowledge exploration subsystem (Asheim, Grillitisch, & Trippel, 2016; Cooke, Gomez Uranga, & Etxebarria, 1997).

# Regional Policy Implications of the Entrepreneurial University

## LESSONS FROM THE ECIU

---

Thus, the existence of these actors and institutions in close proximity, and the successful orchestration of them, enhance the exchange of knowledge and innovation that consequently lead to regional development.

This systemic understanding has led to the idea that if components are missing in the RISs or if the orchestration of the system components is not successful, innovation is less likely to happen. Accordingly, policy makers and researchers have been asking how to fill the gaps that show systematic challenges. Nevertheless, the RIS concept itself has been described as being too static (Edquist, 2010) and while it provides a good method for presenting the current situation, it does not provide the tools to understand how to build change. Thus, mapping out regional innovation systems and 'filling the pre-defined gaps' with policy interventions is not enough to advance a region (Boschma, 2014).

Following the method of Benneworth et al. (2017), we argue that gaps in regional innovation systems cannot 'just' be filled in a simple manner. There is no 'ideal' RIS with a model-like setup that can be copy-pasted into other regions in the hope of achieving higher degrees of innovation and development. Instead, case-specific solutions to potential system failures have to be actively constructed. The kind of activities that can improve systemic contexts which we will focus on are at micro level, conducted by agents within the RIS. In the following, we will therefore look at the actors that conduct these micro-scale activities with the potential to reconfigure the system around them: institutional entrepreneurs.

### *Institutional Entrepreneurship*

The lens we are going to use to explore RIS failures and the ways that solutions are constructed is institutional change and agency – combined in the notion of

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

institutional entrepreneurship “as a way to reintroduce actors’ agency to institutional analysis” (Leca, Battilana, & Boxenbaum, 2009, p. 3). Institutions have been described as the socially constructed rules of the game (North, 1990) that define the patterns of behaviour of agents within their institutional system. Consequently, systematic and institutional change is a complex process that involves different agents which are continuously influenced by the same institutions they are trying to change. Sotarauta and Suvinen (2017, p. 12) highlight that institutional change, often construed as being straightforward (“melt the old, change, freeze again”), can, in reality, be seen as “processual” and a nonstop equilibrium seeking patchwork of action. Thus, in order to understand and stimulate institutional change, agentic processes and activities have to be examined. Benneworth et al. (2017) point out that “institutional entrepreneurs mobilize resources and actionable knowledge to create/transform ‘institutions’ to address RIS inefficiencies”.

Institutional entrepreneurship is understood as a form of agency with a processual and collective nature – the different institutional entrepreneurs are dependent on each other and the activities that they assume. Institutional entrepreneurs cannot change institutions on their own but must mobilise allies and develop cooperation in a process of collective action (Leca et al., 2009). Effective institutional entrepreneurship does not simply require the identification or empowering of leaders or heroes, but about the process of institutional entrepreneurship. This latter process of institutional entrepreneurship includes the mobilisation of skills, resources, constituents and the de-legitimisation of existing arrangement while establishing and legitimising new arrangements. Sotarauta and Suvinen (2016, p. 7) suggest that institutional entrepreneurs follow particular activities (**Error!**



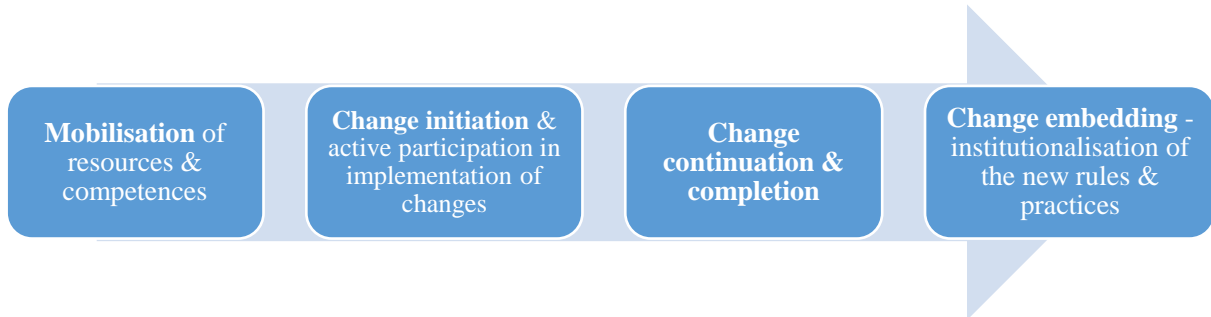
# Regional Policy Implications of the Entrepreneurial University

## LESSONS FROM THE ECIU

---

**Reference source not found.**) with the first phases being initiated through agentic processes that can be unplanned and indirect – conducted by agents in a very personal and intuitive manner.

*Figure 1 - Activities by Institutional Entrepreneurs (after Sotarauta and Suvinen, 2016)*



Sotarauta and Pulkkinen (2011) highlight that relatively little academic and policy literature addresses individual agents and their role as active change agents in regional development. And thus, in this chapter we extend our focus to explore cases where academics are behaving in various ways that create new systematic opportunities for regional economic development, drawing upon a literature of university actors as institutional entrepreneurs (Battilana, Leca, & Boxenbaum, 2009; Garud, Hardy, & Maguire, 2007; Sotarauta & Pulkkinen, 2011).

### *Academics as Institutional Entrepreneurs*

There has been relatively limited attention to date for the roles played by academics as institutional entrepreneurs, with notable exceptions such as Pugh, Lamine, Jack, and Hamilton (2018) who examine the role of academics from entrepreneurship departments in driving regional economic development, and by Aranguren, Guibert, Valdaliso, and Wilson (2016) who study universities and academics that seek to act as ‘change agents’ in the development processes of their regions.

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

Because universities are loosely coupled communities (Weick, 1976) the institutional entrepreneurship lens seems to provide a useful way to understand how people attempting to realise different activities change the nature of the organisation or even the system they are in. We are thus particularly concerned with the ways that actors within universities are constructing solutions to fill gaps in RISs. The individual academic will be analysed in his/her role as an 'institutional entrepreneur' (IE), following the processual framework defined above. From this perspective, we regard the IE as important members of the local entrepreneurial ecosystem, a link to local communities and companies as well as driving forces for higher economic development outcomes. It is those development outcomes that "require social action by knowledgeable pioneering individuals, universities, companies and/or governments" (Simmie, 2012, p. 769). At the same time, the "unplanned, highly personal and intuitive nature of institutional agency" (Ritvala & Kleymann, 2012, p. 493) can be observed in that academics often do not realise the depth of their activities and the impact those can have.

In contrast to treating institutional entrepreneurs as 'simple' components of the system that shape and reflect the instrumental intentions of their managers, we see them as purposive agents. To date, there has been a tendency to assume that university agency lies with the senior management level, and decisions taken around strategies and policies are straightforwardly implemented by academics as agents (top-down change). By contrast – and in this chapter's approach – we contend that part of the act of institutional entrepreneurship involves changing the universities in ways that make them more responsive to regional needs (bottom-up change).

# Regional Policy Implications of the Entrepreneurial University

## LESSONS FROM THE ECIU

---

In practice this requires a much wider scope of analysis, not restricted exclusively to the formal mechanisms and structures created by universities for the purposes of engagement (also described as hard or 'commercialization'), but the pathways that the academics themselves create to engage in informal, soft activities and engagement that often happens through networks. As Pugh et al. (2018) find: "informal linkages to the region have a more complex structure, formation and enactment, and are often curated or developed by individuals". These softer, networked activities mobilised by institutional entrepreneurs can also have wider institutional effects, both by interacting with and becoming integrated into hard engagement activities, but also in shaping the creation of new formal policies and strategies related to regional engagement.

In this chapter, we specifically focus on the ways in which regional policy makers can encourage institutional entrepreneurs to undertake engagement activities that lead to these institutional shifts within universities that in turn increase the overall university structural orientation towards regional development and structural contributions to regional economic development. We aim to look at the ways in which academic institutional entrepreneurs were empowered or constrained to undertake acts of institutional innovation creating soft networks, and the consequences that had for the embedding of those soft networks within the hard infrastructures and central strategies and policies of their parent universities. We will apply the framework above (**Error! Reference source not found.**) to address the research question of "How can regional policy activate and support university institutional entrepreneurs active in their regions?" We aim to understand how regional policies can support those institutional entrepreneurs already engaged and motivate those actors that are not. This is particularly relevant as institutional

entrepreneurs are often not as 'free' as expected due to "rigid structures, politics, major economic layers, and formal policies" (Sotarauta & Pulkkinen, 2011).

## **METHODOLOGY & CASE STUDIES**

### *Methods*

Because we want to analyse diverse activities of academics as institutional entrepreneurs, we will adopt an explorative case study approach. This chapter thus provides a detailed, comparative case study of three universities and their respective peripheral regions: Twente (NL), Aveiro (PT) and Aalborg (DK). These three universities and their regions have been selected in that they have all made substantive efforts in recent decades to stimulate regional innovation and universities have been at the forefront of these efforts. All three universities are members of the European Consortium of Innovative Universities (ECIU), a group of universities "with collective emphasis on innovation, creativity and societal impact, driving the development of a knowledge-based economy" (ECIU, 2019a) - reviewed in the next section.

The data for the three cases were collected by one of the researchers through 21 interviews with academics and key policy stakeholders in all three regions as well as document analysis, always aiming to ensure the case studies' direct comparability. The documents used, such as newspaper articles, project reports and collaboration agreements, were used to contextualise the information given within the interviews. The interviews followed a semi-structured pattern with an interview guide that assured the overall direction, the diversity of interview partners as well as the particular questions and thematic focus varied from case to case. Within the three cases, it is possible to see the effects played by different regional

# Regional Policy Implications of the Entrepreneurial University

## LESSONS FROM THE ECIU

---

contexts, in terms of different regional settings, university management styles and regional stakeholders. The interviews were conducted under a condition of confidentiality and anonymity; thus, the interview partners identities cannot be exposed.

### *Introduction to the Case Studies*

The ECIU is a consortium of universities who profile themselves in terms of the contributions they make through their entrepreneurial, proactive and innovative regional engagement practices. Founded in 1997, the universities put high emphasis on innovation and entrepreneurship and aim to develop an entrepreneurial and innovative culture within their walls as well as bring it to industry and overall society. They describe themselves as “pioneers in pursuing an innovation agenda” (ECIU, 2019b) and have shown to develop a wide set of experiences on how to deal with innovation and entrepreneurship in their education and research activities as well as their knowledge exchange activities. We can see that ECIU universities make a certain claim to be regionally focused and to facilitate internal as well as external innovation and entrepreneurship. Therefore, they seem like a reasonable sample of universities within which we might be able to address our research question. All three universities have shown relevance to regional governance arrangements, as they extended their traditional education and research missions to include missions of engagement with the industry and development of their surroundings overall.

### *University of Twente (UT)*

UT is located between the cities of Enschede and Hengelo in the region of Twente on the eastern border of the Netherlands. The technical university was created

# Regional Policy Implications of the Entrepreneurial University

## LESSONS FROM THE ECIU

---

1961 to “reanimate” a region suffering from the consequence of an economic downfall driven by the decline of the textile industry and associated sectors such as metal-working and precision engineering (Benneworth & Hospers, 2007). Created as an “innovative and experimental institution... [that] survived largely by reinventing itself as a source of new growth for the region” (Benneworth & Pinheiro, 2017, p. 311), the UT’s regional mission has materialised itself through different activities and projects according to different leadership styles and prioritisation efforts. Early examples of this are the implantation of the spin off & entrepreneurship programme TOP since 1984, the creation of the business and science park Kennispunt together with other regional stakeholders in 1989 as well as the role of the UT in diverse regional development programmes and boards nowadays. More recently, emphasis has shifted to creating strategic investment and reach-out units, such as the Fraunhofer Project Centre, which will be the focus of the UT case presented in this paper.

### *University of Aveiro (UA)*

UA is situated in the Centro region of Portugal in the municipality of Aveiro, which is part of the intermunicipal community of the Region of Aveiro (CIRA) with 370,000 inhabitants. It is a university that was created in order to focus on and attend to regional needs, with many of the initial degree programmes at the time of its creation being focused to meet the demands/needs of the local industry (Rodrigues & Teles, 2017). Being committed to its region and the existent regional partners since its beginning in 1973, it has developed a range of infrastructures that facilitate the exchange of knowledge and the transfer of technology such as the technology transfer unit UATEC, incubator facilities, a pro-rector for “interinstitutional cooperation in the areas of regional development and city

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

policy” and a vice rector for “university-Society cooperation”. a close partnership between the university, CIRA and the business association AIDA emerged out of their collective work in defining Territorial Development Strategies for the 2008-2014 and 2014–2020 periods. Since 2007, these partners have worked to realise a creative science park, with the Creative Science Park of the Aveiro region opening in 2018. That example provides the basis for the empirical evidence regarding the Aveiro case, which focuses specifically upon consistency and commitment of engagement between the partners.

#### *Aalborg University (AAU)*

Similar to the first 2 examples, AAU was established in 1973/74 with the hope of maintaining the region attractiveness and renewing the local industry structure at the time dominated by construction, shipbuilding, food and agriculture. The university is based in the city of Aalborg that is also the capital of the region of North Denmark, encompassing 11 municipalities with a population of about 580,000. In order to enhance AAU’s connection to the regional industry, the first degrees established showed a strong emphasis on technical and engineering fields. The pedagogical model of problem-based learning (PBL) was established at the point that the university has created, enhancing the engagement with external partners through applied project work of students. Today, the regional industry has a strong technology focus and has been described as R&D-based – characteristics that are often traced back to the strong link to the AAU. Examples of strong engagement between the university and the regional stakeholders are AAU’s engagement in the science park NOVI and common cluster initiatives that are internationally known (such as the ICT cluster BrainsBusiness). The initiative

analysed in section 4 is a Match Making System established in order to have clearly defined connectors between AAU and its external partners.

### **Individual Institutional Entrepreneurship Processes**

In this section, we set out the activities undertaken by academics as institutional entrepreneurs following the four-step framework outlined above. The case of the Fraunhofer illustrates the energy and effort required to fit an external partner into a university campus, even where the university has notionally created a set of mechanisms to make it easier for external agents to set up within the former campus area. The Creative Science Park case in Aveiro illustrates the ways in which academics can create a conceptual space for a notion then mobilising policy partners to support and realise that notion, even if the passage of the idea to those partners can lead to unpredictable deviations from the original academic idea. The Matchmakers scheme at Aalborg University highlights that institutional entrepreneurs can and do thrive perfectly well away from the managing centre, and even if university senior managers withdraw support for a scheme, institutional entrepreneurs may continue their activities despite these policy shifts.

#### *Fraunhofer Project Centre*

The creation of the FPC can trace its roots back to a long-standing set of ad hominem collaborations between researchers at the University of Twente, and those at the Fraunhofer Institute – Europe’s largest application-oriented research organization both at the level of the central management as well as specifically with the Aachen Institute for Production Technology (IPT). In January 2017 the UT, Fraunhofer IPT and Saxion University of Applied Sciences established a joint Fraunhofer Project Centre (FPC) for “Design and Production Engineering in



## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

Complex High-Tech Systems". This had been prompted by a number of UT academics visiting Fraunhofer installations in regions similar to the Twente region, which in turn kick-started a discussion amongst different partners within Twente as to whether a project centre in Twente could serve as a mechanism to link the UT with local SMEs.

In ***mobilising*** the opportunity to create a Fraunhofer facility at the University of Twente, it was necessary to find a way to fit that external structure into the overall structure of the university. The FPC was initially placed within the department of mechanical engineering, but it quickly became clear that a department did not have the necessary flexibility in terms of risk management or staff policy to support this centre. To promote the idea of the FPC as a university-wide activity, project leaders projected the idea that it offered a wide range of institutional connections and opportunities, with minimal risk. The decision of the university board to approve the formal establishment of the system indicates that some manner was found to fit FPC into the university's structure. However, project staff reported that simply arranging this fit between the FPC model and the UT business model involved a substantive and draining struggle for the project leaders before any progress had been achieved around the practicalities of establishing and developing the centre. Indeed, the difficulties that were experienced in fitting FPC into the structures of the UT led some interviewees to remark that simply getting the permission of the university felt like a victory in itself.

***Change initiation*** happened when the idea transformed into a project and the search for funding started. The German Fraunhofer funding model envisaged that there would be a mix for the funding of 1/3 public money, 1/3 private investment/industry and 1/3 project money. Fitting that funding model fit into the

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

Dutch environment was an institutional challenge faced by the actors involved. Different institutional entrepreneurs within UT were able to activate their regional networks to arrange that the Province of Overijssel would cover the public financing element. An FPC manager commented, "I cannot say that it only [worked out] because of personal relationships, but if you have a good story, and you know who to access and you make them understand the rationale behind the direction you want to go, you can convince them". Similarly, a number of private companies – many regional – were introduced to the FPC initiative, and first "quick scans" would later lead to bigger projects. The brand name of Fraunhofer – as well as already existing connections to the industry (for instance through student placements) – were regarded as being supportive in creating a base of interested companies.

Although the centre was initiated and running, the ***continuation of change*** turned out to be complicated as the FPC did not fit into the prevailing institutional setting of the university. Thus, many small developments, ideas or changes became disruptive and required immense efforts by the institutional entrepreneurs. Examples for these challenges were the initial lack of interest and motivation of professors to participate in Fraunhofer projects due to academic pressures, the prohibition on putting up a sign of the centre due to university rules that forbade names & logos around the campus, issues around square meter rent prices for the Fraunhofer installations, etc. The phase showed that building upon what had already been established was difficult. Objectively the project was fulfilling every expectation that was set out; "we had a business plan and we are always above the expectations" it was nevertheless that tensions prevailed.

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

Finally, it became clear that only limited *institutional embedding* had taken place. The mismatch of the Fraunhofer Project Center with the institutional systems of the UT became clear as the institutional entrepreneurs found themselves having to continuously push for the FPC to make the next small steps in its development. At the time of writing a discussion of moving the FPC to the adjacent Business and Science Park – therefore offsite from the university – had started. A person involved in this process claimed that with this step it would “become really visible as a separate entity” and would be able to interact closer with the industry. At the same time, instead of becoming more embedded in the university’s infrastructure, the FPC was leaving the university system to become independent of the university, something which we contend with fits with the idea of the FPC rationally not fitting in the university and “being treated as foreign body”.

#### *Creative Science Park of Aveiro Region*

The Creative Science Part of the Aveiro Region was opened in 2018, after a creation process between a set of diverse stakeholders lasting more than ten years. The project started with some very enthusiastic stakeholders within the university that had the idea of building upon the already existing relationship with regional governmental bodies such as municipalities and the intermunicipal community (CIRA) as well as with companies and industry associations. A professor involved in the process explained “it all started exactly in the university and then we looked for partners in the region. Then we started to discuss with the municipalities. It evolved from that”. While different ideas about what could be created (such as an industrial area or a real estate park) were exchanged between the partners and the feasibility of the different ideas was checked, the idea of a science park ultimately emerged

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

it would not lead to increased competition between the already existing industrial zones of the municipalities.

In terms of **mobilisation**, different institutional entrepreneurs within the university clearly played different roles in the project. There was extensive research conducted by different actors on possible science park concepts that would fit with the regions setting and necessities. These ideas were exchanged back and forth between the university actors and other stakeholders, with the aim of defining the ideal science park model that would suit everyone's interest. A UA employee involved at this stage of the process highlights the ability of the involved institutional entrepreneur in "understand the language of people in the region [... being able to] do this translation between one side and the other." Through the institutional entrepreneur's international networks direct connections and communication with science parks around the world were established, experiences exchanged and even some fact-finding mission to these science parks conducted.

**Change initiation** happened when an (apparently) joint decision on the science park model was made and funding distribution between the partners was agreed upon as well as external funding being secured. The chosen model, heavily based on the science park in Tampere, Finland, was explained to focus on the existing companies in the region, and a university employee explained that it would be "closer to firms than the traditional science and technology park". What was not clear to the different stakeholders at this phase was that they had only supposedly agreed on a model, while in later stages it became clear that especially the municipalities were still hoping to attract new companies – thereby seeing it primarily as a real estate project. As was later to become clear, there was no real consensus on the content of what had been agreed, whether it was to construct a

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

set of technology transfer services or to attract new businesses, and it was the latter that was important to municipalities. A university employer critically claimed that “what they [the other participants of the study trips] saw were buildings and not so much these institutional bases, which is much more important than the building”.

The failure of understanding each other’s definitions of the ‘common’ idea – and realising that there was not as much commonality as assumed – was the start of a **change continuation** coined by complications and drawbacks. Competitions around the selection of the suitable location of the future science park as well as comprehensive changes within the UA teams were reported by the interview partners. Especially the second point, of university employees leaving their positions within the teams that were engaged with the science park process, shows that IE became disengaged at this stage. An interview partner involved before and after these changes explained that with the entrance of a rector team a “more traditional way of seeing these sorts of knowledge transfer” was introduced, thereby challenging the more perspectives and activities conducted by many of the IE. As the different partners were busy fighting their own battles of location and team membership, they failed to present themselves as a coherent body standing against additional external pressures – such as demonstration of an environmental agency against the chosen location – that emerged along the way.

The story of the science park and the role of the academic institutional entrepreneurs shows nuances of successful change motivation and initiation as well as complication throughout the change imitation and **embedding**. While the university and the respective IEs were very enthusiastic in the beginning, conducting extensive groundwork, the model of the park as well as the changing

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

support through a new rectory team suddenly turned the process around. The original plans of the institutional entrepreneurs were thus questioned, the university interests not guaranteed – one could even say they were trumped – and therefore many institutional entrepreneurs disengaged. The science park was still opened – although it took double the time than planned – but the university's engagement within this process was slowed down.

#### *Matchmaking System*

In 2007-2008, Aalborg University, in cooperation with the North Denmark Region, initiated the creation of a new cooperation infrastructure between the university and its external partners, especially those in the business promotion system. The new infrastructure had the goal to facilitate the exchange of knowledge between the university and external stakeholders, with a particular focus on companies such as SMEs who had limited connections to AAU – often found in the outermost areas of the region. This new infrastructure was to consist of two elements, a matchmaking secretariat tasked with handling project management as well as the organisation of matchmaking activities and so-called 'matchmakers' tasked with becoming knowledgeable intersections between the university and third parties. Three categories of matchmakers were created: (1) university-internal matchmakers (researchers in each faculty), (2) university-external matchmakers (in municipalities, business associations and other institutions) and (3) student 'matchers' (students with special responsibility for promoting the students' collaboration with the business community).

The project was initiated by different stakeholders around AAU Innovation, aiming to create new entry and exit points to and from the university. A university manager

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

very involved in this process explained that the goal was not to centralise engagement tasks but to **mobilise** more stakeholders and 'build' new doors. They clarified that they were applying a 'no-wrong-door' policy in contrast to the often praised 'one-door' policy. This model was seen as a clear fit to the regional needs and funding was made available by the regional growth forum, a body combining different stakeholders within the field of regional development who are involved in the decisions on the distribution of European and national funds (OECD, 2009). In the first phases of funding, the matchmaking secretariat was installed and the identification and induction of match makers started. The deans of the different departments, as well as managers of municipalities and business associations, were asked to appoint matchmakers within their institutions. Interview partners claimed that most of these newly appointed match makers were already engaging with external partners and therefore did not have to change their activities in any significant way.

**Change initiation** happened in that the appointed matchmakers started getting to know each other personally – as well as the institutions which they were representing – through first meetings and activities. An example of such a meeting was the annual matchmaking conference in which keynotes are given, institutions are introduced and an informal way of getting to know each other was established. While some of these activities were described to be rather symbolic and it was questioned whether they fulfilled the matchmaking purpose – such as the official awarding of 'matchmaking certificates' – other participants explained that they were able to create new contacts and a better understanding of the partners needs and possibilities through the new match making infrastructure. In parallel, the matchmaking secretariat started introducing activities such as 'municipality tours'

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

(taking students to companies in specific municipalities) or 'solution camps' (a company posing a particular challenge and students participating in a structured process of defining possible solutions to it). These different activities were said to have systemised some of the existing activities and created new forms of engagement as well as contacts.

After the first years of the match making project terminated, some internal changes of the university management, a restructuring of AAU Innovation and changes in leadership of the university as well as the match making project marked a change in the project's development. While the matchmakers that were already well connected **continued** with their matchmaking tasks, potential new matchmakers (who received the matchmaking tasks when people left their positions) were often not aware of what this actually meant. An external matchmaker claimed that they were never contacted, did not know what was going on within the university and had no clear idea of what the task actually entailed. New leadership started setting new priorities, aiming at one door policies and introducing the idea that engagement and collaboration had to bring clear advantages for AAU. While the system still received funding, the new priorities shifted the nature of the infrastructure. A manager within the system explained that while the "old innovation director was very much focused on listening to what's going on out there and what they [potential external partners] want", the new management was focused on the university's needs and prioritised the educational system. This new focus of the matchmaking project was said to be on proactively connecting students to companies, giving external match makers as well as researchers a passive role.



## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

In the beginning, the project, activities and tasks were managed flexibly and engagement between stakeholders was said to have started to grow. Nevertheless, the long-term changes that were hoped to be achieved according to the original plans of the match making system were not easily **embedded** into the university structure. A manager within the matchmaking project claimed that the system was not “properly implemented at the university”. While the model of systemic transformation seemed to have worked in the first years, it failed to deal with internal tensions inside the university after leadership changes and an exogenous transformation occurred due to the shift of priorities. While different disciplines had different knowledge and production needs (different doors), the match making infrastructure seemed to have been a better fit for some departments than for others. Thus, the attempt by the second team of match making leadership to streamline knowledge engagement and create a rational entry system to the university challenged the idea of the original IEs.

### **Factors Affecting Regional Institutional Entrepreneurs’ Behaviour?**

On the basis of the three case studies, we can recognise different elements that motivate and advance institutional entrepreneurs as well as elements that demotivate or even block the advancement of institutional entrepreneurs. We will, therefore, outline some of these positive and negative elements and then, in the next section, identify how regional policy can make use of these elements, play to the intrinsic motivation of academics, and thereby create mechanisms that allow academics to flourish as institutional entrepreneurs. These factors are summarised in table 1 below.

# Regional Policy Implications of the Entrepreneurial University

## LESSONS FROM THE ECIU

*Table 1 - Factors that encourage and discourage university institutional entrepreneurs*

<b>Factors encouraging institutional entrepreneurs</b>	<b>Factors discouraging institutional entrepreneurs</b>
Regional partners signaling to IEs that their ideas are of value and should be considered	Impossibility for long-term planning in term of the IEs due to continuous university-internal changes
Regional partners considering the ideas of IE and entering co-creation processes to develop the ideas further	Inflexibility in terms of creating settings that allow trial and error phases for testing new projects and institutions
Continued support of external partners through complicated times even after some IEs disengaged	Complications in connecting global pipelines with local partners

Source: Author's own elaboration

Firstly, we were able to realise that what helped the institutional entrepreneurs in our cases was the fact that regional partners gave the academics clear **value signals**. In all three case study regions, the academics – motivated by the wish to ‘create something big’ within their particular academic context – started talking to regional partners from institutions such as companies, municipalities or cities. This was very evident in the case of Aveiro and Twente, where the IEs were already very well connected to mayors and leaders of the main business associations (Aveiro) as well as regional companies and decision makers at province level (Twente). Thus, the IEs were able to approach people directly and translate their ideas into concrete plans (a science park or a Fraunhofer centre) that were received by regional partners with interest and support. The fact that regional partners signaled to the IEs that their ideas were ‘something worth doing’ then gave the academics the signal to keep working on it internally.

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

This first element relates to the second, which was the **co-creation** of the idea. Regional partners did not straightforwardly adopt the academic ideas but rather took a step forward together – from discussing all the possibilities to deciding which possibility they want. By constructively thinking through the academic's initial idea, regional partners and IEs created something around which the partnership could coalesce to co-create a proof of concept. The best example of this was seen in Aveiro with the emergence of the idea of creating the science park as a project owned and realised by all regional partners as a joint initiative. Similarly, in North Denmark, the business development offices of municipalities, the regional growth house and representative of industry associations became very involved in co-defining how their regional match makers would be and how they would evolve within the matchmaking infrastructure. Thus, the academics were particularly motivated by the encouragement and involvement of regional partners in translating their initial idea into reality.

Our case studies all show that **continued support and engagement from external stakeholders through difficult periods** was vital for initiatives' survival. Stakeholders such as governmental bodies or business partners kept engaged in the different projects even after some academic IEs disengaged due to the height of the internal hurdles or personal complications/disagreements. The matchmaking infrastructure provides an interesting case in this regard with some partners disengaging after the internal university changes triggered complications in the change process; nevertheless, there were some partners from the region and the municipalities that did not quit at that point, and kept engaging with the IEs in order to keep the project alive and shape the future of it. Similarly, in the case of the CSP of Aveiro, there were changes in the stakeholder constellation with some

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

IEs leaving the project, with leadership was then taken over by other partners. Although these partners might have shifted the priorities of the project significantly and lengthened the duration of the creation projects, it is clear that this ongoing support was necessary to ensure that the science park was eventually created.

We have also been able to recognize elements that blocked the IEs in the three different cases. Firstly, internal institutional change was undermined by the fact that there was no possibility for the IEs to plan or think **long-term**. A significant example of this was the changes in the matchmaking project after institutionalisation seemed to have been working fine in the first years. The changes in the university and match making leadership, the modification in terms of priority areas, and the projectisation of the matchmaking infrastructure clearly slowed down the embedding process and prevented institutionalisation. Similarly, due to elections of the new rector in 2018 at the University of Aveiro, a race to deliver the CSP started because the rector still wanted to open up this new infrastructure. It was then opened while still being largely empty and some interview partners claimed it was not yet the right time.

Secondly, we can identify examples of a **missing flexibility in terms of the setup and installation** of these new projects within the existing university infrastructures. In the case of the FPC in Twente, difficulties were appeared when the centre was first coupled to a specific department – experiencing restrains in terms of hiring new personal and financial freedom. Thus, IEs promoted the idea of de-coupling the centre from any department and leaving it ‘independent’ under the direct supervision of the university board – a process that took much times, resources and energy as the university was not prepared/not flexible enough to test such a new setting.

Finally, in all three regions the IEs aimed to create **global pipelines into local buzz** partnerships. This was most evident in Twente and Aveiro: The Fraunhofer project centre was created with the goal to conducting internationally relevant research in the area of design and production engineering which was then supposed to be applied to regional SMEs. In Aveiro, the CSP was aimed at attracting international researchers, themes and projects that would then connect to the regional companies and create local buzz in the 11 municipalities. While, Fraunhofer got the global pipeline, it did not necessarily create the local buzz it attempted to – the focus on local cross fertilisation was partly replaced by focusing on international companies from anywhere in the Netherlands and Germany.

### **Concluding Discussions: Creating Regional Policies that Support Academic Institutional Entrepreneurs**

In this chapter, we have asked the research question of how regional policy can activate and support institutional entrepreneurs. By exploring three case studies of institutional change processes initiated by academics in universities that claim to be very engaging and open to their surroundings and innovative change, we highlighted a number of elements that have motivated change and elements that have hindered the change embedding. We explored how institutional entrepreneurs in universities can create new institutions through a process in which change is first mobilised, then initiated and continued and finally embedded (**Error! Reference source not found.**). In the following, we will thus explore what regional policy can learn from the above outlined motivating and blocking elements and how it can react in order to secure more institutional entrepreneurs. These policy findings are summarised in Table 2 below.

# Regional Policy Implications of the Entrepreneurial University

## LESSONS FROM THE ECIU

Table 2 - Potential policy interventions to better support university institutional entrepreneurs

Supporting encouragement of institutional entrepreneurs	Addressing discouragement of institutional entrepreneurs
Create an apparatus that allows academics to translate intangible ideas into deliverable, tangible outcomes	Secure long-term frameworks by demanding institutions to sign up for long-term planning periods
Create opportunity spaces for regional stakeholders to co-create and test ideas	Encourage the creation of 'test spaces' in institutions that allow for checking whether/how new institutional settings could work
Continue support even through complicated phases as the partners might need some time to re-focus	Target the regional and international stakeholders and creating opportunities to combine their knowledge, interest and aims

Source: Author's own elaboration

In terms of **value signalling** and **co-creating** ideas and projects, regional policy could create a mechanism/apparatus that would allow academics who tend to have intangible ideas to deliver tangible outcomes. Thus, the regional policy should provide a way to link the abstract concept of IEs in universities to produce the possibility for impact through projects. This is particularly important as by giving regional partners the opportunity to signal that the academic's ideas are valuable and important and by participating in the creation of a common project, the situation is in contrast to the common discourse of academics being ivory tower researchers, far away from the reality. Regional policies should **support regional stakeholders through difficult phases**, as the constellation of engaged partners might change and new stakeholders – together with the still central IEs – might require additional time to shift focus. It is natural in the circle of projects and institutional changes that some actors disengage and new actors become

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

engaged, thus it is vital that policies give this freedom and do not stop supporting the original missions of IEs just because there might be some complications.

In terms of the need for the possibility of institutional entrepreneurs to plan **long-term**, the regional policy should encourage universities to not continuously change priorities and instead support long-term trajectories. We have seen that academics can become demotivated by nonstop shifting of internal strategic frameworks and priorities of universities and thus regional policy should secure long-term frameworks. By demanding institutions to sign up for a long-term period, IEs will have more reasonable timeframes to actually initiate, continue and embed change. Secondly, regional policies should encourage universities and other institutions to become more **flexible** in terms of testing new institutional set ups. This could give IEs the opportunity to test the projects and find the suitable setting in which they can flourish. Finally, regional policy needs to stimulate that IE build broader **international** connections that are relevant for the **regional** stakeholders through facilitating universities to attract international knowledge and translating as well as embed this knowledge to regional needs. Policy has to work on both sides, the international and local. This also means that regional policy has to tolerate blue-sky research, as it is a mechanism for the creation of global pipelines.

We know the limitations of drawing broader conclusions from three case studies, nevertheless, we seek to claim that this chapter allows us to highlight the important role of institutional entrepreneurs in universities for the engagement with the region and the start of new institutional practices. Through considering the link between institutional entrepreneurs and regional policy, we find that regional policy has an important role to play in the regional entrepreneurial ecosystem. As

evidence from Nieth (2019) has elsewhere suggested, tensions that might arise can be due to potentially institutional mismatches.

The chapter contributes to the literature and discussions on the regional engagement of universities, providing empirical evidence on academic engagement and how these academics can be motivated and encouraged by regional policy. Within this chapter we identify some of the key tensions and dynamics of the entrepreneurial behaviour of universities in general and institutional entrepreneurs in particular and give a first reflection on how regional policy can be both supportive and steering for IEs. We conclude that – because the connections between the IEs and regional partners are vital to the activities undertaken – encouraging and building these links is a critical element that should be enhanced through regional policy.

### **Acknowledgements**

The project has received funding from the European Union’s Horizon 2020 Research and Innovation programme under MSCA-ITN Grant agreement No. 722295. Many thanks are also due to the interviewees who freely and generously gave their time to assist with our research. Any errors or omissions remain the responsibility of the authors.



### References

- Alain, F., & Redford, D. (Eds.). (2014). *Handbook on the entrepreneurial university*. Cheltenham, UK: Edward Elgar.
- Aranguren, M. J., Guibert, J. M., Valdaliso, J., & Wilson, J. (2016). Academic institutions as change agents for territorial development. *Industry & Higher Education*, 30(1), 27-40.
- Arbo, P., & Benneworth, P. (2007). *Understanding the regional contribution of higher education institutions: A literature review* Retrieved from
- Asheim, B., Grillitisch, M., & Trippel, M. (2016). Regional innovation systems: past–present–future. In R. Shearmur, C. Carrincazeaux, & D. Doloreux (Eds.), *Handbook on the Geographies of Innovation*. Cheltenham: Edward Elgar.
- Battilana, J., Leca, B., & Boxenbaum, E. (2009). How Actors Change Institutions: Towards a Theory of Institutional Entrepreneurship. *Academy of Management Annals*, 3(1), 65-107. doi:10.5465/19416520903053598
- Benneworth, P. (2014) "Decoding university ideals by reading campuses" in P. Temple (ed.) *The physical university*, London: Routledge.
- Benneworth, P., & Hospers, G.-J. (2007). Urban competitiveness in the knowledge economy: Universities as new planning animateurs. *Progress in Planning*, 67(2), 105-197.
- Benneworth, P., & Pinheiro, R. (2017). Involving Universities in Regional Upgrading in the Periphery: Lessons from Northern Europe. In M. Fonseca & U. Fratesi (Eds.), *Regional Upgrading in Southern Europe: Spatial Disparities and Human Capital* (pp. 299-321): Springer, Cham.
- Benneworth, P., Pinheiro, R., & Karlsen, J. (2017). Strategic agency and institutional change: investigating the role of universities in regional innovation systems (RISs). *Regional Studies*, 51(2), 235-248.
- Boschma, R. (2014). Towards an Evolutionary Perspective on Regional Resilience. *Regional Studies*, 49(5), 733-751.
- Cooke, P., Gomez Uranga, M., & Etxebarria, G. (1997). Regional innovation systems: Institutional and organisational dimensions. *Research Policy*, 26(4), 475-491.
- ECIU. (2019a). The European Consortium of Innovative Universities. Retrieved from [www.eciu.org/](http://www.eciu.org/)

## Regional Policy Implications of the Entrepreneurial University

### LESSONS FROM THE ECIU

---

- ECIU. (2019b). History and Membership.
- Edquist, C. (2010). Systems of innovation perspectives and challenges. *African Journal of Science, Technology, Innovation and Development*, 2(3), 14-45.
- Garud, R., Hardy, C., & Maguire, S. (2007). Institutional Entrepreneurship as Embedded Agency: An Introduction to the Special Issue. *Organization Studies*, 28(7), 957-969. doi:10.1177/0170840607078958
- Laredo, P. (2007). *Toward a Third mission for Universities*. Paper presented at the UNESCO Regional Seminar "Globalizing Knowledge: European and North American Regions and Policies addressing the Priority Issues of other UNESCO Regions", Paris. <http://unesdoc.unesco.org/images/0015/001578/157815e.pdf>
- Leca, B., Battilana, J., & Boxenbaum, E. (2009). *Agency and Institutions: A Review on Institutional Entrepreneurship* (Vol. 08-096). Harvard Harvard Business School Working Paper.
- Nieth, L. (2019). Understanding the 'strategic black hole' in regional innovation coalitions - Reflections from the Twente region, Eastern Netherlands. *Regional Studies, Regional Science*(Special Issue: Universities, innovation and regional development ).
- North, D. (1990). *Institutions, institutional change and economic performance (Political Economy of Institutions and Decisions)*. Cambridge: Cambridge University Press.
- OECD. (2009). *Denmark - Regional Growth Forums*. Retrieved from Paris: <http://forumpartnerships.archiv.zsi.at/attach/denmark2.pdf>
- Pugh, R., Lamine, W., Jack, S., & Hamilton, E. (2018). The entrepreneurial university and the region: what role for entrepreneurship departments? *European Planning Studies*, 26(9), 1835-1855. doi:10.1080/09654313.2018.1447551
- Ritvala, T., & Kleymann, B. (2012). Scientists as midwives to cluster emergence: an institutional work framework. *Industry and Innovation*, 19(477-497).
- Rodrigues, C., & Teles, F. (2017). The Fourth Helix in Smart Specialisation Strategies: The Gap Between Discourse and Practice. In S. De Oliveira Monteiro & E. Carayannis (Eds.), *The Quadruple Innovation Helix Nexus: A Smart Growth Model, Quantitative Empirical Validation and Operationalization for OECD Countries* (pp. 111-136). New York: Palgrave Macmillan.

- Simmie, J. (2012). Path Dependence and New Technological Path Creation in the Danish Wind Power Industry. *European Planning Studies*, 20(5), 753-772.
- Sotarauta, M., & Pulkkinen, R. (2011). Institutional Entrepreneurship for Knowledge Regions: In Search of a Fresh Set of Questions for Regional Innovation Studies. *Environment and Planning C: Government and Policy*, 29(1), 96-112. doi:10.1068/c1066r
- Sotarauta, M., & Suvinen, N. (2016, 29.9.2016). *Institutional Agency and Smart Specialisation. How Institutional Entrepreneurs and Navigators Work to Institutionalise a New Science--based Industry*. Paper presented at the "Changing Patterns of Territorial Policy: Smart Specialisation & Innovation in Europe" - First SMARTER Conference on Smart Specialisation & Territorial Development, Seville, Spain.
- Sotarauta, M., & Suvinen, N. (2017). *Institutional Agency and Path Creation: An Institutional Path from Industrial to Knowledge City*. Paper presented at the RSA Annual Conference: The Great Regional Awakening: New Directions, Trinity College Dublin, Dublin, Ireland.
- Weick, K. E. (1976). Educational Organizations as Loosely Coupled Systems. *Administrative Science Quarterly*, 21(1), 1-19.
- Yigitcanlar, T. (2010). Making Space and Place for the Knowledge Economy: Knowledge-based Development of Australian Cities. *European Planning Studies*, 18(11), 1769-1786.