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Paper Title: The role of supporting mechanisms on entrepreneurship within HEIs – using the result from the largest European study into HEI-Business Cooperation

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The role of supporting mechanisms on entrepreneurship within HEIs – using the result from the largest European study into HEI-Business Cooperation

Abstract

On the one hand, the role of HEIs has taken a dramatic shift over the last decades with HEIs increasingly needing to provide a greater contribution to society. On the other hand, entrepreneurship has been increasingly recognised for its role in creating jobs and growth, as well as a means of increasing the competitiveness of a region.

Nowadays, HEIs are having an increasing impact in the society through the stimulation of entrepreneurial behaviour. HEIs have been found to encourage entrepreneurship in three different ways. HEIs can provide entrepreneurial education and training, they can transfer knowledge and technologies to industry and finally HEIs can support the creation of new business.

Whilst the role of the HEI in stimulating entrepreneurship is becoming clearer, there are few studies that measure the extent of HEI supporting mechanisms for entrepreneurship, including strategies, structures, activities and framework conditions. Using data from the largest European study into HEI-business cooperation, the paper aims to fill this gap by determining the extent of development of the supporting mechanisms that are in place for entrepreneurship in European HEIs and reviewing the supporting mechanisms that are in place for the best performing HEIs in entrepreneurship against those performing at a low level.

Introduction

The role of HEIs has taken a dramatic shift over the last few decades expanding on their traditional roles in education and research (Etzkowitz, 1998). HEIs have had their roles focussed to a greater extent on the need to contribute to society in a more meaningful way through knowledge and technology creation and transfer / exchange (see proceedings from UNISO 2002- 2004) the so-called ‘third mission’ of the HEI. Centrally important to the increasing prominence of entrepreneurship has been the importance of the role of HEIs in stimulating entrepreneurship (Etzkowitz, 1998). At the same time, entrepreneurship has been increasingly recognised for its role in creating jobs and growth within an economy as well as a means of increasing the competitiveness of a region, state or country (Maes, 2003; European Commission, 2006; Zahra, 1991). Entrepreneurship is being seen by governments all around the world as important for not only these benefits, but also as a response to the increased economic uncertainty and the reduction of trade barriers and increase in global competition (Henry *et al*, 2005).

Education, primarily delivered by HEIs, has been confirmed as a vital component in the creation and continuing development of entrepreneurial attitudes (Gorman *et al.*, 1997; Kourilsky and Walstad, 1998) and successful firms. Furthermore, HEI research has been increasingly used to drive the founding of new firms through ‘spin-outs’ and ‘start-ups’ (Etzkowitz *et al*, 2000). However the extent and nature of this role is still highly debated in a number of theoretical discussions within the *Entrepreneurial University* paradigm, within the context of the universities ‘third mission’ and within the context of the *triple helix* model and *Regional Innovation Systems* (RIS) theoretical movements. Whilst these movements have

given rise to new models of HEI engagement in entrepreneurship, this paper takes the position that HEIs have an important role to play in creating entrepreneurial behaviour. What this paper will argue is that in order to maximise its contribution, the HEI needs to provide the right supporting mechanisms, even the right *entrepreneurial ecosystem*, in which entrepreneurship can prosper.

The important role of supporting mechanisms in supporting academic entrepreneurship has been recognised by Fini *et al* (2011) with HEI-level mechanisms and policies having ‘contributed significantly to the professionalization of activities encouraging the exploitation of research results’ (pp. 3). Whilst the above-mentioned models and theories provide a general theoretical construct for understanding entrepreneurship within HEIs and the statistics drive the discussion about entrepreneurship, there are few studies that measure the development of these mechanisms that support entrepreneurial activity, including strategies, structures and activities, within the HEI. Instead, entrepreneurship measurement within HEIs has a heavy focus on the number of spin-out firms created and the number of entrepreneurship courses in existence owing to their ease of measurement and ability to promote progress (Hughes, 2006). Further, when there has been a focus on supporting mechanisms for HEI entrepreneurship, the focus has been on incubators (Siegel & Phan, 2005).

To summarise, these problems exist:

- Whilst entrepreneurship is recognised as driver of the economy and HEIs as a key player in entrepreneurship, the role of HEIs generally has been widely debated,
- The availability of information about the development of entrepreneurship across HEIs is still limited,
- Information on the extent of development or existing of supporting mechanisms for entrepreneurship is also limited,
- Quantitative data about the types of mechanisms which are present in high-performing entrepreneurship HEIs is still lacking.

Using data from the largest European study into HEI-business cooperation, the paper aims to fill this gap by determining the extent of development of the supporting mechanisms that are in place that support entrepreneurship in European HEIs. A further analysis will review the supporting mechanisms that are in place for the best performing HEIs in entrepreneurship against those performing at a low level to try to identify those mechanisms which may better support the entrepreneurial process within HEIs.

Theoretical background

Entrepreneurship, understood as ‘the mindset and process to create and develop economic activity’ (European Commission, 2003, p. 6), has received increasing focus over the last decades from scientists, practitioners and politicians. This change has coincided with changes in the economic environment such as accelerated technological development (Santoro and Chakrabarti, 2002), changes in the competitive environment (Siguaw et al., 2003) and globalisation (Gummeson, 2002), which has served to elevate the importance of entrepreneurship in policy creation. In today’s economy, entrepreneurship is seen as vital source for economic growth and competitiveness, job creation as well as wealth creation and providing societal interests (European Commission, 2003). Entrepreneurship’s influence on European policy was evidenced when in year 2000 the Lisbon European Council defined the need to boost entrepreneurship as a major challenge facing the European Union’s member states (European Commission, The Gallup Organization 2007). Since then, many different

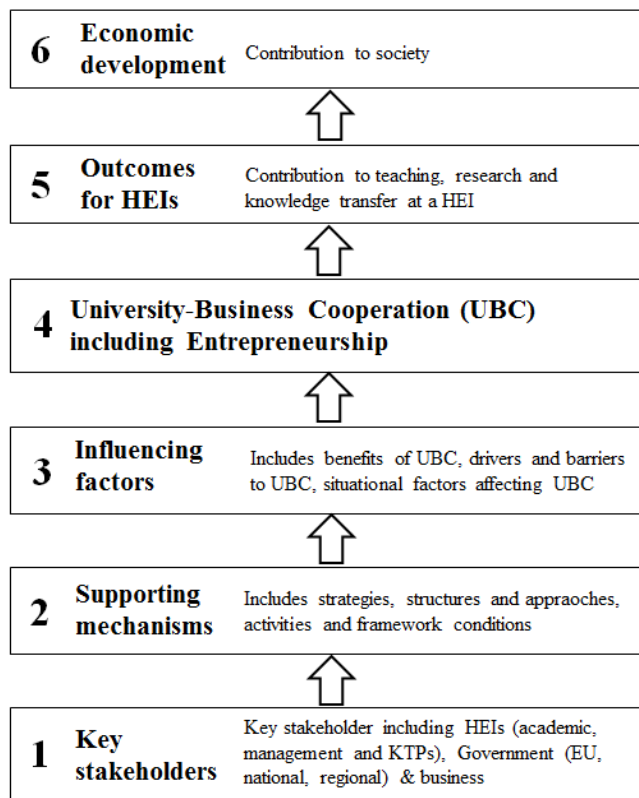
agendas for promoting Entrepreneurship have been set. For instance, the Oslo Agenda for Entrepreneurship Education in Europe (European Commission, 2006) shows a large set of actions also detailing on what level these actions have to be conducted (e.g. EU level, member state level, or at universities, businesses or intermediary organisations). At the same time, entrepreneurship has been embraced globally by some of the world's most renowned organisation such as the United Nations, World Bank, Harvard University, Oxford University and Cambridge University as well as commercial television networks in programs for business ideas (The Economist, 2009) because of its potential for relieving poverty, for the interest to students and the interest to the wider public.

The critical nature of entrepreneurship has been replicated in the dramatic growth of entrepreneurship within the HEI environment. Following Schumpeter's recognition of entrepreneurs as having unique skills and competencies, the first classes in entrepreneurship began in 1940 (Katz, 2003) which was followed by the first endowed professorship in entrepreneurship beginning in the 1960s (Gartner and Vesper, 1994) and subsequently a large increase in conferences and courses dedicated to entrepreneurship (Vesper, 1981). The number of endowed positions in entrepreneurship growing from 101 in 1991 to 564 in 2003 worldwide and by 2006, the number of entrepreneurship courses worldwide had grown to over 2,200 at 1,600 separate universities and colleges (Hisrich, 2006). Furthermore, The Economist (2009) identifies that 85% of all of the high-growth business created in the US over the last 20 years were launched by college graduates.

Despite the acknowledged relationship between academia and entrepreneurship, entrepreneurship is still not yet fully accepted as an academic discipline (Hisrich, 2006) although the acceptance of entrepreneurship has significant momentum within academic circles (Gartner and Vesper, 1994). Additionally, disagreement about the role of HEIs more generally in society has further muddled the water in respect to the HEIs role in entrepreneurship (Gibb & Hannon, 2006), this includes the role of the HEI in the triple helix of business, government and HEIs, as well as its role in the RIS and other theoretical paradigms. Whilst there has been debate about this general role of HEIs in society, the existence of the HEI having a 'third mission' is generally accepted (Etzkowitz, 2001). This mission of knowledge and technology transfer also has been referred to as valorisation, commercialisation and societal contribution. Assuming that HEIs indeed have a third mission, and that HEIs can contribute to entrepreneurship through all three missions, the following sections frame the role that a HEI could play in entrepreneurship.

HEIs are seen especially as having a crucial role in fostering entrepreneurship as they can encourage entrepreneurship in three different ways. Firstly, universities as institutions of higher *education* can encourage students by providing entrepreneurial training (Lüthje and Franke, 2002). Secondly, universities as institutions of *research* can transfer knowledge and technologies to industry. Literature refers to this commercialisation of research competencies, capacities and results as the HEI's 'third mission' (Etzkowitz et al, 2000). Thirdly, universities can bring people together in order to create new business, including spin-out companies, either through networks or project interactions. All of this entrepreneurial activity within the HEI is supported through HEI strategies, structures, and activities created by, or involving, HEIs as explained below (Davey *et al*, 2011).

Graphic 1 – The relationship between supporting mechanisms, entrepreneurship and economic development (The UBC Ecosystem, Davey et al, 2011)



The UBC Ecosystem Model provides us with a framework for understanding supporting mechanisms and their impact on entrepreneurship in HEIs. Stakeholders (such as HEI management, Knowledge Transfer Professionals, intermediaries, business) looking to stimulate cooperation between HEIs and business (this includes stimulating entrepreneurship) create action in the form of supporting mechanisms (strategies, structures, activities and framework conditions). The effectiveness of these actions are influenced by a number of influencing factor (barriers and drivers, perceived benefits from UBC by the academic and other situational factors such as years working at the HEI) before they result in cooperation (including entrepreneurship). The outcomes of cooperation (including entrepreneurship) are directly felt in teaching, research and

knowledge transfer outcomes for the HEI, business and students whilst the indirect outcomes are a contribution to society.

The specific role and importance of entrepreneurial supporting mechanisms at HEIs is highlighted in a report titled '*Developing Entrepreneurial Graduates - Putting entrepreneurship at the centre of higher education*' (Hermann, 2008) in the provision of entrepreneurship education and the development of entrepreneurial graduates. Firstly, there is a need for the provision of '*an enabling environment*' which involves visible leadership, clarity of purpose, embedding of an entrepreneurial culture and capacity building. Secondly a HEI must *engage key stakeholders* from within and from outside the HEI including the academic faculty, vice chancellors, student clubs and societies, other entrepreneurs and business. These groups act as 'agents' in creating entrepreneurship activities (Herrmann, 2008). Lastly, there is a need to implement entrepreneurial practises including multi-disciplinary educators, experimentation and discovery, innovative pedagogies, experiential approaches and cross-campus reach. All these elements help to form a type of ecosystem in which entrepreneurship can exist and potentially thrive. The elements discussed above will be referred to as supporting mechanisms within this paper.

Ecosystems in business theory are often used to describe elements that exist, and have an influence on, the environment and the relationship between these elements (Peltoniemi & Vuori, 2005). Related to the RIS research, and recognising the importance of environment in stimulating entrepreneurship, the value of ecosystem is most commonly recognised in the example of the Silicon Valley and the HEIs role in that of Stanford and Berkeley (Cohen, 2006). Research by Van de Ven (1993) highlighted the role of multiple actors that are needed to facilitate the creation of successful entrepreneurial ecosystems.

In defining the ecosystem for HEI-business activity, Davey *et al* (2011) in *The State of European University-Business Cooperation* defined a number of levels and factors that have

an influence on activity between business and HEIs. This research includes entrepreneurship-specific factors. Whilst the first level of the ecosystem, the *result level*, details the extent of HEI-business activity and the *factor level* provides the factors that influence activity, this paper will focus on the *action level*, which contains all the supporting mechanisms of HEI-business activity.

Following *Davey et al*, the supporting mechanisms can be defined as:

- I. *Strategies* - The drafting and implementation of cross-functional long-term decisions by a HEI that will enable it to achieve its long-term objectives with respect to HEI-business activity, including entrepreneurship.
- II. *Structures* - Mechanisms created that enable HEI-business activity and include the creation or development of institutions, positions, methods and policies and programmes.
- III. *Operational activities* - are actions of a practical nature undertaken by a HEI to create and support HEI-business activity whose scope and volume can be described/measured.

A key finding of the *State of European University-Business Cooperation* report was that the extent of development of the supporting mechanisms was found to significantly affect the extent of general activity between HEIs and business. This paper will investigate the extent of those supporting mechanisms in place for entrepreneurship as well as documenting the difference in the development of mechanisms between high-performing and low-performing European HEIs.

In this paper, results will be presented about the extent of development of supporting mechanisms for HEI-Business activities, which do not specifically relate to entrepreneurship, rather the wider topic of HEI-business activity. The reason for this is based on a finding from the *State of European University-Business Cooperation* report that there was an interrelationship of the eight types (Cooperation R&D, Student Mobility, Academic Mobility, Curriculum Development and Delivery, Commercialisation of R&D, Entrepreneurship, Lifelong-Learning and Governance) of HEI-Business activities. Through a correlation analysis, it was determined that the types of UBC and their supporting mechanisms are similarly developed or under-developed, meaning that when HEI and academics undertook a high level of HEI-business activity in one area (e.g. collaboration in research) they are also likely to undertake a similar level of HEI-Business activity in another type (e.g. entrepreneurship). This indicates that entrepreneurship should not be considered in isolation, rather the entire willingness of the academic or HEI to engage in HEI-business activity needs to be taken into consideration.

A further focus of this paper will be on the extent of development of entrepreneurship within European HEIs. Whilst extensive information exists to document the extent of development of spin-outs created at HEIs, there is limited information of how widespread is the development of spin-out commenced, or involving, academics. Measuring the status of the average academic in these ventures will be the objective of this part of the paper.

Methodology

Research question(s)

The primary research question of the paper is:

What is the extent of development of entrepreneurship at European HEIs and what are the mechanisms (specific to entrepreneurship or more generally for UBC) in place that support the development of entrepreneurship?

The primary research question has been broken down into sub-research questions with a corresponding analysis method named.

<i>Sub-research question</i>		<i>Data analysis method</i>	<i>Respondent</i>
1. What is the extent of development of entrepreneurship at European HEIs in low and high entrepreneurship development clusters	Which groups can be identified in relation with the extent of entrepreneurship in European HEIs?	Cluster analysis coming from a quantitative study	HEI Managers on behalf of the HEI
	To what extent is entrepreneurship developed in European HEIs in these groups?	Descriptive data coming from a quantitative study	HEI Managers on behalf of the HEI
	What is the rate of researcher involvement in spin-outs?	Descriptive data coming from a quantitative study	Academics on behalf of themselves
2. What is the extent of development of UBC supporting mechanisms (including entrepreneurship mechanisms) within European HEIs with a low, medium and high extent of entrepreneurship?	What is the extent to which European HEIs have a contact person, agency or programme/initiative for entrepreneurship?	Descriptive data and Kruskal-Wallis test coming from a quantitative study	HEI Managers on behalf of the HEI
	How developed are supporting mechanisms specifically for entrepreneurship in Europe? There are a three supporting mechanisms which directly relate to entrepreneurship: <ul style="list-style-type: none"> ▪ Incubators for the development of new business ▪ Entrepreneurship education offered to students ▪ Entrepreneurship education offered to academics 	Descriptive data and Kruskal-Wallis test coming from a quantitative study	HEI Managers on behalf of the HEI
	Which UBC supporting mechanisms are most developed within European HEIs with a high extent of entrepreneurship against those performing at a low extent of entrepreneurship?	Descriptive data and Kruskal-Wallis test	HEI Managers on behalf of the HEI

Data source and responses

The paper analyses quantitative results from an extensive study completed by the Münster University of Applied Sciences during 2010-11 for the European Commission into the nature of European university-business cooperation (UBC).

The quantitative study was executed as an online survey that was translated into 23 languages and sent to all HEIs in 33 countries that are existing, or candidate members, of the European Union or are partly committed to the EU economy and regulations as member of the European Economic Area. A total of 6,280 survey-responses were received from academics and HEI representatives.

Respondents

Respondents were given the following definition of entrepreneurship from which they could evaluate the extent of development as their HEI:

Entrepreneurship within or involving HEIs, either in the creation of new ventures or in being entrepreneurial within the HEI itself.

A total of 2,157 full responses were received from HEI managers, including HEI Rectors and Knowledge Transfer Professionals (KTPs), after data cleansing. The HEI managers were asked for their own perception of the level of development of entrepreneurship measures and supporting mechanism at their HEI. Furthermore, a total of 4,123 responses were received from European academics. They were asked to nominate their involvement in spin-out firms.

Data treatment

A weighting system was used to adjust the importance of country-specific data and its influence on the entire European results. This was applied to both the HEI managers and the academic results based upon the representativeness of their results in comparison with the European academic population according to the European Union statistics (Eurostat).

Leaders and laggards in entrepreneurship within European HEIs - By undertaking a two-step cluster analysis we were able to identify three clusters relating to the extent of entrepreneurship development at European HEs. They were 'low' (laggards), 'medium' and 'high' (leaders) entrepreneurship clusters, however we will mostly show only the low and high development clusters within the paper.

A Kruskal-Wallis test is a non-parametric test used to examine whether samples originate from the same population when there is not an assumption that the distribution is normal. The test was run with a number of variables to determine whether the differences found among the clusters are or not statistically significant.

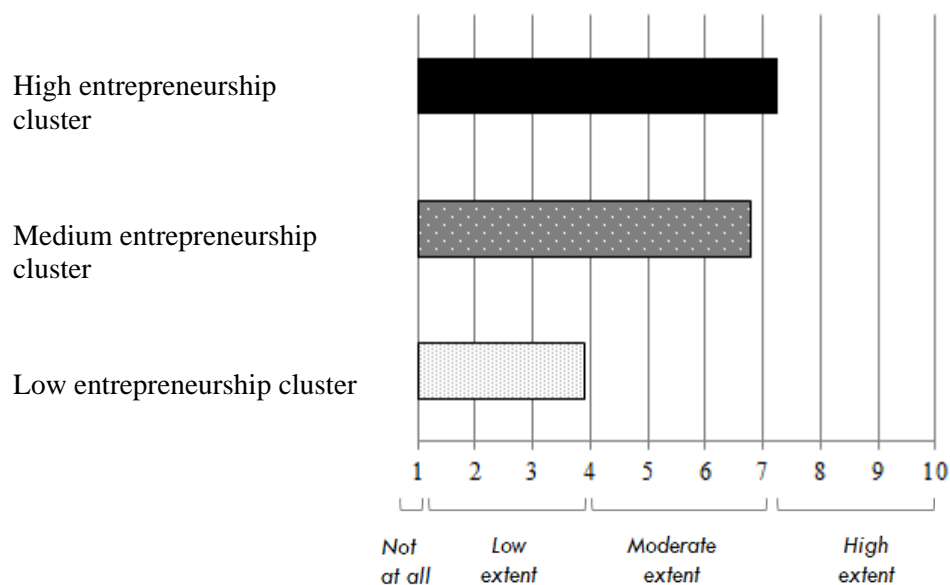
Results

Extent of development of Entrepreneurship at European HEIs

Level of development of entrepreneurship at European HEIs – The variable measuring the extent of development of entrepreneurship was divided into three different clusters, representing low, medium and high entrepreneurship cluster. On a scale of 1 (not at all developed) to 10 (very highly developed) it can be seen that the low entrepreneurship HEIs

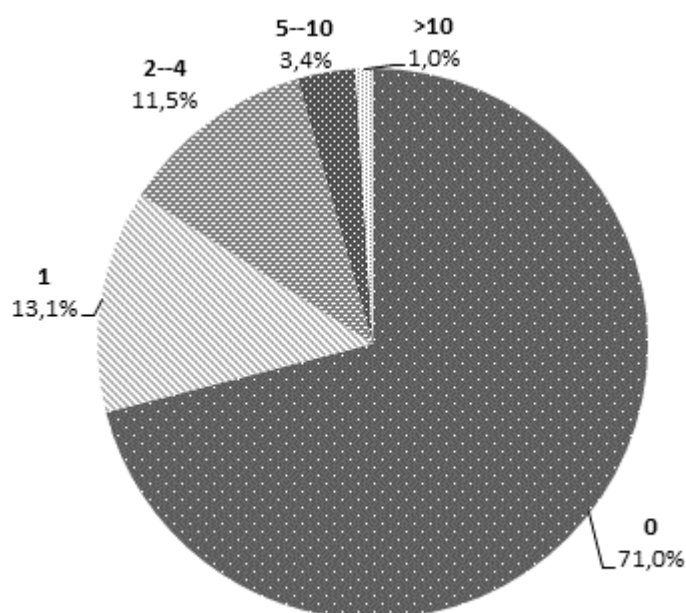
recorded a level of entrepreneurship development of 3.9 (with a standard deviation of 1.9) and high entrepreneurship HEIs a level of 7.3 (with a standard deviation of 2.9).

Graphic 2 – Perceived extent of development of European HEIs



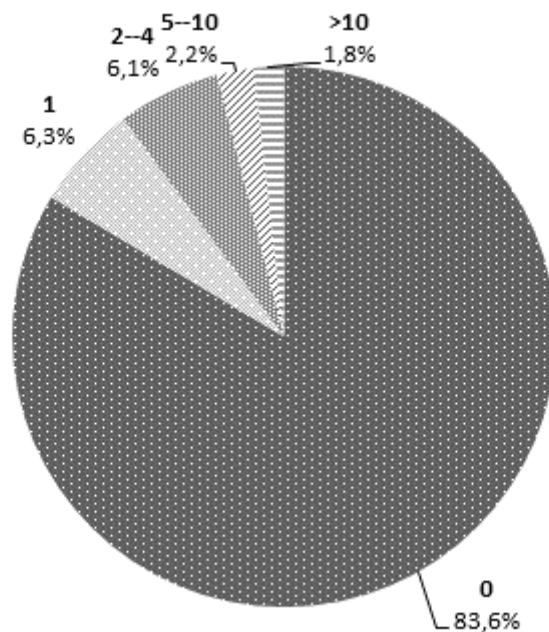
European academic involvement in spin-offs

Graphic 3: Spin-offs created per academic from the academics research within European HEIs (last 5 years)



29% of European academics have been involved in a spin-out coming from their research in the last five years. The pie chart shows that 71% of European academics have had no involvement, whilst 13.1% had been involved in one spin-out, 11.5% in two to four spinouts, 3.4% in 5-10 spin-outs and 1% in greater than 10.

Graphic 4: Spin-offs created per academic not directly involving the academic's research within European HEIs (last 5 years)

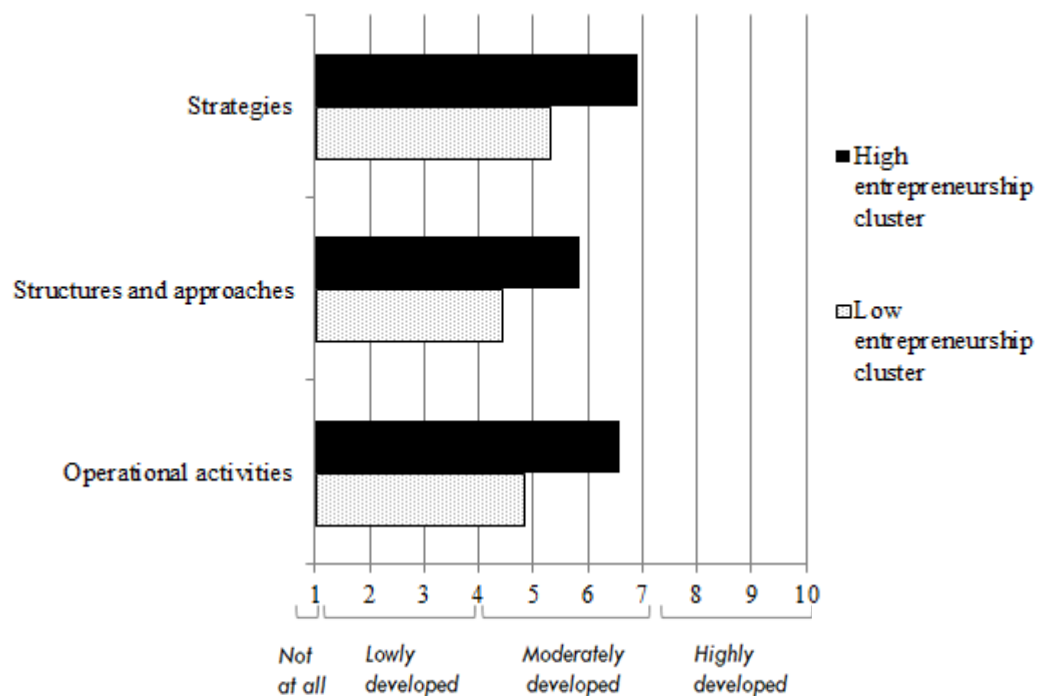


16.4% of European academics have been involved in a spin-out not directly involving their research in the last five years. The pie chart shows that 83.6% of European academics have had no involvement, whilst 6.3% had been involved in one spin-out, 6.1% in two to four spinouts, 2.2% in 5-10 spin-outs and 1.8% in greater than 10.

Entrepreneurship supporting mechanisms

In the survey, respondents were asked the level of development of supporting mechanisms for HEI-business (including entrepreneurship) within their HEI. The level of development of their supporting mechanisms (strategies, structures and approaches and activities) were then presented in the glow and high entrepreneurship clusters. It can be seen that strategies (6.9) followed by operational activities (6.6) were the two most developed forms of supporting mechanisms for the 'High Entrepreneurship Cluster'. Similarly, for the 'low entrepreneurship cluster' strategies (5.3) and activities (4.8) were the most developed forms however at a significantly lower level.

Graphic 5 – The level of development of the supporting mechanisms in high and low entrepreneurship HEIs



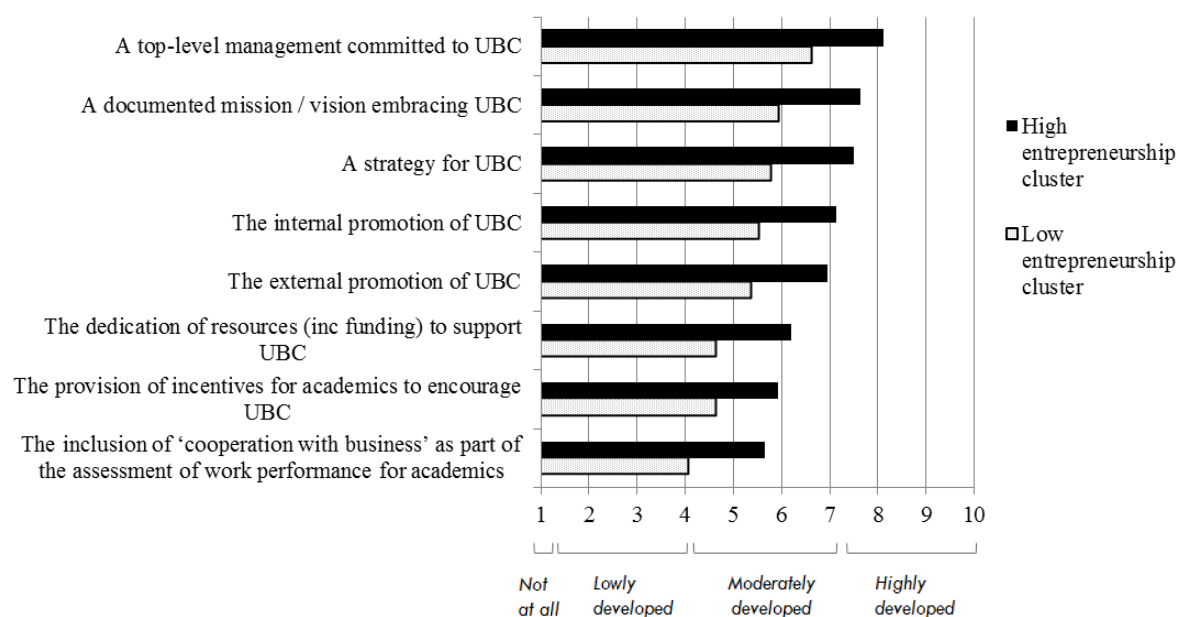
Strategies for HEI-Business activities

The most developed mechanisms for all entrepreneurship clusters (high entrepreneurship cluster figures in brackets) are ‘a top level management committed to UBC’ (8.11) and ‘a documented mission/vision embracing UBC’ (7.64) followed by ‘A strategy for UBC’ (7.51). These ‘paper’ strategies addressing cooperation with business highlight a documented commitment to cooperation with business, which includes entrepreneurship, within European HEIs with all being highly developed (above 7).

At the lowest extent of development for the high entrepreneurship cluster are ‘The inclusion of ‘cooperation with business’ as part of the assessment of work performance for academics’ (5.66), ‘The provision of incentives for academics to encourage UBC’ (5.92) and ‘The dedication of resources (inc funding) to support UBC’ (6.20). All of the lowest developed strategies, in all clusters, are ‘implementation strategies’ which shows a lack of commitment within the HEI to UBC (and entrepreneurship).

Following a Kruskal-Wallis test in respect to the UBC strategies, all strategies showed a significant difference between the low and high entrepreneurship clusters.

Graphic 6 - The level of development of the strategies for HEI-Business activities in high and low entrepreneurship HEIs



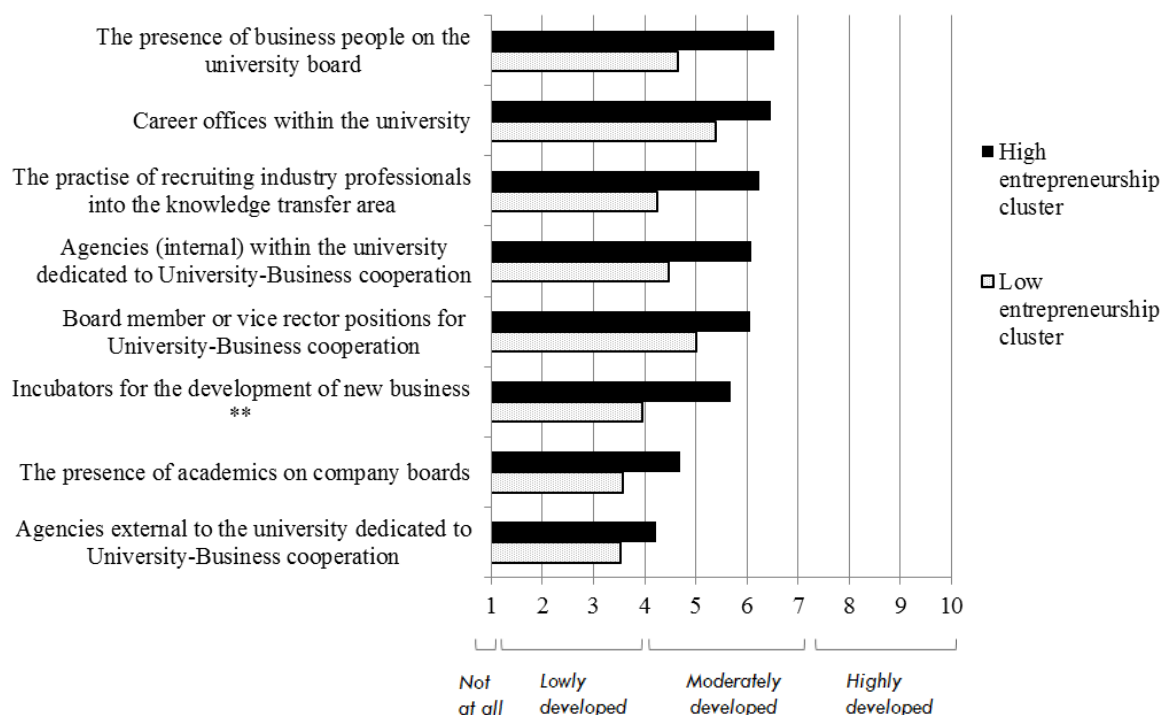
Structures and approaches

The most developed structures and approaches for the high entrepreneurship cluster are ‘The presence of business people on the university board’ (6.5), ‘Career offices within the university’ (6.5) and ‘The practise of recruiting industry professionals into the knowledge transfer area’ (6.3), whilst the least develop were ‘Agencies external to the university dedicated to University-Business cooperation’ (4.2) and ‘The presence of academics on company boards’ (4.7).

Interestingly, ‘Incubators for the development of new business’ was a structure nominated for the study as one which is specifically supporting entrepreneurship, however even in the high entrepreneurship cluster, it is only developed at a medium level (5.68) and only the sixth most developed structure for the high entrepreneurship cluster. These results potentially suggest

that having an incubator is not essentially to having a high level of entrepreneurial development.

Graphic 7 - The level of development of the structures / approaches for HEI-Business activities in high and low entrepreneurship HEIs

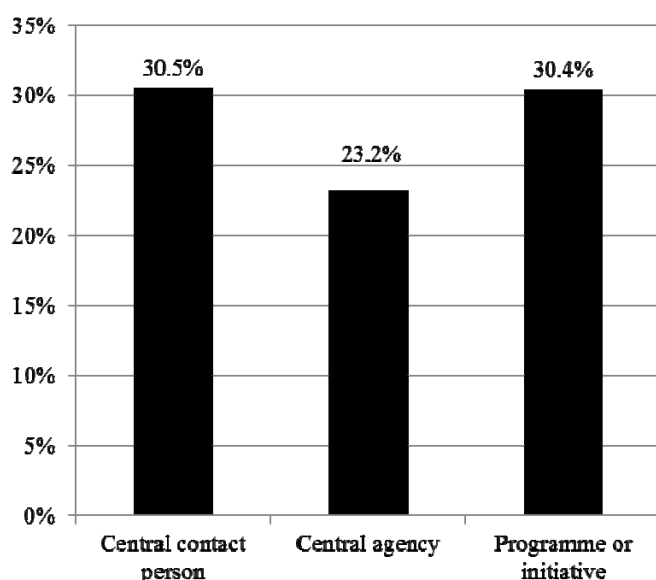


** indicates structures that are specifically dedicated to support entrepreneurship

Furthermore, a number of there are specific entrepreneurship-related supporting mechanisms (contact person, programme or initiative, agency) having a direct influence on the extent of entrepreneurship of HEIs that were tested in the survey. HEIs were requested to nominate whether they possessed one of the following dedicated to entrepreneurship:

- Central contact person
- Central agency
- Programme or initiative

Graphic 8 – Existence of entrepreneurship-specific supporting mechanisms at European HEIs



The results show that ‘a central contact point’ for entrepreneurship is marginally the most common form of support offered for entrepreneurship; however, the majority of European HEIs do not have this position as only 31% of HEIs have this support feature. The second most developed structure of approach for entrepreneurship is a ‘programme of initiative’ for entrepreneurship (30% of the HEIs) whilst only 23% have a central agency for entrepreneurship. Following a Kruskal-Wallis test, it was shown that

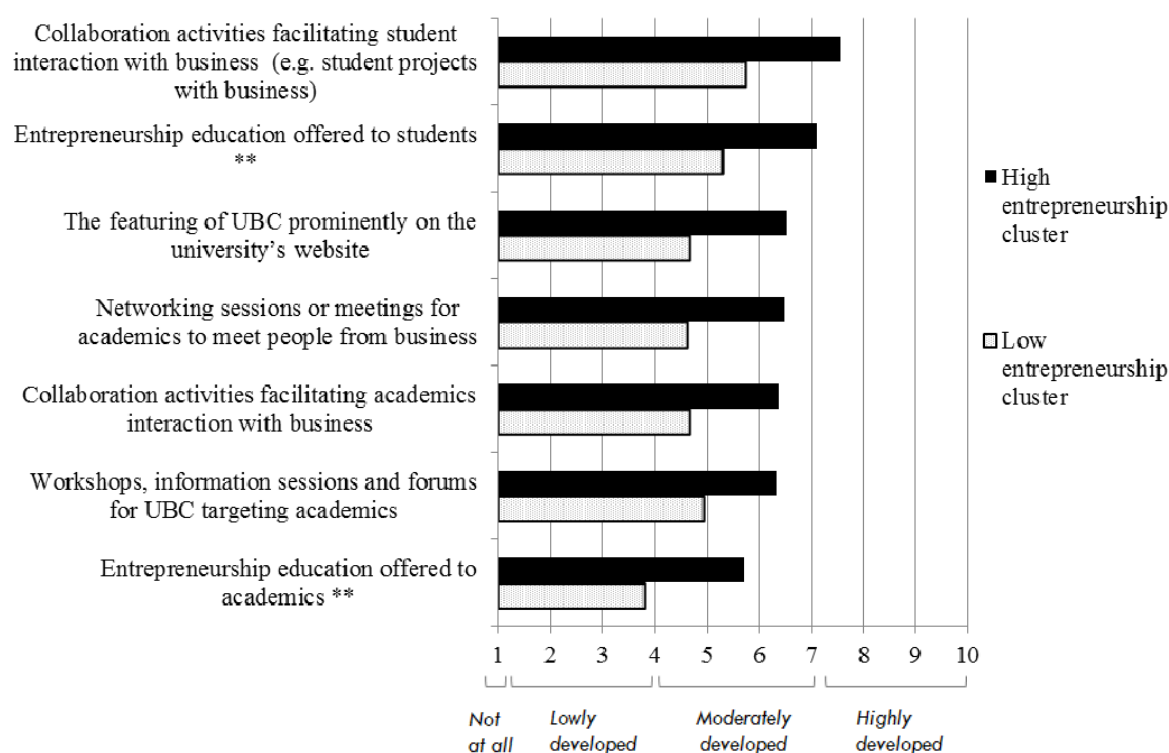
those HEIs having a specific contact person, contact agency or programme / initiative had a significantly higher level of development of entrepreneurship within the HEI. This indicates that the simple creation of these mechanisms dedicated to entrepreneurship could have a significant effect of the amount of entrepreneurship at the HEI.

Operational activities

The most developed activities for the high entrepreneurship cluster are ‘Collaboration activities facilitating student interaction with business (e.g. student projects with business)’ (7.6), ‘Entrepreneurship education offered to students’ (7.1) and ‘The featuring of UBC prominently on the university’s website’ (6.5). The least developed activities were ‘Entrepreneurship education offered to academics’ (5.7) and ‘Workshops, information sessions and forums for UBC targeting academics’ (6.4), which could indicate a lack of attention is given to including academics in developing the entrepreneurial mindset of in academic activities. These results suggest a greater focus of entrepreneurship activities for academics could yield to greater development of entrepreneurship at the HEI.

For low entrepreneurship HEIs, ‘entrepreneurship education offered to academics’ was the lowest developed activity (3.8).

Graphic 9 - The level of development of the activities for HEI-Business activities in high and low entrepreneurship HEIs



*** indicates structures that are specifically dedicated to support entrepreneurship*

Conclusions and implications

The study provides insights into the types of supporting mechanisms that are in place within HEIs supporting different degrees of entrepreneurship. The level of development of supporting mechanisms specifically for entrepreneurship at European HEIs is only moderately developed. The results also showed that those HEIs falling into the high entrepreneurship cluster also have a higher level of development of supporting mechanisms for HEI-Business cooperation.

The main results are that those HEIs with a higher development of supporting mechanisms are those carrying out a significantly higher extent of entrepreneurship, and vice versa. It is uncertain however whether one causes the other or about their relationship. The results, when combined with the extensive literature however suggest that supporting mechanisms could have a positive effect in the extent of entrepreneurship. In particular, those HEIs with a specific entrepreneurship-related supporting mechanism, such as a central contact person or central agency or entrepreneurial programme, were found to have significantly higher levels of entrepreneurship develop, albeit perceived. Interesting, 'entrepreneurship education offered to academics' was the lowest developed activity even for the high entrepreneurship cluster whilst 'entrepreneurship education offered to students' was the second highest developed strategy indicating that entrepreneurship education for academics needs to be developed within European HEIs, even in those HEIs with highly developed entrepreneurial activity.

The primary contribution of the paper is to highlight the role of "mechanisms" in supporting entrepreneurship, whether they specifically address entrepreneurship, or more generally address HEI-business cooperation. In this light, entrepreneurial activities are not divorced from the HEI's cooperation with business; rather entrepreneurship is one of 8 types of cooperation which are related and therefore need to be addressed as a group. For this reasons, it provides insights for HEI managers and practitioners of how entrepreneurship can be fostered within or in cooperation with a HEI. In this way, the paper offers HEI managers a view of entrepreneurship within the 'broader' cooperation between the HEI and business.

Further research into supporting mechanisms is required to determine their how they assist HEI entrepreneurship activities. The impact and role of these supporting activities on entrepreneurship within a HEI needs to be determined.

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