

Nuancing the Roles of Entrepreneurial Universities in Regional Economic Development

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Abstract

This paper explores the idea of the entrepreneurial university and how it differs in diverse regional and institutional settings. From the analysis of university engagement in a regional economic development programme in fifteen city-regions in England (UK), this study identifies three roles that entrepreneurial universities play in regional economic development as growth supporter, steerer, and driver. The roles vary depending on regional characteristics, the university's motivation and its capability to engage in third mission activities and the constellation of active stakeholders working towards regional development. In addition to advancing the concept of entrepreneurial universities, this paper explores the contemporary policy trend towards placing a stronger emphasis on universities as drivers of regional economic development.

Keywords: entrepreneurial university, regional development, stakeholder engagement, third mission.

Introduction

A fundamental question is, what drives regional economic growth, and what role do universities play? In addressing this question, many economic, industrial, and technology policy discussions have focused on the knowledge-driven economy and the exploitation of scientific and technological research in universities (Etzkowitz and Klofsten, 2005; Guerrero et al., 2014; Klofsten et al., 2019). Although governments at many levels consider universities as having a significant role to play in regional development, policies have often been implemented on the assumption that 'one size fits all'. Consequently, such policies tend to be based on the best practice idea of an entrepreneurial university, usually modelled on world-famous exceptional institutions, without considering the differences in regional capacity and its ability or inability to exploit economic growth. Indeed, the extant literature says surprisingly little about the role of the entrepreneurial university in enhancing regional growth beyond technology transfer and knowledge commercialisation.

Moreover, it has been seen that not all regions benefit equally from universities' entrepreneurial activities (Huggins & Johnstone, 2009; Pugh, 2017). While some regions might be able to grow due to strong university-industry networks, others may be subject to negative effects from a lack of interaction or may face economic restructuring challenges following post-industrial decline (Addie et al., 2018). There is evidence that less competitive regions are more dependent on their universities for employment and innovation, but these universities generate less wealth than their more competitive regional counterparts (Huggins and Johnston, 2009; Rossi and Goglio, 2018). Consequently, these regions can be disproportionately dependent on universities that are typically less productive economically. So, it is imperative that we fully understand the extent of universities' capacity and commitment in supporting regional growth and how it is shaped by their regional characteristics.

This paper explores the theoretical and policy implications of the emerging concept of the entrepreneurial university and its role in regional growth programmes while addressing the following interrelated questions: what roles are universities taking, what duties are they being asked to perform in relation to regional characteristics and stakeholders? This question is derived from the increasing pressure on universities to deliver public value and an expectation that universities need to provide the leadership roles to drive local growth programme (Audretsch, 2014; Ferrante et al., 2018). This study therefore enhances understanding about what forms these activities might take, and what potential roles there are for universities to make a positive impact on their region.

Entrepreneurial university: From knowledge factory to catalyst for growth

Arguably instrumental in this proliferation of university-centred policy for regional economic and innovation growth is the concept of the entrepreneurial university (Audretsch, 2014). The entrepreneurial university has focused on a certain type of university setting in which universities expand their roles and become more entrepreneurial to generate knowledge-based economic growth (Rossi and Goglio, 2018). Guerrero et al. (2016) define an entrepreneurial university as one that undertakes entrepreneurial activities with the objective of improving regional or national economic performance as well as the university's own financial advantage and that of its faculty. The concept helps to explain the interaction between academia and the institutional spheres of industry. It covers the contribution of the university to the innovation capability in the region in a variety of ways including the production of skilled human capital, the transfer of technology from academia to industry, and the creation of spin-out companies (Rossi and Rosli, 2015; Sharifi et al., 2014).

However, as the concept of entrepreneurial university progresses, universities are encouraged to expand their roles from common entrepreneurial activities such as contract

research, patenting and licensing and the formation of spin-offs to supporting the entrepreneurial climate in the region (Harrison and Leitch, 2010), and acting as a regional animateur (Pugh et al., 2017) through coordination and collaboration with other key stakeholders in the region (Sutphen et al., 2018). These new roles have challenged the concept of entrepreneurial universities. Across the world, attempts have been to replicate what is perceived to be the best practice and success of entrepreneurial universities. Many examples are found and developed in economically strong regions, such as Silicon Valley or the Cambridge region of the UK. While there is a problem of using a ‘copy and paste’ approach to try and replicate the success of these regions, the issue of diverse and divergent regional contexts comes to the fore (Cooke, 2004; Hospers, 2006). The lack of a conceptual model for less economically successful regions has resulted in many policies being replicated in diverse and divergent regional contexts. While these criticisms have been levelled at the broader body of regional policy (Tödting and Trippel, 2005), they are still lacking in the context of entrepreneurial universities. As a result, there is a need for further research examining the role of entrepreneurial universities in more diverse regional settings.

Research approach

There are a number of impediments for regional growth programmes such as resource deficit, restricted absorptive capacities of the firms as well as considerable lack of commitment from other key stakeholders in the region. Such problems, however, can be considerably reduced if a university gets involved in the development of local/regional economic growth initiatives. However, there is no guidance on how entrepreneurial universities should be involved in supporting or leading a regional growth programme. In some regions, other stakeholders such as government organisations or business community are proactively involved in delivering regional growth programme while in other regions, they may not even exist. In

addition, the characteristics of universities varies considerably. As a result, this study argues that the roles played by the universities will be determined by the interaction between university and their regional context such as the presence of active stakeholders and current economic potential. Figure 1 shows the hypothesis framework of this study.

[Figure 1 near here]

Given our interests were to understand more about the role and importance of entrepreneurial universities as actors in regional economic development, we purposefully chose a qualitative approach and combined different sources of data collection which allowed us to build an informed case study (Pratt, 2009). We used the Wave 2 Growth Hub (W2GH) programme as our case study, which has been found an effective approach for filling gaps in the existing body of research, such that we highlight above about our lack of knowledge about the roles of entrepreneurial universities in diverse regional settings (Yin, 1994). In the case reported here, sources include documents, questionnaires, interviews and observations (participatory and non-participatory). For the data analysis we followed a broadly inductive method, influenced by our research questions and interests and our reading of the data and in line with standardised approaches we found published in management studies (e.g: Halinen and Törnroos, 2005).

The context of the study: Wave 2 Growth Hubs programme (W2GH)

The Growth Hubs were created in partnership with local councils, LEPs (Local Enterprise Partnerships), universities, alongside BIS (Department of Business, Innovation and Skills), the Cabinet Office and the Department for Communities and Local Government. In 2016, the UK government announced that the planned Growth Hub network was complete, with

39 Growth Hubs operating across England supporting 4.7m businesses. In the 2017 Industrial Strategy, the government announced its intention to ensure all businesses in every region would continue to have access to a Growth Hub. By 2019, the W2GH Programme was confirmed as the model for building locally embedded business support in every region of England.

The W2GH included 17 LEPS, 42 universities and over 200 local and national business representatives including local Chambers of Commerce, the Federation of Small Business and national agencies such as UK Trade and Investment, Intellectual Property Office and Innovate UK. The 15 Growth Hubs were designed flexibly to be able to structure and operate their partnerships to meet the needs of their locality, their priorities, and existing linkages. Their unique constellations however show some commonalities. 12 Growth Hubs have the local authority as the accountable partner, and several others are managed by a consortium of local actors, and 9 have LEPS managing the Growth Hubs. The managing and accountable bodies in the Growth Hubs can be different organisations or consortia.

Figure 2a shows the location of the Growth Hubs while figure 2b shows the overlapping map of the Growth Hubs with higher education provision in the region and surrounding region. As it is illustrated from the figure, a number of Growth Hubs were located in diverse regions with some of them having less proximity to main universities due to the uneven spread of higher education provision across England. Especially, weaker economic regions, i.e., those most in need of policy support for regional economic development, are lacking higher education provision, in a situation akin to the weaker region paradox.

[Figure 2 near here]

There are three notable points about this programme, and the involvement of universities therein, that have made it an excellent candidate for unpacking further the varied

regional development roles of entrepreneurial universities. First, is the geographical scale of the programme, and the fact that 12 Growth Hubs involve universities formally in their structure and delivery of local business support. Second, the financial scale of the programme (32 million GBP fronted by central government) is significant. Thirdly, the programme is the first of its kind to be centrally delivered by a university, contracted directly by central government, and this illustrates a unique and highly innovative role that the institution is playing, also affording excellent levels of access for data collection.

Findings

An expanding role of entrepreneurial universities

What we found was not one model of the entrepreneurial university at play, but three distinct variations on it (table 1), stemming from the common modes of entrepreneurial engagement that we found across the 12 Growth Hubs. The evidence showed that entrepreneurial universities are not homogeneous but varies in their nature in supporting regional growth.

[Table 1 near here]

As a growth supporter, universities are often expected to play a traditional function as knowledge producers and sharers. This role stems from the traditional concept of the university as an engine for economic development, pushing out knowledge and innovations, in these cases in the form of offering support and advice as well as targeted innovation supports. The Growth Hubs show that the role of universities as a supporter for growth can be expanded beyond knowledge production and commercialization activities (such as IP and spin-out which dominate the EU literature on the third mission) to working directly to support local businesses.

Support such as business coaching, networking events, funding for growth, and access to the university's resources and knowledge are commonly provided by the universities. However, beyond delivering activities to the local business community, universities in this category play relatively passive roles in terms of managing the Growth Hubs, or what we can term in a theoretical sense 'governance activities' (Pugh et al. 2016, 2017). As universities are becoming more familiar with the role of serving a regional business sphere comprised particularly of SMEs (Chatterton & Goddard, 2000), their new role in knowledge-related regional university–industry networks coincide with a policy trend towards increased localization of innovation and knowledge exploitation activities in countries such as the UK.

In the next role, universities are steerers of regional development. Entrepreneurial universities' role here has moved from their traditional role of knowledge commercialization to a rather complex role of creating and organising regional growth. This role implies a greater commitment to the region and is dependent on the alignment between regional needs and the universities' resources and capabilities. This is more in line with the theoretical concepts of anchor institutions and civic universities (Goddard et al., 2014). In embedding regional needs into their third mission, universities need to overcome their dominant logic of focusing heavily on teaching and research by high level governance and incentives at various levels of universities (Sutphen et al., 2018). In acting as a growth steerer, universities are regarded as organizations that are nested within wider networks to contribute to regional growth. We found this to be the case in Growth Hubs where the networks between universities and other stakeholders were quite well established, and there was a high participation of different stakeholders, or 'buy in' to the Growth Hubs. In these cases, there could be a number of different engaged organizations that are running the Growth Hubs – such as local authorities, LEAs, chamber of commerce, or a private organization – and universities step into a strong steering role, for instance sitting on the steering group of the Growth Hubs or being one of the

core partners. Universities in this category were usually also playing other roles such as in delivering different activities for the Growth Hubs, but they had a more central involvement in decision making and agenda setting. In these cases, there were usually one or two key individuals at the university (often based in the third mission offices) who were working closely with the other Growth Hub's actors, meeting regularly, and sitting on the steering groups.

The final role played by universities was a growth driver. In this role, universities are expected to coordinate and manage growth in which the key aspect here is the capacity to respond to regional needs (Benneworth & Hospers, 2007). This is the strongest example of universities contributing to regional development efforts. In many cases, universities also serve other roles such as a supporter while simultaneously performing coordination activities. Here we also argue that both roles of universities do not necessarily substitute one another, nor are they successive. These roles can be layered on top of one another in a complex picture, or they can be performed in isolation as we see a mixture of this in the cases we studied. As a growth driver, universities were the responsible Growth Hub co-ordinator, creating and managing the support being delivered both by themselves and other local actors, and also steering the Growth Hubs and acting as the responsible reporting and monitoring actor. These were the universities that we, as central project delivery, had the most regular contact with the because they were undertaking the day to day running of the Growth Hubs and taking part in all of the national events.

University and regional characteristics and their influence on the roles of entrepreneurial universities in the region

Our analysis of the Growth Hubs shows universities can act entrepreneurially in support of regional economic growth in different ways, however our observations also suggest that one size does not fit all and hinders our understanding of universities' involvement in local

economic development. Each configuration is dependent on the underlying factors such as the context of the region and the institution. Universities may play different roles at different levels while the roles may also vary and change over time, and we see the possibility of universities shifting between our three identified characteristics here as well as a 'layering' of roles. This finding challenges the current trend in policy practice that assumes that key actors (including universities) and the roles they play are relatively homogeneous and stable over time. While we found across the Growth Hubs common roles and attributes, each case was different depending on the organisations and institutions in the region, their history of working together (or not as the case may be) to deliver local growth, the resources available in the region, and more. This leads us to question the tenancy of programmes or policies modelled on a simplistic or singular understanding of what an entrepreneurial university is, and what role in its region it might play; space is needed in the framework for varying local, historical and institutional contexts. We find that both academic theory and policy practice have been previously too strongly based on an ideal type of entrepreneurial university and not enough has been done to investigate local varieties of universities' roles and try and build this flexibility into the theory.

The reasons for these different entrepreneurial university roles played are indicated throughout the paper, but the individual institutional circumstances are also important. Some universities found that their role was limited to business support, simply because time and resource limitations could not be mobilized in time to align with the Growth Hubs project, which had very short timelines politically aligned to an impending national election. In other cases, the universities play an active role as they possess the capability and motivation to commit strongly to the programme, and it somehow fits their orientation and ongoing agenda. Often, the presence of other stakeholders plays an important part in delivering the programme.

To summarise, when there is a strong level of regional capability and an active participation from other regional stakeholders, universities' roles are more limited. Their

participation in the programmes spans from providing business support to designing and managing several different activities. In several Growth Hubs, the university helped to initiate the programme by providing space for initial meetings, helping to form the consortium and sometimes they were involved as a member of the steering committee. However, other stakeholders such as private organizations, the City Council or Chamber of Commerce led and managed the programme. In the context where the level of regional capability and stakeholders' involvement were relatively low, universities often played a more significant role as initiator and coordinator while at the same time also providing a supporting role. Playing them simultaneously, may create a burden to universities and runs the potential risk of unrealistic expectations about the capability of universities to expand their traditional core mission. Of course, work of this kind requires a significant amount of time and financial resources, which would then need allocating in staffs' workload and budgets. Importantly it requires senior leadership in the university to see the value in that mission and be prepared to support staff who engage. Figure 3 shows the relationship between university's roles in regional growth and other conditional factors.

[Figure 3 near here]

Conclusions

There are important implications that these findings elicit. The main one is that we should not push for a common structure in every place, and a common role for entrepreneurial universities to take; they are all too varied. In the context of a regional growth programme, different configurations and approaches have been found to work, but these differ from place to place. Trying to impose a single best-practice approach is unhelpful because it will disregard this variation and potentially lead to less effective local solutions that are not context specific.

By allowing the expansion of entrepreneurial universities' roles in supporting regional growth, the programme has proved to be successful. To strengthen the impact, the government announced its intention to ensure all businesses in every region would continue to have access to the funding and use the W2GH Programme as a model for building locally embedded business support in every region of England.

When we turn to our research theme of diverse regional settings, we can see that this flexibility of roles and activities is necessary to account for the different regional settings that entrepreneurial universities are operating in. Each of the Growth Hubs has its own characteristics with varying support packages tailored to their local industries and markets. The Growth Hubs in the Black Country and Coventry and Warwickshire have a strong focus on supporting the Midlands' manufacturing sector, while the Growth Hubs covering Oxford and Central Oxfordshire has a tailored package to support the strong scientific base of that region, focused on innovation. Because each region's history, institutions, and industrial structure are very different, the ways that universities are engaging in and supporting local development needs to also be different: a university in a very high-tech high knowledge region such as Oxford has a different role to play than in a heavy manufacturing area such as Coventry. The idea that we can posit some theory such as the 'entrepreneurial university' or 'triple helix' that will be equally applicable for universities in such different regions is, of course, a fallacy.

Moreover, a key remaining question relates to how best to reconcile and manage the multiple expectations of universities' roles as an agent for economic growth from other stakeholders. On one hand, the stakeholders that are present in the region are diverse with different levels of expertise, resources and motivations. On the other hand, universities differ in size, status, specialization, capabilities and focus. Unfortunately, policy makers have often overlooked the distinctive characteristics of networks in the region. Without acknowledging the contextual differences in each region, the policy to replicate the lessons from other successful

regions are unlikely to work as intended. Policy makers also tend to overestimate the extent to which universities can play their role. Universities are multi-dimensional, complex organizations comprising multiple views and objectives. In fact, supporting economic growth in regions is only one of the many agendas that universities pursue.

In the case we present here we see that whilst most local Growth Hubs involve universities at some level, some are much more centrally involved than others, reflecting the varied roles and relationships between universities, government, and businesses in different localities. In essence, we see a range of different “entrepreneurial university” structures evolving on the ground, very much influenced by the factors of place, histories, cultures, and institutions in the different parts of England. As such, a one-size-fits-all model for the involvement of universities in local growth networks is found to be of limited use and relevance. Some universities are found to be more strongly connected to their local growth networks than others, and universities of different sorts are found to play different roles. This empirical result provides a foundation for an examination of university roles, which thus far has little appreciation of the diversity in universities in terms of structure and can as a result be overly normative regarding the ideal for interaction with regional stakeholders.

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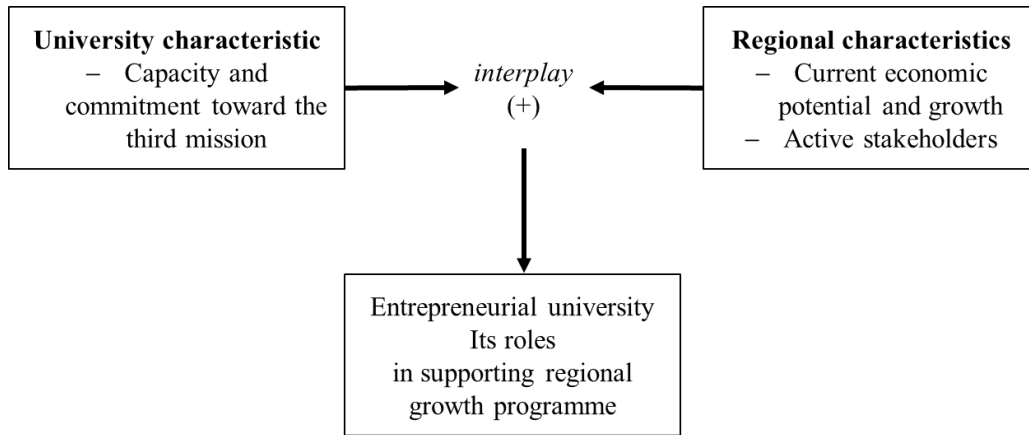


Figure 1. The hypothetical factors that determine university’s involvement in regional growth programme

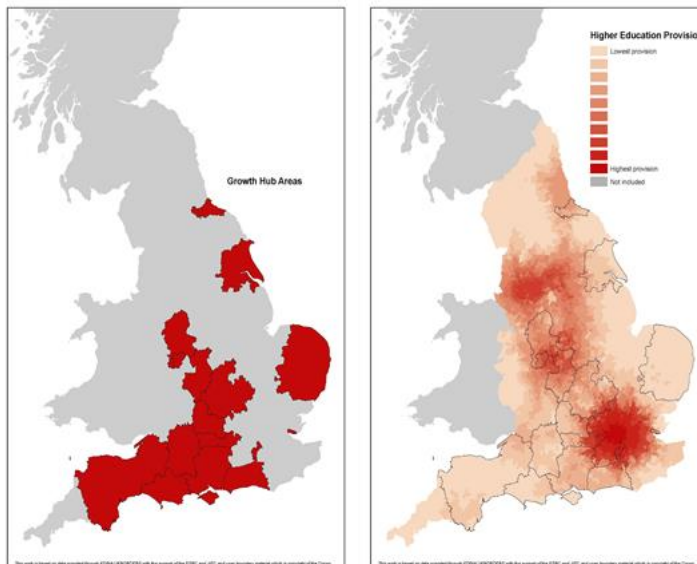


Figure 2. Growth Hubs area (a) and the level of education provision (b)

Figure 3. University's roles and the conditional factors

University capacity and commitment toward the third mission

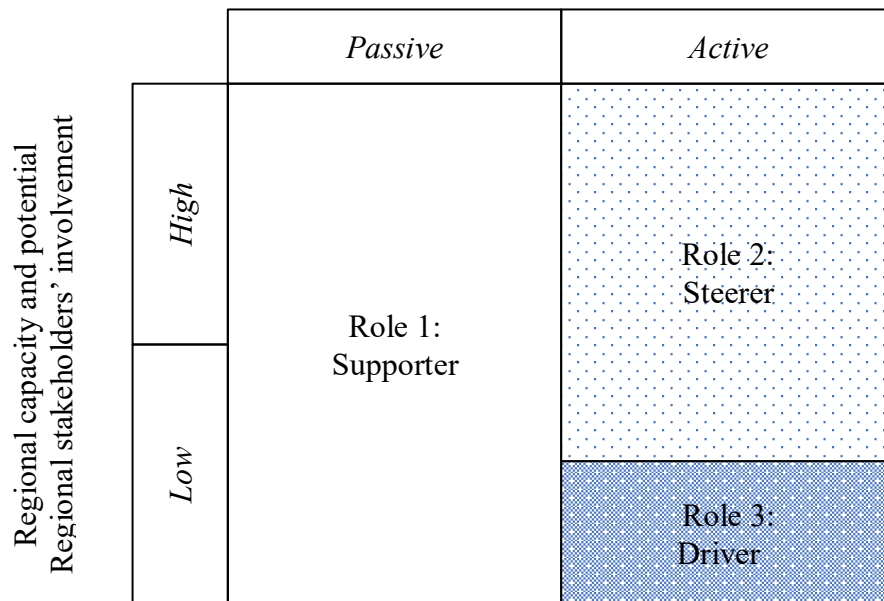


Table 1. Description of university's role for regional growth

	Supporter	Steerer	Driver
Roles in region	Supporting local business through support provision.	Triggering and steering the direction of the programme and complementing other local organizations.	Driving the programme by providing coordination and management support
Function	Knowledge producer for regional growth.	Building network and looking to build strength of the region.	Provide leadership to deliver the programme.
Main partners	Business, other universities	BIS, chamber of commerce, other universities within the steering group	BIS, chamber of commerce, other universities, business and all the stakeholders
Direction of engagement	Horizontal	Vertical	Horizontal and Vertical