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EDITED BY
RÓMULO PINHEIRO, MITCHELL YOUNG
AND KAREL ŠIMA

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Tales from Northern and Central Europe

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This book is dedicated to our dear colleague Olga Šmídová-Matoušová (27/06/1955–18/09/2017) who sadly passed away during 2017

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University Complexity and Regional Development in the Periphery

Rómulo Pinheiro, Karel Šima, Mitchell Young, and Jan Kohoutek

Introduction

Universities and other types of higher education institutions (HEIs) have long been recognised as playing a key role, directly and indirectly, in socio-economic development, both at the local and national levels (Arbo & Benneworth, 2007; Pillay, 2011). They do so through the provision of skills

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and competencies (via graduates), knowledge and technology transfers, engagement and outreach, and so on. In recent years, and as a result of the rise of a post-industrial and globalised economy, HEIs the world over have also been mandated to help their regions and countries become globally competitive through fostering economic development and innovation, amongst other things (Harding, Scott, Laske, & Burtscher, 2007; OECD, 2007).

The rise of strategic science regimes within HEIs (Rip, 2004) has taken some of these external demands into account, and the increasing competitiveness for students, staff, and funding has led to a situation where external priorities and agendas play an increasingly important role (Benneworth & Jongbloed, 2010). This is particularly the case for HEIs located in peripheral regions, which often lack the adequate physical, technological, and knowledge infrastructures required to compete in the new knowledge economy. Not only are these regions highly dependent on a few knowledge-based institutions (HEIs, firms, and other knowledge producers and manipulators) to increase their absorptive capacity (Isaksen, 2014), but they are also at a disadvantage geographically, as they are located in less central (more remote) parts of their respective countries (Kohoutek, Pinheiro, Cabelkova, & Smidova, 2017). In addition, they tend to suffer from a multiplicity of socio-economic issues, such as deindustrialisation, unemployment, brain drain, and high levels of social exclusion and, thus, are often stigmatised as "places to avoid".

HEIs located in peripheral areas tend to struggle when it comes to attracting talented students, staff, and competitive funding, and in many cases, they lack in-house research capacity, which, in turn, limits the developmental roles they can play in their host regions. This, in turn, generates a set of internal and external tensions that universities need to address in their quests for legitimate places in the increasingly competitive domestic and international higher education (HE) field, as well as in their immediate geographic surroundings.

In order to understand how these internal tensions emerge and develop over time and how they affect the roles that HEIs play in their host regions, one needs to consider the organisational and institutional features of HEIs. Therefore, building on earlier work in the field combined with seminal insights from organisational studies, this chapter provides a broad conceptual framework against which the case studies that form the bulk of

this volume can be assessed and interpreted. In so doing, we address two interrelated questions: (1) what characterises HEIs as organisations? and (2) how does the complexity inherent to modern HEIs (in the form of in-built ambiguities) affect their interactions with their host regions?

The volume derives from a comparative research project (2015–2017) investigating the socio-economic role of HEIs located in peripheral regions in Norway and the Czech Republic.[1] Norway, one of the richest countries in the world, is located at the periphery of (Northern) Europe and has long identified HE as a key sector in the socio-economic development of the country. Regional considerations have, since the early 1950s, ranked high in the policy agenda, culminating in the geographic distribution of HEIs through the entire country (324,000 square kilometres). The Czech Republic emerged from communism in 1989 and its split with Slovakia in 1992 to become one of the strongest economies in Central Europe. It is oriented on the industrial sector and closely tied to its neighbour Germany. It is a landlocked country (of 79,000 square kilometres) situated in the centre of Europe. Higher education (HE) was profoundly reformed during the transition era in the 1990s, with partial changes after the 2000s. Regional development imperatives have largely been absent in HE policy until the recent adoption of EU regional agendas (structural funds, regional innovation policy, etc.).

We find comparisons—similarities and differences—regarding the role of HEIs in the development of peripheral regions in these two rather distinct national economies to be of interest to policymakers and scholars alike in shedding light on important contextual circumstances at the macro (policy and region), meso (HEIs) and micro (key actors within and outside HE) levels. Methodologically, the study adopted a mixed-methods research design with qualitative and quantitative data sets emanating from a variety of sources: policy and institutional documents; official statistical databases; national and international reports; published peer-reviewed studies; site visits; face-to-face interviews with selected internal and regional stakeholders; and seminars and workshops involving researchers, university managers, and regional actors across the public and private sectors and society at large.

The chapter is organised as follows. In the next section, we describe the features of universities as organisations by shedding light on five key ambiguities. Then we provide critical empirical insights on the contextual

circumstances underpinning the case studies by shedding light on national policy dynamics and the chosen regional contexts, respectively. Finally, we provide a brief overview of the aim and focus of the volume's individual chapters.

Universities as Complex Organisations Nested in Dynamic Policy and Regional Environments

It has long been acknowledged that HEIs are rather unique and complex organisational forms (Birnbaum, 1988; Clark, 1983). Even though many HEIs are rather recent in their histories and local traditions, as an organisational template or archetype, universities and other types of HEIs have, in some shape and form, been around for the best part of eight centuries (Ridder-Symoens, 2003). This implies that, as an organisational form, and when compared to other types of organisations, such as firms, HEIs are thought to be rather resilient when confronted with shifting external circumstances (Olsen, 2007). This resilience is due to the fact that, over the years, HEIs have adapted to new external contexts without losing a sense of identity regarding their core functions and purposes (Frank & Meyer, 2007; Wittrock, 1985; for a recent analysis see Pinheiro & Young, 2017).

Following seminal works in the area, Pinheiro (2012a, 2012b) characterises modern HEIs as organisations along five key structural features, each of them representing a certain type of ambiguity which distinguishes them from other organisational forms. Taken together, the complex interplay between these five ambiguities helps explain their internal dynamics, as well as the ways in which HEIs respond (or not) to environmental factors.

The Ambiguity of Intention

In spite of the fact that most people, internal stakeholders included, recognise what an HEI is, defining what its core purposes are is a more daunting task. For some, the purpose of HE is to socialise and train youth to become productive workers and/or engaged citizens. For others, HEIs are unique social arenas for critical and disinterested inquiry about topics

of shared interest to scholarly communities and society alike. Yet, for many, HEIs are the bastions of freedom and democracy, substantiated on core values such as equality and autonomy. Staff based at teaching-only institutions would contend that instruction and supervision are their core functions, whereas those at research-intensive HEIs would argue that the pursuance of knowledge for its own sake ranks high amongst their core priorities. "Classic" universities, such as the flagship institutions of many national systems, often located in the capital city/large urban areas, praise their societal independence. This contrasts with the normative postures of smaller and less resourceful institutions located outside major urban areas or core regions, where the dominant ethos is that of addressing societal needs by responding to the emerging requests of multiple stakeholder groups. Throughout history, different types of HEIs catered to different, sometimes contradictory, demands in society (Castells, 2001). On paper, providing education to the masses and elite training are contradictory functions, yet many HEIs the world over have been successful at simultaneously accomplishing both. Likewise, teaching and research are rather distinct activities, but many HEIs have devised mechanisms for accomplishing both tasks, albeit with different degrees of success. In short, the ambiguity of intention pertains to the different internal conceptions of the functions and roles played by HEIs.

Tensions emerge when internal actors, more often than not managers, who possess different normative views on the role of HEIs in society attempt to suggest that one view should be predominant over the other competing ones. At the heart of the problem lie conceptions of HEIs along two relatively distinct paradigms or visions (Olsen, 2007). There are those pushing for a more instrumentalist view, suggesting a vision of HEIs as tools for reaching certain predetermined political or managerial agendas. In contrast, some argue that internal rather than external imperatives should be at the forefront, with autonomy and respect for diversity ranking high on the strategic agenda (Olsen, 2007).

The Ambiguity of Causality[2]

The second ambiguity characterising the university as an organisation pertains to the complexity inherent to universities' core technologies, namely,

teaching and research (Clark, 1983). More specifically, and in the context of the third mission of regional development (Pinheiro, Karlsen, Kohoutek, & Young, 2017), it is rather difficult to ascertain the causal relationships between inputs (funding, students and staff, projects, etc.) and outputs (innovation, economic growth, etc.). It is a common argument that the outcome of many research projects is the need for additional projects/funding in order to address new insights and try to answer the new questions posed. Similarly, it is impossible to predict the impact that both graduates and the knowledge produced by academics will have on society.

The simple presence of an HEI is not a sufficient condition for local development to take place, as other factors play critical roles as well, as demonstrated by earlier studies from both Europe and North America (Feldman & Desrochers, 2003; Florax, 1992). These include, but are not limited to, the ability of regional institutions (public and private sectors alike) to absorb both skills (employability) and academically generated knowledge, what is commonly known in the regional science literature as local "absorptive capacity" (Vang & Asheim, 2006). It is widely acknowledged that universities stimulate the formation of social capital or networks at multiple levels—local, regional, national, and global (Benneworth & Hospers, 2007; Zyzak, Pinheiro, & Hauge, 2017). Yet, it is far from clear how these networks contribute, directly or indirectly, to regional development. Hence, tensions emerge as institutional managers and regional actors attempt to predict and quantitatively assess the impacts or effects that regionally related activities by various academic groups have in the region. More often than not, such activities contribute to regional externalities, for example, in the form of a growing awareness of the importance of knowledge and innovation, but are not easily captured in a formula (gross domestic product, innovation per graduate, patents resulting from local activities, etc.), per se.

The Ambiguity of History

The third ambiguity relates to the fact that, like all organisations, universities have histories of their own, which, in part, help shape local values and beliefs, mind-sets and behaviours, and strategic ambitions. The concept of *organisational saga* (Clark, 1972) is a useful one in this

respect, as it relates to the importance attributed to past achievements and a sense of unique identity. This feature is most visible in old, renowned universities such as Oxford and Cambridge (Tapper & Palfreyman, 2011), but it permeates the internal life of every institution, irrespective of size, age, and location. Following the tenants of historical institutionalism within the social sciences (Pierson & Skocpol, 2002), the "ambiguity of history" is associated with the fact that past events help determine current behaviours and future trajectories, yet not necessarily in a linear or predictable fashion, as argued by proponents of systems theory and the study of complexity (Room, 2011).

In the realm of HE, Krücken and colleagues have empirically demonstrated how contemporary responses to emerging demands, like globalisation and increasing competition, are, to a large extent, shaped by historical or deeply institutionalised features such as values and identities (Krücken, 2003; Krücken, Kosmützky, & Torka, 2007). For example, the negative or positive experience of past engagement activities with regional actors will, to a large degree, determine the willingness of particular academic communities to be actively involved with partnership efforts that address the needs of regional stakeholders (Pinheiro, 2012a). Organisational archetypes or blueprints are also relevant in this respect (Greenwood & Hinings, 1993). Classic, older research-intensive universities have traditionally been more inward oriented, focusing on knowledge and science as an institution. This contrasts with younger and/or more vocational institutions, often located in peripheral regions, which have tended to take into consideration external dynamics and the needs of stakeholder groups (Pinheiro, Benneworth, & Jones, 2012). Hence, tensions emerge from the clash between logics and normative postures that have grown organically over time and those (more recent ones) that result from external drivers and strategic postures by formal leaders and other key actors.

The Ambiguity of Structure

The fourth ambiguity relates to the ways in which universities as organisations organise or structure their core activities. As knowledge organisations, universities are organised around bodies of people working within

the context of a specific knowledge or disciplinary domain (Clark, 1983). In this respect, there is a considerable degree of loose coupling between the activities undertaken by various sub-units (Birnbaum, 1988). Decoupling also occurs within the sub-units themselves, for example, between teaching and research activities. What is more—and, given the fact that (European) universities were traditionally characterised as "bottom-heavy" organisations (Clark, 1983), that is, with power and authority located at the lower levels (e.g. department or institute)—there has been a considerable amount of decoupling between leadership structures and activities (e.g. strategies) at the central (university/faculty) levels and the inner dynamics of the individual academic sub-units (Birnbaum, 1992; Hölttä & Nuotio, 1995). Earlier studies also revealed significant structural decoupling between core, teaching and research activities, and academic efforts aimed at promoting regional development (Arbo & Eskelinen, 2003; Benneworth, 2013).

Structural decoupling can be problematic in those situations where central leadership structures are attempting to steer academic units in a particular direction, such as increasing emphasis on excellence/world class or tighter societal engagement (Pinheiro & Stensaker, 2014a, 2014b). In the last few decades, under the banner of "modernisation", efforts have been underway to centralise leadership structures within HEIs along the lines advocated by new managerialism (Deem, Hillyard, & Reed, 2007). Such efforts, initiated externally by government but eagerly implemented by management (Berg & Pinheiro, 2016), are integral to a much broader process of transforming/rationalising HEIs into more coherent, predictable, and accountable strategic actors that are thought to be better able to respond to external events and the pressing needs of multiple stakeholders (Ramirez & Christensen, 2013). Hence, tensions arise from the different sub-units reacting differently to external events, as well as to the strategic postures by formal leaders at the central level.

The Ambiguity of Meaning

Finally, HEIs are value-laden organisations composed of a multiplicity of internal norms, values, identities, and traditions (Dill, 1982). Each

disciplinary field has its own heroes and behaviours that are seen as legitimate and play important roles in allocating specific sub-identities and normative postures (Becher & Trowler, 2001). Some ("pure") fields are more inner-oriented, towards science and knowledge, whereas others ("applied") are more willing to be engaged with societal actors and take into account external dynamics and demands, for example, professional fields and labour market requirements (Pinheiro, Normann, & Johnsen, 2017). The path-dependencies referred to earlier ("ambiguity of history") also result in a specific conception of "who we are at this institution" versus "the others" (Clark, 1970; Fleming & Lee, 2009).

In the Nordic countries, vocational HEIs such as university colleges and/or polytechnics have traditionally catered to the needs and expectations of external groups, resulting in a specific "organisational ethos" that, in theory, makes them more willing to actively engage with regional actors across the public and private sectors (Kyvik, 1981). In contrast, the more elitist ethos of research-intensive universities or flagships, when combined with an institutionalised tradition of autonomy (Stensaker, 2014), in theory makes them less willing to partner with external actors in the context of regional development. Obviously, in reality, the picture is more complex than the one painted here, as one can find "localists" and "globalists" in either type of institution (Pinheiro, 2012a), not least due to socialisation effects, that is, PhDs being trained at classic universities but gaining employment at more vocationally oriented institutions later on. As public organisations operating in a highly institutionalised and increasingly competitive environment (Geschwind & Pinheiro, 2017), HEIs constantly face a challenge to simultaneously develop a distinct institutional and market identity whilst making public claims of belonging to specific organisational categories within the broader HE field, such as the highly legitimate archetype of the research-intensive university (Mohrman, Ma, & Baker, 2008). In this respect, being "regional" or "locally embedded" is a sign of lower status, thus leading to internal tensions insofar as the institutionalisation and fulfilment of HEIs' regional roles (Table 1.1).

Table 1.1 Ambiguities, key features and tensions

Type of ambiguity	Key features	Tensions
Ambiguity of intention	Purpose, goals & functions	Arising from clashes between instrumental versus institutional conceptions and the role attributed to internal versus external forces
Ambiguity of causality	The relation between inputs (students, programme, projects) and outcomes (e.g. regional impact)	Resulting from the difficulties in determining outcomes ex-ante, and the short term expectations of external actors
Ambiguity of history	Institutionalised (taken for granted) norms, values and identities	Emerge from clashes of normative and cultural-cognitive postures
Ambiguity of structure	Decoupling between sub-units and types of activities	Between the need for control versus the quest for autonomy and decentralisation
Ambiguity of meaning	Multiplicity of identities and meanings both within and across sub-units	Amongst "globalists" (more interested in science and knowledge for the sake of knowledge) and "localists" (focusing on relevance and local impact)

Source: Based on Pinheiro (2012a, 2012b) with modifications

The National Policy Context and the Regional Mission

In Norway, following the post-World War II period and the unrivalled dominance of the Norwegian labour party in domestic politics, the dominant policy/governance logic put an emphasis on the socio-economic development of peripheral regions, many of which were lagging behind. The establishment of a regional college system during the 1960s represented a watershed moment, since it led to the convergence of two distinct policy portfolios, namely HE and regional development (see Pinheiro, 2014). The primary mandate of the regional colleges was to train professionals for the public and private sectors and to engage with regional actors. Over time, as the university college system expanded and

consolidated, the regional mandate became more and more relegated to the background, not least due to the academic drift tendencies of the research-intensive university as the model to emulate. At the system level, recent policy developments and funding instruments—well aligned with international trends—have tended to prioritise output-based measures, competition (through concentration of people and resources) and the nurturing of world-class scientific excellence. Less policy attention has been given to local relevance and societal engagement by HEIs. Recently, the term *co-creation of knowledge* (*samskaping*) has been suggested by some as a fruitful means for bringing together local engagement centred on relevance and global ambitions geared towards scientific excellence in the fulfilment of policy and university strategic goals. Yet, besides the establishment of a national programme of centres for applied innovation and some (limited) funding for regionally related research, proper incentives towards societal/regional engagement by HEIs are still absent, despite the fact that societal engagement (*formidling*) has become an official mandate for all HEIs in Norway.

In the Czech Republic, during the communist regime, the regional development policy focused on the sector-specific development of particular regions. For instance, there were regions with major textile industry, so there was a specialised HEI for clothing industry education with fibre research and development facilities. After the fall of the communist regime, most of these institutions achieved the status of university and entered the path towards becoming comprehensive research universities. During the 2000s, the Czech HE system expanded radically and reached the level considered to be universal access to HE (Trow, 2007), driven mostly by the regional universities. Czech regional universities followed the path to a classic Humboldtian type of HE and cultivated their sector and disciplinary heritage from communist times. The third mission of universities did not become an explicit agenda until the period of 2006–2009, during the negotiation process of HE reform. However, the reform was withdrawn before passing and the focus on the third mission and regional role of HEIs was set aside. Only the two regional, public, non-university HEIs that were established in early 2000s retain explicit regional roles in educating graduates for the regional labour market.

The Case Regions

Earlier we emphasised that universities are nested in regional contexts. The differences in these contexts are important for understanding the relationships that HEIs establish with their regions and the impacts that they have. In general, we find that there is a lack of diversity in terms of the types of regions that get studied, that is to say, much of the literature on the university's regional role is oriented towards positive case studies. Regions get selected for study because they have been deemed successful; however, this volume looks in the other direction, at the least likely cases. We look at HEIs in peripheral regions, those in which the regional characteristics serve a constraining role.

Peripheral regions are defined by their distance from core regions in both spatial and aspatial dimensions. The spatial dimension deals with the periphery as outside of the major urban centres in terms of physical distance and ease of access, as well as structural distance, which deals with population density, the predominance of the primary sector of the economy, and a lack of agglomeration advantages. Aspatial distance, on the other hand, is created by factors such as the flow of information from urban cores or global networks, the quality of technological infrastructure, levels of human and social capital, integration with global markets, strength of civil society institutions, and so on (Copus, 2001). The peripheral regions in this book have a combination of spatial and aspatial characteristics, but each represents a particular aspect of the idea that peripheral regions have weaker potential due to their more limited agglomeration capacity and access to knowledge and information.

The six regions that form the nested contextual basis for the studies in the book exhibit different constellations of the factors of peripherality, reflecting overlapping types of spatial and aspatial distances (for an earlier analysis and categorisation, consult Kohoutek et al., 2017). Within them are found numerous cleavages: rural/urban, unified/divided character of districts within the region, industrial-/service-/natural resource-based economies, larger/smaller firm predominance, and high-tech/low-tech industry profiles with local/global marketing catchment areas, to name

only some of the most prominent. We present each region first in abstract terms to emphasise its representativeness, as we believe that these constellations of factors can be found outside of their specific national setting, across Europe and beyond. At the same time, we recognise the particularities and unique elements of each region and allow those to come forward in the individual chapters.

Region one, having "post-industrial blues", is characterised by its high unemployment rates (due to a history and prevalence of unskilled labour in declining industries such as mining) and its high proportion of young people. It shares a border with a much wealthier country. It has just under 1 million inhabitants (131 per square kilometre) and is highly urbanised (over 80% of the population lives in cities), but at the same time, it is fractured (there are 46 cities in the region), and the border region is remote and sparsely populated. Economically, the region is focused on resource-based and manufacturing industries: mining, chemical, glass, automotive, mechanical engineering, textile, and energy. There is a high risk of social conflicts, including ethnic and racial tensions. The region has in recent decades developed a considerable HE infrastructure, but the population still contains a relatively low proportion of graduates and very low levels of research activity. The university in the capital of this region was created from a teacher training institute in 1991 with a widened focus on social sciences, health care, environmental sciences, arts, and humanities. It enrols about 8000 students and hosts 400 academics. This type of region can be found in the north-western part of the Czech Republic and is the subject of Chap. 2, which points to tensions resulting from the ambiguities of intention, structure, and history.

Region two can be described as "rural modernised" and is situated adjacent to region six but has a significantly smaller population (170,000 inhabitants; 11 per square kilometre) that is concentrated primarily into two urban centres. The region is home to around 500 industrial firms operating within forestry, metal, and natural products. It has a flourishing biotechnology research environment and, since 2005, is host to an innovation centre for natural gas. The region has a major publicly run, mostly teaching-oriented university college (dating back to the mid-1990s) that has 6500 students and 600 staff and operates in a dispersed manner across the region in the form of a multi-campus model with five locations. This

type of region can be found in southwest Norway and is the subject of Chap. 3, which focuses on the importance associated with the ambiguity of structure.

Region three is "rural idyllic" and is characterised by an internal periphery in that it shares no borders with other countries. The region has an above-average agricultural profile, high population stability within sparse settlements (75 inhabitants per square kilometre) and high environmental quality. Economically, a significant proportion of businesses are small and privately (family) owned. In addition to agriculture, there is an emphasis on the cultural and tourism industries, though manufacturing is also significant. Within the region, there are three UNESCO World Heritage sites and two mountain ranges. The region lacks a tertiary education tradition and has a limited HE infrastructure. The non-university HEI (approx. 2000 students and 90 academics) located in this region is young and teaching-only and was established with an explicit mission in engagement with regional needs, especially in the regional labour market. This type of region can be found in the south-central part of the Czech Republic and is the subject of Chap. 4, which outlines the tensions associated with the ambiguities of intention and history.

Region four is "extremely remote" and has a population of fewer than 100,000 inhabitants, who are sparsely spread out (2 inhabitants per square kilometre). The region shares borders with two other countries, one of them non-EU, and is home to a minority ethnic group. The local economy is centred on agriculture (fishing and reindeer herding), tourism and, more recently, energy exploration. Most firms are small, family-owned businesses. Since the mid-1990s, the region has had a small-sized university college (1800 students and 240 staff), which is a teaching-only institution. This type of region can be found in north-eastern Norway and is the subject of Chap. 5, which sheds light on the tensions associated with the ambiguity of history.

Region five is "split/schizophrenic" because it is divided into two distinct parts. The southern part is economically developed with advanced agricultural production, a high share of industry and services and a rather dense population in and around 30 cities (121 inhabitants per square kilometre). Economically, the manufacturing and construction industries

are the strongest employers. It also has a strong HEI infrastructure and tradition, including the second oldest research-based university in the country. It is a relatively comprehensive university with only economics/business administration and engineering missing in the study programme portfolio. It has research-intensive faculties in humanities, sciences, and medicine, as well as more vocationally oriented faculties in social and medical care and physical training. The university has 21,000 students and employs 1800 academics. The northern part of the region is mountainous and remote; it is one of the poorest districts in the country. This type of region can be found in the eastern and north-western parts of the Czech Republic and is the subject of Chap. 6, which focuses on the tensions resulting from the ambiguity of intention.

Finally, region six is "split/industrialised" and has a population of close to 300,000, who are mostly located along the coastline and in the largest urban areas. It has a population density of about 17 inhabitants per square kilometre. The region hosts three major industrial clusters: ICT, process industry, and gas and oil manufacturing, with some others emerging, for example, green energy. Most companies across the region are Small and Medium Enterprises (SMEs) and are not very knowledge or research intensive, but some are world class within their niches. The region also hosts a relatively young (ten-year-old), mid-size public university which was a former university college (established in the mid-1990s) and employs about 1000 staff and enrols 10,000 students. It is primarily a teaching institution, with growing yet limited pockets of research. This type of region can be found in the southernmost part of Norway and is the subject of Chap. 7, which focuses on the tensions derived from the interplay between the ambiguities of structure, meaning, history, and intention.

Notes

1. The study was undertaken under the framework of the research programme entitled "Norway Grants" (2009–2021), funded by the Norwegian Research Council, and focusing on research and capacity building in the so-called new EU countries.

2. Originally, this type of ambiguity was termed by Pinheiro (2012a, 2012b) as pertaining to "understanding", but it has been renamed here "causality" for reasons of clarity.

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2

Geography Versus University Functions-Regionally Based Networks: The Case of the Ústí Region

Helena Šebková, Inna Čábelková, and Vladimír Roskovec

Introduction

Higher education has undergone significant changes over the past 50 years. Increasing demands on social and economic accountability, massification, and stress on internationally competitive research have forced universities to operate in various types of regulatory and market environments. Besides facing increased competition, universities are now supposed to produce a number of benefits for society, particularly in the region they are located in (Bramwell & Wolfe, 2008), by training qualified personnel, generating and commercializing knowledge (Goldstein & Renault, 2010; Wolfe, 2005), attracting talent from elsewhere to the local

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community (Betts & Lee, 2005; Gertler & Vinodrai, 2005), providing technical support for the research and development activities within companies, and facilitating local linkages and networks (Gertler & Vinodrai, 2005; Wolfe, 2005). Successful examples of regional engagement, such as technology transfer in Silicon Valley (Lécuyer, 2006), have "gone viral" and are frequently copied by other regions and universities. The policies implemented to attain these ends, however, often have unexpected results (Čábelková, Norman, & Pinheiro, 2017), as both the universities and the regions themselves may present certain challenges and tensions.

Government authorities often view universities as monolithic strategic actors (Whitley, 2008) capable of responding to regional needs (Goddard & Puukka, 2008; Pinheiro, 2017), but in fact universities are highly complex organizations, often with a decoupled structure (Orton & Weick, 1990; Pinheiro, 2012), that pursue multiple, often contradictory goals (Kerr, 2001; Laredo, 2007; Pinheiro, 2017), have rather autonomous structures (Arbo & Benneworth, 2007), and seek to define new roles and identities for themselves in changing environments (Enders & De Boer, 2009; Olsen, 2007).

In this chapter, we analyze the ways universities strive to fulfill their regional role, examining in particular the University of Jan Evangelista Purkyně in Ústí and Labem (UJEP), a young institute located in the Ústí Region. We conceptualize the university's complexity using Pinheiro's five-dimensional model of 2012 (see also Chap. 1 in this volume), which identifies five ambiguities—the ambiguities of intention, understanding, history, structure, and meaning—each of which creates a number of tensions. To narrow the focus of the chapter, we concentrate mainly on the ambiguities of intention and structure. The ambiguity of history, which is also present despite the university's short existence, is mentioned without any further detailed analysis.

We have selected two tensions for analysis that are related to the lack of both prospective students and qualified academics in the region. These tensions mostly influence UJEP's regional engagement in particular and its functioning as a prosperous university in general. Both tensions stem from the relatively low level of education in the region, which is rooted in

its history, its negative image, and low technologically intensive economy. The Ústí Region's symbolic geographical distance from better-educated parts of the country worsens these tensions, despite the region's easy access by public transport from practically anywhere.

The university's first and foremost role in this region, which suffers from overall low education levels, is to educate. However, the lack of capable prospective students in the region results in a significant tension for UJEP; the university cannot attract enough acceptable applicants and thus cannot fill its role of improving the education level of regional inhabitants. We analyze how UJEP, and especially its faculties, tries to overcome this tension by cooperating with primary and secondary schools and by networking with them. In doing so, we take into account the ambiguity of structure (loose coupling within the university).

Second, a lack of senior academic staff (associate professors and full professors) prevents the university from meeting the strict accreditation requirements in place, namely that only such highly qualified academics can guarantee degree programs. In general, there are two ways the university can get senior academic staff: it can either promote existing assistant professors or attract associate and full professors from elsewhere. But UJEP has not had full success with either of these methods, and thus the lack of qualified academic staff has resulted in a tension hampering the university from fulfilling its dual-objective mission: on the one hand, UJEP's teaching and applied research activities should benefit the region, but on the other hand university officials strive to make its academic research internationally competitive.

This tension, which stems from the dual nature of the university's mission, is connected with the ambiguity of intention. In this chapter, we analyze the way in which university officials cope with this tension—by creating and using various types of (mostly informal and essentially stochastic) academic networks. To this end, we pose the following research questions: how do the networks between UJEP's faculties and primary, secondary, and tertiary professional schools work? How do networks between academics operate and to what extent do they help mitigate existing tensions?

Methodology and Theory

Methodology

We have analyzed data collected as part of the project The Contribution of Higher Education Institutions to Strengthen Socio-Economic Development of Peripheral Regions in Norway and the Czech Republic (PERIF, 2015–2017), financed by Norwegian Financial Mechanism 2009–2014.[1] We acquired quantitative data in digital form from the Czech Statistical Office, statistics of Ministry of Education, Youth and Sport (MEYS), and UJEP's annual reports. In the qualitative part of the research, we analyze primary and secondary sources, such as regional and university strategic materials, studies, and annual reports. In addition, we also conducted 20 semistructured interviews with regional and university stakeholders. Our primary objective was to study the university's regional engagement; we conducted 15 interviews with university officials and in 5 interviews we asked regional stakeholders (regional officials and the representatives of central governmental bodies in the region) about their perspective on regional problems and the possibilities of university engagement. All the interviews were conducted in 2016. University informants were chosen from different UJEP faculties. The sample included older long-term university employees, former and current university officials and managers, and young academic staff. Additionally, considering the large number of external academic employees, many of whom commute from Prague, representatives of this group were also addressed. We held multiple interviews with some respondents throughout the last year of the project to monitor the short-term development of their views. The results of the interviews were double-checked in the pilot verification. Given the relatively low number of interviews and diversity of informants, who ranged from young academics and university administrators to external staff, we did not code the interview, but instead employed a descriptive comparative perspective (Boeije, 2002).

Conceptualizing the University: Ambiguities and Tensions

As already mentioned in the introduction, we conceptualize the university using Pinheiro's five-dimensional model (2012). In this chapter, we will address three out of five ambiguities. The first and the most important is the ambiguity of intention because it influences the university's overall strategy and direction. The Czech Higher Education Act distinguishes between higher education institutions (HEIs) of a university type (with all levels of accredited degree programs) and of a non-university type (with mostly bachelor degree programs and no doctoral ones). Both types of HEIs are expected to engage in relevant basic or applied research, development, and other creative activities. Although UJEP's original purpose was to primarily support regional development, it is classified as a university-type institution because most of its faculties offer degree programs at all levels. Consequently, its mission is formulated in three explicit goals: UJEP should be

- the most important education institution in the region;
- the most important research institution in the region; and
- a significant partner in socioeconomic matters in the region (UJEP, 2015).

The university mission was established in response to government strategic policy, which effectively promotes universities primarily engaged in academic research over those focused on their regional role. The lack of highly qualified academics—professors and associate professors—complicates the accreditation process because each master and doctoral accredited program must be guaranteed by a professor or associate professor and all courses should be supported with the sufficiently qualified academic staff. Similarly, pressure to produce internationally recognized publications has shifted the university's profile from a regionally focused university to a would-be international research university, which, however, suffers from a lack of qualified academic staff.

Thus, UJEP's reflection of external circumstance led to tension arising out of the lack of qualified academic staff and its dual mission focused both on its regional role and research. This behavior is connected to the ambiguity of intention, and in the following sections we will analyze how the university managed to cope with this tension by developing academic networks.

The second ambiguity addressed here is the ambiguity of structure (Pinheiro, 2012). Though universities are viewed as unified and governable institutions, they represent highly complex organizations that often have a decoupled or a loosely coupled structure (Meyer & Rowan, 2008; Orton & Weick, 1990). Such a structure implies that the connections between a university's internal parts may be infrequent, circumscribed, weak in mutual effects, or slow to respond (Clark, 1983; Weick, 1976). Although loose coupling results in an organization possessing a certain flexibility during turbulent times, it causes inefficiencies when the organization needs to deal with a common issue (Orton & Weick, 1990).

The lack of secondary graduates in the Ústí Region who wish to continue their studies at a university creates another tension because of the insufficient number of applicants to UJEP faculties. We will analyze the role of networks with secondary schools developed at UJEP faculties, keeping in mind the ambiguity of the university's structure.

The two tensions described earlier and the ways to relax them are also connected with the ambiguity of history, namely the various path dependencies existing within both the university and the region. In section "The Ústí Region," we will examine the path dependencies that led to low education levels among the regional population. Despite the fact that the region is easily accessible by public transport from almost anywhere, its historically embedded negative image and its perception as a peripheral region distant from national centers of education persist. The result is a "symbolic geographical distance" related to the historically low level of regional education and the lack of qualified academics and experts in the region; all the above-mentioned ambiguities are somehow associated with this symbolic distance, which has also been transferred to UJEP.

Although UJEP is quite young, many features of the ambiguity of history from the previous Faculty of Education (FEd; see section "The University of Jan Evangelista Purkyně") have influenced its future

development, including the collective memory (March & Simon, 1993) and cause significant stability and inertia in university systems (Clark, 1995; Rothblatt & Wittrock, 1993).

Networks

The tensions we described in the previous section can be resolved in many ways. UJEP, for example, has elected to create and utilize networks between academics and ones with secondary education institutions. We believe that networks are a favorable instrument for loosely coupled or decoupled organizations to resolve inherent organizational ambiguities through interpersonal and intergroup relationships.

For the purposes of our research, we consider the concept of social networks (Bruggeman, 2008; Carrington, Scott, & Wasserman, 2005; Katz, Lazer, Arrow, & Contactor, 2004; Wasserman & Faust, 1994). These networks consist of a set of actors ("nodes") and relations ("ties" or "edges") between them. The nodes may be individuals, groups, organizations, or societies (Katz et al., 2004, p. 308); the ties may be formal or informal (Goes, 2015). Scholars have distinguished several types of networks: one-mode networks involve relationships between similar actors, two-mode networks involve relationships between two different groups of actors, socio-centric networks connect the relationships of a bound community, and ego-centric networks feature a focal actor (the ego) and its relationships to other actors (ego-alters) (Wasserman & Faust, 1994).

Some networks are formal and relatively stable, whereas others are inherently stochastic and may form temporary "cliquish" structures over time (for an example of the use of stochastic networks to model social relationships, see Wasserman, 1980; for model information processes, see Cowan & Jonard, 2004; for an analysis of macroeconomic dynamics, see Durlauf, 1991).

Researchers have also discussed several other types of networks in the literature: business networks between academics and businesspeople (Huggins, Jonstons, & Stride, 2008; Lambooy, 2004), networks between academics (Garton, Haythorntwaite, & Wellman, 1997; Heckerman, Geiger, & Chickering, 1995), and networks between universities

(Winter, Smith, Morris, & Cicmil, 2006) and secondary schools (Veugelers & Zijlstra, 1998). We will concentrate on networks between academics and networks between UJEP's faculties and secondary schools.

The main aims of the networks between universities and secondary schools described in the literature are to modernize upper secondary education, to interpret and influence governmental policies, to create new initiatives and programs focused on secondary school students' transitions to universities, and to better prepare students for university study. In some countries, the participation of schools in such networks is stunning: nearly 70% of secondary schools in the Netherlands participate in them (Veugelers & Zijlstra, 1998).

In this chapter, we also discuss networks between academics. Such networks often provide benefits to academics who are seeking jobs or who wish to improve their publication records (Winter et al., 2006). Research network between academics may also substantially help promote research and develop academic careers (Lopes, Moro, Wives, & de Oliveira, 2010). In this chapter, we discuss the role of networks between academics in relieving some of the university's identified tensions.

The Case Region and the Case University

The Ústí Region

The Ústí Region is by most standards a peripheral region because it lags behind much of the country in geographic, economic, social, and environmental terms. Geographically, it is situated on the border of the Czech Republic and Germany. Economically, it is one of the poorest regions in the Czech Republic based on average income, average value added per worker, and average GDP per capita. From a social perspective, the region is home to above average numbers of socially disadvantaged people and those living on social security benefits. This region also has some of the highest pollution levels in the country.

However, 100 years ago, today's Ústí Region was one of the most prosperous regions in the country and was a shining example of early capital-

ism. At that time, new industrial enterprises possessed advanced production technology and new social elites in the form of owners and managers of major companies emerged (Koutský, 2011). Ethnic Germans predominately inhabited the region.

World War II forever altered this successful development trajectory. After the war, the German population was transferred to Germany, and the region was resettled by Czechs from other socially weak parts of the country. These historical events disrupted vital production chains that were linked to neighboring Germany and, as a result, significantly diminished the region's economic diversity. Sectors associated with the early stages of the Industrial Revolution and strongly linked to German capital and markets (particularly the textile industry but also the glass- and wood-processing industries) experienced both an absolute and a relative decline in production. On the other hand, a significant absolute strengthening was shown in sectors such as mining, metal production, and chemical industries. The series of migrations and the resulting demographic changes disrupted the population's sense of rootedness in the region and led to a certain sense of alienation (Koutský, 2011, 2012).

As a result, by the end of the communist era the region was home to major industrial sectors based on the extensive use of exhaustible resources (lignite mining, thermal power generation, raw materials for the chemical industry); the region's heavy industry largely produced basic components for more specialized manufacturing sectors located in other regions. The total value added per worker remained low in the region. The dominance of large, vertically organized companies characterized by the overemployment of mostly unskilled labor did not provide structures able to flexibly react to the changes in market conditions of the 1990s (Koutský, 2011, 2012).

Most of the region's economic structure became unsustainable in the 1990s, when market competition was reintroduced. But the region no longer possessed the knowledge base necessary for diversifying and modernizing its economic processes. The education level of the population was also low (in 1993, only 4% of the population had higher education). The lack of an educated workforce kept new technological firms out of the region. A large uneducated, socially disadvantaged population had immigrated to the region, partly due to communist-era policy and partly

due to low real estate prices. The resulting demographic conditions reduced total economic activity within the region and increased unemployment levels. The poor state of the environment, the result of communist mining, metallurgy, and chemical industries, negatively affected the population's health. The devastated natural environment along with low education levels, a lack of well-paid qualified jobs, and the proximity of both the capital city of Prague and Germany supported brain drain. Although there have been considerable efforts to increase education levels in the region, the number of residents with higher education still falls below the national average (8% in the Ústí Region compared to the 12% countrywide average in 2015). Eventually, the region got locked in the position of an old industrial region with aging infrastructure, a poorly educated population, low value-added production, and the inability to change its economic trajectory on its own.

In view of the foregoing, the Ústí Region is sometimes referred to as a "wounded" region, that is, a region with historical, economic, environmental, social, and educational "wounds." The inflow of qualified personnel from other regions has been minimal; the out-migration of skilled labor has been very common. The only way to increase education levels in the region is to educate the local population and try to keep them in the region.

The University of Jan Evangelista Purkyně

Soon after the political change in November 1989, the idea of establishing a university in Ústí nad Labem arose. In March 1990, a preparatory committee in Ústí nad Labem drafted a proposal for a new university, which was submitted to the MEYS and to the Accreditation Commission, a body newly established by the Higher Education Act of May 1990.

The commission objected on the grounds that some of the university's planned faculties would not be sufficiently staffed by holders of advanced academic degrees. In addition to the already existing FEd (established in 1964 as a self-standing faculty), it approved only two new faculties: the Faculty of Environment (FE) (which was a new specialization in Czechoslovakia at that time) and the Faculty of Social and Economic

Studies (FSE). Both new faculties could build on the activities of existing institutions in Ústí nad Labem.

Thus, a new university in Ústí nad Labem was established by Act No. 341/1991 Coll. and was officially inaugurated on 28 September 1991. It was named after renowned Czech physiologist Jan Evangelista Purkyně (1787–1869), who was born in the region. The university's potential contribution to regional development was an important motivation for its establishment, but it was not explicitly expressed in any strategic document.

UJEP's progress was not simple and straightforward because many factors were involved. The basic conditions for providing higher education are qualified teachers and material conditions, such as buildings, equipment, and other infrastructure. The latter conditions were relatively very good; at first the city of Ústí nad Labem offered the university several buildings and later donated the former city hospital campus. Although the MEYS provided the university financial support for renovating the campus, work has progressed piecemeal and thus is still ongoing.

The lack of qualified teachers has persistently hampered the accreditation of new degree programs, and it has been a source of significant tension in attempts at establishing new faculties, which will be discussed in greater detail later in this chapter. Nonetheless, from its very founding there were great efforts to expand the university in new directions. At Department of Art Education of the FEd, two specialized studios were created in 1992 and 1993: the Glass Studio and the Ceramics and Porcelain Studio. In 1993, these studios were transformed into the Institute of Art Culture. Several other new studios emerged over time, and in the end the Faculty of Applied Art and Design was established in 2000. (In 2004 it was renamed the Faculty of Art and Design (FAD)).

A similar process took place at the Department of Technical Education at the FEd. Experts from the industrial sector founded the Institute of Technology and Production Management, which was transformed into the Faculty of Production Technology and Management (FPTM) in 2006.

The Czech Republic's accession to the EU and the changing demands of regional healthcare facilities put new requirements on healthcare education. In 2003, the university responded by setting up the Institute of

Healthcare Studies, which provided bachelor's degree programs in four non-medical professional fields: midwifery, general nursing, occupational therapy, and physiotherapy. It was transformed into the Faculty of Health Studies (FHS) in 2012.

Meanwhile, efforts at establishing two "classic" faculties had finally succeeded. The Faculty of Science (FS) was founded in 2005 as the transformed Institute of Science (until then part of the FEd). The Faculty of Arts (FA) was created in 2006 by the merging of the Institute of Humanities (founded in 2005) and other humanities-oriented departments, namely the Department of Social Sciences and the German Department (until then also at the FEd). Both faculties now provide bachelor's, master's, and doctoral degree programs in the natural sciences and the humanities and, to a certain extent, also educate future primary and secondary teachers. After these developments, the FEd has become primarily focused on teacher training.

Currently, UJEP has eight faculties. Its dynamic growth is illustrated by the increasing number of students (from about 2000 in 1991 to 10,000 in 2015), graduates (from 380 in 1995 to 1860 in 2015), and academic employees (from 338 in 1995 to 562 in 2015). Nevertheless, a lack of suitable applicants for studies permanently threatens the smooth functioning of the university and is a source of significant tension.

Analysis

In this section, we describe in greater detail the two selected tensions and the networks created and used by UJEP to eliminate or minimize them.

The Lack of High-Quality Applicants and Networking with Primary and Secondary Schools

The main cause of the lack of high-quality applicants is the low level of education in the region. Although the region's history and economic profile significantly determine its low educational level, there are other important factors at play. First and foremost, potential students must

know that the university exists, where it is located, and what programs it offers. In many cases, this knowledge is insufficient. According to our respondents, awareness of UJEP is clearly more pronounced in the city of Ústí nad Labem than in other parts of the region (interview data). This observation also holds true in most other Czech regions, where a university's influence is the greatest in the vicinity of its campus, while in remote locations its impact is significantly smaller (Šima, Kohoutek, & Šmídová, 2016).

More importantly, there is a symbolic distance between the population and the idea of higher education: many local people do not view higher education as desirable and value hard work more. This cultural distance, of course, correlates to geographical distance; it is more marked in localities far from Ústí nad Labem, where the university is located.

The geographical position of the Ústí Region and its distance from the "center" of the country and from other regions play a certain role, but once again symbolic distance plays a key role; the region is perceived as being symbolically distant from the rest of the country, a view rooted in the region's enduring negative perception and its peripheral character. This image is sometimes carried over to UJEP, which applicants often perceive as one of the "worst" Czech universities. According to our interview data, many applicants apply to more than one HEI and choose to attend UJEP only after they have not been admitted elsewhere. At present, about 65% of UJEP students come from within the region.

Student interest in individual degree programs also plays a significant role; for a program to be sustainable and effective, the number of students cannot fall below a certain value. For an HEI to maintain prestige, it must offer a variety of degree programs at each level; it may again attract new students. To improve regional development, special emphasis is placed on studying technical and scientific disciplines; according to interview data, such graduates are in high demand by employers, but applicants show little interest in such fields. All these factors influence the lack of high-quality applicants to UJEP, and the need to attract them gives rise to significant tension.

One way UJEP can deal with this tension is to closely cooperate with secondary and primary schools in the Ústí Region to address a satisfactory number of applicants. Each faculty may have other further reasons

for such cooperation, which can come in different forms. Social networks between individual faculties and cooperating schools have been created.

The FPTM in particular has developed a compelling model of such formal networks. Since its inception, it has gradually built up a group of "faculty schools" throughout the region, consisting of grammar schools, two professional high schools integrated in tertiary professional schools, and one tertiary professional school. The goals of such joint collaborations formulated in FPTM documents are to support technology-oriented education, to improve secondary school students' knowledge about the FPTM to increase the numbers of applications to the FPTM, and to increase the number of FPTM graduates to meet demand of regional companies (Fakulta výrobních technologií a managementu, 2011, 2015).

The FPTM confirmed its ability to collaborate with secondary schools and tertiary professional schools through its involvement in a project focused on supporting technology and science studies based on mutual collaboration between all educational sectors.[2] With project funding, the FPTM organized lectures for secondary school teachers, attractive practical training courses for secondary school students in faculty laboratories and workshops, and technology and science project competition for secondary students, which culminated in a large conference where the wining projects were presented.

The faculties fully or partly focused on teacher training (FEd, FS, FA) have traditionally collaborated with primary and secondary schools across the region (they are legally obliged to do so), mainly to ensure strong practical training for their students. Teacher exchanges are another objective and should lead to the enrichment of the participating educational institutions and better mutual understanding of the educational processes at the secondary and tertiary levels. Such collaboration is beneficial to both faculty academics and secondary school teachers. For example, the directors or managers of secondary schools can lecture faculty students on the practicalities of school management.

Two groups of schools collaborate with the FEd, which also include nursery schools and establishments for children with specific needs. The first group, officially referred to as "faculty schools," makes up the faculty's formal network; these schools engage in the prestigious collaboration we discussed earlier. The second group is freer and broader and comprises

an informal network with the faculty. When collaboration between one such school and the faculty becomes more stable and more regular, the school will become a "faculty school" and join the formal group.

The FEd works with 16 faculty schools within its formal network. Most are in the city of Ústí nad Labem, and four are located in three relatively large cities and towns within the region (Děčín, Most, Teplice) easily accessible by public transport. The remaining faculty schools are located in significantly smaller towns (including suburbs) that are very close to Ústí nad Labem or other big towns and cities. This selection of faculty schools demonstrates that transport accessibility is one important criterion.

All UJEP faculties, however, pay strategic attention to attracting secondary schools graduates to the particular degree programs they offer. The strategy of the FS best demonstrates this approach; this faculty's central mission is to focus on research activities. Because there is relatively high interest in studying at the FS, the faculty can select the best possible applicants. The faculty's academic staff engage in various outreach activities (summer schools, seminars and presentations for secondary school students and teachers).

Secondary schools specialized in the arts have been important stakeholders in the FAD since its establishment. The teaching provided by the faculty's academics, participation at final examinations, PR activities, and so on, have been the main forms of collaboration with these schools, enabling to broaden the pool of applicants from the region (Fakulta umění a designu, 2011). This relatively free network, based on personal contacts, has also significantly contributed to improving cultural life in the region. The FAD has stimulated some secondary schools to engage in public activities (exhibitions of student artworks, public lectures, etc.) and has even participated in them.

The Lack of Qualified Staff and Academic Networks

Since its establishment, UJEP has dealt with a lack of highly qualified staff members, who are so vital for getting accreditation for new degree programs (File, Weko, Hauptman, Kristensen, & Herlitschka, 2006).

The university's difficulties with meeting the state requirements stipulated by the amended Higher Education Act and implemented through the National Accreditation Office (former Accreditation Commission) have resulted in significant tension, which the strong preference for high-quality, internationally recognized research has only exacerbated. The emergence of this tension is not surprising, however, because in the Ústí Region the level of education was and is generally low (see section "The Ústí Region"), and there is only a small pool of qualified specialists and researchers across all disciplinary fields. The negative image of the region makes it unattractive for experts from elsewhere despite its good accessibility from other parts of the Czech Republic and its proximity to the German border. The region's "symbolic geographical distance," the result of its location outside the better-developed parts of the country, has also contributed to the tension.

An associate professor or a full professor must guarantee master's degree and doctoral programs, whereas a PhD suffices for bachelor's degree programs.[3] An adequate number of highly qualified teachers is also required to ensure the teaching quality.

A relatively common method for meeting these requirements has been for professors and associate professors to have multiple job contracts at different universities. Their main position has been at a "renowned" university, but they have been also formally employed at "younger" regional universities or at private HEIs. A significant part of the academic staff of the institutions in question has been composed of external employees, colloquially known as "flying professors."[4] Formal employment, however, does not necessarily imply the actual undertaking of academic tasks. To prevent overly high formal workloads, the MEYS established the Register of Associate Professors and Professors, a record of all employment contracts. This system has been used to curtail abuse of this practice for getting around ministry requirements for degree programs.

In this context, it should be noted that the right to confer the titles of associate professor and professor is also subject to accreditation. Candidates from a university that is not qualified to grant these titles in a given field must apply for the appropriate academic qualification from another qualified HEI. Competition between universities may complicate the process, thus often hindering the production of a new properly qualified staff.

Finally, one attribute of highly educated academic staff is having published in prestigious journals indexed in internationally recognized databases (SCOPUS, Web of Science, etc.); such publications are strongly preferred over domestic ones. The staff at young universities does not often have sufficient publishing experience and therefore cannot acquire the necessary academic titles.

To overcome the shortage, qualified academics have been drawn from HEIs located in other regions, mostly in Prague. Ústí nad Labem's good public transport access[5] (suitable even for daily commuting) facilitates this possibility. During the first years of UJEP's existence, experienced academics based outside the region were willing to help build up the university by working part time at the newly established faculties and were officially invited to participate in governing bodies (scientific boards, the board of trustees, etc.). Thus, the free informal networks (Šmíd & Šubrt, 2010; Francová, 2009) between academics built upon personal contacts established in various ways (see below) were used.

UJEP offered academics from outside of the region better career-development opportunities than in the highly selective environment present elsewhere, particularly in Prague. Thus, the university's disadvantaged situation offered an easier path to a good position to academics who were not overly ambitious and in some cases not even satisfactorily qualified.

UJEP also presented an opportunity for older professors who felt underappreciated at leading Czech universities. UJEP welcomed them because they could help solve the immediate lack of academic staff. They did not contribute to long-term staff stability, but most of them were still willing to work hard, to share their experience with the "home" academic staff, and, in doing so, to significantly benefit UJEP.

As already mentioned, one way to attract well qualified academics to work at UJEP is to develop and exploit academic social networks (Buštíková, 1999).

The identified tension is related to the dual mission of the university and to the permeation of external interests in the internal dynamics of universities described in the first chapter of this book. So it is related to the ambiguity of intention and this relation will be discussed in the next section.

Discussion

In this section, we at first will discuss the types of networks described in the previous sections.

The various forms of cooperation between primary and secondary schools in the Ústí Region and UJEP faculties has produced several social networks, all of which can be considered social networks between organizations (Katz et al., 2004, p. 308). The networks we have studied involve two types of actors with different roles and positions—primary and secondary schools and university faculties—and therefore, we can describe them as two-mode networks (Wasserman & Faust, 1994, p. 29). In terms of structure, they are ego-centric networks, in which the central node is the faculty (Wasserman & Faust, 1994, pp. 41–42). Formal relations and networks are distinguished by contract-based cooperation, whereas informal networks arise out of informal personal contacts (Goes, 2015). Over time, informal relationships may transform into formal ones, and informal networks may convert into a formal one of faculty schools. In principle, one network may contain schools with a formal relationship with the faculty (e.g., faculty schools) and other schools with an informal relationship; the result is a mixed network. The networks of the FAD, FS, and FA belong to this category.

Some primary and especially secondary schools may belong to two or more networks (see Fig. 2.1). Cooperation and communication between the faculty and each school is primarily bilateral. Although communication between schools in the network is not so important for network's functioning, it is not ruled out and in some cases it may prove useful.

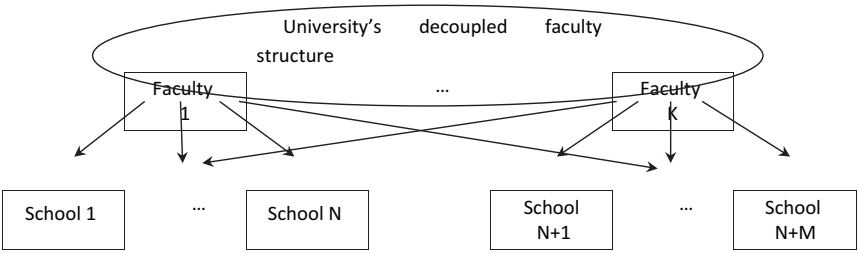

Fig. 2.1 The structure of the UJEP-schools network

Belonging to one network may create the opportunity for closer cooperation between schools and their teachers. In these cases a bridge between two nodes (or more bridges between more nodes) in the network is created (Wasserman & Faust, 1994, pp. 114–115).

Academic networks, in comparison, are much more complex. They are composed of individual academics, actors of the network, where the local academics usually play the important role due to their rich contacts. Personal contacts form the ties that individual actors have with a certain group of people as well as the ties among these groups. This arrangement means that the academics in the network can communicate with all the others, with several (a group) of them, or even with just one other actor. Information transfer characterizes their interactions and forms the network's social norms and its consensus-making mechanism (Buštíková, 1999; Mitchell & University of Zambia, 1969). The ties between actors in UJEP's academic networks may vary from being quite free to strong and may be of a short-term or a long-term nature (Šmíd & Šubrt, 2010). As Vajdová, Bernard, Stachová, and Čermák (2010) have argued, a dense, trusted network supports collaboration and improves accessibility to information. UJEP's academic networks are primarily based on informal contacts between actors, which may develop into formal contract-based relationships (see below).

The informal academic networks at UJEP were most frequently built up in two ways: first, local academics develop informal contacts with partners (mostly from other Czech HEIs or experts from research institutes) established at various professional meetings, through participation in advisory/expert/consulting bodies, and so forth. Second, the groups of academic people working on the preparation of various projects' proposals are usually involved in the collaboration on the informal basis, and so on.

If such informal ties result in success—for example, developing significant interest in an ad hoc lecture or being awarded a grant—they are usually formalized by way of a contract between the academics involved. These individuals (actors) may become UJEP employees and thus may no longer belong to the original informal social network. An entire informal network may change also into a formal one, for example, when the members of a project team sign contracts specifically related to their project.

Through interview data and analysis of UJEP documents, we have demonstrated that academic networks motivated most of the highly qualified academics and young PhD holders from outside of the region to engage in work or collaborate with UJEP. Clearly, however, not all projects result in signing contracts with external partners for many reasons—they are tied to their home institution, the theme of the project is not developed further (a reason frequently mentioned by informants), UJEP's job offers are not attractive enough, and so forth.

UJEP's academic networks are characterized by common trust and the principle of reciprocity; by improved coordination and collaboration between actors; by increased communication with well-informed people, which enables to gain more easily the needed information, or with better possibility to solve the important tasks which harmonize with the characteristics of the social capital (Anderson & Jack, 2002; Coleman, 1990; Francová, 2009; Putnam, 2000). These networks often serve similar purposes which, for example, Tullier (2004) offered in his idea that networking cultivates and maintains relationships of mutual information exchange and supports the success and happiness of all involved actors. The networks may also support Putnam's ideas (2000) about social capital, which he described in terms of its positive aspects, such as education, welfare, safe partnerships, economic prosperity, health, and happiness.

Some academic networks rely on trust and good partnerships (Vajdová et al., 2010; Putnam, 2000); such networks are stable (Šmíd & Šubrt, 2010) and may be extremely beneficial. In one illustrative case, a sufficiently qualified and competent academic gradually put together a network large enough to build an entire new department at UJEP's FA.

Now, we will try to connect the observed tensions with the ambiguities attributed to UJEP. As for the tension resulting from the lack of secondary school graduates and UJEP's need for applicants, our investigation of collaboration between UJEP faculties on one side and primary and secondary schools and tertiary professional schools on the other has shown that cooperation and networking have primarily emerged thanks to initiatives undertaken by UJEP faculties. Central university authorities do not regulate school networks, have not expressed the need to develop them, and have not shown visible support for such faculty activities. In

this respect, the university's strategy is far from systematic, and interfaculty cooperation is rather sporadic. This phenomenon most probably reflects the ambiguity of structure within the university (Pinheiro, 2012). The integration of UJEP units into the university's overall structure is quite low; this state of affairs is a common characteristic of all Czech universities (File et al., 2006; Santiago, Tremblay, Basri, & Arnal, 2008). It may explain why linkages between UJEP faculties are rather weak (Šebková, 2006; Šebková & Kohoutek, 2006). At UJEP, one does not find frequent connections between internal university subsystems that could result in the emergence of subcultures at individual faculties, as Clark (1983) suggested.

The question arises as to whether this ambiguity of structure is beneficial or detrimental for relieving the identified tension. Pinheiro (2012) noted that "a number of scholars have argued that 'loose coupling' is particularly advantageous for organizations operating in complex and rather turbulent environments, since semi-autonomous units are more capable of responding to external changes when compared to more centralized or tightly-coupled systems" (p. 16). Thus, "loose coupling" may be an advantage in networking. The faculties do not need university management to organize or even influence their activities as such an arrangement would make their work inflexible. On the other hand, the real and symbolic geographical distance that affects applicant interest in studying at UJEP could be addressed with the university's help. Financial support (e.g., from grant projects) could broaden existing faculty school networks to include schools located far from the regional center and, thus, to increase the number of applicants and improve the education level of regional inhabitants over the long term.

Now we shall examine in closer detail another tension resulting from the lack of qualified academics needed for UJEP to function.

This tension stems from the university's multiple missions (Dill, 1997; Kerr, 2001; Šebková, 2012) and is to a significant extent connected with the ambiguity of intention. UJEP's mission, as we mentioned in section "Conceptualizing the University: Ambiguities and Tensions," formulates both regional development and academic research goals. UJEP has further committed itself to helping overcome the below-average education level of the region's inhabitants and to decreasing the high out-migration

of higher education graduates. UJEP's research and development (R&D) activities would take into account regional needs with the aim of contributing to regional economic development (UJEP, 2015). While at first sight these goals may seem like standard objectives for any established university, they create considerable mission overload for the young, primarily regionally focused UJEP. Meeting them would be very difficult, even impossible, because of too many tasks and too many diversified stakeholders, as described by Enders and De Boer (2009).

One of the reasons for complicated and even contradictory goals of the university mission (Cloete, Maassen, & Bailey, 2015; Laredo, 2007) is the non-existence of clearly defined professionally/regionally focused HEIs in the Czech Republic (File & Goedegebuure, 2003; Šebková, 2006) as it was usual in binary higher education systems in other European countries like Finland, Germany, and Austria (Santiago et al., 2008). Despite the recommendation to develop a new sector within the universities with a mission focused on professional higher education programs (File et al., 2006, p. 19), Czech HEIs are categorized based on the highest degree programs they offer (see section "Conceptualizing the University: Ambiguities and Tensions"). As explained in section "Conceptualizing the University: Ambiguities and Tensions," UJEP is a university-type institution with all the consequences this status entails in regard to degree programs and R&D activities.

Meeting the university's goals requires highly qualified academic staff that the university cannot completely produce in-house or easily hire in the region. This lack of academics combined with state higher education policy (strict accreditation rules and prioritization of research) has resulted in the already-identified tension (for details, see section "The Lack of Qualified Staff and Academic Networks"). This tension is related to the ambiguity of intention due to UJEP's contradicting mission goals.

It is also influenced by external demands on internal university dynamics. For example, the drafters of UJEP's strategic plan for 2015–2020 (UJEP, 2015) had to compromise internal university interests with the goals of state strategic planning formulated in the long-term development plan for the higher education system elaborated by the MEYS for the same time period (MŠMT, 2015).

Conclusion

Having specified the tensions inherent in the case of UJEP, we can now answer our research questions. We will start with the first question: how do the networks between UJEP's faculties and primary, secondary, and tertiary professional schools work?

Measuring how effective these networks are in increasing the number of applicants to UJEP is not easy, and no quantitative data are available yet. We can only conclude on the basis of interviews with faculty officials that the schools involved in these networks have successfully motivated applicants. Different forms of cooperation provide students with direct and rich information about UJEP and its degree programs and inform them about the diverse job opportunities after graduation.

The FEd and the FPTM work very closely with "faculty schools." The title of "faculty school" has become a mark of quality recognizable by the bodies that run such schools (regional or local governments), by parents, and by the general public. We found that cooperation with teachers at these schools is very good and is beneficial for both parties. Faculty schools invite UJEP teachers to give lectures to their teachers, students, or the wider public, to perform interesting laboratory experiments, and so forth. In this manner, they can obtain important experience and feedback for their pedagogical activities at UJEP. Likewise, the teachers from faculty schools are invited to give lectures or lead seminars at UJEP, where they can share practical experience. According to interview data, students of faculty schools show increased interest in studying at UJEP (interview data).

The FEd and other faculties that train teachers create networks with primary and secondary schools primarily to provide their students the opportunity for practical training. These networks are of a formal nature (practical training must take place on a contractual basis). Some of the participating schools also bear the designation of "faculty school"; students at these schools obtain better and more exact information about studying at UJEP than those at schools that have no contact with UJEP.

UJEP's networks with primary, secondary, and tertiary professional schools have many other positive impacts on the cooperating schools, which are then transferred to the broader public and the whole region. In

general, collaboration between UJEP faculties and these schools contributes significantly and effectively to improving the quality of education at all levels and to raising the educational level of local inhabitants across the region. Thus, they help mitigate one of the tensions UJEP faces.

Now we will answer the second research question: how do networks between academics operate and to what extent do they help mitigate existing tensions?

The role of these academic networks is to increase the number of qualified academic staff members (professors and associated professors). The growing number of professors employed at UJEP indicated in the university's annual reports documents the situation's improvement. In 2000, there were 31 professors (average workload: 0.8 FTE), in 2010 there were 54 professors (average workload: 0.7 FTE). The number of associate professors grew similarly (from 79 in 2000 to 112 in 2010), but a significant number of them were qualified young "home" UJEP's academics. Since 2010, the situation has remained mostly stable. Therefore, a number of new degree programs, including ones at the master's and doctoral levels, have been accredited, and existing programs have had no problems with re-accreditation.

It is rather complicated to assess the effectiveness of the academic networks developed at UJEP. Some may be highly efficient, for example, those established for projects that consequently motivate academics to stay and work at UJEP on a contractual basis. As we mentioned in section "The Lack of Qualified Staff and Academic Networks," however, other networks may not be effective, even some project-based ones. For example, if the project is not selected for funding, the network's primary reason ceases to exist. According to interviewees, such networks tend to "disappear."

Such networks have had positive results on the composition of the academic staff; in addition to employing local people, the university also has part-time contracts with academics who commute (sometimes even daily) from Prague or other locations. Informants had different views about this situation. Some argued that the external staff have brought not only necessary qualifications but also the new professional ideas and views from other universities which contribute to the faculty's positive development. On the other hand, some of the "home"

academics considered these "outsiders" to be rivals who are not required to fulfill demanding day-to-day tasks, administrative tasks, and thus they can accomplish their research and publication goals more easily and be promoted. Therefore, academic networks, although interviewees largely viewed them positively, are in some ways substantially problematic.

Networks also offer as-of-yet unexploited potential. The region's geography could support the development of partnerships with German academics thanks to good transport access. Currently, only a relatively small number of academics from German universities participate in various UJEP's and its faculties' boards. Since UJEP was founded, university officials have tried to motivate them to work at the UJEP; the worse economic situation of the Czech Republic and the higher salaries German academics expect have prevented any such plans from progressing.

Despite the concerns associated with hiring external qualified persons and their multiplied jobs, which was proved as clearly negative, personal contacts between academics and networks that emerge from them often play a very positive role. These networks have contributed to improving the qualifications of academic staff since UJEP was established. Consequently, their existence has helped reduce the tension stemming from accreditation requirements and the government's strong preference for the academic research.

In conclusion, our investigation has demonstrated that one way to reduce the indicated tensions is to develop and use networks between academics and networks between faculties and secondary schools.

Other Czech universities, especially those located outside of traditional university centers, also struggle with a lack of academic staff. Although there is no way to assess the effectiveness of academic networks, our informants mostly believe they contribute significantly to improving the situation. UJEP's experience could be considered an example of transferable practice. The university's dual mission, which has led to the ambiguity of intentions, is largely the product of government's higher education strategy and policy. Better balance must be struck between improving academic research and international publications and supporting regional development (mostly under the third role of the university).

UJEP's positive experience with secondary school networks is not unique in the Czech Republic; similar networks have been developed by many other schools, including those located in traditional university centers, such as Charles University and the University of Chemistry and Technology in Prague. In general, such networks help attract the best applicants for study. UJEP's experience can also be transferred to other Czech HEIs.Although we have clearly observed that academic networks and secondary school networks contribute to relieving the described tensions at UJEP, our research methods did not allow us to determine the exact extent of their contribution. In the future, researchers should conduct a greater quantitative study to verify the opinions gained from our interviews in order to assess in detail the contribution of networks to solving problems at universities operating under less favorable conditions.

Notes

1. All results (case studies of regions and HEIs served as background material for our analysis) from PERIF research are available at http://www.perif-project.eu/. The study was undertaken under the framework of the research program entitled "Norway Grants" (2009–2021), funded by the Norwegian Research Council, and focusing on research and capacity building in the so-called new EU countries.
2. The Centre for Higher Education Studies coordinated the Science for Life, Life for Science (VĚŽ) project in 2014–2015, which was financed by EU Structural Funds.
3. The important changes related to the accreditation brought the amendment of the Higher Education Act from 2016. The changes relevant to this book chapter were the slightly softer requirements as far as the academic staff qualification is concerned.
4. The term "flying professor" relates to multiple contracts. The official workload for some professors was so high that they could not physically manage all duties unless they were flying.
5. The journey from Prague to Ústí nad Labem takes approximately one hour by car or train.

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3

Designed for Regional Engagement? The Case of Telemark University College

Rómulo Pinheiro and Roger Normann

Introduction

All over the world, peripheral regions face a series of challenges when it comes to economic diversification and the transition from primary or industrial-based to knowledge-based economies. As the most important knowledge institutions in the region, universities and other types of higher education institutions (HEIs) face external pressures to contribute actively to the transformation of their host regions. Earlier studies are somewhat inconclusive in this respect. There is evidence of the positive role played by universities and university colleges, termed here simply as HEIs, with regard to providing skills and competencies for local labour

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markets, offering knowledge for industry, and helping in strengthening the local innovation ecosystem (Benneworth, Coenen, Moodysson, & Asheim, 2009; Goldstein, 2009). Yet there is also a series of studies suggesting that the role of HEIs in the local economy is less clear and that the observed outcomes are a function of many contextual variables, including the ability of regional actors to absorb university outputs, that is, graduates and knowledge (Feldman & Desrochers, 2003; Florax, 1992). Some studies have also shed light on the ways in which internal arrangements at HEIs affect processes of regional engagement on the one hand and regional outcomes or effects on the other. However, within this discussion researchers have largely neglected the importance attached to organisational design, more specifically when it comes to the geographical distribution of teaching and research activities. There is an assumption in the extant literature that more decentralised models are better able to cope with local conditions, manifested in our case as local academic engagement with the surrounding community. Nonetheless, on the other hand, there is evidence in the literature that decentralisation may result in increasing tensions across the organisation with sub-units gaining a life of their own (Selznick, 1966). There is, for example, some evidence from the Nordic countries that the establishment of relatively autonomous—both financially and in terms of governance—centres of excellence within universities (Aksnes et al., 2012) has resulted in decoupling between the activities hosted by the centres and those from the departmental units from which researchers emanate (Pinheiro, 2012). This chapter addresses some of these aspects by empirically illuminating and critically reflecting on the role that multi-campus system designs—as associated with the 'ambiguity of structure' (see introduction chapter by Pinheiro et al., 2018)—play in processes of academic engagement within the broader context of the third mission of regional development. Accordingly, the research question to be addressed is as follows:

> To what extent decentralised university models, in the form of multi-campus systems, better support academic engagement activities when compared to more traditional arrangements?

The chapter is organised as follows. In the next section, we provide a brief overview of the role of organisational design in organisational performance

and review existing conceptualisations of multi-campus models in higher education. This is followed by a presentation of the case study. We then discuss the findings in the light of the theory/concepts and conclude the argument by reiterating the need to balance autonomy and flexibility with some degree of strategic oversight.

The Interplay Between Organisational Design and the Environment

Organisational scholars have long reflected on the link between environments and performance (Child, 1972, 1977; Galbraith, 1995; Thompson, 1967). A particular group of scholars, termed the contingency theorists, have argued that organisational efficiency or performance results from an alignment or fit between key organisational features such as structure and the various contingencies (environment, size, technology, strategy, etc.) facing the organisation (Donaldson, 1999, 2001). There is a widespread consensus regarding the fact that organisations, public or private, are open systems (Scott, 2003)—that is, their internal structures, functions and activities are affected or determined by the environments in which they operate. Yet there is also solid empirical evidence confirming the fact that all organisations tend to protect their core technologies from the negative effects of the environment (Blau & Scott, 2003; Meyer & Scott, 1992; Scott, 2014), including the risk of co-optation (Selznick, 1948, 1949). One prevalent strategy used is that of structural decoupling, for example, between formal goals or functions and actual arrangements, that is, work integration and coordination (Oliver, 1991; Orton & Weick, 1990). Structural decoupling is a prevalent feature of universities as organisations (Birnbaum, 1988; Pinheiro, Benneworth, & Jones, 2012a), since each internal unit (faculty/department/centre) tends to have a 'life of its own'. For example, within a given university, what happens in the Faculty of the Humanities (internal dynamics) does not tend to affect the other faculties. What is more, there has traditionally been a high level of decoupling between university strategies and structures at the central level and the core activities of the various internal units (Fumasoli, Pinheiro, & Stensaker, 2015; Maassen & Potman, 1990).

Designing Multi-campus Universities

A recent review of the existing literature points to the complexities associated with designing and operating multi-campus universities or 'MCUs' (Pinheiro & Nordstrand Berg, 2017). One of the key challenges pertains to finding an adequate balance between control or centralisation and autonomy or delegation. The core rationale for establishing MCUs is that they are better positioned to respond to local dynamics (i.e. serve the needs of local students and external stakeholders) in ways that more centralised systems are not capable of doing. Yet, on the other hand, too much delegation and decentralisation at the local (campus) level may result in increasing decoupling between local structures, goals and activities and those of the university as a whole (Johnstone, 2012, cited in Pinheiro & Nordstrand Berg, 2017, p. 5). Based on the types of autonomy enjoyed by universities and their respective campuses, Pinheiro and Nordstrand Berg (2017) have advanced a typology on the types of constellations possible within an MCU model.

Models 'A' and 'C' (left corner of the typology) represent a situation in which the individual campuses have significant leeway to define their internal goals and functions, that is, enjoy considerable 'substantive autonomy'. Structural decoupling is likely to be particularly salient in these cases. In contrast, in scenarios 'B' and 'D' (right corner), campuses possess higher levels of procedural autonomy (on how to go about their business, i.e. implementation) but little freedom when it comes to defining their own strategic goals and functions. In other words, the activities and profiles of the individual campuses are more tightly aligned to those of the university (i.e. strategy, market and student profiles, norms and values, etc.).

Building on the earlier work by Winchester and Sterk (2006), Pinheiro and Nordstrand Berg (2017) go one step further in advancing a model for characterising MCUs (Fig. 3.2). In addition to the dimension centralised versus decentralised, their model pays attention to the types of educational programmes being offered at the various campuses, either complementing or overlapping one another.

Under the situation characterised as 'galaxy', similar study programmes are offered across all campuses, coordinated under a common regulatory

or strategic framework. Under the 'planets in alignment' configuration, all major topics/programmes across all academic fields are offered across all campuses, together with a limited number of specialised courses taught at specific locations. 'Birth of a new star' pertains to a situation where all courses or programmes in a specific subject area (e.g. engineering education) are offered at selected campuses. This basically means that campuses have their own distinct disciplinary profile. Finally, in the context of a 'Lone Star' layout, certain academic programmes are offered only at certain locations, with administrative responsibility delegated at the local level.

Organisational Structure and Regional Engagement

There is evidence to suggest that the structural features of universities have an impact on the level and types of academic engagement with their surrounding communities (Benneworth, 2014; Benneworth et al., 2009; Benneworth, Pinheiro, & Karlsen, 2017; Charles & Benneworth, 2001; Pinheiro, Charles, & Jones, 2016; Pinheiro, Normann, & Johnsen, 2017). Geographical proximity and institutional profile (scope of teaching and research tasks) are important contextual variables when it comes to academic engagement at local level. Less is known with respect to the effects associated with the degree of autonomy enjoyed by individual campuses within an MCU, but there is reason to assume that a certain degree of leeway (strategic discretion) is necessary in order to more adequately address the needs of regional stakeholders across the public and private sectors (consult Pinheiro, Wengenge-Ouma, & Pillay, 2012; Pinheiro, 2012). That said, the literature also points to the importance of strategically articulating universities' regional engagement at central level (Pinheiro, Benneworth, & Jones, 2012b, 2015). In other words, as is the case with the activities of MCUs in general, an adequate balance needs to be struck between coordination and delegation as regards regional engagement by the individual campuses. In contextual situations characterised by geographical distance and multiple, complex external demands, it could be argued that the 'ideal scenario' would be one in which individual campuses enjoy the freedom to develop local strategies and structures for engage-

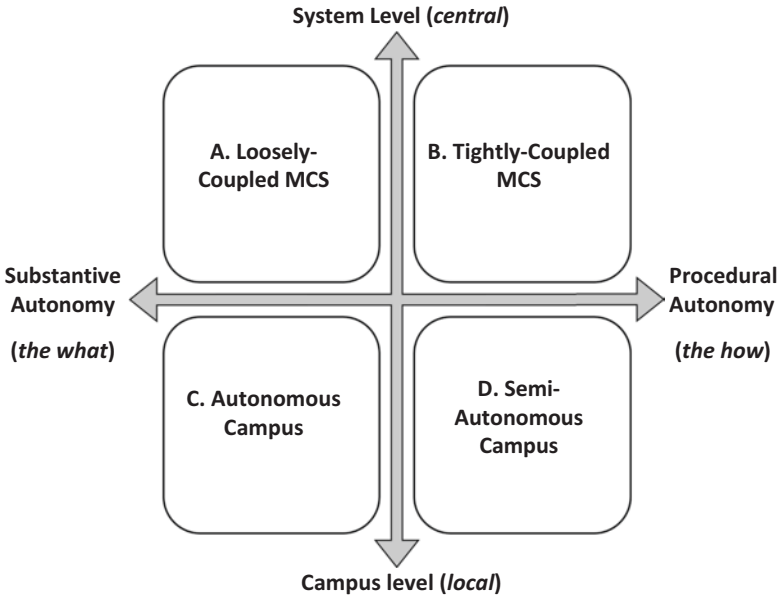

Fig. 3.1 Degrees of autonomy within universities. Source: Pinheiro and Nordstrand Berg (2017, p. 6)

ment (in the light of local characteristics, demands and capabilities) whilst coupling or linking them to higher-level (collective) goals, strategies and structures for the university as a whole. Revising the models presented earlier, this would, in principle, imply a situation in which the university allows for the development of semi-autonomous campuses (scenario 'D' in Fig. 3.1), allowing both for coordination and specialisation to occur (Fig. 3.2) while stimulating campuses to develop their own distinct profiles and local cultures ('birth of a new star') against the backdrop of their immediate geographical surroundings. This leads us to formulate the following hypothesis:

> Faced with a fast-changing and complex environment, MCUs are better able to respond to regional demands when the individual campuses have the necessary autonomy to exercise a certain degree of strategic agency, whilst ensuring that the latter is aligned with the broader strategic goals and profile of the university.

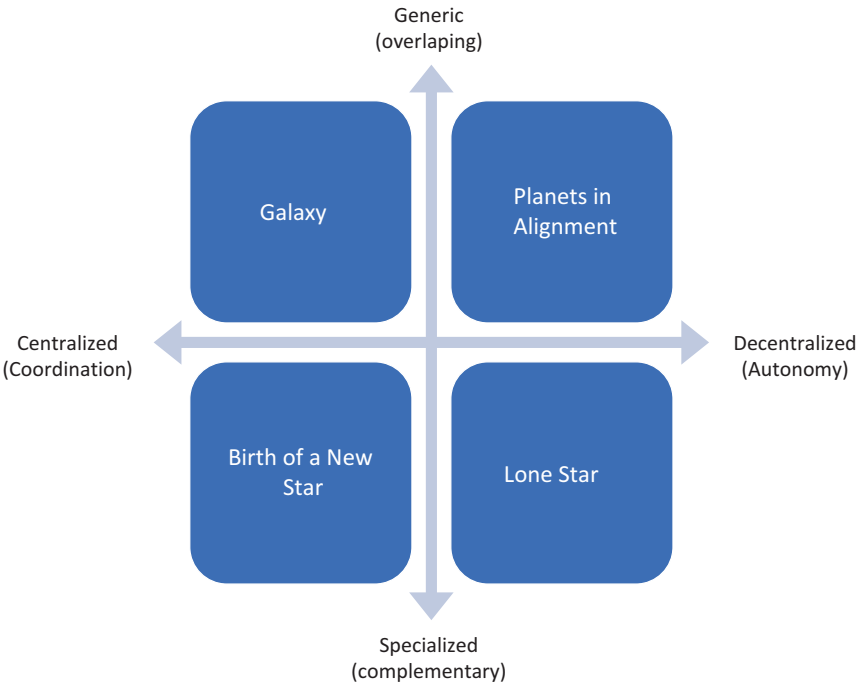

Fig. 3.2 Typology of multi-campus universities. Source: Adapted from Pinheiro and Berg (2017, p. 8)

Design and Method

This chapter is part and parcel of a larger comparative study investigating the role of HEIs in the socio-economic development of peripheral regions of Norway and the Czech Republic.[1] It follows a single case-study research design of one regional HEI located in the region of Telemark, Southeast Norway. Both qualitative and quantitative data sets were collected, both on the region and on the institution's teaching, research and engagement (third mission) activities. Desktop analysis of official statistics (e.g. from Statistics Norway, SSB), institutional reports and previous publications was undertaken, in addition to semi-structured, face-to-face interviews (N = 6) with both the university and regional (external) actors in the winter of 2015. Data material collected during separate site visits in

2015—interviews with university managers ($N = 5$)—in the context of a separate project on MCUs (Pinheiro & Nordstrand Berg, 2017) was used as well. The interviews, lasting about one-hour each, were tape recorded and transcribed verbatim. A thorough analysis of the interview material, using the NVivo 11 software tool, resorting to nodes and trees, has helped us to codify and organise the information. Key data patterns were then identified and further explored. Triangulation was used as a means of testing their overall validity.

Background: Case Region and University

Telemark is one of Norway's 19 administrative counties or regions. It is located in the Southeastern part of the country, covering a land area of 15,299 km^2 and being home to 172,000 inhabitants. It is the 10th largest county by geographical size and the 13th largest in terms of inhabitants. The county is split into 18 municipalities, 12 of which have less than 6000 inhabitants, divided into 5 subregions. Telemark is one of the country's main industrial counties (home to approximately 500 companies), with a strong focus on mining (metals and minerals). That said, public sector employment (health and social services, schools, local government) is quite considerable. GDP per capita (325 506 NOK in 2013) was about half of that of the capital city Oslo, with the county ranked eighth nationwide. Regional unemployment rates (as of May 2016) were slightly above the national average—3.2 versus 2.9% (SSB, 2017), and particularly high amongst those with only primary and secondary attainments. Following the 2008 financial crisis, the region has lost over 3000 jobs, also as a result of the fall in global oil prices that ensued. The county faces a number of long-term socio-economic challenges. Education levels are lower when compared to national averages, particularly as regards long-term (four years plus) higher education attainment (5.3 vs. 9.2% for Norway). The share of persons (aged 15–29) reporting psychological symptoms and diagnoses also ranks higher than the country as a whole. Ageing is a concern, with a forecasted doubling of people over 67 years of age by 2040. Finally, the region has a lack of knowledge-intensive and high-tech indus-

tries, and thus ranks relatively poorly in terms of innovative or absorptive capacity.

Telemark University College (HIT) was first established in 1994 as a result of a forced merger (involving smaller educational providers) that led to the creation of a binary higher education system in Norway (Kyvik, 2002). Its primary mission has, like all the university colleges, been the training of professionals—teachers, managers, health, and social workers—for the region, across the public and private sectors of the economy. In 2016, HIT employed around 650 staff across its 5 faculties,[2] 60% of whom were directly involved in teaching and research tasks. It enrolled about 7000 students, an 18% increase since 2008, and offered a total of 50 bachelor's, 16 master's and 3 doctoral programmes. More importantly, its core activities are spread throughout the region, operating in no less than four individual campuses (Fig. 3.3).

In 2014, the largest and main campus, located in the city/municipality of Porsgrunn (35,000 inhabitants) enrolled 2300 students, or 33% of the total. The smallest campus is located in the rural area of Rauland, part of the Vinje municipality (4000 inhabitants). In 2016, HIT became a part of the newly established university college for Southeast Norway, as a result of the formal merger with the former university college of Buskerud and Vestfold, two surrounding counties to the east of Telemark.[3] This follows a general trend in the sector (since 2009), both in Norway and other Nordic countries, with regional HEIs urged by the Ministry of Education and Research to merge with one another (Pinheiro, Geschwind, & Aarrevaara, 2016).

Key Empirical and Analytical Findings

The data show that HIT is first and foremost a teaching institution with limited capacity in the realms of research training and scientific production. This is aligned with its strong regional mandate of training regional youth and reskilling the regional labour force, and is reflected in the relative large public sector in the region. However, the lack of knowledge production capacity at HIT has also had a negative effect on the region's industry structure, where innovative and absorptive capacity is rather

Fig. 3.3 Norway's Telemark Region. Source: www.d-maps.com

low. Telemark is struggling to move from a predominantly rural and industrial basis into a post-industrial knowledge-centric and globally competitive regional economy. It has also struggled both in retaining talented local youth (brain drain) and in attracting new skills and competencies to the region. Internally, and on the basis of the direct accounts by multiple university actors, HIT views itself as an important participant in

Table 3.1 Faculty locations and student enrolments per faculty in 2014

Faculty	Campus location(s)	Enrolled students
Arts & science	Notodden, Rauland & Bø	2720
Arts, folk culture and teacher education	Rauland	2195
Health & social sciences	Porsgrunn	1232
Technology	Porsgrunn	766

Source: DBH-NSD

Table 3.2 Student enrolments per campus in 2014

Campus	Enrolled students
Porsgrunn	2300
Notodden	1650
Bø	1500
Rauland	1050

Source: DBH-NSD

the various regional arenas and, as a result, as a critical actor in supporting regional development. More importantly, the decentralised strategy adopted since the mid-1990s is partly based on the rationale of being relevant to the Telemark region as a whole, so as to serve its multiple student regional publics and actively engage with external stakeholders across the public and private sectors:

> …when you look at the universities and colleges around the country, it quickly becomes a case of big campuses in the middle of the city. While we have [here in Telemark] the Raulandsakademiet [campus in a rural area] and culture, we have Bø, Notodden and Porsgrunn [campuses] being able to educate within the professions in close interaction with the local authorities … Also, you have Porsgrunn [campus] close to industry and what's happening there … At Rjukan [administrative centre of Tinn municipality], they have a teaching programme on nature and environment at the high school, where we connect it with Hardangervidda [National Park[4]] Centre and Bø University College[5] [Bø campus]. So to connect the disciplines [to the life of the localities] in the way we do, having campuses "outside" [throughout the entire region], I think it's a specialty that is important for HIT, and one that we must be positive about. (Local government representative)

That being said, major issues have emerged during the interviews with university actors with respect to the degree of integration across HIT's campuses and primary activities. It seems that, despite a formal merger in the mid-1990s, the old institutions have continued to operate rather independently from one another.

> … it [mid-90s] was a forced merger… and it did not become an integrated merger. It was more like 4–5 columns standing together… within a fence. (Manager 5)

The data also point to internal rivalries and conflicts emerging as a result of overlaps in programmatic offerings and competition for resources amongst the various campuses and their respective faculties. This was acknowledged as potentially negative in the case of the development of a cohesive, internal culture, including one of regional engagement:

> If we are not considering ourselves as part of a larger [internal] community…internal problems will arise to a larger degree. Fighting for resources, difficulties distributing things… So if no one sees the usefulness of the community [shared set of values and goals], we are no longer an institution! (Manager 2)

In fairness, and over time, the accounts collected reveal that there were active efforts made by the university leadership (central and unit levels) to address issues pertaining to structural and cultural fragmentation within HIT, and as a means of realising the potential synergies resulting from the original merger and the establishment of MCUs—one of the few in Norway at the time. Such efforts were, however, unsuccessful as a result of two critical factors and according to various internal sources, namely strong disciplines, that is, a high level of autonomy exercised by faculties and the academic groups composing them and rather weak central leadership:

> I think this [resistance towards stronger integration] is connected to the need for stronger leadership, but there were strong and uncompromising academic units which were left at peace… We have spent a lot of money on [consultants]… and the last proposal was just archived. (Manager 5)

Despite these frustrations and (still) unfulfilled synergies, the majority of university actors interviewed defended the potential advantages associated with MCUs both for the institution and for the surrounding region:

> From my point of view, the university college would not have been so large if we were not located on so many campuses … It is the presence on campus P, campus B, campus N and campus R which contributes to the ability to recruit from so many categories of students … and we are able to serve larger parts of the [Telemark] county than if we had just one campus … The advantage with the presence at several campuses throughout the county, is the support from the county and several more municipalities than would have been the case if we were located on one campus alone. (Manager 1)

Across all HIT locations, but particularly in the case of the Bø campus, the close relationship with local actors has been a deliberate strategy:

> By letting the surrounding actors see the use of having us [HIT] here [locality] is the biggest security measure we can take in order to stay a viable student town in the future. (Manager 6)

Turning now to leadership-related issues, and following developments elsewhere due to changes in the ways in which Norwegian HEIs have been governed and managed since the mid-2000s, (see Pinheiro & Nordstrand Berg, 2017) a model based on unitary management was introduced during 2011. The rector, appointed by the university board, which is the highest governance authority, has the overall responsibility for academic, administrative and financial matters. In addition to the rector, the executive is supported by two vice rectors (one for teaching and another for research), an administrative director, and the (4) faculty deans. Department managers report directly to the deans, and each faculty has its own administrative head who also reports to the respective dean, as shown in Fig. 3.4. There is no leadership authority at the level of the individual campus, such as a campus dean or director.

The leadership structures at HIT have changed with respect to the ways in which formal leaders are recruited. Previously, academic leaders

Fig. 3.4 HIT's campuses across the Telemark region as of the fall of 2016

were elected in the form of a collegium election, but now HIT's Board of Directors directly appoints the formal leaders (deans, heads of department, etc.). This change, which is also prevalent across other HEIs throughout the country, has created debates within HIT in which some contend that the institutional democracy has been weakened when academics are blocked from electing their own leaders. As for decision-making procedures, HIT's power structures have also undergone change in recent times. Over time, and especially following the 2003 quality reform and the managerial changes (inspired by amongst other aspects, New Public Management) that ensued, decisions have become more centralised (top-down) as regards budgets or financial allocations, and with respect to strategic priority areas. Some university

actors see this as a positive change, since it leads to clarity regarding the important areas on which HIT should focus. At the same time, there are those that argue that the individual local campuses (not the central administration or the senior leaders located at the main campus) know the region best, and should therefore be able to exercise higher levels of financial discretion (own budgets).

With respect to the role of the central leadership in processes of local engagement, there seems to have been a shift towards a more proactive and strategic posture in recent years, as pointed out by one interviewee who has had a long history of engagement with HIT:

> …earlier, the college was so rigid and, what should I say, not very creative. But there have been a lot of improvements out there. But I think that was also related to the replacement of management … who [new central leadership] are used to thinking commercially and in a different [more strategic] way. (External stakeholder)

Turning now to the profiles of the individual campuses at HIT, our analysis reveals the following characteristics:

- The smallest and most remote campus at Rauland is highly specialised, since it offers educational programmes in only one subject area. The campus thus has a clear and explicit academic and student profile. The remaining (3) campuses offer a broader range of educational programmes covering different subjects; Bø and Porsgrunn offers 4, and Notodden a total of 3.
- Disciplinary or programmatic overlaps were found to occur in three specific instances, namely within teaching education at two of the campuses—at Porsgrunn and Notodden; within the fields of ICT, economics and administrative subjects at Bø and Porsgrunn; and within sports, physical education and outdoor life at Bø and Notodden (Table 3.3).
- Given the unique combination of subject areas, each campus location was found to have rather unique academic and student profiles despite small overlaps (individual courses/programmes) here and there.

Table 3.3 Programmatic offerings across HIT's campuses

Bø	Porsgrunn	Notodden	Rauland
	Teaching education	*Teaching education*	Folk music & traditional arts
ICT & business	*ICT & business*	Art & Design	
Sports & physical education	Health and social work	*Sports & physical education*	
Culture, language & history			
Nature and environment			

Note: Overlaps marked as italic and underlined

Turning now to the nature and scope of regional engagement, HIT's strategic plan (2010–2015) states that the university college aims to fulfil its societal tasks by offering educational, research and liaison services of high quality with a basis in regional and national needs, amongst other things through multidisciplinary research. Further, the plan states that HIT should be an innovative actor that helps stimulate business life and society in general. Interviewees often referred to the fact that the decentralised multi-campus model that was adopted facilitates local engagement with various regional audiences. For example, one specific project located at Bø campus involves a tripartite of actors from the local municipality, the private sector (hospitality branch) and the regional research institute (Telemark Research) in defining campus locations to develop HIT as a knowledge organisation. The municipality has to be included in the project in order to incorporate the plans as part of the city and local plans for land use. From projects such as this, a wide array of value-added activities emerge, as is the case of spin-offs like the knowledge park concept designed to connect the various knowledge actors located within the campus vicinity with the ultimate aim of enabling collaboration, creativity and innovation.

Our analysis reveals that HIT does have a strong network with regional business and society. HIT's management seems to prioritise participation in regional arenas where the development of the region is the focus area. In addition to these networking arenas, HIT has also focused on entrepreneurship dimensions in both education and research since the early 2000s. Examples include student firms, entrepreneurship camps, study

programmes within entrepreneurship, and the commercialisation of research and development. A specific example of the innovation focus is the industry incubator, Proventia, where HIT is a shareholder and a Board member. The incubator aims at developing new business ideas with growth potential. Funding for third mission activities emanates from different sources, such as private foundations, different government departments, regional research funds, the Norwegian Directorate of Education and Training and the county authorities.

Our inquiries also revealed that, despite the fact that regional engagement is explicitly mentioned in HIT's strategic plans and other internal documents, there is a lack of incentives for rewarding academics willing and able to collaborate with regional actors. HIT's job descriptions (recruitment practices) state that in addition to teaching within one's field, one is also expected to contribute to project acquisitions and application writing with a regional focus. One potential negative side effect of the structured research connected to regional or societal challenges, as pointed out by some informants, is that it might diminish the distinctive character of each discipline. A point often made during the interviews pertains to the fact that critical research, regardless of regional challenges, is important and should not be excluded when setting the research agenda for the different Faculties.

Going forward (into the near future), key strategic projects together with external actors include: (a) establishing a knowledge centre ('Du Verden') with the goal of increasing local children's interest in scientific subjects and history and a sense of belonging to the Telemark region and (b) developing a new student internship arrangement ('Trainee Telemark'), which is intended to improve the region's competitiveness by providing highly educated competence to local businesses and, subsequently, increasing their absorptive capacity.

Discussion and Conclusion

Despite its relatively traditional organisational structure (Fig. 3.5), with no specific geographic elements in it, the qualitative accounts emanating from the interviews with university staff show that decoupling is rather

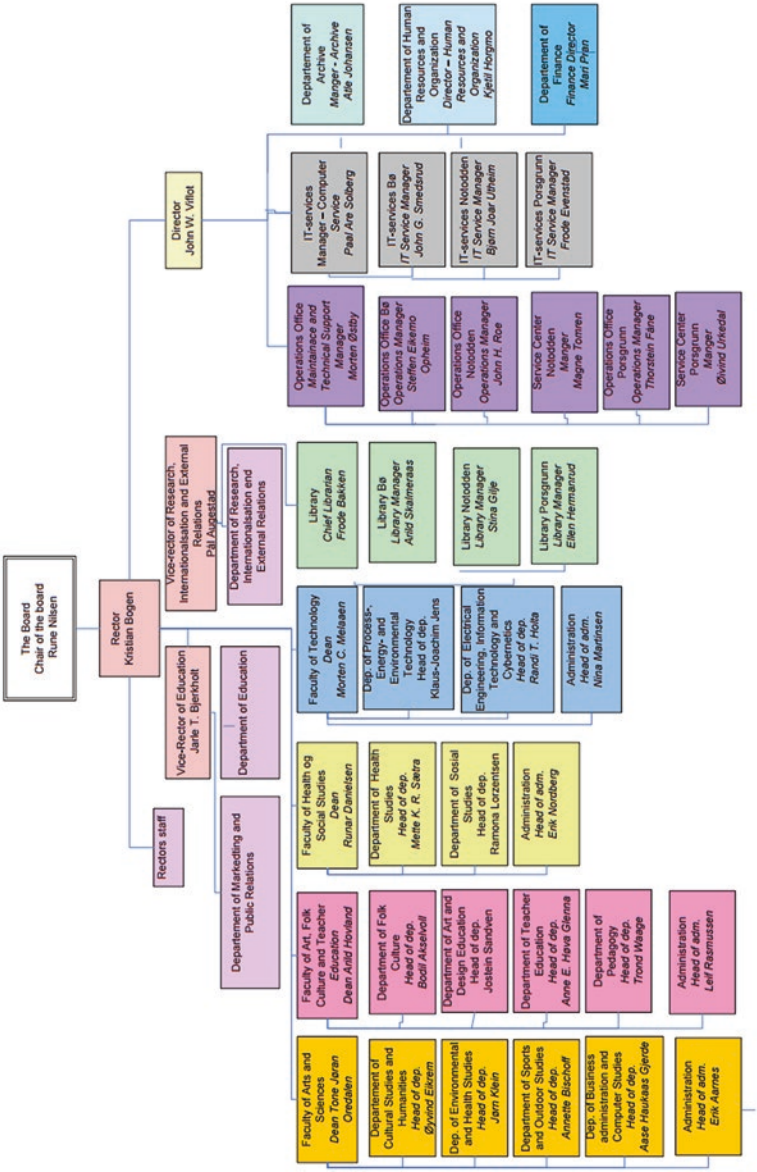

Fig. 3.5 HIT's organisational structure as of the autumn of 2015. Source: HIT (2015)

prevalent at HIT, with each faculty and campus having a life of its own. This, in itself, is not a surprising finding per se, as it is associated with the 'ambiguity of structure' that characterises universities as organisations (Pinheiro et al., 2018). Earlier it was hypothesised that, when it comes to the third mission of regional engagement, a certain degree of autonomy is required if each campus is to engage with and respond to the needs and expectations of external stakeholders. In addition, another requirement pertained to the fact that a certain level of coupling between local (campuses) and the strategic framework of the university as a whole would be warranted so as to ensure that the activities of the individual campuses contribute to shared goals and objectives. The data collected suggests that this last aspect has been absent at HIT, creating a series of tensions and dilemmas. We would term this process 'negative decoupling', in contrast to 'positive decoupling', in which case the decentralisation of activities is combined with strategic oversight and coordination.

In the case of HIT, the main drivers towards negative decoupling can be explained according to several aspects. First, the fact that the 1994 merger, which was a forced, top-down initiative by the Ministry, was only consolidated on paper and was never fully realised, that is, it failed to be fully institutionalised. Despite the symbolic adoption of a shared organisational structure, each faculty and campus continued their own activities as before with little coordination with the other sub-units of HIT. What is more, given the complementary or overlap in programme offerings at certain campuses, combined with the difficulty in recruiting new students, particularly from outside the region, competition amongst the different campuses and faculties increased. This was, to a large degree and as pointed out by some interviewees, the combination of weak central leadership and strong faculties which were capable of defending their own interests regardless the collective aspirations of the university as a whole (DiMaggio, 1988). Such behaviour is typical of organisations or sub-entities that have been successful in institutionalising internal structures, norms and identities (Olsen, 2007; Zucker, 1991), and thus can be considered as relatively resilient institutions (Pinheiro & Young, 2017), that is, to an extent unaffected by external dynamics. Furthermore, it is rather revealing that this institutionalisation process has also had an effect on how external stakeholders perceive (identity) the various

campuses, referring to them as 'quasi-autonomous organisations' operating within the broader dynamics of the surrounding locality. This, in turn, has contributed to confusion, both internally and externally, with respect to the role, mission and identity of HIT as a collective. In other words, it has had a negative effect on aspects pertaining to the 'ambiguity of purpose' (Pinheiro et al., 2018) associated with universities as organisations.

Turning now to the effects of the environment in HIT's organisational structure, most notably in the case of the profile of its individual campuses, the data point to a duality in terms of relations and effects. Broader dynamics and core characteristics within the locality have clearly had an impact on the scope and nature of core activities. Yet the reverse is also true, namely HIT's teaching, research and engagement endeavours have also had an effect on the overall profile of the surrounding locality. This duality is part and parcel of the fact that, like all organisations (Scott, 2003), HIT is not isolated from its environment, relying on the latter for both financial (Pfeffer & Salancik, 2003) and moral support or legitimacy (Drori & Honig, 2013).

With respect to autonomy, it is fair to say that HIT's individual campuses have, in the last two decades or so, enjoyed a considerable degree of freedom both when it comes to *substantive* (goals and functions) and *procedural* (how to reach them) issues (Schmidtlein & Berdahl, 2005), hence operating very much as autonomous units (quadrant c of Fig. 3.1). Subsequently, given programmatic overlaps and some degree of complementarity associated with the teaching profile of each campus, in tandem with a high degree of autonomy or decentralisation, HIT's MCU model can best be characterised as combining features of 'lone star' (very salient) and the 'planets in alignment' (somewhat salient) constellations presented in Fig. 3.2. This, in turn, implies a difficult trade-off between flexibility and the lack of strategic integration, as pointed out earlier by Pinheiro and Nordstrand Berg (2017, p. 10):

> This [lone star model] has the advantage of being sensitive to local events and requirements (e.g. allowing for experimentation and innovation), in addition to benefitting from economies of scope associated with greater specialization. However, on the negative side, there is a danger that, in the

long run and left to its own devices, each campus may develop a life of its own life, thus becoming increasingly decoupled from the system as a whole; i.e. not necessarily aligned with the latter's overall strategic posture and institutional profile.

In short, our case empirically demonstrates the multiple ambiguities associated with modern universities as organisations and institutions, in addition to the complexities inherent in the adoption of decentralised organisational structures, as in the case of MCUs. In so doing, it points to the need to balance autonomy and flexibility with some degree of strategic oversight that is both respectful of local dynamics and characteristics, yet takes into account the long-term values, strategic goals and aspirations of universities as collective organisations rather than simply collections of decoupled sub-entities characterised by a life of their own. Moving forward, more studies (single or multiple case), preferably using mixed methods and longitudinal research designs, are needed in order to illuminate the complex interplay between (a) university design and environment on the one hand and (b) design choices, either rational (by design) or otherwise (path dependencies), and organisational structures, identity and performance on the other.

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Notes

1. For more information, consult the project's website at: http://www.perif-project.eu/
2. Arts and Sciences (2700 students in 2014); Arts, Folk culture and Teaching Education (2195 students); Health and Social Sciences (1232); Technology (766 students) (DBH-NSD 2015).
3. Given the scope of this research inquiry (retrospective orientation), as well as the larger study on the role of HIT in the socio-economic development of the Telemark region, the merger process and the structural changes that followed were excluded from our analysis.

4. The Hardangervidda National Park Centre is situated near Skinnarbu, at the outlet of Lake Møsvatn, in the National Park municipality of Tinn, near the border of the National Park municipality of Vinje, all of which is part of Telemark county. The centre is a government-approved part of the Hardangervidda National Park, and is housed together with its partner, the Norwegian Wild Reindeer Centre South. More info at: http://en.hardangervidda.com/The-Hardangervidda-National-Park-Centre
5. Note that external stakeholders, as in the case above, refer to each campus as if it was a separate institution rather than a part of HIT; this was referred to by many at various points during the interviews.

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4

Graduate Paradox at Jihlava: The Perspective of Stakeholders

Michaela Šmídová and Inna Čábelková

Introduction

Academics and policymakers have long recognized the role of higher education institutions (HEIs) in regional development (Caniëls & van den Bosch, 2011; Goddard & Puukka, 2008; Stephenson & Yorke, 2013; Thanki, 1999). Tertiary-educated employees are an indispensable asset for high-technological firms, clusters, and regional innovation systems (Caniëls & van den Bosch, 2011; Westhead & Storey, 1995). Well-known examples of university-driven technology transfer, such as in Silicon Valley or along Route 128 (e.g., Lécuyer, 2006), emphasize the role of universities even further and have spawned imitations in other locations.

The simplest strategy prompted by these successful examples has been to establish new, preferably public, HEIs in regions where no HEIs exist in

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order to speed up regional development (Labrianidis, 1995; Lechat, 1979; Skodvin, 1997). While in some cases this strategy has worked, in others it has resulted in different paradoxes and tensions. In this chapter, we analyze one such case—the founding of the College of Polytechnics Jihlava (CPJ) in the traditionally agrarian Vysocina Region of the Czech Republic.

CPJ was established in the Vysocina Region in 2004 as the first non-university HEI in the Czech Republic with the triple aim of preparing graduates directly employable within the region, attracting new employers to the region, and keeping young people from leaving the region. Even after ten years of CPJ's existence, the region has continued to experience high unemployment rates among highly educated people. At one point (2004), the regional unemployment rate for tertiary graduates was more than two times higher than the country-wide average. Similarly, the unemployment rate of recent CPJ graduates is considerably higher in comparison with other Czech HEIs.

In this chapter, we investigate the tensions between the regional labor market's need for highly educated employees and the study focus and structure of graduates from CPJ. Therefore, the principal research question is what is CPJ's role in providing graduates for the regional labor market? However, more general research questions stand behind it: how and how effectively can a small, new vocational HEI contribute to stimulating regional development? What barriers between this HEI and the regional labor market can be identified? To answer these research questions we will analyze CPJ's role in the region from the perspective of the stakeholder salience theory (Mitchell, Agle, & Wood, 1997). We will discuss the roles and activities of different types of stakeholders that influence the relationship between CPJ and the Vysocina Region, describe the changing dynamics between stakeholders and the HEI, and identify ambiguities that hamper the regional involvement of an intentionally regional university.

On the Regional Role of Young HEIs in Technologically "Thin" Regions

Goddard and Puukka's (2008, p. 16) description of the regional role of HEIs includes outcomes such as generating taxes, attracting new investors and businesses, supporting graduate retention, and positively

influencing the existing workforce by updating its members' skills, competencies, and knowledge. While in general this description may bear certain aspects of universality, young universities located in technologically "thin" regions in particular can only aim to fulfill some of these tasks.

Technologically "thin" regions are usually ones that have, for various reasons, become stuck at some level of modernization (Tödtling & Trippl, 2005). The economies of thin regions generally depend on the primary sector. The secondary and tertiary sectors, while in some cases significant in volume, are characterized by low diversification, low technological intensity, low value-added production, and low labor productivity. Education levels often lag behind the country average, and thus, new technologically intensive segments of production chains are effectively prevented from coming to such regions. In addition, such regions lack universities with strong research traditions, and hence new HEIs must deal with both the problems faced by the region and the problems associated with their own institutional development. In this situation, the primary tangible contribution of regional HEIs is to provide skilled labor for regional labor markets (see, e.g., Florida, Mellander, & Stolarick, 2008). Global business connections can hardly be developed as there are few high-tech businesses that require university expertise, and young universities in particular need time to cultivate such expertise or attract academics with relevant skills (Goddard & Puukka, 2008).

Similarly, regional authorities often have ambiguous expectations of regional universities and collaboration with local academics. This observation applies especially to regions that have never been home to an HEI. Moreover, the central government often cares more about the excellence of higher education in the country as a whole than in specific regions.

Theoretical Framework

The stakeholder salience theory was originally applied to business management for identifying an organization's relevant stakeholders, that is, the groups and individuals that are truly important to the activities and aims of the organization (Mitchell et al., 1997). It has also been since

used many times to analyze HEIs and higher education in general (e.g., Amaral & Magalhaes, 2002; Benneworth & Jongbloed, 2010; Leisyte & Westerheijden, 2014; Pinheiro, 2015).

Freeman (1984) broadly defines a stakeholder as "any group or individual who can affect or is affected by the achievement of the organization's objectives" (p. 46). Thus, there are many potential stakeholders involved in an organization's management, both external (government entities, competitors, suppliers, and communities) and internal (mainly employees). Stakeholders can also be people (such as representatives of other organizations) to whom the organization has obligations or with whom it has some other relationship. When this approach is applied to higher education, HEI officials are seen as "managers" of their institutions or organizations, whose task it is to identify relevant stakeholders and, on the basis of this knowledge, to support decision-making within the HEI (Benneworth & Jongbloed, 2010).

Mitchell et al. (1997) distinguish different classes of stakeholders (see Table 4.1) based on the possession of three basic attributes—power, legitimacy, and urgency. In the case of higher education, the stakeholder's *power* to influence an organization is reflected in "growing pressure from students, parents and legislators to force universities to adopt more cost-conscious operating principles" (Mitchell et al., 1997, p. 869). The *legitimacy* of a stakeholder's relationships can be viewed

> as a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system

Table 4.1 General stakeholder typology

Possession of attributes					
Type of stakeholder		Power	Legitimacy	Urgency	Salience
Dormant	Latent	X			Low
Discretionary			X		
Demanding				X	
Dominant	Expectant	X	X		Moderate
Dangerous		X		X	
Dependent			X	X	
Definitive		X	X	X	High

Note: Adapted and modified from Mitchell et al. (1997, p. 884)

> of norms, values, beliefs and definitions. Today, the university's traditional stakeholders (e.g. students and governments) have been supplanted by, amongst others, local industry. (Mitchell et al., 1997, p. 869)

Finally, the *urgency* of the stakeholder's claim on the organization is "the degree to which stakeholder claims call for immediate action. A good example would be the greater emphasis put on research in health/life science fields at the expense of research in other scientific areas" (Mitchell et al., 1997, p. 869). In this sense, humanities, arts, and social science departments are seen as possessing less urgency because many stakeholders both within and outside universities do not view these fields as making great economic contributions to society (Benneworth & Jongbloed, 2010).

According to Mitchell et al. (1997), *stakeholder salience* means "the degree to which managers give priority to competing stakeholder claims" (p. 854). It is positively related to the cumulative power of the three attributes that managers perceive to be present, which in turn triggers managerial actions. It is also important to note that power, legitimacy, and urgency are not static parameters, but dynamic ones. Thus, stakeholders can move from one class to another by gaining or losing particular attributes. *Latent stakeholders* possess just one attribute and have low stakeholder salience, *expectant stakeholders* have two attributes and moderate salience, and *definitive stakeholders* possess all three attributes and high salience (see Table 4.1).

Methodology

We mainly analyzed data that were obtained as part of the Contribution of Higher Education Institutions to Strengthen Socio-Economic Development of Peripheral Regions in Norway and the Czech Republic (PERIF, 2015–2017) project financed by the Norwegian Financial Mechanism 2009–2014.[1] We have applied stakeholder theory to an analysis of qualitative and quantitative data on one specific region and one specific HEI (i.e., the College of Polytechnics in Jihlava). We drew quantitative data from relevant statistical sources made available by the

Czech Statistical Office and the Ministry of Education, Youth and Sport (MEYS) of the Czech Republic, and from CPJ annual reports. We used two different qualitative research methods. First, we conducted a content analysis of regional strategic documents and CPJ strategic documents, focusing mainly on connections between the region and CPJ, and paying special attention to statements and practices related to the job market and employment rates. Second, in 2016 we conducted semistructured interviews with five regional officials and five CPJ representatives.[2]

The College of Polytechnics Jihlava as a New Actor in the Region

In 2000, the administrative division of the Czech Republic was redefined and new administrative units were established.[3] Thus the Vysocina Region emerged, endowed with self-governing competencies for expressing local and regional identity more strongly and for promoting regional economic development more independently. Although there were several smaller branches of HEIs from outside the region located here, no public HEI[4] was headquartered in the region before. Therefore, establishing the CPJ in 2004 was one of the first steps the region took toward emancipation. The regional authorities took advantage of the favorable conditions for establishing new HEIs (both private and public) and held negotiations with the MEYS. Between 1999 and 2010, MEYS was well disposed to establishing new public and private universities with the aim of increasing access to and availability of higher education (Kouřilová & Krejčová, 2013; Prudký, Pabian, & Šima, 2010). This aim was closely connected with the ongoing post-1989 transformation of the education system.[5]

CPJ was founded in 2004 on the foundation of an existing vocational institution, the College of Jihlava,[6] which did not have the status of HEI. The new institution inherited from the original one its main building and facilities, its practical orientation, and its management—that is, the last director of the College of Jihlava became the first rector of CPJ. From the

very beginning, the founders aimed to establish a non-university HEI that produces directly employable graduates with bachelor's and master's degrees, that is, the institution was to retain its vocational and professional focus. Thus, study programs were meant to fulfill the needs of the region and local private and public employers. The inclusion of the word *polytechnics* in the title of the school indicates the broad spectrum of fields taught there.[7] CPJ has three main academic streams: the first includes study programs in business and administration with a special focus on tourism and management and follows in the footsteps of the College of Jihlava's original focus; the second stream centers around the technical fields of applied engineering and IT; and the third one focuses on health care and social work. Currently, this last-mentioned stream is the only one with an accredited master's degree program. (For a list of study programs and the number of students and graduates, see Table 4.2). The business stream is predominant as 75% of all graduates finish their study within it (in 2015). According to CPJ representatives, another master's degree program focused on technical studies is currently undergoing the accreditation process, but its final approval depends on the application of the Amendment to the Act on Higher Education from 2016.

Table 4.2 CPJ study programs and the number of students and graduates (2015)

Study programs	Degree programs	Students	Graduates
Electrical Engineering and Informatics	1. Applied Computer Science 2. Computer Systems 3. Applied Technology for Industrial Practice[a]	256	20
Economics and Management	4. Travel and Tourism 5. Finance and Management	1431	326
Midwifery	6. Midwifery	606	121
Health care	7. General Nursing		
Clinical Social Work	8. Clinical Social Work		
Specialization in Health care	9. Community Care in Midwifery (master's degree)[b]	24	

Note: Data from the year 2015 (College of Polytechnics, 2016)

[a]Accredited in 2015. The first students were enrolled in 2016/2017

[b]This study program was accredited in 2014; the first students were enrolled in the 2015/2016 academic year

Regional Context

To an outside observer, the Vysocina Region is a calm, static region with a high quality of life. This traditionally agrarian, rural region features a large number of small settlements and no single center. Only one-third of inhabitants live in urban areas, and the largest city—the regional capital of Jihlava—has a population of only 50,000. A total of 704 municipalities exist in the region, almost half of which are small villages with less than 200 inhabitants; only 34 municipalities have the official status of town. This fragmentation leads to high demands on infrastructure such as sewage systems, gas networks, the electricity grid, roads, and health, educational, and social services—and subsequently to high costs.

The demographic composition of the region is relatively stable, and inhabitants have strong local and regional identities. The population has remained unchanged since 1869 although in that time the country's overall population has increased by 40%. Most regional inhabitants are "natives," strongly rooted within the region. The region did not experience the significant population shifts that happened elsewhere in the Czech lands during and after World War II. The originally numerous Jewish population did, however, largely disappear as a tragic consequence of the Holocaust, but there was no wide-scale internal immigration from other parts of Czechoslovakia to replace the Jews after the war.[8] The region recently experienced a small demographic deficit, but this is not a significant trend. Ethnic homogeneity and a low proportion of foreigners (about 3%; Czech Statistical Office, 2015) are also typical for the region. Like other regions in the Czech Republic, the Vysocina Region also has to cope with population aging. The proportion of people above 65 years of age has increased from 13% in 1994 to 18% in 2014. For comparison, the oldest region in 2014 was the Plzen Region (with 18.4% over 65) and the youngest was the Central Bohemian Region (16.7% over 65); the Czech Republic average was 17.8% (CSO, 2014).

The agricultural sector makes up an above-average percentage of the regional economy, whereas the tertiary sector indicates below-average figures. The share of the secondary, or industrial, sector is also below the country average and is based mainly on metalworking (21% of the secondary sector), engineering (16%), the automotive industry (11%), and food processing (11%, Czech Statistical Office, 2013). The largest com-

panies in the region (measured by annual turnover) are Bosch Diesel and Pacovske Engineering; in 2014 they placed in the Czech Top 100 rankings. Regionally based Zdarske Engineering is also one of the stablest and largest companies in the country. Another important employer is the Dukovany Nuclear Power Station in the Trebic district, which is operated by CEZ, the second largest company in the country and the leading producer and supplier of electric energy. Entrepreneurship is not particularly strong. The Czech Statistical Office's business register indicates the presence of 108,800 companies in the Vysocina Region, which occupied the second to last place in the ranking of all the country's regions at the end of 2014. Although the number of companies in the region grew by 225% between 1994 and 2014, this rate of increase is somewhat below the national trend.

To sum up, this region differs significantly from other peripheral regions in the Czech Republic (particularly the Ústí nad Labem and Moravian-Silesian Regions). On the one hand, social cohesion, regional identity, and regional affiliation are all very strong, and environmental conditions are good because the region has not been devastated by heavy industry like other peripheral regions in the Czech Republic. Yet the region's economy faces structural problems associated with the need to increase high value-added sectors. In this respect, the situation in Vysocina seems, in some ways, to be comparable with the overall situation in the Czech Republic. Like the national economy, the Vysocina Region's economy is driven by businesses that are not based on high value-added labor but on the "advantage" of a cheap but not highly skilled labor force. Additionally, the region is relatively strongly dependent on the automotive industry, as is the whole country.

Graduate Employment in the Vysocina Region

The region's economic history has significantly influenced the regional job market as a whole, including for HEI graduates. Natural conditions suitable for agriculture long defined Vysocina's economic profile. It has always ranked among the poorer regions in the country as a consequence of its less developed industrial infrastructure and agricultural focus.[9] People live in small towns or follow a typical rural lifestyle. Traditionally,

the stone, textile, and woodworking industries dominated the regional economy, but nowadays industrial engineering and the food industry are growing. Industrial engineering, however, is very narrowly focused on manufacturing components for the automotive industry. Thus, the region is vulnerable to fluctuations in the automotive industry caused by global economic cycles.

In addition to the specific structure of the industrial sector in the region consisting of a small number of branches of major corporations and a relatively large number of small and mid-sized companies producing mostly standard products with no technologically intensive value added, research and development (R & D) expenditures are very low. The majority of small and mid-sized businesses spend minimal resources on R & D, and when they do, they do it in a very unsystematic manner (Regional Office, 2013). Larger companies (e.g., Bosch Diesel in Jihlava, Tedom in Trebic) invest more in R & D, but even they are not able to reverse the Vysocina Region's overall low innovation performance or its low absorptive capacity. In addition, some of these firms, as global players, have strategies that do not correspond with purely regional interests and they often have R & D departments located in different regions or countries.[10]

Here, corporate R & D expenditures as a percentage of regional gross domestic product are the lowest in the Czech Republic alongside those in the Karlovy Vary and Usti nad Labem Regions. Public R & D efforts are also low because the local HEI and the branches of other universities operating in the region focus primarily on teaching activities. Activities promoting innovation and research are still in the planning and early-implementation stages. The regional office (i.e., the local government) has launched a research-support program (small and mid-sized businesses are entitled to "entrepreneurial vouchers"), but it is still in the pilot phase.

Unemployment Among the Tertiary Educated

Although nowadays the unemployment rate does not seem to be the biggest problem in the region, during the last economic crisis (from 2008 to 2012) there was a dearth of available jobs with, on average,

33 jobseekers for every vacant position. This ratio was one of the worst in any Czech region and indicates the overall fragility of the job market and the economy, which was and still is based mainly on manufacturing marked with low innovativeness and little existing capacity for employing highly educated people. Although the region is relatively small, low labor mobility and the poor transport accessibility of some subregions,[11] such as the Jemnice, Telc, and Nova Bystrice subregions, contribute to local unemployment. The economies of most lagging subregions are focused on agriculture and tourism. They are mainly rural areas with less favorable production conditions, lying outside main transport (both bus and rail) lines and with few new businesses.

Focusing on the demand side of the labor market, we see the tertiary-educated workforce in the Vysocina Region is weak due to the region's agricultural profile and specific industry focus, both with low innovativeness. Although the industrial sector provides more job opportunities for highly educated people, the narrow profile of the mainly automotive firms operating in the region make such jobs highly volatile. For example, in the first quarter of 2016 the labor office in Jihlava recorded the highest demand for positions that do not require higher education at all (more than half of offered positions). Specifically, firms were looking for craftspeople and repairers (27% of all offered positions), and machine and equipment operators and assemblers (27% of all offered positions; Úřad práce České republiky, 2016).

The supply side of the regional labor market seems to have increasing potential. The diverse educational opportunities available in the adjacent Central Bohemian Region and, most importantly, in the capital city of Prague, and at the newly founded CPJ in the region have made higher education geographically accessible for the majority of the local population.[12] Despite all the opportunities, however, the proportion of the workforce with higher education is still below the country average. Only 9.5% of the regional population aged 15 to 65 has a degree (the last reliable figure for the country-wide average, 12.5%, comes from the 2011 census), whereas almost 19% of the population aged 19 to 65 has only a primary education or not finished primary education (Czech Statistical Office, 2011).

As a result, despite the fact that the share of residents with higher education is still well below the country average, the unemployment rate of the highly educated labor force in the region systematically exceeds the national average—for example, by close to 100% in 2003, 2004, and 2012 (see Fig. 4.1). Surprisingly, the major economic downturn of 2008–2011 was accompanied by relatively low unemployment among tertiary-educated residents. At least three jointly acting factors could explain the situation: first, jobs that require higher education are not overly threatened by financial crises, that is, educated people are more likely to keep their jobs even during economic downturns; second, the number of positions for people with a tertiary education are low in a long-term perspective in Vysocina; and third, graduates often emigrate from the region due to better job offers elsewhere.

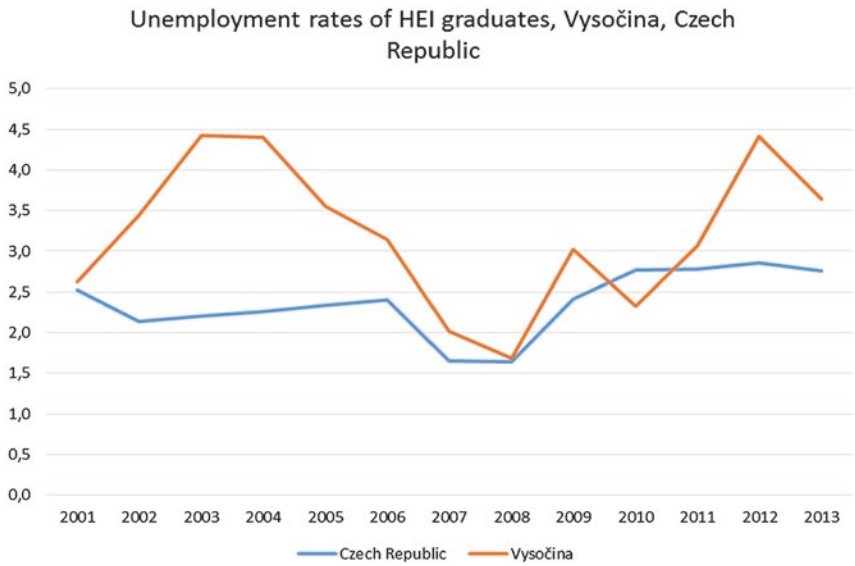

Fig. 4.1 The unemployment rate of HEI graduates in the Vysocina Region. Note: Adapted from data of Czech Statistical Office from the year 2013

Analyzing Identified Tensions

Are There Too Few Jobs for Higher Education Graduates?

Suitable jobs are particularly lacking for higher education graduates possessing a bachelor degree only, which are in fact all of CPJ's graduates.[13] Local firms tend to prefer people with either no higher education (manual workers) or with very advanced technical skills (usually those with a master's degree in engineering). This "needs gap" seems to be permanent and has not changed during CPJ's existence (i.e., during the last decade). Even though the idea that the existence of an educated labor force would attract new employers to the region motivated CPJ's establishment, the latter has not managed to change the region's absorptive capacity in terms of higher educated labor.

In general, a region's low absorptive capacity with respect to higher educated personnel is considered to be a frequent factor limiting the influence of HEIs on regional development (Feldman, 1994; Florax, 1992; Pinheiro, 2013). In fact, the presence of a new HEI in a region is a necessary, but not sufficient condition for sparking more dynamic regional development (Florax, 1992; Pinheiro, 2013), which requires, among other things, constant and long-term interplay between regional actors and stakeholders (Benneworth, Pinheiro, & Karlsen, 2016).

Besides low absorptive capacity, we should also take into consideration the profile of CPJ graduates. Even though the spectrum of study programs seems to be relatively wide, most graduates complete the business and administration stream. For example, in 2015 about 75% of graduates received such degrees. This one-sidedness could contribute to the graduate paradox as well.

In the Czech Republic, holders of a bachelor's degree in economic fields, including business and administration, are relatively vulnerable because the prestige of the awarding HEI and the region it is located in is of great importance for employers. For example, in 2015 the unemployment rate of people with degrees in economics or business ranged from 0.4% to 20.1% depending on the HEI and the faculty,[14] averaging 4.9% in total (Kvačková, 2015).

The Reliability of Unemployment Indicators

Even though there is consensus on the high unemployment rate among higher education graduates in the Vysocina Region, the quality and reliability of official supporting data are far from satisfactory. According to CPJ's annual reports (and strategic plans), the national HEI-funding method[15] disrupts the comparability of results. Given that CPJ has only recently begun to offer a master's degree program, graduates of this college who decide to pursue further education elsewhere temporarily leave the local labor force. These graduates should not be considered unemployed, but they artificially increase the unemployment numbers. The currently used statistical methods do not trace such people, thus the results are overly unfavorable for CPJ. According to Zelenka and Koucký (2013, p. 8),

> from the long-term perspective, graduates of both new public [Czech] higher education institutions[16] face job-seeking problems. These HEIs are at a disadvantage to some extent because they do not offer M. A. degree programs yet and their graduates often pursue M. A. degrees in different towns (or regions). Even so, mainly in case of CPJ this seemed to be only a temporary matter when regional employers are only starting to get used to a new type of graduate. But in the last year there was a change after hopeful development when the unemployment rate of CPJ graduates decreased over two years from 22% to less than 9% and the current unemployment rate is more than 16%.

The above findings are based on data on registered graduates collected by the national labor office. While CPJ management is aware of the existence and significance of these data (they are used as one of the indicators for governmental funding), which are rather unfavorable for the institution, and they would like to challenge them, they have not succeeded in presenting an alternative analysis that could call into question official findings. In order to do so, CPJ has just started to promote relationships with graduates in the form of an alumni club.[17] However, it has not yet systematically collected data on graduate employment, and thus there is currently very limited opportunity to provide and present differing data.

Tension from the Perspective of Regional Actors and HEI Management

The numbers presented in Fig. 4.1, although contentious, raise questions about the direct employability of CPJ graduates in particular and about regional residents with higher education in general. In an environment where jobs for higher education graduates are scarce and local firms concentrate on low-tech industries, companies do not yet accept a bachelor's degree as a relevant qualification. This dilemma is, in part, associated with two conflicting ideas about the general role of higher education. On the one hand is the very conservative view that only scientists and top management need higher education, whereas on the other hand people destined for manual and technical jobs require just secondary education. According to this mindset, those with a vocational higher education have only limited opportunities on the job market. As one informant, a senior university administrator, stated:

> Sometimes I hear employers' voices or the voices of labor unions and people who have "communistic" thinking that young people should be only apprentices or secondary educated and they should start work at 19 years of age and stay in the same job until retirement… But I think this is currently a wrong idea. So, this waiting for efficient graduates of vocational or technical secondary college is very likely nonsense because most students would like to continue studying at universities.

One CPJ representative interviewed, an employee of the Lifelong Learning Department, described her encounters with this conservative approach. She mentioned that many local companies prefer people with secondary education, but only because they tend to offer manufacturing jobs:

> I am from Humpolec, where industry is growing enormously but they [employers] are looking mostly for people to operate automated lines. In the best case scenario, they might hire our bachelors from technical study programs as middle management. But most of their human resource needs are for [manual] workers… They would like people who are reliable, are able to stand 8 or 12 hours at the automated line and not be ill too often.

The second, opposing idea about the role of higher education seems to be related to some kind of social engineering or the application of endogenous growth theory (e.g., Romer, 1994). Adherents of this view expect new employers will come to the region because of the presence of the skilled labor force produced by CPJ. However, this has not happened yet as indicated by a former regional stakeholder, a senior manager at CPJ, who played a critical role in the college's establishment: "My original idea was that CPJ would produce graduates, bachelors as well as masters, and this fact would attract new firms and employers focused on more sophisticated production and services. And this would have a positive impact on the entire region. But this has never happened." Nevertheless, from a long-term perspective this statement is probably overly pessimistic: newly created HEIs undoubtedly introduce new dynamics into regions, but time and close, persistent cooperation between regional actors are necessary for achieving more visible results (Benneworth et al., 2016).

In addition, the companies operating in the Vysocina Region mainly demand graduates with practical skills. One informant (from CPJ's technical department) clearly described the profile of required graduates as follows: "So, they [local firms] are paradoxically not looking for excellent researchers, academics, but they are looking for people who are practical. If those [graduates] encounter a problem, they can solve it. If they don't know, they are able to find relevant information."

The newly accredited Applied Technology for Industrial Practice program (2015) seems to be a concrete attempt at reacting to these demands. Informants with extensive experience from Czech Technical University in Prague, a major research center with a long tradition, expressed another paradox that affects decision-making at CPJ: even though CPJ was established as a vocational, non-university institution, it must follow national requirements that prioritize success in research and emphasize academic excellence.

In short, given the elements presented, there seems to be no clear solution for increasing the employability of existing graduates in the region. The main problem lies in the unchanging (or perhaps slowly changing) structure of the Vysocina Region's industry, where most positions are for secondary school graduates only. Employers are still unsure about the advantages of a bachelor's degree over a secondary school diploma.

Moreover, there is a contradiction between the private sector's demands for practical skills and some students' interest in completing master's degrees outside of the region. Additionally, the government strongly, albeit implicitly, favors research-oriented programs through systematic conditions.

Finally, there appears to be a mismatch of qualifications and regional demands that defies simple interpretation. CPJ has strong departments focused on business, health care, and social work. In theory, the two last-mentioned fields of study should meet local demands associated with the gradually aging population. The position of CPJ graduates with bachelor's degrees in economics is relatively vulnerable mainly because of CPJ's novelty and low prestige in comparison with other well-established HEIs (see section 7.1). The higher unemployment rate among graduates could be caused by either the lower quality of CPJ graduates (who are thus undesirable for employers) or graduates' lack of interest in working poorly paid, low-prestige jobs. Nevertheless, graduates of CPJ's technical study programs—about 5% of all CPJ graduates, a figure that has grown steadily in recent years—are in a more favorable situation. Regional employers are hiring technical professionals such as mechanical engineers, and thus there is an evident gap in the workforce.

Identifying Stakeholders and Their Salience

We have identified three main groups of external stakeholders in CPJ: the regional government, regional employers, and the central government. We are aware that other stakeholders (students, graduates, etc.) could be taken into account for this analysis. Nevertheless, we have at our disposal limited data that enable macro- and meso-levels of analysis (see section on methodology).

Regional officials (i.e., those elected by inhabitants in regional elections) have the power to affect the regional labor market. They can influence development strategies and conditions for all kinds of employers. They can authorize or reject the creation of new industrial parks, introduce investment incentives, provide infrastructure for newly created businesses, and so forth. However, their authority is temporally framed

due to term limits and election cycles. Strategic instability tends to appear particularly after elections in which the ruling party (or parties) has been voted out.

We should take into consideration the fact that the founding of CPJ as a regional HEI was driven by the establishment of the region itself as a new administrative unit of the Czech Republic (the region has existed since 2000) and the establishment of this region's key stakeholder, the regional administration. Regional officials were a *dominant stakeholder* in the process of establishing CPJ, possessing both power and legitimacy. Yet, currently, their role has shifted to that of a *dependent stakeholder* who possesses legitimacy and urgency, but no real power. At the time of the college's establishment, the MEYS, provided strong motivation for the region (i.e., regional officials) to establish such an educational institution (and imbued it with the power to do so); regional higher education was supposed to increase the prestige of the region, promote economic development, and thus make the region more self-reliant. However, as one informant, a regional development official, noted, as time progressed regional officials realized that the "influence of CPJ on development is not as strong as was expected 15 years ago when it was a regional priority. And companies need only small numbers of highly skilled people."

Additionally, although the regional authorities had the power to establish an HEI, they do not have (and in fact they never did have) the legal power to operate an HEI located in their region because the ministry both regulates and funds HEIs. The legitimacy of regional officials was not found to change over time, but it seems that the legitimacy of regional officials as stakeholders is more implicit than explicit. We have discovered from research interviews that whereas CPJ officials still feel a moral responsibility toward the region, the region does not consider CPJ to be an important actor.

Regional employers, both public and private, are the second group of stakeholders to consider. As Jongbloed, Enders, and Salerno (2008) suggest, "where the *teaching and learning* function of the university is concerned, regional firms may obviously form a first candidate for partnerships. Local and regional firms provide internship (student placement) opportunities for students and express a demand for re-training and re-skilling their employees" (p. 311). We have observed that CPJ has

started to establish partnerships with firms as potential employers of its graduates. Although these companies do not possess legitimacy over CPJ, their ability to decide about whether to employ its graduates, offer student internships, and participate in program development gives them both power and urgency, and therefore, according to Mitchell et al. (1997), they are *dangerous stakeholders*. Informants expressed the belief that CPJ's study programs were and are developed in close cooperation with potential employers (particularly in terms of program content). There are also efforts underway to employ entrepreneurs or non-academics as lecturers to enhance the overall quality of study programs, that is, to improve graduates' practical knowledge and skills. Finally, local firms provide opportunities for students to complete compulsory semester-long traineeships.

Although CPJ's internship program is thriving, and practical traineeships are a necessary component for all CPJ study programs to receive accreditation, its requalification courses, which are an integral part of CPJ's lifelong learning program, are underdeveloped. Many private educational firms, which are not strongly regulated (in comparison with HEIs), provide requalification courses for workers and thus compete directly with CPJ for this particular market.

The final important identified stakeholder is the central government represented by the MEYS. Although HEIs in the Czech Republic enjoy high levels of academic autonomy, the regulatory and funding requirements put in place by MEYS impose significant limitations, hence giving the latter power, legitimacy, and urgency, and making the ministry a *definitive stakeholder*, according to the classification of Mitchell et al. (1997). The ministry's role has remained unchanged over time, but its strategic aims are dynamic: whereas 10–15 years ago establishing new HEIs was a priority, today's main objective is to stabilize the system and its quality. The motivation behind these two priorities are clear—for the former, to make higher education accessible to more students and to liberalize higher education, and for the latter, to achieve quality and accountability of HEIs (with limited financial resources).

Current regulatory and funding mechanisms favor classical research universities over their vocational counterparts. This preference is reflected in accreditation requirements, funding, the promotion of academic staff, and

the overall prestige of the institution; vocational HEIs are in a very difficult position.[18] Such institutes do not receive research funding, a financial resource that constitutes a significant portion of some traditional universities' budgets.[19] Frequent changes in regulatory and funding requirements, aimed at promoting excellence in research over the last decade or so (see Chap. 1 in this volume, Pinheiro et al., 2018), have produced additional uncertainties for the existence of vocationally oriented HEIs.

At the time of its establishment, which coincided with the Czech Republic joining the European Union (EU) in 2004, CPJ enjoyed significant support from MEYS. The overall strategy in higher education was to increase the number of students because enrollment figures were well below the EU average. One way to achieve this goal was to establish new HEIs, such as CPJ. As time passed, however, the situation changed: the economic crisis that began in 2008 limited the budget for higher education and demographic decline resulted in fewer applicants. Gradually, the ministry's strategy shifted from educating the highest possible number of students to improving the quality of education and strengthening university research. As elsewhere in Europe, the central government's policy concentrated on promoting world class universities, while the regional role of vocational colleges, although officially proclaimed, was not supported by the government (for more on the tensions between central and regional roles, see Chatterton & Goddard, 2000; Arbo & Benneworth, 2007).

The national regulatory environment affecting HEIs has recently been reorganized by Act No. 137/2016, the Amendment to the Higher Education Act, which has changed the way educational programs are accredited. In contrast to the old system, the new accreditation mechanism distinguishes between tertiary-level vocational/professional and academic programs.[20] Nevertheless, "access to money" is still a problem. Research-intensive universities have more financial resources at their disposal thanks to institutional research funding and research grants. Therefore, CPJ as a small, new regional HEI has rather limited possibilities for enriching its own budget via such means because its publication output and research grant application success rate is quite low.

Of the three stakeholders, the central government is the most salient. For CPJ, it is a clear priority to meet the requirements of MEYS and to

receive sustained funding for their mostly teaching activities. Regional officials have little effective means to influence the institution as they do not fund or regulate it, although they originally expressed the aim of establishing a new HEI. Currently, it is too early to judge if the new *Regional Innovation Strategy*[21] will result in improvement. Despite these barriers, a feeling of general responsibility toward the region (and regional officials as well) and its development still persists among CPJ management and academics. Regional employers, although effectively collaborating with CPJ via internships and student traineeships, can offer a limited number of positions to graduates and focus mostly on hiring secondary educated personnel. After 12 years of existence, it is fair to conclude that CPJ's presence in the region has not attracted a significant number of new employers. Arguably, this would require a more developed regional innovation strategy and more collaboration between the region, the HEI, and companies (Benneworth et al., 2016).

Revisiting University Ambiguities

The most important ambiguity that led to our results is the *ambiguity of intention* (see Chap. 1 of this volume, Pinheiro et al., 2018). We have identified several mutually connected stakeholder intentions that stood at the beginning of efforts to establish an HEI in the Vysocina Region. MEYS encouraged the establishment of new HEIs to support the accessibility and massification of tertiary education. In turn, regional officials wanted to increase the prestige of the Vysocina Region and founding a new HEI was a relatively simple step toward accomplishing this goal. In addition, companies were interested in influencing the quality and quantity of their future employees, HEI graduates. But these original intentions were never properly articulated. Currently, although institutional strategies stress CPJ's regional role, the regulatory and funding requirements imposed by the central government in the hope of increasing the quality of teaching and research do not take into account the specific needs of professional or vocational HEIs and give substantial preference to research universities with an international reputation. Given the limited budget for higher education, regional universities have less access to

funds and worse regulatory conditions. The region cannot on its own financially support CPJ's regional role. To complicate matters, regional officials have been unable to define this role.

In this case, the ambiguity of intention is closely connected with the *ambiguity of structure* (Pinheiro et al., 2018), when decoupling of the HEI and the region is apparent and to a great extent related to the different "classification" of these actors in the organizational system. The region and its elected officials have no authority over higher education, and thus, under current conditions, there are limited opportunities for broader, sustainable cooperation.

Finally, the *ambiguity of history* (Pinheiro et al., 2018) played an important role in the analyzed tensions, particularly in regard to two key stakeholders—MEYS and regional officials. Despite the fact that MEYS is (and was at the time of CPJ's establishment) a definite stakeholder, its approach toward higher education has changed substantially in the last decade to the detriment of regional HEIs in general and of CPJ in particular. The establishment of CPJ was actually the highest point of collaboration between the region and CPJ actors; MEYS also devoted significant effort to this activity. It must be emphasized that between 1999 and 2005 many new private HEIs were established, whereas only a few new public HEIs were founded (Körner, 2010). Therefore, even from this perspective CPJ's establishment seems to have been an extraordinary achievement that overcame the *ambiguity of structure*. Nevertheless, after CPJ's establishment, regional officials diminished their support for the school, and now CPJ management has to deal with the situation alone. Regional government, initially a dominant stakeholder, has, over time, become a dependent stakeholder.

One must also take into consideration the historically great opportunity to establish a new HEI in a newly created administrative region. A new HEI could also boost regional identity; not only did Vysocina become an official administrative region but it also gained its own HEI. This "regional ethos" present in the beginning disappeared after several years. Today, regional officials and CPJ are entangled in the routines of everyday life and their collaboration has lost its original impetus. Although there are still personal connections between regional and CPJ officials, these actors were never able to reorganize such networking into

an institutionalized form of cooperation (cf. Zyzak, Pinheiro, & Hauge, 2017).

In addition, the idealistic conviction that merely placing a new HEI in the region will attract firms that will employ highly skilled workers, which was pronounced at CPJ's launch, turned out to be false. This result may have arisen from the lack of a sufficient long-term strategy for developing industry and supporting innovation in the region. Public policy on regional innovation definitely suffers from deficiencies in understanding opportunities and actors' roles and from an inability to mobilize collective resources and to foster collaboration (Rodríguez-Pose, 2013). The Vysocina Region had no regional innovation and research strategy until 2013, when the obligation for all Czech regions to have such a document entered into force. Nevertheless, the *Regional Innovation Strategy* (*Regionální inovační strategie*; Regional Office, 2013) takes into account CPJ only marginally and in fact reproduces the approach of regional officials from recent years. CPJ is recognized as a non-research and non-innovation institution that is instead focused on teaching and, to some extent, applied research. Currently, the innovation strategy is just beginning to be implemented, albeit hesitantly. For example, the Regional Innovative Office has introduced entrepreneurial vouchers for small and mid-size firms, but the effectiveness of this measure is doubtful. Another regional strategic plan (from 2015) defines the overall priority as achieving "a competitive economy and employment," which includes the sub-priority of "science, research and innovation" (Regional Office, 2015), in which CPJ again plays a minor role.

Conclusion

To interpret the graduate paradox, one should take into account CPJ's extraordinary position within the Czech higher education system. First, it is a new, non-university vocational type of public HEI. On the one hand, CPJ must define this specific form of HEI and explain it to stakeholders.[22] On the other, it has yet to form its own identity. Second, CPJ is located in a region where no tradition of higher education had existed before. The broader regional public and all involved actors are just

becoming aware of what a HEI is and what it means to have one in the region. Finally, CPJ is a rather small educational institution and its real impact on the regional labor market is limited, even if the focus of its study programs (and graduates) seems to meet the needs of the Vysocina Region. All three mentioned factors—CPJ's relative novelty, the non-existent tradition of higher education in the region, and size of the HEI—have effects on the groups of stakeholders analyzed in this chapter: the central government, firms as potential employers, and regional authorities. From the perspective of CPJ officials, they are all important but deserve different levels of attention. Currently, CPJ must cope mainly with one *definite stakeholder*, MEYS, and its requirements. Regional officials (the local government as a stakeholder) do not seem to be particularly interested in developing a partnership with CPJ, and regional employers, who are far from being a homogenous entity, tend to hire workers with secondary education only. The labor market as a whole is still not prepared for an influx of workers with higher education.

We identified three main barriers that influence the graduate paradox. The first and probably most important barrier is the administrative decoupling of the regional government and CPJ caused by the significant centralization of the higher education sector on the country level, which leaves regional governments with almost no official power to influence HEIs located within their administrative borders. In general, the region lacks motivation to deal with CPJ.

The second barrier is conservative and ineffective regional decision-making in promoting innovative strategies and real activities to implement such strategies (e.g., ways to attract new firms to the region or to motivate traditional employers to invest in innovation or improve human capital). One manifestation of this barrier is the region's vague approach to creating regional networks that also include CPJ as an important actor.

The third barrier is caused by the significant change of attitudes of two of the three main stakeholders (MEYS and the regional government) that has occurred since CPJ was founded (as illustrated in Table 4.3). In the early stages of founding this HEI, all the analyzed stakeholders put in great effort at justifying and outlining the benefits of the new HEI for the region. That original synergy of aims resulted in success—a newly established HEI—even though both mentioned stakeholders had, from the

Table 4.3 The evolution of external stakeholders' roles

Stakeholder	During the establishment of CPJ	Currently (after a decade)	What happened? (dynamics)
Regional government	Dominant	Dependent	Past—initiators of establishing CPJ; Currently—non-defined relationship to CPJ (due to weak competencies and unclear regional R & D policy)
Regional employers	Dependent	Dangerous	Past—collaboration on developing study programs, including traineeships; Currently—focus on employees with secondary education, very limited number of positions for the tertiary educated
Central government: the Ministry of Education, Youth and Sport	Definitive	Definitive	Past—establishing new HEIs was a national trend, research at HEIs was not prioritized; Currently—new amendment to Act on Higher Education, new strategic plans, funding focused on excellence in research (following EU-wide trends)

very beginning, principally different reasons for wanting to establish an HEI. In the process of establishing CPJ, regional officials originally had great power and ambitions, which were eventually lost when they realized they had little power over the functioning of the HEI. The original intention of MEYS was to allow the creation of new HEIs without much regard to their academic focus, but currently, the general strategy of MEYS is to give greater priority to research. Among other things, this attitude shift is reflected in the framework for HEI funding: the graduate employment rate is indubitably an important indicator relevant for HEI funding for teaching.

The employment rate of CPJ graduates is well below the country average, and therefore the college has a strong motivation for changing this trend. Due to CPJ's "problematic circumstances" (its short existence and the fact that it is a small, non-traditional institution with limited influence on the region), such changes can only be made in close cooperation

with regional stakeholders (i.e., regional officials and firms/employers) and over a long period of time.

Our findings have implications for further research as well as for CPJ as an organization. We are aware of the limitations of our study. There are many questions that should be raised in future research. First, further research should focus more on developing ways to measure graduate employment. Filling this knowledge gap, by having more reliable data about CPJ that would facilitate an assessment of graduate unemployment by field of study, is actually a more general aspiration because reliable data on graduate employment are still lacking in the Czech Republic. This focus should be important not only for researchers but also for regions and CPJ in their decision-making processes. Another important aim of further research should be to analyze regional migration patterns of higher education graduates who have (or had before they started to study at an HEI) residency in peripheral regions. Possible future research questions include the following: what percentage of people who study outside their region of residence come back? Does regional "brain drain" exist? In addition, the actual spectrum of stakeholders is much broader than that presented in this study, and stakeholder interests can vary significantly. Therefore, in-depth analyses of students as important internal stakeholders and graduates as external stakeholders would be relevant for future research.

What implications could our findings have for CPJ's decision-making process and the formulation of its institutional mission? Although we identified some activities that could help tackle graduate unemployment (i.e., internships, more focus on technical fields, closer cooperation with alumni), overall CPJ seems to be in a difficult situation. As a still very new and small institution, it is having a hard time being taken seriously by the stakeholders we have examined in this study. In addition, CPJ must primarily take into account the requirements of MEYS as a definite stakeholder. Nevertheless, some steps are available for CPJ to take, but they will all require time. One of them is to continue fostering cooperation with the region and regional employers in order to achieve more institutionalized or more formal forms of cooperation. Furthermore, CPJ officials should more actively express and explain the school's position to

the public, that is, they should, through promotional efforts, systematically convey an image of CPJ as a regional, non-university HEI. The quality of CPJ's study programs could also be improved to cultivate in students skills and abilities that support creativity and an active approach to life and work. These changes would foster entrepreneurship and allow graduates to "make their own jobs."

Notes

1. For more information, see http://www.perifproject.eu
2. All the output of the PERIF research project is available at http://www.perifproject.eu/
3. All together 14 regions were created, including Prague as a special administrative unit.
4. There were and are only several small branches of HEIs from outside the region located here.
5. As a result of the enactment of the Act on Higher Education in 1998. Whereas in 1999, 23 public HEIs existed, in 2005 there were 25 public HEIs and 36 private ones and in 2009, 26 public and 45 private HEIs (Körner, 2010).
6. *Vyšší odborná škola* in Czech. This is a specific type of educational institution, which in the Czech tertiary system is a de facto vocational college but not a de jure tertiary institution. Such schools are also not as prestigious as HEIs, that is, universities. They do not grant traditional degrees, such as bachelor's or master's degrees, but the "diploma specialist degree" (DiS.).
7. From the Ancient Greek *polytechné*, which means "many arts."
8. For different reasons the German-speaking population, which was located mainly in Jihlava, also disappeared.
9. Potatoes are the traditional agricultural product here. The region's harsh climate is suitable for their cultivation. Historically, more profitable crops could not be grown here.
10. For example, BOSCH Diesel's regional research and development (R & D) center is based in the South Bohemian Region, which neighbors the Vysocina Region to the west.
11. Subregions are smaller units within regions that are centered in a bigger town.

12. CPJ currently provides an education to approximately one-tenth of all students at HEIs who have residency in Vysocina Region. From this perspective, its capacities are still quite small.
13. The first expected graduates of the master's program will receive their degrees in the 2017/2018 academic year.
14. CPJ as an HEI without faculties is not included in this statistic.
15. The Ministry of Labor and Social Affairs publishes graduate employment data.
16. CPJ and the Institute of Technology and Business in České Budějovice.
17. The alumni club's activities focus on workshops for graduates on topics connected with job seeking and supporting work habits; it also facilitates job offers.
18. Regional universities could not effectively exist without the inflow of highly qualified academic staff, such as associate professors and full professors, because regulatory conditions do not allow such institutes to grant high-ranking academic titles themselves. On the other hand, the presence of such academics is required to guarantee a study program's accreditation. If a qualified staff member leaves, the HEI may lose its accreditation if it cannot quickly find a replacement. Similar problems occur when an HEI wants to open up new educational programs that address regional conditions.
19. The University of Chemistry and Technology in Prague spends the most on research in relative figures; more than one-third of its budget goes to research. At Charles University, Czech Technical University, and Palacký University Olomouc (UPOL) one-fourth of expenditures are on research activities. However, less than 1% of CPJ's budget is allocated for research. (These figures are based on our own calculations made using data drawn from these HEI's annual reports).
20. Nevertheless, criteria for distinguishing between academic and professional study programs have not yet been developed. The newly established National Accreditation Office will have to carry out this crucial task.
21. The *Regional Innovation Strategy* is the first document of its type in the Vysocina Region; the central government demanded it be created in order for the region to draw European funds.
22. CPJ is one of only two public non-university HEIs in the Czech Republic. The second one is the Institute of Technology and Business in České Budejovice.

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5

Power, Institutions, and Periphery: What Can a Small University College Do?

James Karlsen

Introduction

Higher education institutions (HEIs) are seen as key sources for innovation, global competitiveness, and regional development (Gornitzka, Maassen, Olsen, & Stensaker, 2007; Harding, Scott, Laske, & Burtscher, 2007; Lester & Sotarauta, 2007; Mowery & Sampat, 2005; Nilsson, 2006; OECD, 2007) because of their role in the transmission, production, and dissemination of knowledge (European Commission, 2003). Literature in innovation system studies articulates HEIs' central position in the development of innovation and entrepreneurship (Asheim, Smith, & Oughton, 2011; Cooke, Uranga, & Etxebarria, 1997; Lundvall, 2007). By collaborating and constructing regional advantages, HEIs and regional actors can change the conditions for innovation in their regions (Asheim, Boschma, & Cooke, 2011) and construct their given region as more 'the place-to-be' (Gertler, 2003).

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The expectations for the contributions of HEIs are high. However, the literature about HEIs and their contributions to economic development is often a result of studies from successful core regions in Europe and the USA. The conditions in such regions for innovation and development are different from the conditions in other types of regions, such as peripheral regions (Dawley, 2014; Isaksen, 2015). In peripheral regions, the conditions which exist for urbanised economies, such as a local pool of specialised labour, local inter-firm division of labour, local supporting institutions, interaction with HEIs, and local knowledge spillovers, are not necessarily present. Key assets often linked to dynamic and innovative places are, therefore, scarce in peripheral regions (Isaksen & Karlsen, 2016). According to Petrov (2011), peripheral regions have been left out of the major theoretical debates and empirical generalisations with regard to geographies of innovation.

There is a lack of studies of HEIs in peripheral regions and of their practices with actors in such regions (Benneworth, Coenen, Moodysson, & Asheim, 2009; Drucker & Goldstein, 2007). One can assume that HEIs located in any given peripheral region will face some of the same challenges as other organisations located in such regions. Recruitment of faculty and students is one example of such a challenge (Charles, 2001). However, all HEIs and regions are different; that is, not two are exactly alike, despite the traits they may share. There is, therefore, a need for studies of HEIs and their practices with actors in peripheral regions. In this chapter, I explore the case of a particular university college and its interactions with regional actors. Finnmark University College (HiF) is located in Finnmark, which is a peripheral region located in the high north of Norway.

The theory used to analyse the case is at the intersection of the regional innovation system (RIS) approach and institutional theory. The former approach combines a regional approach with a systemic approach to innovation, economic, and regional development (Braczyk, Cooke, & Heidenreich, 1998; Cooke, 1992). This model offers an influential theoretical approach for the analysis of regions and for policymakers working with regional development issues (Asheim, Smith, et al., 2011). This approach understands HEIs as playing a central role in learning, knowledge development, and innovation. The latter approach, with a description of institutional theory and five types of ambiguities, is presented in the

introduction chapter of this volume (Pinheiro, Šima, Young, & Kohoutek, 2018). One of the five ambiguities, historical ambiguity and path development, is further developed in this chapter about power, institution, and periphery by connecting it to the dimension of power. Power is a dimension that is not usually discussed within the RIS approach, but within the institutional approach, power is an explicit element (Lawrence & Buchanan, 2017; Mahoney & Thelen, 2010).

The chapter covers the time period from the establishment of HiF in the 1970s to the institution's merger with the University of Tromsø in 2013. HiF was, mainly, an educational institution for nurses, teachers, and administrators for the public sector. HiF did not reach out to other main industries and did not work on regional development issues with actors in the region, even when the region was laden with development challenges. The institution stayed in the educational path. The questions discussed in this chapter are:

1. *Why did the institution end up solely focused on the teaching mission?*
2. *What are the territorial consequences, if any, of this development?*

Theoretical Framework

The presentation of the main concepts I use in the analysis builds on this volume's institutional framework and adds the dimensions of power and territory to that framework.

The Concept of Institution

The concept of institution can have different meanings. Institutions can be defined as infrastructures in the form of systems such as universities, research and funding organisations, and technology transfer agencies. With this meaning of the concept, there is no difference between an institution and an organisation. The term 'institution' can also refer to a more complex phenomenon. HEIs can also be understood as institutions, characterised by a common set of norms, practices, understandings, and structures (Olsen, 2007). It is this meaning of the concept that I use in

this chapter. HEIs are knowledge-producing institutions. This definition differentiates between an HEI as an organisation and as an institution. As institutions, an HEI is a:

> relatively enduring collection of rules and organised practices, embedded in structures of meaning and resources that are relatively invariant in the face of turnover of individuals and relatively resilient to the idiosyncratic preferences and expectations of individuals and changing external circumstances. (Olsen, 2007, p. 7)

HEIs face expectations that regularly conflict with their core missions and values, especially those related to excellence, universality, and theoretical frameworks (Allen, 1988; Benneworth, 2012). Some of these expectations can come from internal actors in HEIs and others can come from external actors, such as actors in the surrounding region. These expectations can create tensions, dilemmas, and conflicts for an HEI. Some authors assume that this conflict can be easily addressed through a strategic alignment process (cf. Goddard & Chatterton, 2003). However, as Benneworth (2012) argues, this might be an oversimplification; such a simple solution is likely a rarity rather than a norm. In practice, conflict is as natural as consensus (Koppenjan, 2007). How HEIs change according to ambiguity, agency, and power is, therefore, of interest for further exploration (Mahoney & Thelen, 2010).

Power and Territoriality

I will draw on Lawrence and Buchanan's (2017) notions of power, expressed with the concepts of institutional control and institutional agency, in this analysis of the multiple tensions to which HEIs are exposed (see Table 5.1). In addition to Lawrence and Buchanan's notion, I added the term 'region'. I will start with their notions of power:

> Institutions exist to the extent that they are powerful, the extent to which they affect the behaviours, beliefs, and opportunities of individuals, groups, organizations and societies. (Lawrence & Buchanan, 2017, p. 477)

Table 5.1 Elements of power in institutional agency and control

Element of power	Institutional agency	Institutional control
Mode of power	Episodic	Systemic
Tension	Observable	Not observable (latent)
Regional consequences	Yes, observable	Yes, if combined with a regional approach.

Adopted from Lawrence and Buchanan (2017, p. 482).

'Institutional control' is the effect of institutions on actors' beliefs and behaviours, which 'set the rules of the game' (Holm, 1995; Lawrence, 1999; Lawrence & Buchanan, 2017). Although institutions are relatively resilient towards change, they can maintain their position, as well as change, through 'institutional agency', defined as the work of actors to create, transform, maintain, or disrupt institutions (Lawrence & Buchanan, 2017, p. 490). Gradual change can be an inbuilt property of institutions, making them increasingly resilient to external demands (Mahoney & Thelen, 2010).

In this chapter, I identify power by its expression as episodic power or as systemic power. 'Episodic' power is 'constituted in relatively discrete, strategic acts of mobilisation initiated by self-interested actors' (Clegg, 1989; Lawrence & Buchanan, 2017, p. 492). This type of power is action initiated by actors and expressed as episodes. 'Systemic' power, in contrast, works through routines and ongoing practices in such a way that it favours or gives advantages to some groups (Lawrence & Buchanan, 2017). These groups do not necessarily need to establish or maintain these practices. From an institutional approach, actors can be subject to forms of power that are disconnected from the interests of other subjects. Systemic power works through institutionalised systems, which are taken for granted.

Tension, conflict, and contestation can be observable as episodic events between different actors. In the mode of institutional control, such tension can be latent, which means it is not necessarily observable but is still having an effect on decision-making processes. Systemic power can work in diverse ways. It can reduce the number of possible choices and actions, or it can alter the range of options available to actors (Lawrence & Buchanan, 2017).

The role of decision-making is different between institutional agency and institutional control. In the former, explicit decisions are made by actors. In the latter, decisions are an integrated part of the system. The system disciplines actors' decisions, and these decisions have become internalised routines, part of the actors' own actions. Disciplined actors have 'internalised external demands and made them their own' (Lawrence & Buchanan, 2017, p. 486). Therefore, decisions are an implicit part of actors' routines, that is, the decisions are not made explicit in a system of institutional control. In such a system other types of actions are, therefore, meaningless and even unthinkable (Zucker, 1977, p. 728).

Territorial consequences of institutional control are decisions made through the system that can have implicit territorial consequences, which means that they are not necessarily observable. As mentioned in the introduction, the RIS approach combines a system approach with a regional approach. This approach distinguishes between the knowledge exploration and knowledge-exploitation sub-systems (Asheim, Smith, et al., 2011; Cooke, 1992, 1998). In the knowledge exploration sub-system, new theoretical knowledge is produced, such as in research institutions and HEIs. In the knowledge-exploitation sub-system, knowledge is applied for commercial purposes by firms. The RIS approach does not use the term 'systemic conflict' but rather uses 'system failure' or 'deficiencies'. There are different types of system failures, but the common factor is that they result in low innovation activity (Trippl, Asheim, & Miörner, 2016).

To simplify this analysis, I further distinguish between two types of knowledge theoretical and experience-based. Experience-based knowledge is knowledge that is produced and acquired through daily work without any theoretical reflections on the knowledge produced (Berger & Luckmann, 1966). Theoretical knowledge is knowledge that is produced by using scientific methods and where peers review the outcome of the knowledge production process.

A 'region', in this chapter, is the space where institutional dynamics are played out. This is not a passive space, but a space generated by interactions between different actors and with power present. It is a relational space, a power-filled space in which some alignments come to dominate,

at least for a certain period, while others come to be dominated (Murdoch, 2006). Space can be 'consensual' and 'contested':

> Consensual because relations are usually made out of agreements or alignments between two or more entities; contested because the construction of one set of relations may involve both the exclusion of some entities and the forcible enrolment of others. (Karlsen & Larrea, 2014, p. 15)

From this point of view, regions are fragmented, contested spaces in which different coherent sets of desired principles and values are competing, and power is played out, sometimes as episodic power and other times as systemic power. Examples of episodic power are conflict between different actors in a region about decisions such as locations of new public or private organisations or the downsizing or closure of such organisations. Such decisions are observable, they are explicit, they can create resistance and tensions among actors, and they have territorial consequences. The location of such organisations in a region can have economic, social, and cultural consequences. A region can be any geographical unit between the nation state and a local place (Cooke, 1998). For the purpose of any empirical study, the actual territory studied must be defined. I give the delimitation of the studied territory in the next section.

Context

Finnmark: A Peripheral Region

When Germany withdrew from Finnmark in 1944, it used scorched earth tactics, with the result that most of the buildings and infrastructure throughout the region were destroyed. After the Second World War, the government initiated a heavy reconstruction process aimed at developing infrastructure and industrialising and modernising the region, with the ultimate goal of raising the standard of living and the general welfare of the population (Arbo & Hersoug, 1997). There are rich natural resources (fish, minerals, oil, and gas) in the region, which is an important foreign

currency earner for Norway. For the government, investing in resource-based industries in the region, such as the fishing industry and the mining industry, was, therefore, natural.

Finnmark is one of Norway's 19 administrative regions (counties). Located in the high north, well above the Arctic Circle, it has borders with Finland, Russia, and the Barents Sea. The distance to Oslo, the capital of Norway, is about 1900 km from the county capital, Vadsø. The distance, by road, from Vadsø to Alta, where HiF is located, is about 500 km. Finnmark is the biggest region in Norway, at approximately 48,631 km^2, which is about the same size as Denmark. In 2016, the population in the region was 75,758. This makes Finnmark one of the least populated regions in Europe (1.6 inhabitants/km^2). The population structure is scattered in the region. The biggest municipality is Alta, where HiF is located, with nearly 21,000 inhabitants. Alta is the growth centre of Finnmark and has had continuous population growth, as show in Table 5.2. Vadsø, Sør-Varanger, and Hammerfest are the other centres in Finnmark. Vadsø has stagnated in population development, while Hammerfest and Sør-Varanger have had a positive population development since 2001.

Table 5.2 demonstrates that the population in Finnmark was growing until about 1980, and then stagnated. The sub-region with the strongest decline in population is coastal Finnmark. This sub-region consists of ten municipalities located on the coast of Finnmark. In 1960, there were almost 25,000 inhabitants living in this region; in 2016, the number of inhabitants was reduced to about 15,000. The population development in Inland Finnmark has stagnated.

Table 5.2 Population development in Finnmark, central places and sub-regions

	1960	1970	1980	1990	2001	2011	2016
Vadsø	4708	5535	6068	5993	6149	6128	6160
Alta	9655	11,159	13,378	15,170	17,156	19,249	20,097
Hammerfest	8038	9188	9642	9248	9066	9927	10,455
Sør-Varanger	10,159	10,443	10,485	9,671	9623	9851	10,227
Inland Finnmark	12,349	13,188	14,487	14,463	14,288	13,421	13,483
Coastal Finnmark	25,197	24,511	22,586	18,608	16,562	14,117	15,336
Finnmark	70,106	74,024	76,646	73,153	72,844	72,693	75,758

Source: Statistics Norway

Finnmark University College

When HiF merged with the University of Tromsø, the largest and, by then, only comprehensive university in the North of Norway, in 2013, the institution enrolled about 2000 students and employed 600 staff (faculty and administration). Because of the funding base for Norwegian HEIs, the focus for the institution has been on student recruitment and graduation rates. The institution has a vocational profile, with the bulk of enrolments being at the undergraduate level. With the exception of research on tourism, the levels of research activity at the institution were rather low. HiF was already the result of a merger of three former university colleges in 1994: Finnmark Nursery College (FNC), established in 1960 in Hammerfest, which is about 141 km from Alta and Alta Educational College (AEC) and Finnmark District College (FDC), which were established in Alta in the 1970s. The latter was a result of the establishment of a new type of HEI in Norway in the 1970s, the District College System (Kyvik, 1981). The aim of the new system was to offer shorter and more targeted education addressing specific societal needs, compared with the more comprehensive profiles of the universities. With some exceptions, the new institutions were located outside the established university towns, often in the periphery of Norway, where many youths were located. From the perspective of politicians and policymakers, the new institutions were seen as instruments for the modernisation of regional industries and the transformation of the peripheral regions as part of the emerging knowledge society (Kyvik, 1981, 1983). The establishment of FDC in Finnmark was part and parcel of a broader strategy of converting Finnmark into a modern, industrialised region.

Method, Data, and Analysis

This is a case study (Yin, 2009) focusing on the interaction between the regional HEI and actors in the surrounding region. I use different sources of data to offer an overview of important regional development trends and the regional university college. Especially important for identifying tensions is a book written by a former university college director (Berg,

2006). The primary sources are from qualitative (semi-structured) interviews conducted in December 2015 with current and former leaders at the level of the central administration, and three interviews with local actors in Alta representing the municipality, a regional state organisation located in Alta, and a knowledge park. The selection of interviewees and the development of the interview guide were undertaken in the context of an international comparative project, investigating the developmental role of universities in peripheral regions in Norway and the Czech Republic.[1]

The institutional framework developed in the previous section is used to identify different types of tensions. The data analysis is inspired by the critical incident technique (CIT) that originates from the work of Flanagan (1954) and has been used in several studies (Billington, Karlsen, Mathisen, & Pettersen, 2017; Kraaijenbrink, 2012). In this study, that technique has been used to identify conflicts that might have had an impact on the development path of HiF. In addition to the aforementioned interviews, the book by Berg (2006) has been used to identify conflicts with external actors, as well as internal conflicts in the organisation, and to identify the territorial outcomes of such conflicts. Many CIT studies, including this one, have used a retrospective approach. On the one hand, the limitation of such a research approach is that it relies on the respondent's ability to provide an accurate, detailed description of a past event, while on the other hand, the advantage is that it focuses on events that have actually happened, rather than on generalisations or opinions (Billington et al., 2017).

Historical Ambiguity and Path Development

The two types of tensions presented here, *systemic conflict* and *episodic conflict*, are examples of historical ambiguities (tensions) to which HiF was exposed in the early development of its path. In this section, I will discuss two specific examples, applying the theory presented in the theoretical section. These are examples of tensions in interface between the region and the HEI (Pinheiro, Benneworth, & Jones, 2012). These tensions have created internal tensions within HiF and have influenced the

development path of HiF. They are also examples of the relationships between power and institutions, and the consequences of those relationships.

A Systemic Conflict

In the 1960s and 1970s, Finnmark was, due to the consequences of the war, still in the midst of a rebuilding and modernisation process. The Norwegian state wanted to modernise the region and supported the development of the frozen fish industry, located along the coast of Finnmark, and the mining industry. The number of employees increased in these industries until 1984, which was the peak point, with 6500 employees (Arbo & Hersoug, 1997).

In the 1980s, HiF competed for the regional youth with the local industries, which could offer well-paid jobs without any formal education after primary school. The regional industries did not demand workers with theoretical knowledge, but instead required more 'hands'. The necessary knowledge to work in these industries was on-the-job training. Industries demanded experience-based knowledge, not the kind of theoretical knowledge which HiF offered. According to a senior manager at HiF, there was a feeling that higher education did not fit into the dominating industry structure in Finnmark. There was a mismatch between higher education and the dominating industry when HiF was established. This is an example of a systemic conflict between the knowledge exploration and knowledge-exploitation sub-systems; it is an implicit conflict. According to the senior manager, HiF interpreted this as a lack of demand for workers with higher education, that is, theoretical knowledge. The dominant industries had almost no R&D activity, low levels of innovation, a lack of key assets, a low absorptive capacity for development of new products, and little interaction with R&D organisations and HEIs both in Finnmark and outside the region. As presented in the theoretical section, this situation represents an example of implicit conflicts within the institutional approach; within the RIS approach, this is an example of a system failure. From a policy approach, system failures should constitute a basis for legitimatising and designing a new, fine-tuned regional

innovation policy (Tödtling & Trippl, 2005; Trippl et al., 2016). However, the tension between HiF and the resource-based industry was not solved by a policy intervention. In the late 1980s, the resource-based industry started to decrease. The number of firms producing frozen fish was reduced, and mines in Inland Finnmark and Sør-Varanger were closed down. The consequences of the reduction had a spatial impact, with a decrease of the population, as shown in Fig. 5.1, and an increase in unemployment, welfare problems, and generally poor living conditions in coastal Finnmark. In 1990, the government established an action zone in Finnmark and Nord-Troms (the northern part of the neighbouring county) (St.meld. nr. 32 [1989–1990]). The aim was to make Finnmark and Nord-Troms more attractive places to settle, run businesses, and work. The establishment of this zone was a response to several crises,

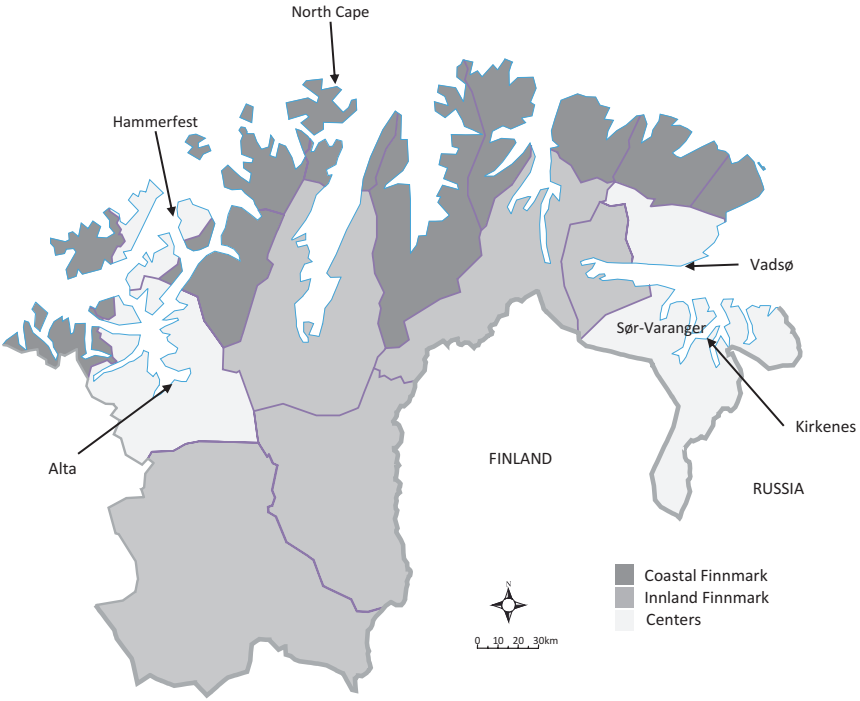

Fig. 5.1 Finnmark county. Source: The Norwegian Mapping Authority (Creative Commons Attribution 4.0)

especially in the fisheries and fishing industry, and an effort to address high unemployment and welfare problems. However, in 2017, the communities are still suffering from this dramatic restructuring process. New industries, such as tourism and fish farming, have not managed to compensate for the employment losses.

The decline of resource-based industry, though, opened up new and different opportunities, both in public sector jobs and for HiF. There was no systemic conflict between HiF and the public sector, as there had been with the knowledge-exploitation sub-system. Rather, HIE and public sector needs matched as a result of the development of the welfare state in Norway. The decentralisation of welfare state services created new job opportunities in the public sector in the 1980s and 1990, both in peripheral and central regions in Norway. The public sector demanded well-qualified workers and offered safe and well-paid jobs. The decrease in the resource-based industry therefore triggered young people to start applying for higher education programmes. Fig. 5.2 demonstrates this increase in the number of FDC and AEC students in Alta. The increase in students started around 1985, and the demand increased particularly for the type of education FDC offered.

According to Berg (2006), over 80% of the students educated at HiF worked in the public sector in 1991. HiF has, then, primarily been an

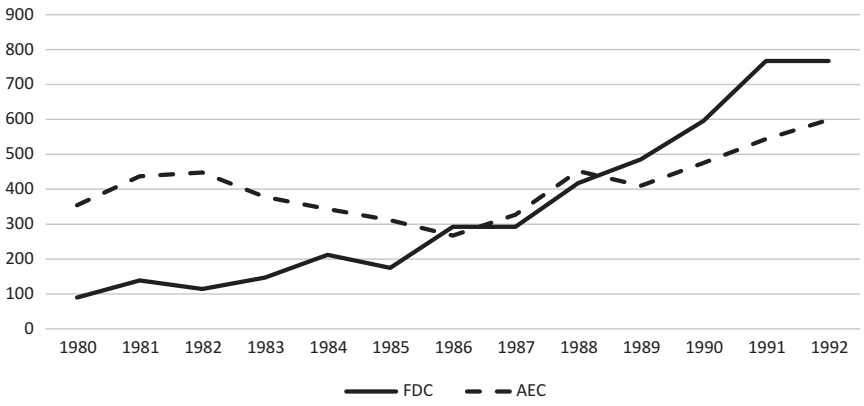

Fig. 5.2 Increase in the number of students from 1980 to 1992. Source: (Berg, 2006, pp. 186–187)

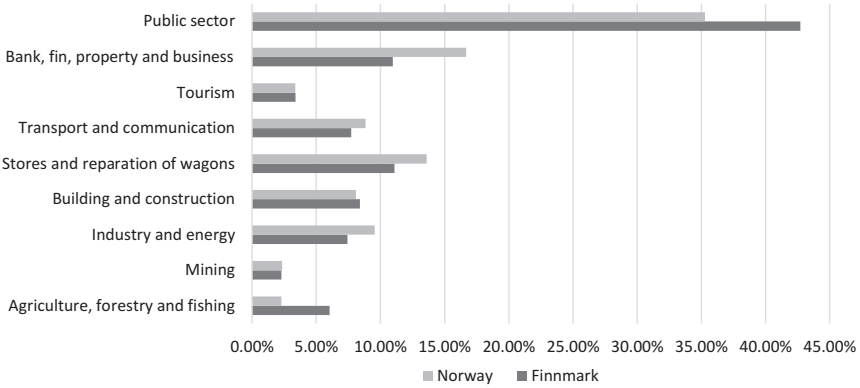

Fig. 5.3 Employment structure in Finnmark and Norway, relative share in 2015. Source: Statistics Norway

educating institution for the public sector (Hanssen, 2010), which is a dominating sector in Finnmark. In 2015, almost 43% of the regional labour worked in this sector, as shown in Fig. 5.3.

Episodic Conflict

In 1981, a proposal for establishing a branch office of decentralised teacher education in Vadsø was launched. The proposal created tensions within the board of HiF. There were two main arguments against establishing a branch office in Vadsø (Berg, 2006). First, HiF felt it was better to organise a mobile, decentralised education outside the main campus, in the municipalities where there was a demand for higher education, such as teaching or nursing education. The second argument was that it was better to have a strong campus in Alta than to establish a branch office in Vadsø, which would weaken the newly established institution. The resolution of the conflict was the decision not to establish a branch office in Vadsø but to instead organise mobile, decentralised education. These educational programmes became a success, and, some years later, there were more students off- than on-campus (Berg, 2006). However, the conflict had consequences for the relationship between HiF and the actors in Vadsø for some years. Finnmark University College could not

always expect full support from the institutions in Vadsø (Berg, 2006, p. 179). However, the relationship gradually improved with the election of a new county mayor in 1987. The new mayor not only was a former student at HiF but also was from Alta (Berg, 2006). Both geographic proximity and the mayor's personal knowledge about the institution slowly improved the relationship between the two institutions. However, Berg (2006) further argues that it has been a disadvantage for HiF that the capital of Finnmark with the county administration is located to Vadsø. It should have been in Alta. The location in Vadsø, with the long physical distance between the places and the institutions created a barrier for communication and interaction between HiF and the Finnmark County.

Regional Consequences of the Two Types of Conflict

The first conflict was an example of a latent, systemic conflict between the knowledge exploration and the knowledge-exploitation sub-systems. Since systemic conflicts are latent, they are not easy to identify. In the late 1980s, the RIS approach had not yet been developed. Seen in retrospect, we can argue that the series of events described earlier was a systemic conflict. HiF interpreted the problem as a lack of demand created by the conditions in the resource-based industry, which they could not do anything to solve. The increased demand for workers with higher education from the public sector solved the demand challenge for HiF. However, instead of modernising the industry sector, as was one of the aims with the new college system in the 1970s (Kyvik, 1981), HiF contributed to the modernisation and development of the public sector in Finnmark by supplying graduates. The consequence was that HiF did not directly engage in the challenges the resource-based industries were facing. This lack of engagement had territorial outcomes, particularly the lack of engagement in the development of the frozen fish industry, at the cost of Finnmark's economy, and the lack of engagement in the huge social and welfare challenges the coastal municipalities faced due to downsizing of their major industry. However, it must be added that it is important, here, not to be too critical about HiF's lack of engagement with the

regional challenges. There are limitations to what a small, regional HEI can contribute to solve regional development challenges.

However, this is not a sufficient answer to why HiF stayed in the educational path and did not engage much in the many regional development challenges. The answer to why HiF stayed in the education is simple: It stayed there because major actors took for granted that the HEI should be focused on education. HiF was a powerful political actor in the region, which the episodic conflict shows, but the institutions regulating the behaviour of HEI presented a hindrance for such engagement. By the rules of the game for HEIs at that time, regional engagement was not a mission. Regional engagement of HEIs is often referred to as the *third mission*, which is a role that was only introduced for HEIs in this century and by international organisations, such as the OECD and EU (Arbo & Benneworth, 2007; Krčmářová, 2012; OECD, 2007). By third mission, I mean how universities consciously and strategically contribute to economic and social development in their surroundings through interaction.

This explicit conflict resulted in two important decisions for HiF. The first was to develop a decentralised education model, which has been successful, and the other was to strengthen the campus in Alta. These two decisions are somewhat contradictory. They came as a result of not establishing a branch office, and of instead establishing a decentralised educational model, which organisationally was likely as challenging as establishing a branch office, since education was then offered in many different places in Finnmark simultaneously. The education that was offered through this decentralised model was mainly aimed towards the public sector, with nursing and teacher education. The territorial consequence was that, as an educational institution, HiF reached out to many places in the region.

However, the most important territorial consequence was probably the decision to locate HiF firmly in Alta and to concentrate on the development of the main campus. The effects of locating HiF in Alta have been very important for the development of the locality. Alta municipality and HiF have also developed collaboration in infrastructure investment on campus, such as building a new auditorium that could also be used by the municipality (Berg, 2006). The location effects

of establishing an institution, with its many students and staff, have had positive regional multiplier effects on the local economy (Goldstein, 2009; Kohoutek, Pinheiro, Čábelková, & Šmídová, 2017). In addition, there are positive cultural and social effects of having an HEI in a relatively small community (Chatterton, 2000) such as Alta. There is also the proximity effect of being located close to an HEI. Both public and private knowledge organisations have relocated to Alta because of HiF's presence. Many of the graduated students have preferred to live in Alta because of better job opportunities than in many other places in Finnmark. The level of people with higher education is, therefore, relatively high in Alta compared with, for example, coastal Finnmark.

Conclusion

In this case study, I examined the role of an HEI in a peripheral region, from its establishment in the 1970 to its merger with a university in 2013. The research questions were thus: (*1) Why did the institution end up solely focused on the teaching mission?* and (*2) What are the regional consequences, if any, of this development?* Even if HEIs are located in peripheral regions with many regional development challenges, they do not necessarily have a strategic approach towards regional development. On the one hand, HiF has primarily focused on serving national goals, especially educational goals. As an institution owned and financed by the state, HiF has focused on its close relationship with both the Ministry and the Norwegian Parliament (Berg, 2006). On the other hand, the institution has strategically made decisions that have had a regional approach and a regional impact. The most important and successful was probably the decision to create a decentralised model of education, which was offered in different parts of the region depending on the local needs. The aim of the establishment of regional colleges in the 1970s was to contribute to the modernisation of peripheral regions through education rather than research, which was seen as the monopoly of existing comprehensive universities elsewhere.

The answer to the first question is that the HEI ended up in the educational role because that was the institutional systemic norm for HEIs at

that time. Systemic control routines are characterised as not being questioned, since they are an embedded part of practice (Lawrence & Buchanan, 2017). The core missions for HEIs are teaching and research (Clark, 1983). This was embedded in the new system of regional colleges developed in the 1970s in Norway. The goal was education of candidates for a more knowledge-intensive labour market (Kyvik, 1981), not engagement in regional development issues, even in a peripheral region as Finnmark with many such challenges. Even in 2017, with the high expectations for HEIs' engagement with their surroundings, third mission activities have only to a limited extent permeated policy frameworks and initiatives in Norway (Pinheiro, Karlsen, Kohoutek, & Young, 2017). Regional actors in Finnmark also took this earlier, limited role for granted. The aforementioned tensions HiF faced were not about their educational role. The tensions were about establishing branch offices and not about engagement in regional development issues. However, establishment of branch offices implied the creation of workplaces with high-qualified labour and the possibilities that such an establishment represented for place-based development (Sotarauta, Beer, & Gibney, 2017). HiF was a political actor that defended against any attack that could weaken the role of the main campus in Alta. Establishment of branch offices could reduce the powerful role of the main campus, that is, of the leadership of the HEI. It could have created internal tensions in the HEI between the management at the main campus and the branch offices, especially the branch offices and local actors made any alliances. By having one main campus, these kinds of internal tensions were avoided.

The answer to the second question, about regional consequences, is that there are different types of such consequences. The first type addresses the missing effects of not establishing branch offices in other parts of the region. It is only observable that there is not any branch office there and that there has never been a branch office. It can, of course, be speculated what the possible effects of establishing such an office could have been, but such speculation is limited. The second type of consequence stems from the decision to establish an HEI in Alta. The effects are multidimensional and involve much more than the effects of teaching and research. The overall effect involves the economic, cultural, and social effects of the location of an HEI in a small place, in a peripheral region.

There is also an attractiveness effect for other public institutions and knowledge-intensive industries to relocate to or build in Alta. The first two types of consequences are a result of location decisions and are expressed as episodic power. The third type of regional consequence discussed in the case was a result of systemic institutional power. It was a system failure between the knowledge exploration and the knowledge-exploitation sub-systems; that is, between the regional HEI and the resource-based industries. Resource-based industries are located in a place or a region close to the resource that is exploited. The regional consequence of the system failure was that there were no interaction and engagement between the regional HEI and the industries, nor between the HEI and the municipalities, about the consequences of the downsizing and closures of the industries. The systemic approach explains why there was no interaction, and the regional approach demonstrates that this system failure had a regional consequence. The situation was taken for granted as a lack of demand, by HiF, and, therefore, there was no explicit tension between the industry sector and HiF. Nobody reflected over the possibility that there should be any interaction between the two systems at that time. System failures are implicit outcomes of the functioning of systems. Institutional systems alter the range of options available to actors (Lawrence & Buchanan, 2017). These changes and outcomes are hard to identify, since the altering of possible actions is a part of the functioning of the system. Without a theoretical approach, it would not have been possible to identify the example in this case as a system failure with regional consequences.

This analysis offers several theoretical contributions to contemporary debates about the roles of HEIs in peripheral regions. The first is that HEIs are powerful political actors in peripheral regions. Once created, they try to defend their positions as independent actors, which can result in a lock-in effect, where the HEI does not engage in regional development efforts even when the regional challenges are many and deep. The second is that, even if an HEI is a powerful actor in a regional context, their role does not matter when reforms are restructuring the national systems of HEI. Third, in regard to the role of HEIs in stimulating economic growth and innovation within peripheral regions, future research could focus on the long-term effects of education on innovation and

entrepreneurship in the immediate geographies where HEIs are located versus the effects for the surrounding region as a whole. Finally, power, both in the form of institutional agency and of institutional control, is of interest for exploration in further studies of HEIs, from an institutional approach, an RIS approach, and a combination of the two approaches, as applied in this study.

Notes

1. More information at: http://www.perifproject.eu/.

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6

Multiple Streams Running Dry: Third-Mission Policies at a Czech Research University

Jan Kohoutek and Karel Šima

Introduction

The last few decades have been marked by substantial interest in the role of universities within their spatial surroundings. Research findings have shown that a university's international and economic competitiveness can be improved not only by producing qualified graduates and high-profile research but also by utilizing links to its surrounding region, typically by setting up profit-making partnerships (Arbo & Benneworth, 2007; Gunasekara, 2006). Interest in the involvement of universities in their spatial surroundings also stems from the fiercely competitive nature of the higher education landscape, in which universities try to accumulate limited resources to get an edge over their competitors. This situation has mainly arisen due to the (past) economic crisis and population decline in many developed (EU) countries (Pinheiro, Benneworth, & Jones, 2012).

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In such a landscape, taking advantage of university linkages to the region "has come to represent a 'strategic opportunity' for generating additional income and securing public support (external legitimacy) towards universities' core tasks and functions" (Pinheiro, Langa, & Pausits, 2015, p. 3). However, a university's relationships with its spatial surroundings go beyond economic and profit-oriented undertakings; they also entail social expectations and cultural activities (Jongbloed, Enders, & Salerno, 2008).

Correspondingly, a large amount of literature has been produced to account for how universities work with their regions to help create unique competitive advantages. These studies focus on different areas of research, including measuring economic impacts (Drucker & Goldstein, 2007); exploring universities' contributions to social, environmental, and cultural development (Charles & Benneworth, 2002); analyzing social justice issues (Benneworth, 2013); and analyzing regional governance arrangements (Gunasekara, 2006). Studies along these lines have been subsumed under the rubric of "the university's third mission." Despite some conceptual and empirical limitations (Pinheiro, 2011), they have helped generate and solidify research-based knowledge on the significance of a university's regional involvement.

In the Czech Republic, however, investigations focused on the third mission of universities have hardly been given the attention they deserve (Pinheiro & Kohoutek, 2017). Prominent academics, politicians, and industry representatives have proclaimed much about the importance of universities for regional socioeconomic development. Nonetheless, in reality, they have largely sidetracked the implementation of strategies that would contribute to the development of third-mission agendas and issues (Pinheiro, Karlsen, Kohoutek, & Young, 2017).

There are four reasons why little attention has been paid to investigating the third mission of universities. First, universities' third missions have traditionally been very broadly defined, often due to contextual circumstances. The result has been considerable ambiguity and ambivalence about what university stakeholders consider to be a third mission (Pinheiro, Langa, et al., 2015).

The second reason stems from conceptual underdevelopment. The third mission has been studied in diverse ways, ranging from econometric impact measurements to in-depth case studies (Kohoutek, Pinheiro,

Čábelková, & Šmídová, 2017; Pinheiro, 2011). Such research has given ground to third-mission-related policy concepts embodied by mode 2 knowledge production and the triple helix, or entrepreneurial, university. These "common ground" concepts, however, tend to "carry a highly reductionist connotation of the practice of involving universities in engagement activities" (Benneworth, Pinheiro, & Sánchez-Barrioluengo, 2016, p. 732). Overly reductionist conceptualizations of the third-mission idea then spill over to simplistic assumptions about what should be done when the third mission gets taken up in policymaking debates (cf. Benneworth & Pinheiro, 2017) that also entail an "almost anything goes approach" which can be inferred from higher education strategy documents in the Czech Republic (cf. Pinheiro & Kohoutek, 2017).

Correspondingly, the third reason for lack of interest in studying third missions is that simplistically conceived third-mission-related regional and national policies have turned out to be dysfunctional or ineffective in practice. The blackboxing of relations between university and region, however, not only reflects oversimplified assumptions about universities but also hints at the incapacity of public sector governance. In the Czech Republic public policymaking, including in higher education, are a case in point, showing signs of sectoral isolation and a lack of intersectoral deliberation, strategic governance attitudes, and policy impact assessments (Ochrana, Plaček, & Půček, 2016; Potůček, 2014). It therefore comes as little surprise that Czech third-mission regional activities tend to be fragmented, of limited impact, unevaluated, and instable due to the centrality of the individual (noninstitutionalized) contacts of those who undertake them (cf. Pinheiro & Kohoutek, 2017).

The final reason why the third mission has been largely ignored is associated with increased calls for reforming the modern university (Maassen & Olsen, 2007). Today universities, including Czech ones, are expected to serve heterogeneous student populations (not just the elite), conduct teaching and research activities more efficiently, ensure graduate employability, and enhance socioeconomic development and innovation nationally and regionally (Pinheiro & Stensaker, 2014; Pinheiro, Benneworth, et al., 2015). These demands have led to university mission overload (Pinheiro & Stensaker, 2014; Benneworth, Pinheiro, & Karlsen, 2017), which in turn has caused universities to "dilute their strategic focus…. [with] [t]he third mission risks

being regarded as a desirable but not an essential duty" (Benneworth, de Boer, & Jongbloed, 2015, p. 280). All in all, these global developments along with historical, conceptual, and policy-centered concerns tend to induce "a third mission as a third-leg mentality." Hence, the third mission of universities is nowadays looked upon as a useful but essentially dispensable ("third-leg") undertaking and thus tends to be disregarded. Therefore, restoring its legitimacy may be the key to reopening interest in it.

Against this backdrop, we examine the third mission of universities through a case study of Palacký University in Olomouc (UPOL), one of the few traditional, research-intensive universities in the Czech Republic. To our knowledge, no empirical study on the realization of the third mission at a Czech research-oriented university has been conducted to date; we intend to fill this gap with the study presented in this chapter. More specifically, we analyze how the third-mission agenda was set and enacted at UPOL and examine the associated ambiguity of intention. To this end, we will first outline a conceptual approach to analysis and present our research questions and methodological grounding. Second, we will describe UPOL's basic institutional characteristics and then present the issues and actors associated with UPOL's third mission from 2005 to 2015—that is, the policies, politics, policy windows, and entrepreneurs that help operationalize UPOL's strategic understanding of its third mission; thus, we will be able to analyze the evolution of UPOL's third-mission agenda over time. Finally, we will present the analytical conclusions of this case study and their potential significance for ongoing third-mission research nationally and internationally.

Conceptual Grounding

Setting the Stage

Exploring universities' third-mission policies and their regional impacts has led us to the ambiguity of intention, which is manifested in the formulation of strategic goals and key priorities that are often unclear, inconsistent, and evolving (see Chap. 1 in this volume for more on strategic formulations). Potential inconsistency in university third-mission

goal formulation can apply not just to goals themselves with regard to their (un)specificity, rationale, logic of argumentation, and the like, but also to actions that lead to goal realization within broader tenets of third-mission agenda setting. Research on higher education has shown ample evidence of failing to act upon defined strategic goals because of the conflicting views and agendas of the autonomous actors involved (Eggins, 2013; Gornitzka, Kogan, & Amaral, 2005). This failure is not least due to the loose coupling of organizational levels, the variety of actors' preferences, and the discretionary authority of frontline academics (Orton & Weick, 1990). Drawing on Zahariadis (2016), we contend that agendas are "more than a mere laundry list of issues that groups, institutions or individuals consider 'fit to print'…. They involve some sort of filtering process that depends not only on the values of the actors involved but also on the degree of actionability" (p. 5). Agenda setting then can be seen as the process of turning public issues into priorities that can be acted upon (cf. Zahariadis, 2016, p. 6).

In our case study, exploring the actions undertaken at UPOL between 2005, when third-mission priorities were identified, and 2015 should help ascertain the university's third mission's strategic (and, potentially, ambiguous) nature and also explicate the processes of setting the third-mission agenda within the wider context of UPOL's organizational concerns. Therefore, any judgments of UPOL's third-mission priority goals would be incomplete without also empirically and analytically accounting for the processes of third-mission agenda setting, including the recognition of the third mission as a potentially problematic issue to be dealt with through policy actions carried out by the UPOL actors involved. Hence we argue that third-mission goal formulation evolves from the ways the third mission is set as an agenda in its own right, including official recognition through strategic policy documents and actions. By coupling third-mission goal formulation with a relevant issue agenda, we argue that the ambiguity of intention may stem from third-mission agenda setting in the sense of deciding on what related issue is (not) perceived as problematic and needing attention as a policy goal ("filtering process"). Correspondingly, once asserted as part of the agenda and worthy of policymakers' attention, (intentionally) ambiguous policy goals may affect the nature of actions(s) performed to turn them into reality;

overall this attests to the complexity of agenda setting, which impacts the success or failure of policy implementation processes (cf. Gornitzka, Kyvik, & Stensaker, 2002).

Reflecting upon the complexity of third-mission agendas, we further argue that such complexity can be productively disentangled by applying the multiple streams approach (MSA), which encompasses five analytical categories: the politics stream, the policy stream, the problem stream, policy entrepreneurs, and policy windows (Jones et al., 2016). Concentrating on third-mission-related policies should aid in recognizing the "building blocks" of actual third-mission undertakings, with the actions undertaken by a host of university actors (i.e., policy entrepreneurs) involved in negotiating solutions to particular problems related to the third mission. Discriminating between entrepreneurs and politics in agenda setting should provide more nuanced insight into who formulates actual policy goals and under what conditions, whereas focusing on the problem stream should help in understanding the nature of the actual third-mission issue the policy is a reaction to. Finally, examining policy windows is important for establishing when entrepreneurs in decision-making positions have the opportunity to implement solutions.

These five analytical categories constitute the bedrock of the MSA (Cairney & Zahariadis, 2016). Conceived by Kingdon in the 1980s, the MSA has since been applied plentifully (Jones et al., 2016), including in the field of higher education (Zahariadis & Exadaktylos, 2016), to analyze agenda-setting processes, ambiguity, perception, and policy entrepreneurship (Zahariadis, 2016, p. 11; Cairney, 2014). As Zahariadis (2016) further explains:

> Kingdon built a framework of agenda setting … , [conceptualizing] a system based on temporal sorting: issues rising to the top of the agenda depend largely on what else is happening in the system and who is pushing the item and how. The fact that … systems are plagued by ambiguity … creates two distinct dynamics. The first dynamic refers to three streams of problems, policies, and politics. Each stream is assumed to be largely independent of the other, obeying its own structural rules and shaping which item will bubble to the surface and which will not…. The second dynamic

> refers to how and when the streams interact. To make this process more comprehensible, Kingdon (1984) added two more elements: policy windows and policy entrepreneurs [actors seeking the right time to exploit or encourage attention to their solution via a relevant problem (Cairney & Jones, 2016)]. (pp. 11–12)

The underlying logic of the MSA is that the problem, policy, and politics streams are assumed to operate independently of one another and to occur in any order.[1] For a policy solution to emerge, each of the streams *must come together during a (short-lasting) window providing an opportunity for change* (Cairney & Zahariadis, 2016; cf. Ackrill, Kay, & Zahriadis, 2013). Therefore, solutions to problems are likely to be made when "people pay high attention to a problem, a viable solution exists, and policymakers have the motive and opportunity to select it" (Cairney & Zahariadis, 2016, p. 87). However, Cairney and Zahariadis (2016) further explained that "this outcome is not inevitable. Rather, attention may shift dramatically to a different problem before anyone has had the chance to solve the first one. Many 'windows of opportunity' for major policy change open, but most close before anyone has the chance to exploit them" (p. 87). The "residual randomness" associated with an unexpected event coming into play, such as elections yielding an unlikely winner or a policy gatekeeper suddenly losing his or her position, may also be of significance (Baumgartner, 2016). For our research, we have borrowed the five MSA categories to more lucidly explore the complex nature of third-mission agenda-setting processes and explain why UPOL's third-mission agendas change the way they do. In doing so, we apply these MSA insights rather loosely, not paying attention to coupling logic, policy decision style, or factors of entrepreneurial success that also pertain to MSA application (cf. Jones et al., 2016).

Research Questions

We have posed three research questions that will enable us to study the ambiguity of intention in UPOL's third-mission policymaking through the analytical lens of the MSA. They are as follows:

1. What are the goals of UPOL's third-mission agenda, and how are they formulated in policies?
2. How is UPOL's politics arena shaped, and what motives and opportunities do entrepreneurs involved in setting the third-mission agenda have?
3. Were there any policy windows especially pertinent to setting the third-mission agenda at UPOL and did they lead to enduring policy solutions? Why or why not?

The first research question addresses the content of UPOL's third-mission agenda and the problems associated with setting it. The second question focuses on governance and political structures at UPOL that enable or disable entrepreneurs from implementing UPOL third-mission solutions. The third question deals with identifying potential policy windows that bring together external and internal conditions for setting the third-mission agenda and analyzing the results of these situations. Together these questions, which are in line with MSA logic, help provide analytical, structured insight into the ambiguity of intention involved in UPOL's third-mission endeavors.

Methodological Note

We used several methods for our case study of the institutionalization of the third mission at UPOL: desk research; the analysis of relevant bylaws, policy documents (plans, strategies, reports), and statistics; and semi-structured interviews (cf. Yin, 1994). Interviews followed a set of thematically structured questions that allowed us to reflect and focus on agendas of special interest to each interviewee based on the nature of his or her work and position. This approach was chosen in view of the breadth and depth of the third mission as a research topic. Interviews thus covered a range of themes, from strategy, leadership, and funding, to the cultural significance of the third mission. We conducted ten interviews with relevant actors—officials from UPOL's rectorate and its faculties, from UPOL's scientific park, from Olomouc City Hall, and from the Olomouc Regional Administration Office (the governor's office)—to

obtain further data for analysis. The insights gleaned from this qualitative investigation, to which the MSA can be suitably applied (cf. Jones et al., 2016, p. 22), are valuable also with regard to the cumulation of third-mission-oriented case study research domestically and internationally.

The Third Mission at UPOL

Introducing UPOL

Palacký University Olomouc (UPOL) was founded in 1566 when a Jesuit college was established in Olomouc; in 1573, this college was granted university status and is thus the second oldest university in the Czech Republic. Jesuits governed the university for 200 years, and the Faculty of Theology played a central role in its life. In 1773, the institution's status was downgraded to that of lyceum. In February 1946, the university was reestablished and was named Palacký University. The Faculties of Theology, Medicine, Philosophy, and Education were established after World War II, but the Faculty of Theology was abolished shortly after the Communist takeover in Czechoslovakia in 1948. In 1959, the Faculty of Science was established. In 1973, when the university celebrated its 400th anniversary, the institution employed 860 academic staff and was attended by 3520 full-time and 2130 part-time students. After the fall of the Communist regime, the Faculty of Theology was reinstated and the new Faculties of Law and Physical Culture were opened. The eighth and newest faculty at the university is the Faculty of Health Sciences, which split from the Faculty of Medicine in 2008.

As a comprehensive Humboldtian university with several professionally oriented faculties, UPOL is a highly decentralized institution with little responsibilities and duties at the central level; governance largely takes place at the faculty level. Individual departments, which are generally small, play a significant part in decision-making. The strong emphasis on self-governance, at both the university and faculty level, gives faculties a crucial framing role. The board of trustees consisting of external stakeholders has limited powers. Apart from the faculties, there are a small number of centrally managed units that offer services to all faculties

(an IT department, a project management and fundraising department, libraries, a science and technology park [STP], a sport center, etc.).

In 2014, UPOL student enrollment reached 21,063, which represents nearly 7% of public university enrollment in the Czech Republic. Along with the leading universities in Prague and Brno, UPOL belongs to the group of four big Czech HEIs with approximately 20,000 students. Since 2004, enrollment has followed national trends, rapidly expanding until 2010 and slowly decreasing since then. The number of graduates has likewise followed the same trend but with a corresponding delay. Approximately 30% of UPOL students can be considered "regional" (i.e., those with permanent residence in the Olomouc Region); this figure has remained stable over time. The university is selective; in 2014 out of the 18,646 applicants for admission to bachelor's programs, only 6726 were admitted, of which 4588 actually enrolled. UPOL is mostly funded from public sources, including funds for teaching and research. Funding directly linked to the third mission represents only less than 1%, including a symbolic amount of targeted financial support from the municipality and the regional authority. Projects funded by EU structural programs have largely contributed to growth in the "other" category in Table 6.1 and include a number of small projects as wells as investments in large research centers (see below).

Problems, Goals, and Policy

The key sources for studying the formulation of UPOL's third-mission goals are UPOL's two long-term strategic plans for the periods 2006–2010 and 2011–2015. These two documents, which are mandatorily written every five years and complemented by annual updates, outline UPOL's strategies for institutional development and the policy actions to be performed to meet the strategic goals and priorities.

In the 2006–2010 strategic plan, UPOL declared several development priorities: giving maximum support for excellence in research and education, modernizing study programs, supporting staff and student mobility, improving connections to the public through applied research and lifelong learning courses, and making a positive impact on regional issues

Table 6.1 A breakdown of UPOL funding streams by area of activity (Czech Crown amounts in thousands)

	2007	2008	2009	2010	2011	2012	2013	2014
Teaching (lump sum)	884 636	914 676	1 000 000	960648	981846	925339	996508	945036
Teaching (other)	291 898,00	222 087	231 050	225347	235746	222587	231847	236233
Research (institutional)	233 490	220 901	241 382	226 498	268 027	312 029	340 889	394 603
Research (public project funding)	165739	243283	295534	302557	278920	288670	325185	519084
Third mission (regional authority)	3696	4990	5132	10295	3050	6645	4614	3020
Third mission (municipalities)	791	2800	3100	840	1690	868	810	790
Third mission (licences, contract research, consultancy)					4841	22407	18603	26999
Third mission (vocational training)					3612	1685	980	505
Administrative fees	120992	128362	131258	68502	41523	46892	46251	51440
Fees for study over standard length	6048	10791	11667	16564	19086	22528	22051	16888
Tuition fees - international	36748	31538	40868	40097	50117	49732	73118	85220
Other	323272	360564	389426	634590	714117	1236002	1617668	1847686
Total	2067310	2139992	2349417	2485938	2602575	3135384	3678524	4127504

Source: Data from UPOL's annual reports

with significant benefits to education and culture in the region. The drafters envisioned UPOL in 2010 as a standard European university that would be research oriented in some fields of study, competitive, aware of society's needs, and an indispensable partner for cooperation (in research, technology, social affairs, and culture; UPOL, 2005).

The broader tenets of the 2006–2010 strategic plan were put into more concrete form through nine priority areas. External relations that were considered especially relevant to UPOL's third mission make up the ninth area. This area entails the following goals:

- Preparing a long-term communication (PR) strategy
- Deepening cooperation with the Olomouc regional bureau, the Olomouc city council, the Olomouc job center, institutes of the Czech Academy of Sciences, the Czech Statistical Office, and with selected secondary schools, tertiary professional schools, and private higher education institutions (HEIs)
- Continuing cooperation with the Olomouc hospital
- Continuing organization of Academia Film Olomouc (an international film festival)
- Offering research- and education-related services to external stakeholders through presentation of relevant activities on UPOL websites, in the university newsletter, and in multimedia publications
- Deepening cooperation with industrial enterprises (Bioveta, I.Q.A., Ivax, Naturprodukt CZ, Walmark) through joint projects or other profit-generating activities
- Continuing organization of student internships in selected companies (Farmak, Meopta; UPOL, 2005)

The updates to the 2006–2010 strategic plan extended the range of declared third-mission-related goals even further. These additional goals entail preparing a graphic style guide for UPOL, increasing the number and variety of UPOL promotional materials, and expanding cooperation with local government, industry, and businesses by developing scientific incubators, clusters, and spin-offs.

Relevant to the third mission as these goals are, no rationale or explication of UPOL's third mission underlie them. The blackboxing of

what the third mission is—that is, the avoidance of defining its contents and benefits for strategic development—seems to present a major problem. The reasons may lie in UPOL's clear-cut profile as a traditional, research-oriented university (Šima, Kohoutek, & Šmídová, 2016) as well as in the manifold diverse assumptions some university decision-makers have about third-mission core principles (particularly among academic senate members). The missing rationale behind the third mission then seems to induce an "almost anything goes," "dropbox"-like mentality and leads to the definition of several agendas (such as "to establish/develop cooperation with…") as third-mission-development goals without specifying the reasons why they have been selected, any potential synergies in realization, instruments for realization, and, most importantly, indicators of successful fulfillment. These design-related limitations can be considered a "minor problem" of third-mission goal setting and policymaking. Attesting to the ambiguity of intention, UPOL's disparate third-mission developmental goals, ranging from research and development to UPOL's visual style, show the effect of "layering" under which goals are brought together without much thought for their potential links, synergies, or order of importance.

UPOL's strategic development plan for 2011–2015 further illustrates the layering of third-mission-relevant goals. In its initial premise, the authors specifically state that "research and creativity excellence is the future of UPOL in all … fields provided" (UPOL, 2010, p. 2). A number of third-mission goals are also set in a section focused on "openness." Again, the authors stress the need for enhancing the university's communication strategy, for cooperating with Olomouc-based public administration bodies and educational institutions, for establishing conditions for effective cooperation with industry in applied research and development partnerships, and for organizing Academia Film Olomouc. However, in the document UPOL also declared new relevant goals such as revising study programs and lifelong learning courses following employer feedback, supporting University of the Third Age activities, promoting and popularizing scientific research, and, most importantly, being involved in drafting and implementing the Olomouc Region's strategic development plan.

Some updates to the 2011–2015 strategic plan had relevance for the third mission; for example, the 2012 update explicitly referred to "systematic discussion and incorporation of UPOL development projects into the Integrated Development Plan of Olomouc and the Olomouc Region, the active participation of UPOL in the Regional Innovation Strategy [of the Olomouc Region] and the foundation of OK4INOVACE," the latter of which was accomplished in 2011. To illustrate how these third-mission goals were met, our research showed that the adoption of the Regional Innovation Strategy (RIS) in 2011 was driven by the aim to improve the Olomouc Region's economic situation and competitiveness. The other, more practical reasons for adopting the RIS[2] were to create a regional coordination and communication platform to identify problems in the region, to foster the Olomouc Region's research, development, and innovation potential, to ensure greater flexibility in adapting to changing regional needs through the functioning of a permanent coordination body, and to improve the effectiveness of public investments in innovation. Thus far, RIS implementation has been limited, and as UPOL's rector stated in an interview, the idea that this strategy alone can bring significant change in problem identification and delimitation by the relevant regional actors is a myth. Furthermore, he pointed out that the content of the strategy was conceived and shaped mainly by the university and that it is seen as a sine qua non condition for obtaining EU structural funding rather than a real platform for sharing leadership in regional development.

OK4INOVACE was founded in 2011 as a body for supporting and coordinating RIS implementation. Uniting officials from the Olomouc Regional Authority, Olomouc City Hall, UPOL, the College of Logistics, the Regional Cooperation Foundation, and the MedChemBio Cluster, OK4INOVACE mainly aims to support a whole range of innovations, including commercialization; to create optimal tools for supporting innovation processes; and to coordinate activities and actions undertaken within the RIS' framework. The RIS' framework should cover third-mission activities associated with information updates, forging partnerships, and cooperation, with OK4INOVACE partners actively participating in education including organizing training courses, fundraising, and establishing new bodies active in regional research,

development, and innovation. Overall, the RIS and its framework should support the transition of the regional, more industry-based economy to a knowledge economy. However, the actors we interviewed from both university management and the city council are skeptical about the impact of the RIS and its framework as they criticize them as mixing means and ends. Even if there are some initiatives to turn the goals into ends (e.g., the SmartAccelerator project funded by an EU structural program), their impact on the development of university third-mission policy has been very limited thus far.

Further *explicit* references to the third mission can be found in the 2014 update to UPOL's strategic development plan for 2011–2015. It again declares the need for further developing long-term cooperation between UPOL and regional institutions (the Olomouc Regional Authority, Olomouc City Hall) and for evaluating other regional partners' and potential employers' needs geared toward joint research and development and project-based activities. Certain faculties were selected to engage in this cooperation. The Faculty of Science was tasked with supporting student internships and helping graduates orient themselves on the job market (both through the Window for Practice project) and with taking regular surveys of its graduates. The Faculty of Education's role was to continue cooperating with the Olomouc Region–based administration in obtaining grants and holding educational and training seminars (in addition to supporting attendees' career advancement). UPOL's collaboration with external stakeholders entails getting regular feedback on the incorporation of UPOL projects into the Integrated Development Plan of Olomouc and the Olomouc Region. Third, the 2014 update aims at utilizing UPOL activities done within OK4INOVACE and OK4EU. The latter is an interest-based organization that joins together public administration bodies, HEIs, and industry chambers within the Olomouc Region with the aim of representing their interests in official Olomouc-focused talks with EU institutions.

Plentiful as the above third-mission goals for the 2011–2015 period are, they do not seem to reflect any comprehensible third-mission-driven policy strategy that would be substantiated by evidence or help solve specific problems of relevance. Third-mission goal layering and repackaging, devoid of any impact assessment (see the repeated goal of

more intensive cooperation with regional government), is thus contingent on the perception of UPOL's third-mission policy as a canvas upon which almost anything can be projected (or, more grimly, like a dropbox into which anything can be dumped). Such disparate, fragmented goals lean toward an "almost anything goes for third-mission policy" approach. Central to this is the problem of a missing rationale of what UPOL's third mission's central constituents are and how they should be meaningfully put together (designed) for practice. In the absence of a reasoned, clearly enunciated approach to UPOL's third mission, its actual third-mission agenda is predominantly about research, development, and innovation, which function as the link to UPOL's overall strategic goals in research excellence and internationalization. There are, however, other third-mission activities, but they seem to be carried out in a fragmented and somewhat isolated fashion. In other words, with the exception of research-related endeavors, the myriad other third-mission activities have not seemed to gain institution-wide recognition (i.e., they do not resonate enough with members of UPOL's academic and student communities), and they have a spurious effect on UPOL's institutional development as a whole. Because no impact assessment of defined third-mission-related goals and actions is available, it is difficult to effectively adjust or replace them. This complication adds to the ambiguity of what UPOL's third-mission policy entails in reality beyond excellence in (profitable) research.

Politics and Policy Entrepreneurs

The politics stream is essentially about policymakers' motives and opportunities available to them (Cairney & Jones, 2016), and therefore in this section we will address politics and entrepreneurs together. The internal political sphere of Czech public universities has been shaped by the post-communist trend toward reestablishing universities' autonomy following the Humboldtian model. During the 1990s, strong self-governance mechanisms were established and legally introduced. As a result, two characteristics have marked the politics arena within Czech universities over the last two decades.

First, self-governance principles have played a crucial role in university decision-making processes, in which academic- and student-elected academic senates have a relatively strong position. Their power to elect rectors and deans and to approve institutional budgets has made them significantly more powerful bodies than boards of trustees consisting of external stakeholders. In this sense, academic senators elected by the entire academic staff and student body (but with very low voter turnout) hold not only legislative power but also play an important role in mirroring the executive powers of rectors and deans. This arrangement has been criticized several times (e.g., in OECD reviews and in White Paper 2009, see above), but, despite attempts at reform, academic representative bodies have managed to retain this self-governance framework as the main principle for internal university politics.

Second, legal provisions and the Humboldtian notion of autonomy also endow public universities with a high level of internal autonomy. Large traditional universities function more like federations between faculties than centralized organizations. Indeed, central management has limited strategic powers. Thus, rectors and their offices may push for agenda setting, including policy formulation, but within the political stream, the crucial actors are faculty representatives who stand up for faculties as specific interest groups. In this regard, the rector must respect the Humboldtian academic culture including academic collegiality and the idea of teaching and research autonomy (see Šima & Pabian, 2013). The fact that most important policy instruments used for teaching and research funding at the national level are mimicked at the university level illustrates the strong position of faculties within university politics. Thus, institutional funding for teaching is mainly allocated to faculties by the same mechanism that the ministry uses to allocate funds to universities. At UPOL, the main public funding stream from the ministry in form of formula with main indicators in number of students and costs of study programs is slightly adjusted on university level and used for allocation of budget to faculties. Part of each faculty's budget is then "sent back" to the central administration as "a participation fee … for central university activities" (see UPOL, 2013). This reallocation of finances from the central administration to faculties and then back to the center reflects the importance of faculties as the key actors within the university. A similar

procedure is used for allocating institutional research funding at the national and university levels.

Considering the political framework of public universities' institutional policies, it comes as no surprise that the most important political cycle within universities coincides with rector elections. At UPOL, the rector is elected to a four-year term; the last election was held in 2014. Candidates are always respected academic employees. The three most recent rectors have been from the Faculty of Arts, the Faculty of Science, and the Faculty of Medicine, which are the largest and most prestigious of UPOL's faculties; they follow the classic Humboldtian model and have strong research missions and ambitions.

UPOL's strategic documents that we discussed in the previous section are obligatory documents that all Czech public universities must produce every five years. The asynchrony between the rector election and strategy cycles helps maintain institutional strategic continuity but can result in the parallelization of strategic goals set by rectors and in long-term strategic plans. For instance, at UPOL the rector in office from 2006 to 2010 was not involved in developing any strategic plan.

Due to the impact of internal politics on third-mission agenda setting, there are very limited options for successfully developing third-mission policies at UPOL. The politics stream is mainly controlled by the interests of academics from faculties who recognize academic traditions and legacy as the key reference discourse. Within this discourse, academic freedom, autonomy, scientific quality, and responsible scholarship are important values. Because university leadership comprises elected representatives from the academic community, these values extend to setting the excellence-in-research and internationalization agendas and to a limited extent to determining the relevance of teaching and research for the region. Due to the very low engagement of the board of trustees in university politics, UPOL politics is almost exclusively driven by internal dynamics framed by national policy. However, as described in Chap. 1, both internal university culture and national higher education policy have not favored explicit third-mission policy agenda thus far.

Within this political setting there is little space for potential political entrepreneurs who could foster third-mission policy within the university. The rector is typically a respected scholar who frames the university's

third mission according to his or her disciplinary discourse. In an interview, the present rector, a professor of history, explained the university's third mission as the historically grounded link between the university, the Catholic Archdiocese of Olomouc, and the city. Even though he mentioned some examples of university–region engagement in industry and agriculture, he primarily defined the third mission as "charity, philanthropy, and a strong presence in public discourse." He gave the example of the Faculty of Theology, which provides the wider region with graduates for pastoral service and for charity work in regional non-governmental organizations. He sees himself, as rector, as a representative of the university who should publicly promote excellence in research (and partly in teaching) and who should be an active leading figure in public debates on topical social and political issues.

Correspondingly, the rector indicated that the vice-rector for public relations was the main entrepreneur involved in the third-mission agenda. This vice-rector was responsible for everyday communication with the media as well as publicly presenting UPOL at events such as street festivals, film festivals, and public conferences on human and environmental rights. He was also very active in promoting UPOL's scientific research to the public, particularly at a popular science museum. This framing of third-mission activities gains regional attention for UPOL but also significantly limits third-mission policy development. First, it restricts university–region links to presenting scientific knowledge but does not contribute to developing innovation partnerships. Second, it has produced a situation in which the region is "jumped over"; the third mission is connected to the city as the location of the university's infrastructure, whereas at the national level UPOL is presented as an important actor in science, politics, and public debate. Thus, the Olomouc Region is somewhat left out of the equation.

Within this framing, the role of vice-rector for technology transfer is also limited. This position was established in 2014 for a former rector, a professor of experimental physics. The creation of this post could be interpreted as an expression of the priority of technology transfer in UPOL's third mission, but we did not observe any impact on policy formulation at the university level. This vice-rector's main responsibility is the university's STP, a main third-mission policy instrument with an

impact on the region. Its director, therefore, has the greatest potential for becoming a policy entrepreneur in UPOL's third-mission agenda. It was originally created as a technology transfer office in 2000 in a facility donated by UPOL; in 2007, it officially transformed into the STP and gained the status of being a central university facility. Despite being supervised by the vice-rector, it functions relatively independently. This center offers commercialization services for academics from UPOL's faculties, organizes innovation networking, and supports innovative firms by providing them space within its facilities. It has evolved into an important facilitator between some academic departments and regional businesses. However, its purview over intellectual property management (patents, licensing consultancy) has not been widely accepted within UPOL so far, and facilitating contract research via innovation vouchers has been only moderately successful. The reasons for the STP's limited impact are mostly rooted in the mismatch between UPOL's disciplinary structure and the regional economy's potential (Šima, Benneworth, Pinheiro, & Beseda, 2017) but also in the park's role within university politics. It has not yet become an active player exerting substantial influence on UPOL policy agenda setting and problem solving (see Šima et al., 2017). As the director of the STP stated in an interview, this institution has a relatively independent standing within the university, self-funding its activities, but because it does not bring any financial profit to the university, although key actors may respect its position within UPOL, it lacks urgency when negotiating with traditional faculties about the university's strategic priorities.

Policy Windows

From the previous sections, it follows that third-mission activities are not a priority at UPOL and that in official documents such activities tend to be merely enumerated or presented in a "layered" style. When looking for policy windows that could have brought the third-mission agenda to the fore, we have identified three situations when there were externally and internally favorable conditions for successful third-mission agenda setting, but the incongruence of the problem, policy, and politics streams

led to ambiguous results with little or limited impact on UPOL's third-mission agenda. By analyzing these three streams, we would like show why these identified situations cannot be understood as policy windows as presented in the multiple streams theory.

The first situation was marked by the establishment of UPOL's STP. In the early 2000s, when the national strategic framework for higher education was just established and science policy was still not heavily oriented toward global excellence in academic research, UPOL administrators could focus the university's knowledge production more on innovation and knowledge exchange. Established as a technology transfer office, the STP succeeded in gaining support for infrastructure investments from EU structural programs. It helped the university build up its real estate properties that could be rented to innovative firms and spin-offs. Thanks to external funding, the STP gained a respected position within UPOL but was not an active player in developing the university's strategy. In this respect, problem setting was rather overlooked. External funding opportunities pushed the knowledge agenda while the university's strategy reflected this agenda in a "business as usual" way. Consequently, there were no specific university-level policy solutions for motivating academics to engage with industry via the STP.

UPOL's lack of departments focused on business and engineering further complicate the STP's role. Its applied disciplines are primarily oriented toward the public sector (social and health services, medicine, law). This low capacity in disciplines linked to technological transfer caused further institutional marginalization in UPOL's strategy and policymaking (Šima et al., 2017).

There is also a significant lack of innovative firms in the region. According to the university chancellor, the large enterprises present in the city in the 1980s moved out or went bankrupt after the fall of the Communist regime. UPOL has had a lasting partnership with two employers with a long history in the region: Sigma, an engineering firm, and Meopta, an optics company. However, there are no innovative multinational corporations in the region and only very few innovative small and mid-sized enterprises that have their own research and development programs. Even though the STP provides facilities to innovative firms at low cost, not many are headquartered at the STP.

As mentioned in the previous section, the two main entrepreneurs possibly active in this field are the vice-rector for technology transfer and the director of the STP. This vice-rector position was established in 2014 and has had little impact on university politics primarily due to the rector's notion of UPOL's third mission as being focused on public service and popular science. The director of the STP has been very active in building the STP's position and brand. However, because the STP is a central university unit, it has limited presence in the university's politics, which is framed by academic self-governance. Because the STP is under the executive powers of the rector alone and not a part of the academic self-government system, its impact on university politics can only be indirect.

In summary, the problem and politics streams are not coupled in this case to create an opportunity for a policy window. Problem setting was underestimated and the university politics arena does not provide motives and opportunities for entrepreneurs to develop the third-mission agenda.

The second potential policy window for UPOL's third mission is linked to the establishment of the RIS for the Olomouc Region in 2011. Driven by national policy goals and the EU's regional agenda, regional actors were pushed to formalize regional innovation networks and set common goals and instruments. This policy framework was a new mechanism that had no equivalent in the regional policies of the Olomouc Region. Being discursively framed as an obligatory condition for benefiting from EU structural funds, this policy initiative was perceived as a more-or-less formal exercise from the beginning. When asked in an interview, a local policymaker from the city council responsible for education expressed open skepticism about the RIS' agenda. According to him, this policy produces new positions for implementation officers with the approach that "the journey is goal"; he compared it with the activities of a local entrepreneur who "really sees the goal." As mentioned above, the rector also does not believe the RIS will improve university–region cooperation and referred to it as a myth. In conducting our research, we noted that academics paid little heed to the RIS or to the implementation structure of OK4INOVACE.

The STP director was appointed regional innovation manager by the member bodies of the RIS, becoming the leading executive for RIS implementation. The establishment of a regional innovation council,

OK4INOVACE, as a supportive network and setting up a detailed program including policy instruments and responsibilities did not lead to accelerated action. Of the significant number of policy instruments, only three were related to UPOL, and they extended STP's existing activities. The only instrument concerning UPOL's actual teaching and research activities was the development of new interdisciplinary study programs in nanotechnology, bioinformatics, and material sciences. However, during annual meetings of the regional innovation council it has been noted that there are not enough applicants for these programs and that they have high drop-out rates. Furthermore, approximately 20,000 students attend UPOL, an institute that offers more than 200 degree programs. Therefore, these new programs, from which a handful of students graduate every year, represent a miniscule part of the university's activities and have not drawn any attention in the arena of university politics.

In sum, the introduction of the RIS did not represent a policy window because it lacked trust and confidence in terms of problem setting and did not have support from policymakers. The only relevant point that actors mentioned was that it was obligatory for getting money from EU structural funds. This goal alone, however, did not legitimize the implementation of the RIS. Instead of true implementation, a set of policy bodies and instruments was established that have had only a negligible impact on UPOL's third-mission policy.

Third, thanks to the formal existence of the RIS, UPOL benefitted considerably from EU structural funds in the 2007–2013 funding period (with the possibility of extension until 2015). It was one the most successful beneficiaries among Czech HEIs. Six large infrastructure projects were realized:

- Building of Infrastructure of Faculty of Medicine;
- Research and Teaching Centre of Faculty of Pedagogy;
- CenBiol—Biology Centre of Faculty of Science;
- Regional Centre of Advanced Technologies and Materials;
- BIOMEDREG—Institute of Molecular and Translational Medicine; and
- The Centre of the Region Haná for Biotechnological and Agricultural Research.

The first three projects significantly expanded the research infrastructure of the Faculty of Science, the Faculty of Medicine, and the Faculty of Education, which received large investments in laboratory and technological equipment. The other three projects were oriented toward research and innovation that should bring more economic third-mission activities (i.e., innovation and commercialization) to UPOL's faculties through the establishment of research centers. These institutions have successfully boosted research at several departments and introduced cooperation with the Czech Academy of Sciences. Outputs include prestigious academic publications as well as patents, products, and services for high-tech firms. However, these centers' ambitious research and innovation programs have not reached regional firms. According to experts from the STP, these programs are driven by UPOL's existing academic focus and not by regional demands (see Šima et al., 2017).

As a part of EU and national policy for fostering the competitiveness of underdeveloped regions (in all regions of the Czech Republic outside of Prague), the EU's Research and Development for Innovations Operational Programme should provide opportunities for building infrastructures that would strengthen the knowledge capacity of universities and research organizations in Czech regions. This richly funded program was perceived as a major instrument for renewing and expanding universities' infrastructures and capacities. The operational program's large, complicated implementation structure at the national level posed substantial project-development challenges to UPOL (and indeed to all Czech public universities). With the help of the project support unit at the rector's office, UPOL's projects were negotiated on different levels of the university, but the key policy arena was at the faculty level. As we mentioned in the section on the politics stream, the faculties are the main actors in university politics, and they retained their agenda in project formulation and development. Three of the successful projects clearly prioritized renovating buildings and facilities used for teaching and research in medicine, biology, and education. The other three projects focused on building new centers based on existing research capacities. The Institute of Molecular and Translational Medicine was established as a research center concentrated on cutting-edge basic research in biomedicine. The Centre of the Region Haná for Biotechnological and Agricultural

Research is a joint research institute between UPOL and the Czech Academy of Sciences and is a public research organization active in agricultural research. The synergy between two major institutes should bring high-standard research and innovation in biotechnology resulting in publications in leading international journals and in national and international patents. The Regional Centre of Advanced Technologies and Materials based at the Faculty of Science has become a successful, prestigious research center producing international publications and offering services, products, and technologies for commercialization. Most business partners are companies with national or international scope, but several regional firms also collaborate with the center.

We can conclude that these EU-funded projects reflect the intentions of key players within UPOL on the faculty level who, as policy entrepreneurs, managed to push through their agenda. Problem setting was driven from the bottom up, so key activities—be they the renovation of buildings for teaching, investment in research facilities, or the establishment of a new research center for knowledge-exchange activities—focused on the deficiencies and opportunities at particular faculties and departments. Consequently, these projects confirm the "drop-box" approach to the third-mission agenda when third-mission policy is "uploaded" with various urgent goals reflecting the actual needs of the main political players. At the central level, the university's main role was to strengthen the central project support unit to improve faculties' chances of success when applying for national funding. As a consequence, EU-funded projects brought significant change within the university, but the impact on UPOL's third mission toward the region has been only minor or of an implicit nature. For example, when these funds were used to modernize teaching facilities, they improved students' qualifications, which gave them an advantage on the regional labor market. However, the newly established research centers do not engage heavily in knowledge-transfer activities at the regional level and instead have a national or international focus. In an interview, the rector expressed confidence that these centers would enhance the competitiveness of basic research at UPOL internationally and improve regional engagement and that their extensive infrastructure would be sustainable even after EU funding ended. The director of the STP, however, was much more skeptical about regional outreach.

He gave the example of registered patents for drought-resistant barley developed at the Centre of the Region Haná for Biotechnological and Agricultural Research. The path such crops take to get to regional farmers is long and convoluted. First, multinational corporations must conduct large-scale testing focused on international markets before local farmers can buy improved seeds and use them on their fields. However, due to the lack of large firms conducting and funding development and innovation in the region, such activities have no specific impact on the innovativeness of the agricultural sector in the region.

In all three cases—the establishment of the STP, the introduction of the RIS, and the projects funded by the EU structural program—there were potential policy windows that could have brought enduring policy changes to UPOL. However, in each case, obstacles limited the impacts on the third-mission agenda. Within the university's governance structure, the dynamics of consensus-making, based on broad academic self-governance, limit opportunities for aligning university priority setting and funding cycles for regional engagement projects. On the same grounds, potential active entrepreneurs who could promote the third-mission agenda within the university have a weak position in internal politics. Most importantly, the dominant policy discourse, which is framed by research excellence and internationalization and substantially supported by national higher education and science policy, does not motivate key actors to identify problems that are related to the Olomouc Region; hence, there is a lack of urgency and motivation, even if there are specific policy instruments or initiatives that might otherwise address the third-mission agenda.

Conclusions: How Much Ambiguity?

Exploring UPOL's third mission through the lens of the MSA makes it possible to formulate the three following conclusions. First, UPOL's strategic and development documents from the last decade show a growing number of third-mission-relevant goals (e.g., in its communication strategy and strategic regional innovation partnerships) but without a clear order of significance and preference or any relationship to the

development plans of individual faculties. As such, the ambiguity of UPOL's third-mission plans remains high, with many third-mission activities put forward at lower institutional levels under the radar of UPOL's central administration. In its unintended breadth, goal multiplicity, and layering, UPOL's third-mission policy is like a "drop-box" for different nontraditional activities. The negotiation of policies results not in the identification of key problems and the setting of coherent goals but mostly in more urgent agendas in academic research that bring more prestige and resources.

Second, the prevalence of academic research affects UPOL's actual third-mission actions. A significant part of the university's third-mission policy is framed as public relations activities, popular science activities, and UPOL's presence in the national and, to some extent, regional public discourse (organization of film festival in Olomouc, involvement with a popular science museum, etc.). A larger part of third-mission activities having a broader, interfaculty reach is, one way or another, related to (potentially) profitable research undertakings; witness the establishment of the STP at UPOL, EU-funded infrastructure projects, or the STP director's role in cooperative partnerships for innovation at the regional level. In this respect we argue that, overall, UPOL's internal decision-making and politics tend to favor research and its outcomes, not least due to the mimetic pressures of the global and national research-university discourse. Following these trends, UPOL's third-mission internal policy dynamics prioritize research-related third-mission undertakings and attribute less significance to other activities. This understanding, overall, attests to "a third mission as a third-leg" approach.

Third, so far policy entrepreneurs within the university have failed to fully exploit open policy windows and set longstanding third-mission policies. In the case of the STP, its disconnectedness from the decision-making processes at the central university level (based mainly on self-governance principles) has resulted in isolation and the lack of potential to become a key entrepreneur in the third-mission agenda. Similarly, EU-funded infrastructure projects have been driven by the particular institutional agendas of key faculties with only minor consideration of regional affairs. Here, a regional dimension was missing from problem setting, and interuniversity negotiations framed by the excellence-in-

research and internationalization discourse resulted in strengthening the research capacity of some faculties and departments. The Olomouc Region's RIS should be an important driver for cooperation between key actors in the region, but it has not provided actors the confidence and willingness to act upon the agreed agenda.

Finally, two concluding points of general importance should be made, the first about governance structures on both the national and institutional levels, the second about the effectiveness of the MSA. Public sector governance in the Czech Republic suffers heavily from goal layering, formalization, coordination issues, intersectoral rivalries on both the national and regional levels, funding instability, and missing impact assessments (both mid-term and long-term). Czech universities exist within this public sector policy culture and have to behave strategically to synergize different sources and utilize them for their institutional goals. These conditions, together with the essential role of academic self-governance in the university's politics, encourage an inward-looking approach and the dominance of academic goals and policies. Within this framework, there is little space for third-mission policy entrepreneurs to establish the third-mission agenda as one of UPOL's logical priorities. These structural policy limits will hardly be challenged without systemically devising more effective solutions to university third-mission belittlement and effective ways of putting them into action.

Second, the MSA, when applied rather loosely as a conceptual framework rather than as a theory, can explain some barriers to establishing third-mission agendas. However, the coupling logic focusing mainly on ideal policy windows with clear and linear success of particular policies do not follow varied paths that lead to diverse results with more or less intense links to each of the streams. On the basis of our analysis, we argue that instead of relating the analysis to ideally coupled streams in successful policy windows, we should shift our attention to the dynamics of interstream relationships that could result in various situations with complex impacts on actors. Rather than following the linear logic of coupling in singular windows, the MSA could benefit from a more differentiated view of multiple temporal layers that when not coupled in unique policy windows have a significant impact on negotiating particular agendas.

Notes

1. As Cairney and Zahariadis (2016) have pointed out, "solutions may need to be produced in anticipation of policymaker attention to a problem, since attention often lurches to another problem before there is a chance to consider options from scratch" (p. 87).
2. The Regional Innovation Strategy (RIS) was adopted by a set of regional actors including, but not limited to the Olomouc Regional Authority, UPOL, Moravian University College Olomouc, the College of Logistics, the Chamber of Commerce of the Olomouc Region, the Agrarian Chamber of the Olomouc Region, and Přerov City Hall.

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7

University Collaboration at a Cross-Road: Evolution and Tensions in Third-Mission Engagement

Roger Normann and Rómulo Pinheiro

Introduction

The University of Agder (UIA) is a rather young university; first established in the mid-1990s as a university college, it became a full-fledged university in 2007. At the same time, the national higher education (HE) landscape in Norway has undergone considerable change—system contraction/concentration—because of mergers between regional providers. UIA has, since its inception, been embedded in its surrounding region, which is relatively 'thin' in terms of knowledge and innovation ecosystems, but nonetheless possesses several globally competitive industry clusters, as well as many small and medium-sized enterprise (SME) firms that do not belong to organised cluster

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organisations. As is the case with other mid-sized HE institutions in Norway and beyond operating in an increasingly competitive sector, both nationally and internationally, UIA faces a major dilemma, namely: How to devise and develop internal structures and activities that will ensure its survival in an increasingly competitive sector—nationally and internationally—whilst, at the same time, addressing the multiple (and sometimes contradictory) needs and expectations of regional actors across the public and private sectors? In this chapter, based on an institutional framework, we explore some variations of governance practice and rationality that can influence third-mission engagement processes. We compare these with how UIA's operational strategies for external engagement have developed over the years—with a focus on its engagement with firms in Southern Norway in the light of its evolving third (regional development) mission. Third-mission engagement represents a substantial challenge for newly formed HEIs, given that there is increasing internal and external ambiguity regarding what that mission entails, in contrast to the deeply institutionalised core functions like teaching and research. In this respect, we cast light on a series of as yet unresolved internal tensions and dilemmas for HEIs in their quest to provide a positive contribution to the surrounding region. We address some of the basis for HEI third-mission strategy, using the UIA as a case, by asking the following research question: *How does third-mission engagement evolve, and does it create additional ambiguities in young HE institutions?*

This chapter builds mainly on qualitative data sources: Examples of selected illustrative third-mission cases that UIA has been involved over the years are gathered from media sources such as newspapers, university web pages, research reports, PhD-thesis work, and other published academic work. Data underlying categorisation of shifts in third-mission strategies, interpretation of tensions, and ambiguities are based on interviews (N = 6) with key informants working at UIA during 2015 and 2016, including key management in the rectorate, researchers with practical third-mission engagement experience from different departments at UIA, and heads of department from units involved in third-mission activities. In addition, we undertook a careful examination of governmental white papers, as well as a thorough analysis of three generations of UIA's strategic documents. The analysis of third-mission engagement

activities prior to attaining full university status (pre-2007) was mainly based on PhD theses on the topic (Karlsen, 2007; Normann, 2007).

The rest of this chapter is structured as follows: First, we introduce the case of the institutional development of UIA and its third-mission strategies. Then, we discuss institutional theory (March & Olsen, 1989, 1995; Olsen, 2007) as a framework for interpreting case developments in third-mission engagement. The chapter is concluded with our analysis and reflections on the research question posed and a summary of the key findings.

Evolution of Third-Mission Collaboration in Southern Norway

National Regulation of Research and Third-Mission Activities in Norway

Norwegian HE is organised along a binary divide composed of universities and university colleges, with the latter being more vocational in nature, working with education within professional fields. Some of these colleges date back to the 1950s, with the establishment of regional colleges ('distriktshøyskoler') throughout the country (Kyvik, 1981). Nonetheless, as a recognised sub-sector, the university colleges have only been operating since the mid-1990s, as a result of forced mergers including local high schools and the regional colleges (Kyvik, 2002). As pointed out by Gulbrandsen and Nerdrum (2009), there is no clear definition of what is meant by the 'third mission' in Norway. We see this typically manifested in strategy processes at most Norwegian universities and university colleges every rectorate/election cycle. However, all these strategy documents have in common the fact that they tend to state the 'third mission' as equally important as research and teaching (Gulbrandsen & Nerdrum, 2009). This, however, was not always the case, and the role of the HE-sector with respect to research and third-mission activities has changed significantly over recent decades.

In 1968, a government proposal stated that the most important difference between a university and regional (non-university) colleges was that the latter *should not* engage in research and, consequently, not in research-based

third-mission activities either (St.prp.nr.136, 1968–1969). However, as early as in 1970, the national government adjusted this position, stating that regional colleges *could* engage in research-based activities, with the aim of addressing the knowledge needs of their host localities (in the form of applied research). However, given their institutional profile, the colleges were primarily to engage in research within the social sciences and the humanities, and not within the natural sciences or technological research. This role was to be reserved for the established universities (Innst.S.nr.249, 1969–1970). In 1995, and following the establishment of the binary system, this requirement changed, and now all activity (including third-mission activities) at all HE institutions in Norway is expected to be research driven (LOV, 1995-05-12-22) (see Fig. 7.1). The rapid growth in university colleges in Norway in the 1960s and 1970s was driven by popular demand for accessing HE from students and their families, fuelled by the country's need for a skilled workforce; nurses, economists, engineers, and teachers in the peripheral regions (Pinheiro & Antonowicz, 2015).

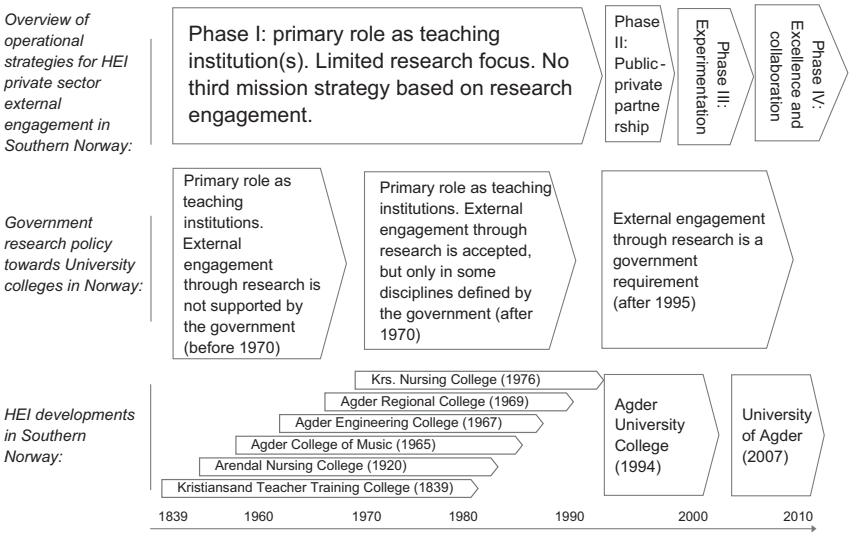

Fig. 7.1 Overview of third mission and HEI developments in Southern Norway

Mergers in the Higher Education Sector in Southern Norway

The suggestion to comprehensively merge university colleges in Norway was first launched by the so-called Ottosen-committee in the 1970s. It was, however, only some 20 years later, in 1994, that the number of university colleges was reduced from 96 to 26 through forced mergers. The regional need for an HE workforce that stimulated the establishment of many new university colleges in the 1960s and 1970s resulted in a plethora of university colleges that was difficult to run effectively for the government (Kyvik, 1999; Normann, 2002). In Southern Norway, in the Agder region alone, there were six independent university colleges by the mid-1970s: Kristiansand Teacher Training College (est. 1839), Arendal Nursing College (est. 1920), Agder College of Music (est. 1965), Agder Engineering College (est. 1967), Agder Regional College (est. 1969), and Kristiansand Nursing College (est. 1976). In 1994, and as a result of the government mandated mergers across the country, these six institutions were merged into Agder University College (AUC). In 2007, and as a result of changes in the legislative framework (early 2000s) allowing colleges to apply for full university status (Stensaker et al., 2005), AUC applied for, and was successfully awarded, the status of full university institution, becoming the UIA.

Conceptualising Third-Mission Engagement Rationales

There are many ways to understand and conceptualise the role, institutional characteristics, meaning, and significance for society that a university can have. On the one hand, it can be viewed as a technocratic instrument aimed solely at delivering specific forms of knowledge and workforce to private and public sectors—what Levin and Greenwood (2016) labels the *neoliberal public university*. On the other hand, we can

see universities as key democratic institutions, developing the demos and being defenders and proponents of an open and free societal discourse. Universities, in this sense, are also arenas for democratic practice, as *free public universities* (Levin & Greenwood, 2016). In practice, we could observe university academics and managers with various degrees of success aim to balance both external demands given either by the government or by marked forces with internal, often conflicting, demands and expectations stemming for different positions of power or rooted in different academic disciplines and communities of practice (Lave & Wenger, 1991). An appropriate framework for interpreting such developments can be found in institutional theory (March & Olsen, 1989, 1995; Olsen, 2007), as it considers both internal and external processes and dynamics and the interplay of these in shaping institutions in their developments.

University Governance and Autonomy

One way of conceptualising what a university is involves distinguishing between the university as an instrument and the university as an institution (Olsen, 2007). Following this reasoning, we recognise that an instrument is something that is used to achieve something else—outside itself. Its value is linked to the extent it contributes to achieving goals. In the context of understanding the university as an instrument, this means that both internal process and the external engagements of the university should be organised and structured in such a way that tasks and objectives are achieved in the most efficient manner possible. A key question then becomes: For whom is the university an instrument? (Olsen, 2007).

While there is both theoretical and empirical evidence that illustrates the importance of understanding the instrumental side of universities (Levin & Greenwood, 2016), viewing them as institutions means that we look at the ways in which its norms, constitutive rules, and practices prescribe appropriate behaviour to internal participants—mostly academics (March & Olsen, 1998). Furthermore, they also instil a specific purpose and identity in the members of the academic profession

(Merton, 1973)—one that is not necessarily aligned with the notion of the university as a tool or instrument for reaching certain external (e.g. political) agendas.

These norms, values, and systems of meaning that are relatively enduring, and thus provide purpose and direction over time, can be at odds with changes in expectations and demands (March & Olsen, 1989), both internally and emanating from the outside. Likewise, the formal organisational structure, its strategy and goals can constitute a rationale for third-mission activities. Finally, the rules, values, norms, and expectations outside the university (e.g. government and regional actors) might also shape third-mission rationale and practice, as demonstrated in recent studies from Norway (Stensaker, Persson, & Pinheiro, 2016).

In addition to this, it is also possible to distinguish between the university as a system of operations that is primarily governed by internal factors from that of a system that is shaped by external forces (Olsen, 2007). Internal factors can be represented in formalised structures like structure and strategy but also in more tacit dimensions, such as the values and norms associated with the different disciplines (Becher & Trowler, 2001). A university governed by external factors is often aligned with the demands and administrative obligations associated with implementing national policies or addressing some specific private sector's needs. The university can also be driven by the institutional demands in its environment, for instance, through the notion that one of its key roles or functions is to serve its local or regional community.

Given these two dimensions for conceptualising the university, autonomy and governance, we can pursue the conceptualisation and discuss how third-mission engagement will be situated in the four quadrants labelled: university as a strategic, technocratic, deliberative, and civic arena (see Table 7.1). Obviously, this is a simple typology, which does not describe with a higher degree of accuracy the multifaceted complexities associated with specific positions and historical periods. However, in our view, it provides an important heuristic for analysing the interplay between in-built university ambiguities (consult Pinheiro et al., 2018, in this volume), both new and old, and the emergence of key tensions, such as efforts to institutionalise a regional mandate across the board.

Table 7.1 University governance and autonomy

	Autonomy:	
Governance	Governed by internal factors	Governed by external factors
Instrumental (means-end rational)	***University as a strategic arena***	***University as a technocratic arena***
	Key sources of power: Internal dynamics of the academic disciplines/ faculties	*Key sources of power*: External strategic alignment
	Basis of leadership: Ability to forge instrumental compromises amongst internal stakeholders	*Basis of leadership*: Ability to forge instrumental co-operation with external constituencies
	Dominant ethos: Meritocracy	*Dominant ethos*: Administrative, bureaucratic
	Third-mission rationale: Mean for achieving teaching and research goals	*Third-mission rationale*: Fulfilling external political and/or marked demands
	Criteria of third-mission success: Contributions to teaching and research objectives	*Criteria of third-mission success*: Scale and efficiency of contributions
Institutional (values rational)	***University as a deliberative arena***	***University as a civic arena***
	Key sources of power: Public deliberation	*Key sources of power*: Networks and affiliation
	Basis of leadership: Transparency, civic virtues, democracy	*Basis of leadership*: Ability to negotiate axiological (value-laden) compromises
	Dominant ethos: Egalitarianism	*Dominant ethos*: Entrepreneurial
	Third-mission rationale: Collaboration where there are shared goals, values, norms, identities	*Third-mission rationale*: Community service (civic engagement)
	Criteria of third-mission success: Alignment with internal and external norms	*Criteria of third-mission success*: Empowerment of external actors/institutions

Source: Authors own, derived from (Goddard et al., 2016; Levin & Greenwood, 2016; Olsen, 2007; Pellizzoni, 2001)

Third-Mission Rationales

The university as a strategic arena model characterises the university as an institution driven and governed by the rationality, norms, and codes inherent in the academic disciplines. The university is, here, an independent and self-governed institution in society where third-mission engagement is a consequence of the rationality and traditions of different epistemic communities within the university (Johnsen, Normann, & Pinheiro, 2017; Pinheiro, Normann, & Johnsen, 2016). The power structure is also linked to operations within academic disciplines. Thus, leadership and its execution, is derived and gains its authority from a norm of meritocracy, governance by peers, and the ability to forge instrumental compromises between internal fractions representing conflicting views (Pellizzoni, 2001). Third-mission rationales are expected to be assessed in terms of the extent to which they contribute to the efficient realisation of goals and ambitions linked to their core tasks, research, and teaching. In this model, we expect that structural ambiguity could be an important factor to consider (Pinheiro et al., 2018). This is the case, since the model relies on the function and capability of university management and faculties to forge collaborations around shared understandings that become embedded into standard operating procedures resulting in a functional work organisation (Miles, Snow, Meyer, & Coleman, 1978).

While the university in the previous model is conceived of as an instrument for realising internal goals, the *university as a technocratic arena model* is an instrument for realising goals set by external parties. The university can manoeuvre and improve its relative position in society through aligning its own strategies with those set and expected by external agencies such as national government bodies, private sector interest and marked demands, institutional academic piers, students, and so on. Leadership success is linked to the mastering of the bureaucratic rationales and the ability to forge instrumental co-operation (Pellizzoni, 2001) between parties internal to the university and interests and external demands, instructions, and regulations. In this model, market-based mechanisms and bureaucratic procedures are seen as more important for

fulfilling third-mission agendas when compared to informal relations (social capital) developed over time amongst regional actors across the public and private sectors. The key question for assessing third-mission success is if the university can be considered an efficient instrument that has sufficient scale in its operations. In this model, we expect the ambiguity of intention to be a relevant factor, for example, insofar as the extent to which university strategies and those of external parties or stakeholders align (see Pinheiro et al., 2018). The ambiguity of intention can create tensions between the university and external stakeholders with respect to the execution of the third mission.

In the previous two models, the university was viewed as an instrument for achieving specific goals, either internal or external. In the *university as a deliberative arena model*, the university is governed by values and identities linked to either normative prescriptions of what the university is or could be as a democratic institution and deliberative arena for open free and critical dialogue and exchange of knowledge (Levin & Greenwood, 2016). Leadership in this model is firmly anchored and legitimised in democratic ideals, and power stems from deliberation in the public sphere. Within this model, third-mission collaboration is only possible when there is alignment between internal and external norms and values. For example, third-mission collaboration with the weapons industry could be difficult to achieve if this is viewed as not being aligned with the internal norms and values of the university, and third-mission collaboration with the renewable industries would then be easier to achieve if this industry represents values that are aligned with university norms and codes. Therefore, in this model, we expect that ambiguity of meaning could be a factor (see Pinheiro et al., 2018). In situations where there are not any pronounced or shared normative orientations or dominant cultural ethos, this could create tensions in relation to the HE execution of its third mission.

In our last model, *the university as a civic arena model*, the university is just viewed as a civic arena (Goddard et al., 2016). Power stems in this model from the ability to develop networks and affiliations with external parties and be responsive to such parties' strategies and visions. There are still norms and values that govern university interactions, but they are aligned in a pragmatic way with the institutional structure. Leadership success then becomes a function of negotiating axiological compromises

between parties external and internal to the university. By axiological compromise, we refer to the fact that actors act for non-instrumental ends and co-ordinate with others independently of their ends (Pellizzoni, 2001). The motives for action are not important. What is important for the university actor engaging in third-mission activity is that the joint action should be efficacious and compatible with one's norms and values. The basis for third-mission collaboration in this model is therefore the value of civic engagement itself. The success of such collaborative efforts is in such cases assessed based on the extent to which it empowers external actors/institutions. Therefore, in this model, we expect that the ambiguity of history could be a factor for third-mission practices (consult Pinheiro et al., 2018). In situations where collaboration between the university and external agencies originates in lasting relations and a shared history of collaboration, we expect to find fewer tensions with respect to third-mission engagement practice and rationales.

Third-Mission Ambiguity and Tension

Overview of Third-Mission Strategy and Activity in Southern Norway

The evolution of third-mission strategies in Southern Norway follows a relatively predictable pattern given national guidelines, mergers, and university strategic ambitions until University status was gained in 2007. Figure 7.1 summarises some of the main characteristics of this development, pointing to key historical moments or 'critical junctures' (Pierson & Skocpol, 2002). Based on this, a total of five key phases or stages are identified and discussed later. Based on the available data, we examine what ambiguities, if any, were present, and the subsequent tensions created by these.

Phase I: Third Mission Through Education

Before the 1994 mergers, the six university colleges based in Agder primarily functioned as teaching institutions. Very little research was

conducted and almost no systematic, research-based third-mission activities were carried out. The colleges fulfilled their roles as teaching institutions as dictated by the government, and the institutions were largely left to their own devices in fulfilling this role. Prior to 1994, the various colleges spread out across Southern Norway did not perform any third-mission roles directly, but engaged with the region through the education of a competent workforce, addressing the basic educational needs of the public and the private sectors. Examples of the relevant teaching programmes include; professional education for nurses, teachers, engineers, economists, and within the arts. The colleges in this sense, and during this historical period, share features of what we have earlier labelled the 'university as a strategic arena' model in the sense that they rely on internal governance and a clear educational objective. The third mission is not the source of any ambiguities or tensions, since it is not executed in any other way than though educational programmes which are embedded in the structure of the colleges.

Phase II: Third Mission Through Public-Private Partnership

After the 1994 merger that resulted in the creation of a unitary institution, and until the decision by the government to award full university status in 2007, AUC's strategy was dominated by the goal of becoming a full-fledged university. To achieve this goal, the AUC strategic plans were focused on developing strong teaching and research milieus as a means of fulfilling the official governmental requirements and securing accreditation by Norway's quality assurance agency (Norwegian Agency for Quality Assurance in Education [NOKUT]). However, the significance of close collaboration with, and support by, the region was also emphasised as strategically important in the development towards a full-fledged university (Agder University College, 2001). During this period (from the mid-1990s to the mid-2000s), the university engaged with many different collaborative arrangements in the region. Regional stakeholders in turn also mobilised efforts and resources to support the college in its efforts to attain university status. In fact, this goal became the foremost

and dominating agenda for regional stakeholders in the 10-year period from 1995 to 2005 (Normann, 2007). The region, for instance, spent approximately NOK 100 million (approx. €13 million) of regional funds supporting AUC's university strategy. It is therefore fair to describe AUC's third-mission strategy during this period as a broad *public-private partnership strategy* (Robertson, Mundy, & Verger, 2012), in which both regional stakeholders and university college leaders developed a mutual interest in regional engagement and collaboration. From the side of regional stakeholders, the presence of a university in the region would not only raise the latter's domestic and international profile, but also contribute to supporting the region in its transition towards a knowledge-based and globally competitive economy.

Earlier inquiries from Norway show that the active support of external stakeholders plays an important legitimising role in mergers involving HEIs (Stensaker et al., 2016). In this phase, AUC became increasingly inward-oriented as academics focused more and more on developing their credentials (academic legitimacy) through new PhD programmes, publications, and gaining professorships. However, there was an acceptance and understanding of this in the region as a necessary condition for gaining status as a full-fledged university. There were several lines of argument backing up the necessity of developing a regional university. One important reason was the emphasis put on knowledge economy and learning regions that emerged during the 1990s, another that neighbouring regions were positioning themselves in order to gain university status, and lastly that regional funding of such efforts was made possible through the sale of regionally owned shares in an hydro-electrical power plant (Normann, 2007).

During this period, AUC shares some of the features of what we have described as the 'university as a deliberative arena'. Empirically, we find both alignment and interdependency between the internal goals and processes within AUC (aimed at upgrading teaching and research) and the region's understanding and support for this aim. In this sense, the third mission in this period becomes the shared goal of developing a university in the region, which by implication becomes synonymous with an internal focus at the AUC on developing excellence in the realms of teaching and research. Hence, it is fair to state that during this period a shared

understanding and normative alignment between actors internal to the university college and regional stakeholders existed.

In the university governance and autonomy typology presented earlier, we make the point that the ambiguity of meaning could be a factor to consider in the rise of new tensions. However, in our case, since the partnership shared one clearly defined goal (creating a new university), there are no discrepancies of meaning that surface to the extent that tensions are created. For the most part, the regional stakeholders seemed to have trusted and shared the university's stakeholders' assessments (Normann, 2007). In 2007, the shared goal was finally achieved when NOKUT delivered its final verdict allowing the region to finally obtain its own full-fledged university.

Phase III: Third-Mission Experimentation

After university status was secured in 2007, a new phase in the development of the third-mission role and strategy was officially introduced in 2009. The new strategy document contained a broader set of goals, for instance, developing nationally leading and internationally prominent teaching and research milieus, promoting the innovative use of new technologies, and internationalisation (University of Agder, 2009). That said, close collaboration with the region continued to feature prominently in the new strategy. A closer look at university-regional industry collaboration in practice reveals that the latter could be described as a *third-mission experimentation strategy*.

In the beginning (2007–2010 period), UIA approached regional industry one-by-one as a single firm third-mission strategy. There were several initiatives taken for bilateral collaboration between the university and some of the largest firms in the region, such as Glencore and Elkem, both large process industry firms. Elkem collaborated much with the university in this period. In early 2008, Elkem started to build a new NOK 4.2 billion plant, 'Elkem Solar', in Kristiansand (Fædrelandsvennen, 2011), the key product from which would be silicon—a key raw material for products such as solar cells. At UIA, this was followed up with the establishment of new study places in renewable energy, and multiple col-

laborative initiatives related to this. Unfortunately, both for Elkem and UIA, there is at this point a massive global overproduction of silica, in part because of the impact of the global financial crisis initiated in the fall of 2007, so that several silica and wafer plants in Norway (located in Kristiansand, Narvik, Glom, and Herøya) ended up laying off over 1000 employees by 2010–2011 (Teknisk Ukeblad, 2011). In January 2011, it was announced that the Norwegian-owned Elkem group was sold to the Chinese company Bluestar (Adresseavisen, 2011). Elkem Solar had, in the period from 2008–2012, lost NOK 3.5 billion (Fædrelandsvennen, 2013). Following this, and because of the establishment of regional industrial clusters across the country (government policy), the university changed its strategic posture (2009–2013 period) so as to more intensively collaborate with regional industry as a collective entity, through regional cluster organisations. However, this strategy can be viewed as a third-mission strategy for the university, as much as a key strategy for the cluster organisations in the region to influence the university into developing study programmes and research activities that are aligned with the interests of the firms in the cluster organisation (Fosse & Normann, 2017; Normann, Vasström, & Johnsen, 2016).

In this first phase, in the years after attaining full university status, the university experimented with how to execute its third mission. First, it attempted to find a strategic alignment with single firms, as shown with the Elkem case. This strategy was found to present the university with some risks, as argued by the research director at the time, surrounding the notion that it is rather complex for the university to relate to industrial firms as single entities. As an alternative, the university found out that it was both less risky and less complex, to interact with regional cluster organisations. An additional bonus, as indicated by interviewees, was that the university could be perceived to interact and be relevant for a larger spectrum of the regional industry. Third-mission external engagement was, by and large, increasingly interpreted in terms of the strategic relevance for the regional industry of university core activities (Čábelková, Normann, & Pinheiro, 2017; Pinheiro et al., 2016). During this period, the university also underwent a phase of rapid professionalisation, bureaucratisation, and academic development, which has resulted in it becoming an increasingly more complex organisation.

Returning to our typology of university governance and autonomy, we see that the university in this phase shares significant features with the model we labelled 'university as a civic arena'. We see the university increasingly participating in network clusters, defining third-mission engagement as activities where the university shall be relevant and of service to regional industry, including contributions to entrepreneurial opportunities. In the discussion of the typology, we make the point that the ambiguity of history (Pinheiro et al., 2018) could be a factor to consider in creating new tensions. In our case and in this phase, third-mission endeavours are viewed more as ad hoc experiments rather than strategic collaborations stemming from years of engagement. These experiments have led to some new tensions within the university as they were intrinsically linked to the technological innovation and developmental needs of regional industry and, to a lesser extent, to addressing non-technological engagements of relevance to other ('less applied') academic fields such as those from the social sciences and the humanities (Normann et al., 2016).

Phase IV: Third Mission Through Collaboration and Excellence in Research

In the last phase (2014–ongoing), UIA has further redefined its strategic positions with the aim of investing in collaborative arrangements (both within and beyond the region) to secure third-party public grant funding. The latter is typically achieved through existing research funding structures at the international (EU/ERC), national (Research Council of Norway), regional (Nordics), and local (regional research funds) levels; this strategic shift is, in large part, a reaction to changes in governmental policy exercised through the adaptation of the funding formula to universities and university colleges in Norway. Changes enacted in 2017 now include a new performance indicator that assesses HEIs' abilities to attract competitive funding from external sources, public or private, increasing competition amongst domestic providers. According to the Ministry of Education and Research:

> The [new] indicator will provide incentives for more interaction with work, society and business. More and better cooperation between universities

> and colleges, business actors and working and community life will give greater relevance to education, increase value creation and make Norway better equipped to meet major societal challenges. (KD, 2016)

The observed shifts in the third-mission practice build on the previous phase and are a result of successes stemming from cluster collaborations where the university was awarded a NOK 200 million (approx. €25 million) centre for research-based innovation (SFI) and NOK 100 million (approx. €12.5 million) in government funding for infrastructure for a technological test lab (Normann, 2015 24–27 May). For the university, the third mission, collaboration with the industry, in this sense becomes an instrument for applying for large research grants. Building on this, the university now increasingly shares some features with what we labelled the 'university as a technocratic arena' model (above). This is in the sense that the university increasingly relies on strategic alignment and instrumental collaboration in order to realise its core aims. In the discussion of the typology, we argue that the ambiguity of intention (Pinheiro et al., 2018) could be a factor to consider in this model. For instance, the extent to which there is an alignment in objectives and strategic roles between the university and external parties. As alluded to earlier, in this model third-mission collaboration is less dependent on social capital among regional actors, but is more a function of market mechanisms, juridical processes, and a general bureaucratisation of social relations. As the UIA is still relatively fresh on this path, examples of tension stemming from this are latent and thus relatively scarce (empirically) at the time of writing. There is no doubt that long-term strategic collaborations between firms and universities deliver value for the former, particularly in highly competitive and R&D intensive industries like medical sciences and biotech (Owen-Smith, Riccaboni, Pammolli, & Powell, 2002). One can, therefore, foresee that research collaborations and the prestige that is associated with being a selected strategic partner will increase in the near future, as the third mission is further institutionalised as a core strategic activity of the university. This is a significant shift from the old days when external engagement was downgraded as a 'nice to have' activity, often to be hosted within universities' extended peripheries (Clark, 1998), rather than as an integral component of its core teaching and research tasks (Table 7.2).

Table 7.2 Summary of case findings

Third-mission phases	Model (best alignment)	Ambiguity (typical source of)	Tension (found in case)
Phase I: third mission through education	University as a strategic arena	Structural	Tensions not observed in case
Phase II: third mission through public-private partnership	University as a deliberative arena	Meaning	Tensions not observed in case
Phase III: third-mission experimentation	University as a civic arena	History	Between technological and non-technological approaches
Phase IV: third mission through collaboration and excellence in research	University as a technocratic arena	Intention	Relatively scarce

Conclusion: Third-Mission Evolution as a Path-Dependent Process

All university engagements, and third-mission activities in particular, face the *dilemma* that there can be more demands for collaboration than resources available at the university to address them adequately. This relates to what is known as the 'demand-supply unbalance' facing most universities in the age of massification (Clark, 1998; Trow & Burrage, 2010), or what Enders refers to 'mission overload' (Enders & Boer, 2009). In Norway and elsewhere, HEIs are expected to accommodate a multiplicity of emerging external demands to their portfolio of existing functions and activities. Yet, at the same time, they are facing increasing competition and resource stringencies, which create new tensions, both internally and between university and external stakeholder groups. When public resources are used for development, we seek effects that apply to the larger society, for example, in terms of new jobs, increased tax revenues, learning, and an increased knowledge base. This is the societal rationale behind most publicly financed development and innovation programmes, including university third-mission engagements. In the Nordic countries, free access to education (i.e. supported by the tax payer

and not individual students), including HE, is legitimised on the basis of the potential collective (societal) benefits that will arise from it. Hence, on this basis, many would agree that there exists a different normative basis and logic to the utility of development resources when they are public, rather than when these are exclusively private.

In this chapter, we have asked: *How does third-mission engagement evolve, and does it create additional ambiguities in young HE institutions?* Using the case of UiA in Southern Norway as an example, we found that the content in the concept and shared meanings associated with the third-mission have changed significantly over time. We observed an institution that started out as many teaching institutions focusing largely on education, with little attention paid to engagement. After the forced merger (in 1994), the institution started to move towards more ambitious academic aspirations with research profiles and strategic agendas beginning to develop. Later, when university ambitions were made explicit, the whole organisation mobilised as a collective entity in cohort with its regional environment and developed the necessary means to attain full university status. After this was secured, the university spent the next decade experimenting with several third-mission strategies and practices. Some of these were clearly more aligned with the internal value and norm system at the university than others. At the same time, external demands from the national policy and bureaucratic apparatus increased considerably during the period, including the fact that the third mission is now a mandatory function for all HE institutions in Norway. We have also seen that institutional developments and policy shifts (a system of voluntary mergers), combined with changes in the national regulatory framework and regional aspirations, forged a process that, in different phases, had the potential to create a multiplicity of ambiguities and tensions. However, and surprisingly so, this situation created fewer tensions than one would expect. In our case, this can be interpreted because of the young institution being able to self-correct its third-mission strategy and practice relatively quickly, combined with the fact that it achieved some notable successes early on. These successes can, at least rhetorically, and based on accounts by both university and regional stakeholders, be linked to regional collaborative efforts and third-mission activities. However, and probably worth noting in relation to this, the Agder region is by all

measures a relatively small one in which stakeholders at the university, in the public sector and in the private sector also often know each other personally, or at least they often know *of* each other. They might also meet frequently in the same public fora in the region such as conferences and other types of meeting places. For a young university experimenting with its third-mission engagement role, such processes may be more difficult to self-correct expediently than might have been the case in the Agder region.

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8

Conclusion: University Ambiguities and Analytic Eclecticism

Mitchell Young, Rómulo Pinheiro, and Karel Šima

Introduction

In this volume, we have examined six cases of university engagement in peripheral regions, regions that have often been overlooked in the mainstream literature on university-region dynamics as they don't readily offer up success stories (Benneworth, Coenen, Moodysson, & Asheim, 2009; Drucker & Goldstein, 2007). Rather, they enable us to explore the challenges and difficulties that arise at the intersection of the university and

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region. While we have not attempted to avoid examples of successful interactions, and are pleased that there have been some uncovered, our focus in this volume has been on the complexity of the interplay between the ideas, interests, institutions, and actors in (and of) the university and the region. We have examined the emergent tensions which arise from internal and external pressures acting simultaneously on these entities and how they are then settled in more or less successful manners.

Studying peripheral regions adds to the literature in several ways. First, as already mentioned, these regions are generally understudied. In the chapters of this volume, the authors have provided rich empirical data on regions which often do not get on the radar of either higher education (HE) or regional studies scholars. Second, we argue that peripheral regions are valuable objects of study because the tensions which affect all university-regional engagements are amplified in these regions due to their fragility. These are regions that do not have excess financial or social resources, leaving no slack with which they can experiment and little room for failure. This tenuousness suggests that cooperation and linkages are less likely to be undertaken (at least in more than a cursory manner) unless there is clear mutual benefit. We recognize that some decoupling will occur in order to satisfy policy demands and regional expectations, but where cooperation is uncovered, it is likely to yield lessons that are transferable. Finally, these regions allow us to hold a mirror to government policy, which following the global race for competitiveness of national university systems is often constructed with the interests of central regions and flagship universities foremost in mind. The effects, and particularly unintended consequences that this bias in policy has, can be most clearly seen in peripheral regions. In what we might term 'the paradox of peripheral regions', these are the regions most in need of reforms and yet also with the least likely institutional setup and capacity to absorb both the lessons and the resources that might be provided.

Universities and regions are both complex, multi-level entities. They exhibit both collective and fragmented structures and decision-making. They are both simultaneously empowered and hollowed out. Universities, considered as complete organizations, are governed directly by national policy, as well as indirectly by the European Union and other supranational norm setters such as the Organisation for Economic Co-operation

and Development (OECD) and ranking organizations (Hazelkorn, 2015). However, universities are also fragmented into faculties, departments, and individuals, who maintain a high degree of autonomy over their own work allocation and thus can be described as organized anarchies (Cohen, March, & Olsen, 1972) or loosely coupled systems (Weick, 1976). The individuals inside the university are governed at multiple levels: managed by the department, faculty, and university but also responsible to their discipline (Becher & Trowler, 2001)—an emergent supranational institution shaped by journals, editors, and peer reviewers—and granting agencies on both national and European levels. This lack of control over the content and practice of research on the part of central university management led to their being characterized as 'research hotels' (Oquist & Benner, 2012). Regions, likewise, are pulled between many levels. They must respond to national policy but also to their local voters, as well as supranational actors who provide both advice and, in the case of the EU, significant funding opportunities. The region, like the university, cannot directly control the actors that shape its destiny: the universities, businesses, and NGOs that make up the regional innovation system and the regional knowledge society. As described by Karlsen (this volume) the region is a 'space where institutional dynamics are played out'. Like the university space, it is not a passive space but an active one, shaped by actors, interests, and ideas.

When discussed in terms of national and regional policy discourses, there is a tendency to treat the university as an instrument rather than an institution. In this functionalist conceptualization that dominates most reform debates (Olsen, 2007), the role of the university is to help some particular part of society to achieve its particular aims. Precisely for whom and for what the university should be an instrument remain open questions, though competitiveness and economic growth, rooted in the broad concept of a knowledge-based economy are commonly put forth answers at both the national and European level (Aghion, Dewatripont, Hoxby, Mas-Colelle, & Sapir, 2008; European Commission, 2006). Regardless, there is a common conceptual problem: for the university to be an instrument, it needs to be something that can be wielded. That requires it be relatively simple and controllable, as a tool that lacks such concreteness cannot be put to a purpose. In this way, governments or regions that seek

to use universities as tools for development and growth are engaged in a process of simplification, one which tries to resolve the inherent ambiguities of the university. This can be seen clearly in the conceptualization of the university as a 'strategic actor' (see Pinheiro & Young, 2017) that is governed (or metagoverned) by shaping the conditions of strategy. The result is that governments see the university through a triply false lens of unification: they see the university as a unified actor with unified interests in a unified environment. In reality, the university does not possess any of these unities. In terms of actorhood, or agency, the university is loosely coupled. It does have a central core, and the relative power of the central administration is growing as a result of the modernization and entrepreneurial university discourses, but it cannot speak or decide comprehensively about what happens within its borders. It cannot force academics to pursue particular research or outreach aims. When businesses deal with the 'university', they often fail to understand the limits of what the central administration can actually deliver, assuming its leadership to have similar power as the chief executive of a corporation. Closely related to this is the question of unified interests. Again, one of the reasons for the success and stickiness of global rankings is that they provide an overarching means to conceptually unify a university's interest by reducing it to a common denominator—prestige. While prestige is indeed a shared interest across the university, it is an abstraction that does little to promote the third mission. Within the university, departments, faculties, and individual academics are each in competition for resources and discoveries as well as establishing their own prestige both inside and beyond their home institution, resulting in an uneven distribution internally. Finally, the unity of environment suggests that there is a single context to which universities are responsive. As can be seen even in the few above discussed levels and actors which exert pressure on the university, there are numerous overlapping and conflicting ties which exert reactions, responsibilities, and even accountabilities to the university. On the other hand, the university still does retain primacy for its own governance. It is an autopoietic, self-sustaining system which interacts with other societal systems such as the political or economic, choosing when to accept or to buffer itself from pressures exerted by them (Young, Sørensen, Bloch, & Degn, 2017).

How can we make sense of this complexity? How can we draw lessons about the role of the university within its region, given the elusiveness of conceptual completeness? At its heart, that is what this volume has attempted to achieve. We have taken the university as our starting point and worked outward to the region. Beginning with a theory rooted in institutionalist literature that depicts the university as a set of five ambiguities (Pinheiro, 2012), we broke down the idea of the university as a coherent whole and sought to apply the ambiguities of intention, causality, history, structure, and meaning to the regional context (see the Intro for a full description). Each of the six case studies dissects and analyzes one (sometimes more) of these ambiguities through a complementary theory, and in so doing, delves deeply into the internested systems of university, region, industry, and policy. The volume takes seriously the idea that these are intrinsically inseparable, that is, they are co-evolving systems that mutually shape and reinforce each other. Finally, by engaging with a wide range of complementary theories that interrogate the ambiguities and provide insights valuable for both academics and practitioners, the volume provides a methodological advance into the use of analytic eclecticism.

Analytic Eclecticism: Universities in Peripheral Regions

Analytic eclecticism is an approach that '*seeks to explicate, translate, and selectively integrate analytic elements—concepts, logics, mechanisms, and interpretations—of theories or narrative that have been developed within separate paradigms but that address related aspects of substantive problems that have both scholarly and practical significance* [italics in original]' (Sil & Katzenstein, 2010, p. 10). Eclectic methods move beyond paradigms, combining elements from them so as to 'develop a causal story that captures the complexity, contingency, and messiness of the environment within which actors must identify and solve problems' (ibid, p. 22). This is precisely the context in which universities and regions operate and hence an ideal subject for this sort of methodology.

This volume is an example of semi-constructed eclecticism in the sense that all the authors begin with a common starting point, the ambiguities model of the university based in institutionalist theory. The authors then advance and interrogate one (or in some cases, more) of the ambiguities with analytic elements from another paradigm (see Table 8.1). Research problems in this volume are found in the tensions, sometimes paradoxical, that arise from conflicting internal and external pressures. The tensions were identified through interviews, and in some cases documentary analysis, with university and regional actors. In this concluding chapter, we both examine how these examples fit the idea of eclecticism by meeting the criteria set out by Sil and Katzenstein and map out other nested ambiguities which could form the grounds for future research.

Analytic eclecticism is recognized by three markers: one, research problems are formulated out of empirical complexity rather than gaps in knowledge of a particular paradigm; two, they provide middle-range

Table 8.1 Cases and their respective conceptual and methodological settings

Chapter	Case	Observed ambiguity	Interrogating theory
2	J. E. Purkyně University in Ústí region	Ambiguity of intention, structure, and history	Social networks theory
3	Telemark University College in Telemark region	Ambiguity of structure	Contingency theory
4	College of Polytechnics Jihlava in Vysočina region	Ambiguity of intention and history	Stakeholder salience theory
5	Finnmark University College in Finnmark region	Ambiguity of history	Regional innovation systems; and Political science: systemic and episodic power
6	Palacky University in Olomouc region	Ambiguity of intention	Agenda-setting theory: multiple streams
7	University of Agder in Agder region	Ambiguity of structure, meaning, history, and intention	Organizational studies: arena model of an organization

(Merton, 1968) explanations that incorporate 'complex interactions among multiple mechanisms and logics' (Sil & Katzenstein, 2010, p. 19); and three, the findings are valuable to both academics and practitioners (Sil & Katzenstein, 2010).

J. E. Purkyně University in Ústí Region

In the chapter on Usti, we see how social networks theory can be used to address the ambiguities of intention and structure. The University of Jan Evangelista Purkyně has a deep tension between its official categorization as a university, measured and accountable to the same standards as the premier research institutions in the country, and its *raison d'être* as defined in both its founding and mission to be regionally important for education and research. This tension plays out in two key areas: recruiting students and hiring qualified academics, both of which engage networks to achieve their aims, but in very different ways. The ambiguity of structure, particularly as seen in the loosely coupled nature of the university, is seen to enable the engagement of social networks in resolving these tensions, which are exacerbated by the peripheral situatedness of the university. In the quest to find students, interinstitutional networks are formed between the faculties (not the central administration) and secondary schools in the region. These are ego-centered type networks, in which the faculty is at the center interacting with each of the nodes (secondary schools), but little networking occurs between the nodes themselves. The quest to find qualified academics, on the other hand, engages a very different looking social network, much more dense and complex, made up of individuals, not institutions, and established through core academic work, such as shared education, conference attendance, multiple-institution grant work, and scholarly exchange. In both cases, however, we see how informal connections precede and lead to the establishment of formal institutionalized relations. Networking, though it is not benchmarked or rewarded either by the university administration or by the national bodies overseeing academic quality, is in fact critical to the university's development and regional engagement. The ambiguity of structure is what allows networking to be a core activity of the faculty and academics

without interference or engagement from the central administration, but at the same time, it clearly exemplifies the ambiguity of intention, as it exposes the limitations of focusing on the output side of the three missions of the university. As important as these networks are, they are essentially invisible to output-oriented measures. A stronger focus on engaging networks could likely produce third-mission results within all five of the university ambiguities.

Telemark University College in Telemark Region

The chapter on Telemark addresses the ambiguity of structure through organizational design literature. Two different typologies for multicampus universities are overlaid, which allow the authors to compare structural ambiguities in both the overall governance and the academic programs at Telemark University College. Due to mergers, the university is comprised of four campuses, which were at one time independent colleges. The official structure of the university, as seen in the organizational chart, is unified and coherent, based on a traditional academic model in which the broad academic fields (faculties) form the primary level of organization; however, in reality, the branch campuses are rather powerful, retaining procedural autonomy and a distinct culture and character that is partly reflected in the programs offered but otherwise is not formally institutionalized except in the spatial dimension. Bringing contingency theory to bear on this ambiguity opens the door to examine the fit between organizational features (structure and degree programs) and the various 'contingencies' that face the organization: the subregional environment and educational needs in which each branch is located, the historical path dependencies of the earlier institutions upon which the university is built, and the university strategy. The blended typology which is developed in this chapter provides a means to better understand the ways in which multicampus universities can address the third mission in their regions, particularly when those regions do not have a unified character or needs.

College of Polytechnics Jihlava in Vysočina Region

The chapter on Vysočina shows how stakeholder salience theory can address the ambiguities of intention and history. The College of Polytechnics Jihlava (CPJ) was established in 2004 with the strong support of three stakeholders: the regional government, employers, and the national government via the Ministry of Education, Youth and Sport. It had a clear intention, which was to create regional growth by providing educated graduates to local businesses and to draw more knowledge-based businesses into the region. This supply-side theory of regional growth did not materialize empirically. The region still has a high unemployment rate, and there are structural mismatches between employers hiring practices and the CPJ's outputs. Employers seek to hire either secondary school graduates or engineers with master degrees, while the demand for graduates with bachelor degrees, which is what CPJ provides, is minimal. After more than a decade of the college's existence, we see that intentionality has changed, and new ideational paradigms from the national level combined with a sense of resignation from the regional representatives have changed the stakeholder constellation. The priorities on a national level have shifted as a result of a new hegemonic idea: that quality, particularly in research, is the driver of success in the knowledge economy, not access or massification of education. This can be depicted in some ways as a path dependent return to the traditional values of major research universities. The government as the most salient stakeholder (possessing power, legitimacy, and urgency) has thus changed the playing field and rules of the game for a regional college like CPJ. Other stakeholders either lack power, as is the case for the regional representatives, or legitimacy, as in the case of employers, thus creating a lopsidedness in stakeholder balance that harms third-mission activities. Future research might consider the causality in these relationships and whether more balanced salience among all stakeholders could bring about positive consequences for these sorts of regions.

Finnmark University College in Finnmark Region

The case on Finnmark brings together the ambiguity of history with the theory of regional innovation systems. Drawing on two concepts of power to explain how historical path dependencies and lock-in effects are maintained or challenged in light of the expectations of regional innovation systems, the text focuses on two tensions that Finnmark University College experienced: the decision to create (or not) a branch office in Vadsø and the decline and change in traditional regional industries. These two tensions represent two conceptualizations of power, which is depicted as episodic when it is discrete, strategic, and wielded by actors to advance their interests, as in the first tension over location, and is systemic when it works through existing routines and practices in a disembodied manner so as to provide advantage to particular interests or actors, as in the second tension over educational priorities. Combining these two theoretical elements allows us to reassess regional innovation systems literature and what can be expected of HE actors. In the first case, the literature argues for the importance of place, that is, the physical location of the university brings numerous indirect benefits to the city (or town) in which it is located. In this respect, we find support and see that the university was successful in using its power to maintain a sole core location in Alta, but was also compromising by decentralizing its activities across the region. On the other hand, episodic power was extremely limited in its ability to respond to regional educational needs. The case found that systemic power was stronger and resulted in a reshaping of the employment structure of the region rather than catering to it. Instead of the university developing new knowledge applications to help modernize declining industries, it mainly served to provide qualified workers for the public sector (particularly in education and nursing) for which there was growing demand as a result of the national decisions to expand these public sectors. This chapter provides a model for predicting more realistically when and how universities will be able and effective in using power to promote or shield themselves from regional innovation systems.

Palacký University in Olomouc Region

The chapter on Olomouc region brings together the ambiguity of intention with agenda-setting theory, particularly that of Kingdon's (1984) multiple streams. In this mashup of institutional, organizational, and public policy concepts, we find evidence of how organizational policymaking can be understood in similar ways to governmental policymaking. The three streams of problems, policies, and politics find a place within Palacky University and particularly its strategic planning process. The text explores how intentions to address the third mission were ultimately implemented or overridden by other interests. The picture which comes out is a mixed one. While several initiatives, such as the Science and Technology Park or Popular Science Museum, did succeed in institutionalizing the third-mission activities, their implementation did not result in a reorientation of university policy away from the research excellence and internationalization agenda. The analysis on the level of the three streams shows how and why the main policy entrepreneurs utilized potential policy windows for purposes other than third-mission agenda setting. While it was shaped by a 'drop box' approach on the central level filling the third mission with partial agendas without a coherent framework and clear prioritization, various actors on other levels succeeded in carrying through their own intentions and interests, as demonstrated by the success of projects funded by the EU structural funds for regional development. On this basis, the authors conclude that using the multiple streams framework as a structure to study organizational policymaking is a rich area for future research and could lead to an understanding of how each of the five ambiguities provides opportunities and constraints for the way in which policy windows are opened and (not) exploited.

University of Agder in Agder Region

The chapter on the University of Agder engages one of the now preeminent models for understanding the institutional dynamics of the university by infusing it with an organizational studies perspective. Maassen

and Olsen's (2007) institutionalist-based model sets out four ideal-type visions of the university: a community of scholars, national political instrument, representative democracy, and service enterprise, which are based on four different institutional factors: constitutive logics, criteria of assessment, reasons for autonomy, and mechanisms for change. The authors advance this discussion into the study of the organizations and how they are governed. Retaining one major axis from Maassen and Olsen based on 'autonomy' (whether the university is steered from the inside or outside), it changes the other dimension to the 'governance rationale' (instrumental vs. institutional), allowing them to focus on the factors of power and leadership to explore four different visions of the third mission. The university, in this case, is seen through an organizational lens, not as a complete actor, but as an arena. The authors identify four visions of an arena conception of the university (strategic, technocratic, deliberative, and civic) and tie each to a specific ambiguity. For the purposes of third-mission research, this provides a valuable variation by which to explore change in the university. The chapter finds that changes in policy framework and regional aspirations did not create as many tensions as might be expected because of the young institution being able to self-correct its third-mission strategy and practice relatively quickly, combined with the fact that it achieved some notable successes early on. Finally, this case sheds light on the paradox associated with universities' regional roles, as UiA needed to address field level issues associated with its academic legitimacy before it could take on board the needs and expectations of regional actors. This, once again, suggest that in HE local relevance and (global) excellence are intertwined.

Nested Ambiguities: Universities, Regions, and Government Policy

Following the conclusions from the empirical case studies, we address here a broader framework that examines not only the ambiguities of the university but the complementary ambiguities between the university, region, and policy system. These are nested ambiguities both in terms of

their cross-relevance between systems and the institutional levels on which they operate: subnational, national, supranational (see Table 8.2).

The *ambiguity of intention* manifests itself at other levels beyond the scope of the organizational boundaries of the university. The latter is increasingly permeated by outside events and imperatives and is thus difficult to determine with precision. At the macro level of governmental policy, there is ambiguity with respect to the broader societal role that higher education institutions (HEIs) are supposed to play, beyond the core tasks of teaching and research. Governments and funding agencies increasingly focus on the societal impact of university activities, but these (impacts) are often ill-defined, largely because they are highly context specific and difficult to predict, let alone to manage. In democratic, multiparty systems, the ambiguity of intention associated with policy is part and parcel of the fact that compromises need to be made and some leeway needs to be given so that local actors (implementers) can translate policy aims as they see fit. Policy is often symbolic (Gornitzka & Maassen, 2000), demonstrating a shift in

Table 8.2 Nested ambiguities: A multi-level analytical framework

Ambiguity of…	University	Government policy	Region
Intention	Mission & Goals	Instrumentality vs. symbolism	Regional development plan
Causality	Relation between inputs and outcomes	Short-term goals vs. long-term outcomes	Multiplicity of actors (and instruments) with diverging strategic goals and demands
History	Trajectories	Policy continuity (reforms build on previous reforms)	Lock-in effects and regional renewal
Structure	Integration	Lack of coordination among governmental agencies and policy portfolios	Decoupling among actors composing the regional innovation and knowledge ecosystems
Meaning	Culture	Conflicting ideological agendas, for example, NPM, excellence, and neoliberalism/market	Local values and identities, but also reputation outside the region ('local attractiveness')

governmental intentions rather than a specific outcome to be achieved. In the realm of HE, as is the case in other sectors, national governments are following more generic global trends (e.g. marketization, focus on quality, efficiency, and excellence), and these often add a new level of ambiguity when translated at the local level or when global templates and local intentions and aspirations are mixed (Pinheiro, Wengenge-Ouma, Balbachevsky, & Cai, 2015). Thus, when it comes to policy, one needs to take into account the complex interplay between 'policy as instrument' versus 'policy as symbolism' or a break with the past (Gornitzka, Kogan, & Amaral, 2005; Sabatier & Mazmanian, 1980). Likewise, at the macro (subnational) level of the region, local development plans tend to be rather generic, aimed at achieving 'better quality of life' for its citizens, more 'sustainable cities', 'innovative cultures', and so on. The interplay, if any, between these local plans and university strategies and aspirations are far from obvious. In most cases, managers within regional governments and universities do not take each other's plans into account, thus leading to a decoupling between regional goals and aspirations and those of the university. This is even more obvious at the level of the departmental unit or academic/research group where the dominant logics are shaped by a complex interplay between professional and disciplinary norms and values on the one hand and competition and strategic funding regimes at the field level on the other. Taken together, these additional two policy layers (national and regional levels) reinforce the ambiguity of intention inherent in modern HE systems, not least with respect to their societal role.

As is the case with the ambiguity of intention, there is *ambiguity of causality* at the level of the national government and within the fabric of the region. When it comes to national policy, despite the stated intentions and ambitions— for example, 'more effective and responsive universities'—it is impossible to ascertain what the results of the reform processes aimed at modernizing both HEIs and the HE sectors in which they are embedded actually are. The complex and unpredictable interplay between short-term goals and long-term outcomes has long been recognized as a key dilemma within public policy and management (Pollitt & Bouckaert, 2011), including in the governance of national HE systems

(Huisman, 2009). The ambiguity of intention manifests itself at the regional level as well, with multiple actors possessing different conceptions (and normative postures) regarding both the value and role of universities for reaching the strategic objectives of multiple stakeholder groups. Local governments may desire that addressing skills shortages in certain areas (e.g. teaching or engineering education) be prioritized. In contrast, local firms may, instead, request that graduates have the innovative and entrepreneurial skills necessary to be competitive in a global knowledge economy. Both imperatives may, in turn, clash with those held by nonprofit organizations and third-sector institutions (e.g. NGOs) centered on the need for more engaged citizens, democratic participation, and social cohesion. In short, so-called regional demands imposed on the university are neither homogeneous nor easy to define, thus resulting in further ambiguity and confusion over what university actors should focus on.

The *ambiguity of history* at the university level is matched by similar path dependencies in governmental policy. Political reform efforts are nested into one another, with ongoing reforms building on or attempting to address the unintended consequences of previous reforms (Gornitzka et al., 2005). Earlier reforms often act as enablers to new reform processes. For example, in Norwegian HE, the first round of mandatory mergers in the mid-1990s led to the establishment of a binary system composed of universities and university colleges. This, in turn, over time resulted in fragmentation and system-wide inefficiencies, leading to governmental efforts to adopt mergers as a policy instrument to consolidate the sector and enhance the government's steering ability (Pinheiro, Geschwind, & Aarrevaara, 2016). This suggests that earlier policy decisions set in motion a series of sector-wide dynamics that are not always easy to reverse and thus establish future trajectories (Pierson & Skocpol, 2002). Similarly, at the regional level, ongoing dynamics and priorities are determined by past events. For example, old industrial regions that are unable to regenerate economically tend to be 'locked in', a process that negatively affects their ability for regional renewal and change (Isaksen, 2014). What is more, the ability of regions to diversify (new sectors and industries) is largely dependent on the region's 'institutional fabric', that is, the ability of local actors and organizations to mobilize

their inner competencies in a joint effort to expand existing industries ('path extension') or to establish new ones ('path creation') (Boschma, 2007). In either case, industry regeneration is affected by the type of knowledge repositories and competencies that exist in the region, including the ability to absorb, generate, and transmit knowledge (Vang & Asheim, 2006).

The *ambiguity of structure* at the university level is matched by a similar dynamic within government since there has traditionally been little coordination across policy portfolios under the supervision of the various government agencies (Christensen, Lægreid, Roness, & Røvik, 2007). As a sector, HE is of interest to various ministries—education, science, regions, industry, even agriculture and foreign affairs—yet, each ministerial agency tends to approach the sector in isolation rather than in a coordinated manner aligned with a 'whole of government' perspective (Pollitt & Bouckaert, 2011). This is one of the main reasons that multi-level governance approaches have become so widespread in recent years (Piattoni, 2010), including within the realm of science and HE (Geschwind & Pinheiro, 2017). At the endogenous level of the region, structural decoupling manifests itself in a lack of coordination among the different actors composing the regional knowledge, technological, and innovative ecosystems. In order to address this issue, many regions have, since the mid-1990s, been adopting triple-helix inspired policies and strategies to align (and explore synergies among) the strategic agendas of key actors across government, industry, and academia (Lester & Sotarauta, 2007). Regions that have been rather successful at promoting diversification, innovation, and economic growth have often established strategic alignment around a shared vision, often with the university taking a leading role (Pinheiro, 2012, 2014).

Finally, with respect to the *ambiguity of meaning*, value systems also play a key role within policy, given the ideological agendas of parties and multiple interest groups involved in the policymaking process (Howlett, Ramesh, & Perl, 2003). Recent examples include the role attributed to competition and market-based mechanisms resulting from neoliberal policies and global trends that have shaped New Public Management inspired government reforms across the whole of the public sector (Christensen & Lægreid, 2011), HE included (Enders, Kehm,

& Schimank, 2015; Pinheiro & Young, 2017). These ideologically driven reforms often clash with the institutionalized values, norms, and traditions within universities, leading to new tensions and volitions (Berg & Pinheiro, 2016). This process has, for example, resulted in a decline in trust between academics and local administrators/leaders as well as between the latter and the government as a result of enhanced scrutinization and monitorization of activities (Hansen et al., forthcoming). Finally, each region is composed of a value/normative structure which is intrinsically associated with a specific local identity and traditions and which is a result of historical circumstances. Local values and identities act as either enablers or constrainers of developmental processes and help determine the behavior of local actors. For example, regional reputation may be a key factor in attracting talented and creative professionals into the locality (Florida, 2006); some regions are known for their entrepreneurial mindset whereas others are characterized as more conservative, even backward. In the latter case, change agents such as policy entrepreneurs (Battilana, Leca, & Boxenbaum, 2009) or entrepreneurial academics (Bercovitz & Feldman, 2008) face a particularly difficult set of challenges given the unwillingness of the regional structure (actors and institutions) to try out new things.

Lessons and Reflections

The third marker of analytic eclecticism is that it brings findings that are valuable to both academics and practitioners. Below we briefly present some overarching findings from the cases, but perhaps most valuable is simply demonstrating the usefulness of analytic eclecticism as a methodology for exploring the relations between policy, regional and university systems.

As is the case with HEIs, each case region is unique in its own way, and universalistic policy frameworks focusing on 'one-size-fits-all' approaches (e.g. traditional metrics for measuring and rewarding excellence and academics' careers progression) have clear limitations with respect to linking the characteristics and needs of the and region with that of the local HEI. University strategies and policy frameworks at the national and regional

level reinforce one another and thus a degree of coupling between these is necessary, while respecting the need for different academic communities to engage with regional actors as they see fit and in accordance with their disciplinary and knowledge domains and perspectives.

Universities are collective actors and they engage more constructively with collective actors in the region. While cooperation on the level of central administration and key regional actors in regional and local government and business can be of importance, this kind of top-down process does not lead to much impact when there is little or no link to the organizational units: local firms and even individual academics, businesspersons, and officials. Regions are complex entities, and regional actors do not have a uniform set of demands and expectations that HEIs should respond to. Further, there are both centers and peripheries within peripheral regions, and the ways policymakers and HEI decided to address these challenges should necessarily differ in approach.

There is a general tendency for universities to make a stronger impact in their immediate surroundings, so the notion of 'regional HEIs' should be critically rethought, and a sustainable platform for linking local engagement with global orientation should be explored.

In the absence or lower level of research capacity across the board, the primary role of HEIs in regional development is that of the provision of skills and competencies via the graduates they train. Yet, the ability of the region to assimilate these graduates is beyond the mandate of any HEI and thus moves into the nested levels of national and regional policy and university strategies and subunit-wide initiatives.

Network arrangements between universities and regional actors are dependent on the more informal, trust-based relationships forged at the local level and thus cannot be 'steered' as such. That being said, there are strategic opportunities for university and regional leadership to nurture social and physical spaces in which such long-term interactions can first emerge and meaningfully develop over time. Students and graduates play a critical role in forging and maintaining such relations.

The absence of incentive and reward systems—both at the national and institutional levels—for academics to engage with regional actors act as major barriers. Human resource practices and procedures can help in this regard by, for example, revamping recruitment and promotion

structures to include a 'regional impact' component. Yet, for the most part, the academic profession as a whole, as well as national and international funding structures (research councils), move academics away from engagement.

Co-creation is thought to present an opportunity to bridge academic and regional imperatives and deliver win-win solutions, but it demands a careful selection of key areas in which HEIs can make a contribution as well as a long-term commitment to such relationships. Such activities should not, however, contribute to HEIs' mission stretch but instead provide an opportunity in which regional engagement facilitates the strengthening of core activities and the successful integration of graduates in local and national labor markets.

Overall the cases have demonstrated that while there is no common prescription for the periphery, the ills faced by these divergent regions can be better overcome by understanding the ambiguity found in both universities and regions. Universities cannot kickstart a region by themselves; they are necessary but not sufficient conditions and additionally require investment, infrastructure, and the will and support of regional actors. Even with such support, the fact that universities are simultaneously embedded in both a global and a regional field, means that they struggle with a fundamental tension between being excellent and relevant. By providing a set of models that bypass this binary and replace simplicity with ambiguity and complexity, this volume initiates an approach to more realistically resolving the intersecting university-regional aims related to governance, geography, and grandeur.

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