Summary in English

Entrepreneurial behaviour of academics within the context of education

This research investigates the entrepreneurial behaviour of academics. Nowadays, universities are expected to be organisations with open boundaries, allowing for the cooperation and interdependency among different actors in the society. Against this background, this research focuses on the engagement of academics on entrepreneurial activities with external actors, so as to introduce novelties in teaching to create value for the university.

Social capital theory on entrepreneurship explains how social structures facilitate and constrain opportunities, behaviours, and cognitions of social actors. However, we know less about the actions of individuals to organize their social network in the first place. This contributes to this theory by focusing on the individual characteristics, such as networking practices of academics, as antecedents of social capital organisation.

Additionally, this research provides societal contribution by accomplishing a better understanding of the possible synergies between the three core tasks of the university (teaching, research and knowledge transfer).

This research follows a sequential mixed methods approach grounded in critical realism. Four studies are conducted to understand How do the social interactions of academics affect their entrepreneurial behaviour within the context of UBC-based education, and (if any) with what effects on the education mission of the university?

Study 1: Does context matter in academic entrepreneurship? The role of barriers and drivers in the regional and national context

With pressure on universities to better contribute to society, academic entrepreneurship is an increasingly recognised source of new knowledge and technologies as well as being a driver of the movement to a knowledge society. However, whilst growing, the level of academic entrepreneurship in Europe is still relatively low.

Two factors influencing this are inhibitors (barriers) and facilitators (drivers), however the understanding of how their interplay influences academic entrepreneurship, particularly across different contexts, is lacking.

For this reason, this study focussed on two environmental settings, European regions and countries, seeking to understand if it is the hurdle (barrier) or (and/or) tail-wind (drivers) that most impacts academic entrepreneurship and how the regional or national context influences this.

An online survey was translated into 22 languages and undertaken in 33 countries in Europe and the European Economic Area. From the original data set, 12 countries in four European regions provided a sample of 2925 responses, with a second step to focus on four ‘lead’ countries within those regions.

The results show that there is a significant difference in the university-business cooperation barriers and drivers that affect academic entrepreneurship in the European regions. Furthermore, different barriers and drivers were found to significantly affect the four lead countries with barriers and drivers being able to provide a good explanation of the extent of academic entrepreneurship in the UK and Germany, and a more limited explanation of...
entrepreneurial activity by Spanish and Polish academics. Overall the article contributes to the literature of resource-based theory and also the understanding of factors influencing European academic entrepreneurship.

Study 2: The role of the networking competency of the academics in university-business cooperation within the context of education: An integration of social capital and social cognitive theories

Perceptions of academics with respect to their networking competency to handle University-Business Cooperation (UBC) activities, has received limited attention in the context of their teaching practices executed with business. This paper addresses this research gap by examining the role of the networking competency of the academic entrepreneur in UBC-based education, from a sociological perspective. We contribute to existing research by combining literature streams from the fields of academic entrepreneurship, UBC, social capital and social cognitive theory, to understand how and to what extent the perceptions of academics about their social capital and their self-efficacy with respect to their networking behaviour, affect the extent of development of UBC-based teaching. To answer the research question, a conceptual model grounded in social capital and social cognitive theories was developed. It was used to test how academics’ perceptions about their immediate social environment influence them in engaging in UBC-based teaching. We also considered the role of the self-efficacy of the academic in this relationship, with respect to his or her networking competency. The empirical research is based on a survey implemented to academics in Germany. The final data set used for this study includes a total of 312 responses valid for analysis. Through a series of regression analyses and mediation analyses the findings of this paper highlight the importance of relational capital for academics in their role of educators, as well as the importance of their self-efficacy in respect to their networking competency to handle UBC-based teaching practices. Implications of the findings for entrepreneurship educators and university management are ultimately discussed along with suggestions for further research.

Study 3: Academic entrepreneurship in the context of education: the role of the networking behaviour of academics

This qualitative study extends literature on academic entrepreneurship and entrepreneurial networking by examining how academics, in their role of entrepreneurial educators, network for the creation and execution of novel teaching practices in cooperation with external actors. Considering evidence from eight case studies conducted in Mexico we found that the networking behaviour of entrepreneurial educators is crucial for the generation of proximity with external actors and for the acquisition of key resources, such as an external actor, to participate in teaching practice and for the generation of legitimacy for their innovations in teaching. The entrepreneurial and industrial experience of entrepreneurial educators emerges as an affordance to network with external actors, helping them to achieve a common understanding of the opportunity and to generate trust among them. This study equips managers of higher education institutions with critical insights into innovating the teaching mission of the university and developing closer and stronger relationships with external actors of the university. The propositions presented in this study regarding the different networking actions of the entrepreneurial educators uncover notable theoretical and managerial implications and offer some key research directions.
Study 4: The relevance of problem-based learning for policy development in University-Business Cooperation

Most prior research on academic entrepreneurship focuses on the interplay between university research and technology transfer activities in the form of joint research, spinoffs, licensing and patenting. Yet there still remain questions with respect to the role of academic entrepreneurship in education and learning. Lifelong learning has been developing into one of the top priorities for many higher education institutions, with a greater emphasis on developing transversal skills, including entrepreneurship. One approach to developing transversal skills through education, which is adopted increasingly, is through problem-based learning (PBL). PBL shifts the focus from teacher-driven education to student-centred learning involving active participation of learners. By taking the students’ perspective, this paper presents the effects of PBL in the context of university-business cooperation (UBC), on the development of student’s transversal skills. According to our findings UBC-based PBL has an effect on the interpersonal skills of students, such as teamwork and communication, and turns out to be a promising approach with regard to entrepreneurship education and paving the way for long-term and more intense UBC activities.

Overall this dissertation sheds light into the actual practice of entrepreneurship within universities. It approaches to this stream of literature with the lenses of sociology, and in particular its sub-discipline, organization theory. This sociological approach helped in the understating of academic entrepreneurship as a collective phenomenon, which recognizes the actions of the individual academic entrepreneur (Chapters 4 and 5), but simultaneously acknowledges the impact of the larger social system and institutional setting in which academic entrepreneurs are embedded, constraining or facilitating their entrepreneurial behaviour (Chapters 3, 4 and 5). Even though entrepreneurship is often regarded “as a highly individualized behaviour”, the studies in this dissertation, have shown how academic entrepreneurial practices are subject to the broader context of UBC.

On the basis of the overall results from this dissertation, it could be argued that that academics need to perceive a context of trust where both parties involved share a common goal and invest time in constant communication. This is to say, that they need to perceive a context where relational capital is high in order to engage in entrepreneurial endeavours. However, they also need to perceive the necessary resources to exploit opportunities as attainable, therefore, academics embedded in trusted networks, will be more likely to engage in entrepreneurial endeavours.

However, environmental and personal aspects interact in a reciprocal manner where the environment causes entrepreneurial behaviour, but also entrepreneurial behaviour of academics causes the environment. Therefore, academics are reflective agents who endogenously decide on, and are practitioners of networking practices that shape their collaborations and at the end their social capital.

Behavioural aspects at the individual level, such as their self-efficacy to network and their actual networking behaviour will determine the successful configuration of their networks and their social capital for the attainment of entrepreneurial goals within the context of the university. Adding to these behavioural characteristics at the individual level, “experience in the opposite environment” represents an “Affordance” for academic entrepreneurs to configure strong and trusted networks with business since it bridges the cognitive and relational proximity with them.
Therefore, academics are strategic actors that can create a context where relational social capital is high, and at the same time, this context will be perceived as a life-space where positive forces predominate, which will encourage the engagement of academics in entrepreneurial endeavours.

The entrepreneurial behaviour of academics creates new learning environments for students through a learning network created by UBC-based teaching. In this contribution, the outcomes are not merely economic, but are also of a social nature creating value for the communities that are involved in this process, such as the students and the business. A UBC-based form of teaching, becomes a network of learning where different members of that network engage in a knowledge circulation process. From a social constructivist view on human cognition, the results indicate that learning also depends on social interactions, not only between instructors and classmates, but also among the actors in the learner’s socio-economic context, providing a source of expertise and experience from the world of work. The findings therefore support the notion that academic entrepreneurship is not merely an economic process but draws from the social and institutional contexts that shape entrepreneurial behaviours, processes and outcomes. In the same vein, the outcomes are not merely economic, but are also of a social nature creating value for the communities that are involved in this process.