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Universities and Place Leadership – A question of agency and alignment

Liliana Fonseca[a], Lisa Nieth[b,c], Maria Salomaa[d] & Paul Benneworth[e, b]

[a] Department of Social, Political and Territorial Sciences, University of Aveiro, Aveiro, Portugal

[b] Center for Higher Education Policy Studies, University of Twente, Enschede, The Netherlands

[c] Regio Twente, Enschede, The Netherlands

[d] Lincoln International Business School, University of Lincoln, Lincoln, UK

[e] Høgskulen på Vestlandet, Bergen, Norway

Abstract

There is increasing interest in the question of how different stakeholders develop, implement and lead regional upgrading processes with the concept of place leadership emerging as one response to this. Simultaneously, universities face growing expectations that they will contribute to regional development processes – often through their collaborative relationships with other regional stakeholders. But universities are complex in terms of their internal and institutional structures, which undermines their capacities to enact coherent place leadership roles. We seek to understand how strategic leadership in universities can contribute to innovation and regional development in the context of the fundamental institutional complexity of universities. We address this through a qualitative, explorative case study comparing six European regions where universities have sincerely attempted to deliver place leadership roles. We identify that the elements of agency and alignment are vital in that: firstly, university leadership has to align with regional coalitions on the one hand and internal structures on the other hand, while secondly, this leadership must give room to individuals to enact agency in their regional engagement activities.

Keywords

place leadership, higher education institutions / universities, regional development, institutional complexity, agency

1 Introduction

There is an increasing interest in and growing literature on place leadership, aimed at answering diverse questions around the agents and/or institutions that lead regions to desired future outcomes. Regional leadership has thus been labelled as a determinant for regional growth and policymakers, practitioners and academics are eager to understand the nature, origins and different appearances of place leadership (see for instance Sotarauta *et al.*, 2017). Concomitantly, higher education institutions (HEIs) are increasingly seen as important agents in regional development, providing both generative activities like patenting and licensing, creating spin-offs and transferring technology, as well as more developmental activities that upgrade and improve their regional innovation ecosystem (Gunasekara, 2006).

Universities' developmental roles can involve both the direct upgrading of the environment as well as co-operative activities to collectively achieve those improvements, including through the exercise of leadership. To date, there has been little systematic consideration of the ways in which universities exercise place-leadership (Benneworth, Pinheiro & Karlsen, 2017) and it is a natural process to wonder where HEI's can be situated in the leadership puzzle. Within this context, we pick up a discussion initiated recently, in that a better understanding of the role of agency in policy and development processes is needed (Uyarra *et al.*, 2017). In parallel, we note that universities' place leadership roles inevitably reflect the complex institutionality of universities as 'loosely coupled' institutions facing mission overload and struggles of internal leadership. Therefore, in this chapter, we reflect on the way that complex organisations (universities) can exert place leadership, and specifically the relationship between universities' internal organisational structures and their capacity to exert place-leadership. Interested in the ways 'strategic leadership' in universities contributes to innovation and regional development within the wider context of these overall institutional architectures, shaping their achievement potential, we ask: *To what extent does universities' institutional architecture affect their regional leadership roles?*

We address this using a comparative case study that crosses six national and regional settings (Aveiro (PT), Lincolnshire (UK), North Denmark (DK), Satakunta (FI), Vallès Occidental (ES) and Twente (NL)). Our analysis shows that the different leadership roles taken by HEIs are dependent on a diverse set of factors, like regional settings, relationships with regional partners and the internal institutional structure within which universities operate. We use this empirical data to develop a better conceptualisation of university place-leadership and the way internal structures (top-management, administrative machinery, academic tribes, support structures and coupling/co-ordinating institutions) are in interplay with top management. These five elements provide us with a basis to, firstly, sharpen the concept of university place-leadership and problematise that internal complexities and misalignment of actors within the university structure often limit external leadership. On this basis, we argue that a model must be found in which alignment (internal and external) as well as individual agency are combined.

This chapter is structured as follows: the first section develops a model of university elements relevant for regional leadership activities and provides an overview of the literature relating to regional leadership roles

and universities in regional development. The next section outlines the data and research method and provides an overview of the cases. Section 4 describes the empirics of the six universities along the outlined elements defined before. Section 5 discusses the nature of the five different elements and how they interact and support regional leadership. Finally, the chapter closes by highlighting the implications of our analysis for policy and present concluding comments.

2 Understanding practical constraints on university regional leadership

Universities' regional policy roles are commonly discussed as if they were part of higher education's legally mandated responsibilities, which confuses two complementary elements of universities' contributions. Universities' generative contributions occur as a side-effect, through spillovers from university knowledge communities resulting of physical proximity and occurring simply by the HEIs' presence. However, developmental contributions rely on the exercise of leadership by university managers, with no *a priori* reason why universities should choose to do this. After all, universities are not development agencies nor private businesses and, though they receive public funding, there is no reason why they should arbitrarily restrict their societal contributions to an arbitrary region chosen for strategy-making purposes. Concomitantly, universities do benefit from their regions in terms of the ways those regions benefit their knowledge communities. Therefore, the art of leadership by higher education must be understood as a search to construct mutually beneficial sets of knowledge activities that drive regional innovation as well as enrich innovation activities.

2.1 The contemporary innovation policy challenge

In recent years, knowledge has become increasingly recognised as the key to unlock economic growth, productivity and competitiveness. The rise of the knowledge-based economy (cf. OECD, 1996) has made the interactivity inherent in the transmission of knowledge between markets, policy, science and technology an essential driver of innovation dynamics (Edquist, 1997; Krammer, 2017). This is particularly the case when considering the territorial dimension, as collective learning mechanisms are more easily developed in more local and regional levels (Goddard & Chatterton, 1999; Morgan, 1997; Santos & Caseiro, 2015). It is therefore unsurprising that public policies, namely science, technology and innovation policies, have emphasised the role of networks and knowledge-intensive actors – especially HEIs – in stimulating regional competitiveness in what is an increasingly global context (Arbo & Benneworth, 2007; Drucker & Goldstein, 2007; Smith, 2002).

Innovation policy has become ever more important to driving regional economic development, and more place-based approaches reflecting on contextual variances have further emphasised this (Barca *et al.*, 2012). McCann and Ortega-Argilés (2015) argue that innovation is highly influenced by factors such as population density, economic diversity and regional market potential. This implies that peripheral and less-developed regions tend to be disadvantaged, characteristically by low local business demand for innovation, inefficient locally-based R&D activities and a lack of inter-institutional interaction (Huggins & Johnston, 2009; Rodrigues *et al.,* 2001). However, with policy discourse coordinating new knowledge-based, place-based and

collective approaches to regional development innovation policy, which consider not just infrastructural but also institutional and social dimensions in fostering collective learning and territorial competitiveness (Morgan & Nauwelaers, 2003; Santos & Caseiro, 2015), these development gaps may be bridged.

The Smart Specialisation framework emphasises this explicitly, as a tailored policy aimed at decreasing regional disparities by exploiting and promoting innovation's collaborative character. Central to smart specialisation is a partnership-based policy process of entrepreneurial discovery constructing regional advantage (Foray, 2016) based upon a vision in which 'partnerships […] are essential in order to elicit the knowledge regarding the most severe obstacles to growth, the major bottlenecks or missing links, the optimal remedies' (McCann & Ortega-Argilés, 2015, p. 1298). These stakeholder partnerships have been referred to as multi-level partnerships (Morgan & Nauwelaers, 2003), regional innovation coalitions (Benneworth, 2007) and regional innovation networks (Rodrigues & Teles, 2017). While these policies tend to expect stakeholders to work together straightforwardly (as 'happy family stories' (Lagendijk & Oinas, 2005)), recently, the urgent call for a consideration of agency has been voiced (Uyarra et al., 2017).

At the same time, the extent to which regional leadership is emerging in practice and enabling strategic steering of regional development is in question. Leadership, understood as a capacity to unlock collaborative engagement in a 'sustained' and 'purposeful' manner, can be seen as transformative and highly impactful in performance (Bass, 1990; Stough *et al.*, 2001). Regional place-based leadership in particular is necessarily a collective endeavour, delivered as much through the effective roles that key regional actors perform, their influence and significance, as their formal institutional titles (Sotarauta, 2014). This raises the issue of which leadership roles can be played by universities in regional innovation coalitions.

2.2. The complex institutional dynamics of universities

The importance of higher education in supporting economic growth has become increasingly evident across a range of policy frameworks (Roper & Hirth, 2005; Vorley & Nelles, 2009; Zomer & Benneworth, 2011). Universities' regional contributions may come through a variety of interventions, from mobilising collective resources (Bergek *et al.,* 2008) through developing a more robust regional knowledge base (Asheim *et al.*, 2011) to directly constructing regional advantages. Policy places complex expectations on universities to function as flexible, integrated and strategic actors (Uyarra, 2010) but, in reality, responding to regional needs and embedding engagement to the academic core can be somewhat problematic (Benneworth & Sanderson, 2009; Uyarra, 2010) because of universities' internal mechanisms (Chatterton & Goddard, 2000; Foss & Gibson, 2015).

Universities' depict their regional contributions through explicit engagement commitments (Pinheiro, Benneworth, & Jones, 2012), such as strategic mission statements. But this downplays the fact that universities are not biddable organisations (Pinheiro et al., 2012) and external interests are not necessarily aligned with those of their regions (Benneworth *et al.*, 2014a). Universities are complex and 'loosely coupled' (Weick, 1976) organisations, held together by institutional structures. Therefore, engagement with the region – and potential leading roles in regional development – is not a straight-forward process.

Universities' regional orientations are shaped by several factors primarily related to the extent to which the knowledge activities they undertake around teaching and research can involve regional partners. This means universities' regional contributions are dependent on several external factors, such as regional job market, public funding and cultural and historic characteristics of the region (Breznitz & Feldman, 2012; Vorley & Nelles, 2012). Likewise, what universities can achieve in their regions are shaped by their existent portfolio of knowledge activities, and the extent to which internal knowledge actors can involve regional actors in these activities (Benneworth, Young & Normann, 2017). Any serious consideration of university regional contributions – including their capacity to exert leadership in a regional context – reflect these factors, particularly regarding the extent to which their engagement activities are embedded into their internal dynamics (Vorley & Nelles, 2012).

Contemporary regional innovation policy frameworks all too quickly assume rather simplistic 'one-size-fits-all' approaches to universities' engagement (Benneworth *et al.*, 2016; Kitagawa *et al.*, 2016). But universities' engagement cannot be effectively delivered by solely adding new engagement activities to the institutional periphery – only by rooting engagement activities across the organisation within these core knowledge processes (Foss & Gibson, 2015; Gibb & Hannon, 2006; Vorley & Nelles, 2009). To date, there have been few considerations of how universities embed engagement within their internal architectures and the consequences this has on their regional contributions (Salomaa, 2019). Therefore, we turn to consider the ways in which universities play regional leadership roles – enacted through their diverse portfolios of knowledge processes – and how they may become embedded in universities' institutional architectures.

2.3. Universities and regional leadership

Following Benneworth, Pinheiro and Karlsen (2014b), Clark (1998) and Nedeva (2008), we characterise university institutional architecture as comprising five elements, where each of these may or may not support the university's institutional contribution (see Table 1). First, the 'steering core/strategic leadership' is represented by senior management, which is responsible for articulating the university's strategy and policy documents, its mission and vision. The second component is the 'administrative machinery' of the university, which translates the strategic aims from top management and thereby aims to guarantee the quality of engagement, while also considering the diverse 'academics tribes' (Becher & Trowler, 2001) and their different needs and interests. The third component is 'academic tribes', i.e. either individual agents or groups of individuals. Fourth, 'peripheral support structures' are those that do not contribute directly to the core teaching and research activities but give universities capacities in other areas, like student exchange or conference facilities. Finally, the fifth element is 'internal coupling/coordinating mechanisms' that validate and legitimise universities' core activities, e.g. teaching, where committees exist to allow both medical and arts degrees – with their vastly different contact hours and teaching methods – to both be seen as valid teaching and to warrant the award of degree status.

Each of these may find an expression in terms of their regional contribution. However, we will foreground leadership as the primary determinant of university institutional change, given that strategic leadership has

the greatest capacity to exert change. The strategic leader could, thus, decide to focus on and support regional engagement, leading a discourse of engagement and freeing necessary resources. Regional leadership has a dual nature, experienced by local partners but conditioned externally. Universities regional leadership is *dependent* on universities' capacities and institutional architecture as a whole, and therefore we consider how its institutional *architecture*, influences universities' capacities to exert leadership We regard a university's institutional architecture as defined by the way that five elements relate to each other (see table 1). The university may create internal structures that coordinate regional engagement processes/activities internally and seek to ensure that they embody the activities already undertaken by academics. There may or may not be a widespread culture of involvement of regional partners in local knowledge activities in various kinds of formal or informal ways. Peripheral structures might help academics better involve external partners in their core knowledge activities and facilitate various kinds of knowledge spillovers from the university to the region. And finally, internal coupling mechanisms – such as promotion committees – might also shape universities' capacities for regional engagement by legitimising it within the university, or as representing a lower or higher quality of higher education activity. This is summarised below.

Table 1: University Institutional Architecture Elements in Regional Engagement /Leadership. Authors own design after (Benneworth et al., 2014b; Clark, 1998; Nedeva, 2008)

University element	Strategic engagement nexus element	External: deliver the visible benefits	Internal: build the activities into the university core structure
Strategic leadership	Rector+ 'heroes'	The Rector 'platform' improving associative governance.	Rector's position evolves, seen as legitimate that wider management team pushing regional engagement
Administrative machine	The organ overseeing the rules and strategies of engagement	University administration more intertwined and integrated with regional funding and collective activities	Development of strategy and formal routines associated with engagement activities
Academic tribes	Engaged agents in academic tribes	Academics more engaged with external firms and politics fitted to core research/ teaching	More academics doing engagement and willing to undertake the task
Peripheral support structures	Structures for delivering university external engagement	Visible HEI structures (e.g. technology transfer office) active in receiving regional funding	Peripheral structures better embedded into core: projects become central organisations / institutions
Coupling/ co-ordinating institutions	The structure that exerts-asserts the power/ legitimacy of regional engagement	A clear set of policies for regional engagement that demonstrate HEI takes engagement seriously.	Peripheral engagement activities (centres of special funding) develop legitimacy, power & significance

Since the capacities to provide strategic leadership are a function of the university architecture (of which strategic leadership is one element), we here distinguish between the regional leadership contribution to

collective innovation activities, and then the way that leadership is by the other four elements this institutional architecture. Our overall research question is:

To what extent does universities' institutional architecture affect their regional leadership roles?

3 Methodology & Cases

3.1. Methodology

To address this research question, we draw upon Table 1 which provides us with a conceptual framework of the way in which the 'iceberg' of the university affects the capacity of the 'iceberg tip' to exercise formal regional innovation leadership. Although derived from Benneworth *et al.* (2014), this conceptual framework has not yet been validated empirically extensively. We choose an exploratory approach to understand whether universities' institutional architecture does affect the way they visibly play regional leadership roles. We are interested in the ways in which different configurations of university institutional architecture may affect these regional leadership roles. For this purpose, a comparative multiple case-study approach across different national and regional settings was deemed appropriate to facilitate identifying patterns across cases and furthers theory-building. The case studies were selected as corresponding sufficiently to the research needs of: regions where universities have been active in regional development; universities where the region is an important partner for them; and where the universities profess that they strategically choose to exert regional leadership. There is some variation here in the cases, from a small "edge city" on the border of Barcelona's urban space, to a remote Finnish region, along with four other regions going through industrial transition and with substantial rural hinterlands (Aveiro, Twente, North Denmark, Lincolnshire). This mix of variety and similarity along with the intensive case study method chosen provides sufficient depth for interpretation through our conceptual framework to derive detailed place understandings of relationships between *internal institutional architecture* and *external visible leadership roles*.

Data collection took the form of secondary document analysis and primary data by way of in-depth, semi-structured interviews, with a similar approach in each of the regions analysed. Questions focused on the universities' organisational structure and institutional mission, their role in their region and particularly their participation in regional strategy processes. Interviewees included university staff, like top-managers at a central university level, technical and administrative staff and academics, intermediate offices and other regional stakeholders involved in regional coalitions, namely regional government authority staff (policymakers, managers, technicians) and other relevant institutional actors (e.g. businesses, industrial or social associations). The total number of interviews is 186, with the following distribution: 31 in Aveiro, 35 in Lincolnshire, 32 in North Denmark, 34 in Satakunta, 20 in Vallès Occidental and 34 in Twente. Interviews had an average duration of one hour and were recorded and transcribed by the authors.

3.2. Case Studies

3.2.1 Aveiro

Aveiro region is located on the coastal area of the NUTS II Centro region between the cities of Lisbon and Porto. Composed of 11 municipalities associated in 2008 under the Intermunicipal Community of the Region of Aveiro (CIRA), it has a population of around 370.000, mostly concentrated in the city of Aveiro. It is considered less-developed under EU's categorisation, SME-predominant and geographically and sectorally diffused. However, it ranks as the third best performing Portuguese region in relative weight of GDP and exports (Rodrigues & Teles, 2017). With the University of Aveiro's (UA) implantation in the 1970s, the region has moved from a more traditional agricultural sector and stagnant industry towards more knowledge-intensive activities, mainly in the areas of ceramics, forestry, metallurgy, agro-food and ICT.

Since 2007, regional development and part of funding management have been delegated from the Centro's regional authority to intermunicipal communities like CIRA, pending their elaboration of territorial development strategies. Thus, in recent periods (2007-2013; 2014-2020) CIRA has done so through a knowledge-based and collective approach, partnering with UA, the sole HEI in the region. UA has approximately 14.000 students, not only in its main Aveiro campus but also spread throughout the territory in its four polytechnic schools. Since its creation it has developed close regional ties, emphasising an entrepreneurial approach and technical areas of regional industrial relevance such as ceramics, biochemistry, agro-food and ICT. Furthermore, at a discursive and practical level, UA has progressively considered more governance and associative-based forms of engagement, namely with local and regional government.

3.2.2 Lincolnshire

Lincolnshire is a large, rural region in eastern England with around 750.000 inhabitants. Its primary land use is agricultural, being the UK's biggest vegetable producer, and with the local business environment largely dominated by SMEs. Lincolnshire County Council (LCC) is headquartered in the City of Lincoln, one of seven County districts. The most important strategic document driving local innovation and economy is Greater Lincolnshire Local Economic Partnership's (GLLEP) Strategic Economic Plan. It was produced collaboratively involving many local stakeholders, including the University of Lincoln (UoL), which has assisted GLLEP in setting the priorities (e.g. food production and engineering) and in writing the plan (Regeneris Consulting, 2017).

UoL has always had a strong regional mission; the main campus in Lincoln was first established as a branch campus in 1996 after long regional lobbying for local higher education (University of Lincoln, 2010). Since then, it expanded quickly into a multidisciplinary full-range university. Currently, it has 14.000 students and 1.600 staff members across three campuses. The two smaller rural campuses, the Lincoln Institute for Agri-Food Technology (LIAT), in Riseholme, and National Centre for Food Manufacturing, in Holbeach in Southern Lincoln, both serve the local agri-food sector. UoL has actively sought to meet local job market needs, of which a good example is the establishment of an Engineering school together with Siemens to

facilitate access to skilled workers in the region. There are also several collaborative incentives to both strengthen graduate entrepreneurship and to attract larger businesses to the region.

3.2.3 North Denmark

The region of North Denmark has around 600.000 inhabitants spread over 11 municipalities, with a strong divide between urbanised city centres and agricultural, rural hinterland. In terms of its industrial profile, the region has undergone significant structural changes since the 1990s. While being dependent on traditional labour-intensive manufacturing and primary industries in the past, today it can rely on growth-oriented knowledge industries (competence clusters in industries such as IT, communication, nanotechnology). Regional development was, until 2019, the task of the regional council and the Growth Forum (GF), the later consisting of representatives from the business sector, education and knowledge institutes and public authorities (North Denmark Region, 2014). Together these representatives advise the region on their multi-year regional growth and development strategy (REVUS), as well as the distribution of funds. While the former REVUSs were described as very broad, current strategies (especially 2014-2018 and the one designed for 2019) were said to be more focused, highlighting regional assets.

Aalborg University's (AAU) rector is a representative of knowledge and education institutions in the GF, alongside the director of the Center for Education and Business (EUC Nordvest) and the University of Applied Sciences' (UCN) rector. AAU, founded in 1974 and with some 21.000 students, played an important role in stimulating the transition to new growth areas, emphasising education and research in technical and engineering fields. While AAUs is currently shifting towards a stronger focus on global excellence and internationalisation, the long-standing problem-based learning (PBL) approaches uses joint projects that strongly connects the university to the region.

3.2.4 Satakunta

The Satakunta region consists of 17 municipalities with a population of 220.398 (OFS, 2017) and two major regional centres, cities of Pori and Rauma. The economy relies on energy production, engineering, offshore process industry, ports and logistics and food, with automation, robotics and maritime performing well. However, annual R&D expenditure underperforms the national average, with clear GDP differences between urban centres and more remote municipalities (Regional Council of Satakunta; Satamittari, 2018). The Regional Council of Satakunta (RCS) has designed the Regional Strategic Plan (RSP), and RSP priorities (e.g. bio-economy, ICT and maritime environment) form the RIS3 strategy's basis. The RSP priorities include increasing local access to higher education. The University Consortium of Pori (UC-Pori), a higher education network located in Satakunta, plays an important role in achieving that goal.

The Finnish university consortia was created to enhance HEIs' societal role and respond to local needs (FINHEEC, 2013). UC-Pori is coordinated by the former Tampere University of Technology (TUT)[1], providing engineering degrees within the region since 1989, along with the University of Tampere (UTA),

[1] Tampere University of Technology and University of Tampere merged on the 1st of January 2019. This new Tampere University and Tampere University of Applied Sciences constitute the Tampere Higher education community.

University of Turku (UTU) and Aalto University (Aalto). Today, UC-Pori has 170 employees and 2.500 students, primarily in arts/culture (Aalto), technology/engineering (TUT), social sciences (UTA) and economics/maritime studies (UTU) (UCPori).

3.2.5 Twente

Twente Region is situated within Overijssel Province in the Eastern Netherlands and has 650.000 residents in 14 municipalities. Having suffered industrial decline since the mid-20th century, Twente has actively sought to reindustrialise, and today, manufacturing, trade and healthcare are the main economic sectors. Several strategic bodies merged to create the 'Twente Board' in 2012 intending to drive Twente's economic development. Currently, the Twente Board (TB) is actively involved in developing the Agenda for Twente (2018-2022), a regional development strategy initiated by the municipalities. The TB involves representatives from various societal partners including two knowledge institutes: Saxion University of Applied Sciences and the University of Twente (UT). UT opened in 1964, offering degrees in mathematics, applied physics, mechanical, electronic and chemical engineering with the aim to be closely connected to the region's industrial base. Today, the university has a more diversified research and educational profile, including social sciences, and has over 10.000 students. UT has been described as being successful in repeatedly reinventing itself, and for having become a source of regional growth and innovation as a consequence of its historic collaboration with diverse stakeholders, such as policymakers and companies (Benneworth & Pinheiro, 2017). One of such areas of reinvention was entrepreneurship and innovation, cementing it as a centre of regional innovation and knowledge networks (Stam *et al.*, 2016) with a range of start-up initiatives.

3.2.6 Vallès Occidental

Vallès Occidental is a county located in Catalonia, the most highly industrialised and highest GDP region in Spain. It comprises 23 municipalities with approximately 900.000 people, and its main centres are Sabadell and Terrassa, the dual county capitals which overshadow the other municipalities both economically and demographically. While a predominantly textile-based region since the 19th century, today it is more diversified, with other relevant sectors including metallurgy, mechanical engineering, biochemistry, agro-food, tourism, services, IT and industry 4.0. The County Council of Vallès Occidental (CCVO) provides policy and service coordination between municipalities, including cooperation for regional development, although the regional authority of Catalonia (Generalitat) retains most public policy and innovation competencies, including RIS3 and structural fund allocation. The County has promoted collective innovation support both autonomously and through RIS3-funded instruments; in these both its universities (Autonomous University of Barcelona – UAB – and the Polytechnic University of Catalonia - UPC) have played a leading role alongside other technical schools.

UAB is by far the largest and most multidisciplinary HEI in Vallès Occidental. Established in 1968, and with around 37.000 students today, it has strengthened its campus' integration with the region as an innovation support resource. UAB focuses upon the fields of social sciences and humanities, economics, bioscience, medicine and engineering, and emphasises entrepreneurship and societal engagement along with international excellence.

4 University institutional architecture elements in regionally engaged HEIs

4.1. Strategic Leadership

Out of the six cases, four prioritised regional engagement in their mission statements, often with this orientation being enacted at top-management levels. Nevertheless, a lack of appropriate organisational mechanisms to anchor it in the wider academic community and effectively promote engagement was sometimes evident. Several cases presented a 'strategic mismatch', in which strategic declarations of university strategic leadership did not correspond with what takes place in practice. In the Pori case, academics and staff choose to autonomously (and perhaps opportunistically) collaborate with the region, despite the absence of any strong strategic push to do so from the universities (Salomaa & Charles, 2019). In both Barcelona and Aalborg, there is a strategic emphasis on regional engagement, but with a simultaneous emphasis on internationalisation, with interviewees reporting experienced tensions between these two goals. In Lincoln, there is a strong strategic goal to engage with the region, but only the vice-chancellor is providing leadership, whereas managers and academics mainly focus on more traditional missions, i.e. teaching. In Pori, Twente and Aalborg, the primary drivers for engagement were academic and student activities (such as Aalborg's problem-based learning projects), which were promoted by institutional leaders, but not particularly effectively, being limited in their reach.

There were four regions where the universities were institutionally involved in associated platforms that sought to develop collective regional strategies for innovation, namely Aveiro, Aalborg, Twente and Barcelona. In these four regions, the universities were perceived as necessary and legitimate partners for these platforms and the strategies they developed. This was due to their access to substantial volumes of knowledge and other needed resources for the eventual successful implementation of those projects and, ultimately, the construction of innovative regional advantage. The universities enjoyed an influential position in the development of regional rhetoric, most evident in the case of Twente, where the region adopted a strategic position in 2014 that foregrounded 'technology' as the single pillar for regional development, echoing UT's desire to profile itself around its then slogan 'high tech, human touch'. In Aalborg, AAU's increased emphasis on internationalisation was undermining its capability to contribute to regional strategy processes, leading to some frustration in the regional partnership. In Lincoln, UoL was heavily dependent on the vice-chancellor as the single external representative, and although this brought visibility for the university, it places practical limits on what that engagement can achieve. In some cases, there have been efforts to create additional senior management positions to support engagement, notably Lincoln and Aveiro, although there were difficulties in ensuring that their external engagement remained coupled to institutional activity.

4.2. Administrative machinery

A range of different 'administrative machineries' to support engagement exists across the cases' universities, varying from top-level activities focusing on specific regional priority sectors (Aveiro, Barcelona), to more

practical models indirectly guiding institutional engagement (Aalborg's PBL approach, Lincoln's European Structural Funds projects). All six universities have collaborative activities, regional networks (Aveiro, Pori, Lincoln) and/or made efforts to win external funding for engagement activities (Barcelona). Some universities have specific administrative departments to oversee these tasks (e.g. Twente's department of Strategy and Policy, Lincoln's Research and Enterprise Team, Aveiro's Technology Transfer office, UATEC). Pori lacks a formal administrative machinery, even though the region remains important for the University Consortium there. In the absence of these institutional mechanisms to support engagement, these activities are not built on strategic/formalised routines, but more on individual academic's efforts to engage with the region. Even if the university has not formulated evident institutional strategies to encourage regional engagement, the region can still be regarded as an important partner for the university (e.g. Twente, Pori, Aalborg). In some cases, the regional funds – such as ERDF – are the key resource for delivering regional engagement activities (Lincoln, Aveiro, Pori)

One tension in all the cases was the fact that these regional funds were not regarded as relevant for universities and, in practice, they were often managed in ways that held them at a degree of distance from the core institutional setting (e.g. in Twente, Pori & Barcelona). It was not just the position of the administrative machinery that was affected by this institutional attitude to the regional funding. In most cases, regional engagement was perceived as unimportant to career development, resulting in little natural impetus within the institution to align those core activities to external engagement activities. Some universities have tried to overcome this dilemma by prioritising collaborative, large-scale initiatives that match academics and businesses to work together on regional priority sectors. Aveiro funded technical platforms in regional strategic priority areas, and Lincoln used ERDF funds to stimulate university-business interaction around innovation. Aalborg was relatively exceptional in that regard since staff members' external connections generated suitable regional projects that allowed their PBL teaching approach to function successfully.

4.3. Academic tribes

There were different kinds of dominant academic identities between the various case study institutions. In Lincoln and Barcelona, there were relatively traditional academic values in which the emphasis lay on delivering teaching and research. In other cases, academic identities were more focused towards engagement (e.g. Twente, Aalborg and Aveiro), where dense connections to particular regional partners and users can be detected at the individual and departmental level. Finally, in Pori, there was much less emphasis on regional engagement at the institutional level, even where there were many academics who prioritised it as being important to their core business activities. They drew primarily on personal needs and interests rather than institutional strategies, although this undermined the capacity the university had to steer those activities institutionally. This is not to downplay the capacity that individual academics can make to regional priorities and innovation capacity; UT had a number of partnership centres that had come to Twente to work with those individuals, and likewise, there were examples of individuals leaving for better employment taking their whole research group (and in one case associated spin-off partner companies with them). Some of the

universities introduced structures to empower engaged academics; Barcelona created Hub B30 and the CORE as bodies to assist these bottom-up engaged academics, whilst Lincoln created innovation voucher schemes as part of their ERDF activities to provide a direct mechanism to reward academic-innovator engagement.

Not all academics sought to be engaged or were successful in engaging through their individual networks. In Aveiro, academics were undermined by a general lack of resources which made a deviation from formally mandated activities extremely difficult to arrange. In Lincoln, the general lack of alignment between engagement and core teaching and research activities also disincentivised engagement. Pori failed to develop a persuasive narrative of its innovation activities, particularly relating to the absence of institutional or national performance indicators for engagement, in turn reducing the institutional steering of academics to engage. In all cases, academics' motivation for regional engagement was heavily dependent on their own preferences and motivations, and at least partly reflected the extent to which regional engagement was supportive of other core knowledge activities.

4.4. Peripheral support structures

A range of support structures was used to promote regional engagement, mostly focused around science parks and technology transfer activities. There was a split within the universities between those that tried to centralise these structures – such as Aalborg where AAU Innovation was supposed to be transformed into a single point of contact – and those that placed support activities within the academic units – as was the case for Aveiro. A key issue with these structures is that most of them did not have an explicitly regional mandate, but rather were responsible for generally promoting entrepreneurship and innovation. Although science parks represented specifically regional development assets, technology transfer and valorisation offices were primarily concerned with technology commercialisation. They did become involved in delivering specific projects related to regional engagement, often funded by European funds, and this had the result of further fragmenting and peripheralising regional engagement within the already institutionally peripheral commercialisation structures.

Five of the regions had science parks, namely Barcelona's Research Park (PRUAB), NOVI science park in Aalborg, Lincolnshire Innovation and Science Park, Kennispark Twente and Aveiro's Creative Science Park, providing both physical spaces but also support structures to promote regional innovation and entrepreneurship. Those parks were typically located at or near the universities, and often included shared space, such as incubators or laboratories, for shared use. Finally, no formal support structures to deliver engagement activities were identified in Pori, where key financial tools (and, critically, access to the European Structural funds), were the sole 'structure' enabling external engagement, depending heavily on individual researchers' motivations and interests. Similarly, Lincoln established many engagement mechanisms, which were primarily opportunistic responses to funding opportunities and were not managed to build and facilitate systematic interaction between regional stakeholders and academics.

4.5. Coupling/ co-ordinating institutions

In most cases there were no, or extremely limited, formal structures in place to link engagement to core university teaching and research activities. Individual academics were often in charge of this coupling, in turn making them responsible for identifying and applying for appropriate funding from different sources. Aveiro attempted to create an academic career evaluation system that included regional engagement, but its inefficiency ultimately discouraged and demotivated academics to report their engagement efforts. Barcelona recently formally announced the intention to factor engagement activities in academic career evaluation, but these have not yet achieved any kind of purchase within local academic communities. Although Twente made a high-level institutional claim towards supporting regional engagement, institutional incentives and internal financial mechanisms primarily reward large numbers of students and research council funding, with regional engagement only seen as legitimate when aligning with those activities.

The one region that did have formal structures was Aalborg, where even the PBL mechanism was under pressure to become internationally excellent. There was a sense that, whilst in the past regional engagement had been important to the university's academic identity, more recent changes undermined the realisation of the existential importance of that regional engagement. The region was seen as a provider of projects for the PBL approach, rather than as a partner and beneficiary of those activities. In some cases, there were examples of management to create new kinds of internal regulatory structures that rewarded engagement, primarily the industrial PhD's offered at UAB and UT.

5 Discussion

We are concerned in this chapter with the ways in which elements of universities' structure affect the formal capacity of their 'leadership' (as understood in Clark's (1998) terms) to constructively contribute to regional processes. When there was an effective alignment between the regional capacities within the university structures, and the managerial leadership intentions, then this provided legitimacy for those managers in regional leadership coalitions. Conversely, when there was a dissonance between these capacities and intentions, this undermined the capacities for managers to exert leadership in these coalitions. Constructing that legitimacy depended on there being good faith in terms of the claims made by university managers, that related to their core knowledge processes being regionally embedded. When engagement was approached more instrumentally or opportunistically by university managers, then those managers' legitimacies in the coalitions was undermined by the evident mismatch between manager claims and university regional knowledge spillovers.

In terms of the supportive factors, first, administrative machinery supported regional engagement and leadership by institutionalising senior manager intentions in various ways throughout the university. Namely in specific offices to support researchers, students and leadership in their engagement activities, as well as to try to make regional engagement viable as part of a successful academic career. This became important in terms of the presence of architectural elements that support management legitimacy in regional

innovation coalitions, when existing regional activities aligned with managers' strategic intentions. Academics' networks with regional partners were important in legitimising university managers in regional innovation coalitions, and this support was strongest when the benefits that these networks were bringing to the region were congruent with the visions managers projected to their regional partners. Related to that, support structures played a role in helping to generalise regional engagement and upscale individuals' bilateral linkages to create regional networks, which formed the basis for managers' legitimacy claims. When this did not occur, there were the risks that key individuals' departures also saw those networks removed from the regional mix. Finally, academic activities including regional engagement in teaching and research activities also contributed to the potential to exert manager legitimacy.

The six cases also highlighted ways in which university institutional architecture can constrain the exercise of regional university leadership, most notably when there was a mismatch rather than alignment between the activities of these regional knowledge communities and strategic intentions. Some institutions had university managers who were keen to exert a strong regional leadership role, but absent strong regional knowledge communities experienced difficulties in meaningfully shaping internal and external change. There was a lack of engaged academics in several universities, and managerial intentions alone were not enough to compensate for a lack of value to the academics in putting effort into regional engagement activities. The issue was not one of academic resistance or recalcitrance to managers, but rather a simple calculus that effective knowledge activities (teaching and research) could be created without the unnecessary effort of involving regional partners. Conversely, despite the presence of strong regional networks in some institutions, there were university managers who sought to remove themselves from regional innovation coalitions because they deemed other priorities more important. One factor that sometimes surprisingly undermined alignment and legitimacy was the presence of regional funding, because it stimulated its pursuit rather than the development of sustainable knowledge activities well aligned with the academic core.

Our analysis suggests that universities' ability to exert regional leadership requires more than the generation of spillover effects by the mere presence of the university. It requires a purposeful exercise of transformative initiatives and construction of enriching regional knowledge activities; whilst historical pathways and regional contexts do influence what can be achieved, universities can themselves influence the situation through their activities. What our analysis highlights is the importance of bottom-up leadership, constructing situations where there are meaningful knowledge spillovers through the involvement of regional partners in university knowledge communities around teaching and research. In turn, this allows university managers to mobilise a legitimacy for their activities within regional innovation coalitions and participate in collective processes that seek to improve the overall regional innovation environment. The key variable here is the alignment of the top-down management with the bottom-up engagement. Good alignment builds legitimacy that allows the exercise of leadership, whilst a lack of alignment undermines that exercise. A 'strategic mismatch' was evident in several of the cases, with managerial intention decoupled from academic community's practice; where knowledge communities were not regionally engaged then strategic leadership repertoires were not enough to stimulate these bottom-up engagement activities.

6 Conclusion

In this chapter we have sought to address the overall research question of: *To what extent does universities' institutional architecture affect their regional leadership roles?* The model sketched out above provides some insights which allow us to answer this question, and in turn reflect on the consequences for research and practice. We here highlight two elements that appear most important in determining managers' capacity to exert leadership, namely *alignment* and *agency* (Figure 1). Alignment involves university managers engaging with regional innovation coalitions in ways in which their legitimacy is reinforced by their existing internal activities. But this alignment depends on those activities which are constructed by academic agents at the grassroots' level, involving regional partners in their knowledge activities and thereby creating knowledge spillovers and crossovers that deliver regional benefits.

The exercise of that academic agency is clearly influenced in profound ways by university institutional architecture, whether through the existence of formal support structures, or policies and incentives rewarding or mandating (as in the Aalborg case) regional engagement. But those architectural elements play a supporting role enabling academic agency, and that mechanism seems to be out of step regarding the institutional architecture as a means for institutional managers to impose their will upon those academic agents. Instead, alignment supports engagement through academic agents, and channels it to allow university managers to best play a wider (informal) regional leadership role.

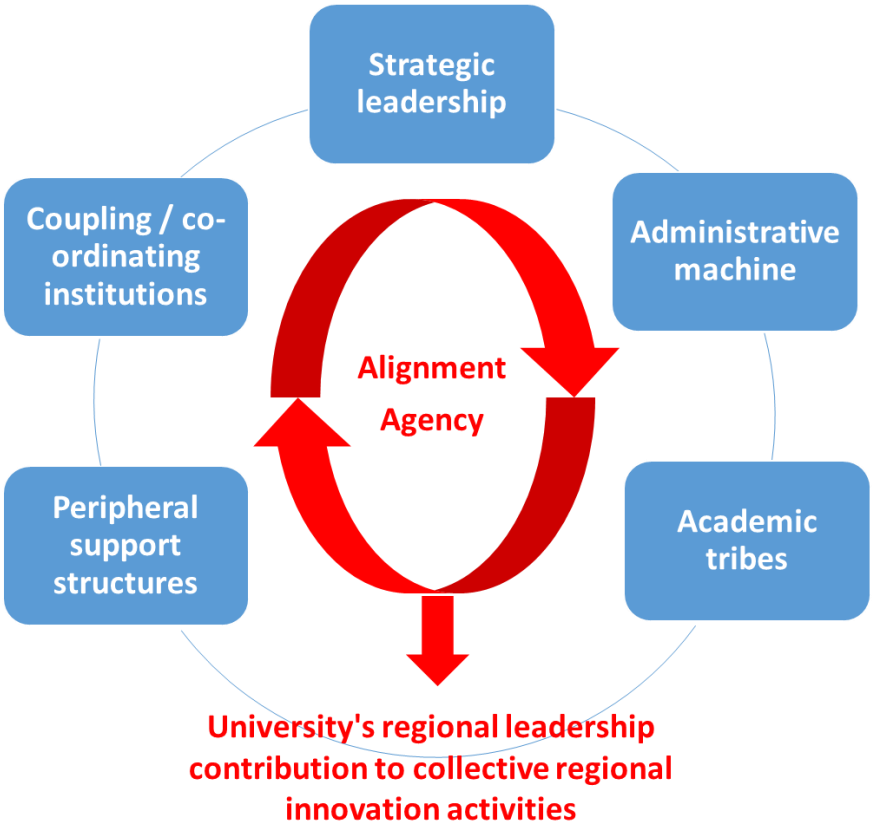

Figure 1. Alignment and agency as emerging elements.
Source: Authors' own elaboration

Many agents, institutions as well as networks/coalitions of stakeholders have the potential to take on regional leadership roles (Ayres, 2014; Sotarauta, 2010; Stimson *et al.*, 2009). Nevertheless, universities have only recently shifted into focus in place-based leadership studies (Benneworth *et al.*, 2017; Raagmaa & Keerberg, 2017). This study thus contributes to both literature strands, linking the debates within the regional development, place-based leadership and higher education management literature by considering how universities' exertion of strategic leadership is influenced by its internal dynamics and assets, thus shaping its regional contribution. Understanding how this particular institution – the university – can contribute to regional development in different contexts and due to different internal preconditions as well as settings thus becomes vital not only for academia, but also policy. While each university of our individual case studies showed a distinctive approach and setting for place leadership, we were able to draw some wider conclusions, considering their similarities and differences.

It is widely acknowledged that universities are complex organisations, and we see our model as reflecting that complexity, with agency and alignment allowing university managers to play these informal leadership roles. There are many factors that undermine dealing with that complexity, particularly from external regulation of higher education that demands simplistic, 'one-size-fits-all' approaches to inherently complex situations. This implies that one key area for university leaders in that regard might be protecting their academic agents from the worst of those pressures to ensure they are able to exert that regional agency, encouraging the use of national languages in education and research, recognising applied research, allowing

local guest lectures, etc. It is in this area that university managers have the opportunity to exert direct leadership, to use elements of institutional architecture to protect their academic agents and allow them to engage in their knowledge activities. In turn, that will support the exercise of this bottom-up agency by academics, generating legitimacy for university managers, and thereby enhancing the strategic regional leadership role they can play and optimising their university's contributions to innovation-led regional development.

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