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SUPPORTING SME INNOVATION, GROWTH AND NEW BUSINESS DEVELOPMENT BY REGIONAL ENTREPRENEURSHIP MODEL

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Abstract

To enhance small and medium sized enterprises' (SMEs) business development Laurea University of Applied Sciences will build a training programme and engage the student and staff in the development work. The students, who choose a company to follow, may also attend the training programme together with their tutor. Both the company participants and the students' experiences will affect the final model. SMEs are often unable to give enough thought for the future business innovation. On the other side, the students and teachers from the universities of applied sciences are so engaged in their disciplinary content that more advanced skills for entrepreneurship may suffer. Our aim is to bring these together in a holistic pedagogical framework. We will create a permanent platform for matching the development of SMEs and university students' studies. The regional model is built together with Regional Business Development Organizations who work with companies on daily basis. Methodological framework consists of Learning by Developing (LbD) action model. It is a pedagogical approach in which learning is linked to applied research, development projects and regional developing. For SMEs, it gives new perspective for customer and business surface evaluation.

Keywords

Business development, Coaching, Entrepreneurial capabilities, Regional innovation ecosystem, SMEs

1. Introduction

Enabler for innovative knowledge and competence creation

The main framework for creating entrepreneurial education is Learning by Developing (LbD) model. LbD is a pedagogical approach [1] in which learning is linked to applied research as well as research, development and innovation projects (RDI) and regional developing. In this framework, much emphasis is given to the social interaction, knowledge and competence sharing, researching and problem solving. LbD improves mobilization of talent resources of the region, which allows new ways for innovative knowledge creation. Learning and RDI practice meet to add value to the students as well as enterprises in the region. For the companies LbD offers the knowledge, creativity and the contact network of the universities including their students and staff.

Regional role and growth potential of SMEs

SMEs are important for various reasons. In 2011 63 percentage of all employees worked in small and mediums sized enterprises [2]. Of the new working places, 90 % was created in companies, which had less than 50 employees. Only 4 % was created in companies, which had more than hundred employees. This shows how important SMEs are in generating new work.

Small and medium-sized enterprises are in the focus of industrial policies as well because of their role in creating jobs, stimulating innovation and promoting entrepreneurial skills [3]. Both the firm's inherent characteristics and firm strategy as well as its operational macroeconomic environment determine SMEs performance [4]. Growth is [5] mainly measured by change in employment or sales. Regression analysis has been applied [6] on a sample of 298 Finnish SMEs across five industry sectors. Cross-relational network competence was found to be a significant predictor of growth in internationally operating SMEs. The network competence of domestically operating SMEs was not related to their growth.

Enhancing SMEs' development

We have earlier studied the needs of the SMEs by carrying out a company survey, interviews as well as two innovation workshops [7]. We found out, that the innovation process of machinery and metal sector SMEs is unclear and their contact networks are diffuse as well. There is very little, if at all cooperation with the universities. As SMEs need new capabilities in order to grow, cooperation and networks are crucial for them. Companies with a high innovation performance also seem to have a higher innovation capacity [8]. Therefore, the regional informal networks benefit especially SMEs as they gain access to the local information communities. Open innovation is also more widely used in regional and local networks. Small companies with their limited resources are therefore more bound to deep and long-lasting relationships.

Recent studies reveal that internationally grown SMEs share three dynamic capabilities: knowledge absorbing capabilities, acquisition and integration capabilities as well as dynamic internationalization capabilities. In addition, SME's foreign growth is positively linked to both its entrepreneurial as well as learning orientation [9]. In order to develop new capabilities SMEs, need both new tools and access to latest information and knowledge networks. Future orientation is important for gaining competitive advantage as well. The foresight process includes the provision of future information and its analysis and use for strategic decision-making. SMEs lack the ability for all of these stages. They need new dynamic tools and other support for their business development and innovation processes.

2. Framework

We have initiated a project for supporting SMEs growth and development of entrepreneurial capabilities of the university students at the same time. European Regional Development Fund and Helsinki-Uusimaa Regional Council are funding this effort. Radar-project and its activities form the general framework for entrepreneurial education development (Figure 1).



RADAR-Framework

Figure 1 Joint regional innovation ecosystem and entrepreneurial education framework.

2.1 Regional cooperation model

Open innovation exploits the inwards and outward flow of information to speed up internal innovation process and explore new markets [10]. It also changes the core competence of the company. SMEs gain new possibilities through specialization and widening up their technological information base. SMEs seldom have time for this. Cooperation with universities is a way to faster learning and gaining new competence required by open innovation.

The future performance of the innovation system will mostly depend on the social processes between regional economic actors. Regional information networks may also explain differences in the efficiency of open innovation. Innovation requires institutional learning concepts and probably regional concepts as well. Interactive learning functions become crucially important for the whole process. From this framework, innovation is constructed of three overlapping processes: the production of scientific and technological

knowledge, the translation of knowledge into working artefacts and responding to and influencing market demand [11]. Training themes have been selected in order to answer the dynamic competence needs of SMEs. Natural innovators possess five key skills: questioning, observing, networking, experimenting and associating [12]. In entrepreneurial education, the basic idea is that activities open one's mind to new ideas [13]. We experiment developing entrepreneurial mindset with entrepreneur and student co-development (Picture 2).



Figure 2 Entrepreneurial Path of a Student in co-development process.

The regional innovation system consists of a set of institutions whose interaction determines the production, diffusion and use of economically useful knowledge. This is a graduated and cumulative process where innovations are resulting ultimately from processes of learning, searching and exploring. Key actors in production and innovation systems apart from business companies are universities, private and public research institutes, organizations of technology transfer and the government [14]. Our regional model for SMEs is entrepreneurial in nature. The regional development companies interact with the participating companies in daily basis and consult them in growth planning. University of Applies Sciences serves as a resource base for both training of the company representatives as well as their development projects by its students. RADAR is the final cooperation and integration model to be established (see Picture 1). As there are three different regional realisation, we will face different regional needs as well.

2.2 Entrepreneurial capabilities

Learning outcomes of undergraduate entrepreneurship education can be divided in three parts: cognitive, skillbased and affective; and further into business-specific as well as interpersonal and personal content [15]. Many of these capabilities are skill-based and correspond to development project contents as well as personal skills in needed in conducting them. Further, we consider SMEs perfect places for learning broad entrepreneurial landscape. Therefore, we define three broad areas of dynamic entrepreneurial capabilities (Table 1), which can also be translated into fragments of evolutionary fitness [16] in dynamic capabilities framework.

Capability	Evolutionary Fitness
Holistic view of enterprise and its functions	Technical fitness
Customer insight and value creation	Market demand
Going concern	Competition
Informal	Formal

Table 1 Dynamic Entrepreneurial Capabilities.

The training program for SMEs consists of five parts: customer needs, future mapping, business model, markets and branding. Students that choose a company to follow through out their studies, participate in the training together with the company representative and their tutor. Cooperation between the company tutor, enterprise developer of the regional development company as well as university tutor is essential for the success of entrepreneurial education of the student.

2.3 Research methods

Methodological framework consists of Learning by Developing (LbD) action model as well Radar framework. They link together pedagogical approach, applied research, development projects, regional developing and in this case strategic management as well. In this action research process, 70 SMEs will go through the development route with their selected development projects and student engagement. Case study method will be used to highlight the approach, where students have chosen the entrepreneurial path.

We also study by surveys and in-depth thematic interviews, what effect the development activities have on the company business or even business model development. Is the multidisciplinary model beneficial for the companies and students? We will incrementally study both company participants' and students' experiences of the co-creation by separate surveys and final thesis of students. For entrepreneurial education, we use three level evaluation: self-evaluation by the student, evaluation by the entrepreneur and tutor as well as verifying structured interviews. Building a permanent model includes anticipating and matching diverse needs as well as defining the critical contact points for cooperation in the organizations.

3. Conclusions

Even though the interest from the SME side has turned out to be strong, only few students are expected to choose this co-development path together with an entrepreneur.

There exists permanent need for flexible cooperation between UASs and working life. Regional cooperation model offering both enterprises and students varied possibilities for development work will best serve this target. Moreover, the students choosing longer cooperation with an enterprise will gain deeper entrepreneurial skills and understanding of businesses. Entrepreneurship is first and foremost a mind-set [17] and it needs to be nourished by a variety of cooperation.

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QUADRUPLE HELIX CONFIGURATIONS IN CENTRAL AND EASTERN EUROPE. AN EMPIRICAL INVESTIGATION

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Abstract

With their emphasis on broad cooperation for innovation, the Quadruple Helix models are nowadays at the center of national and regional innovation policies all across Europe. In such a context, higher education institutions and research organisations, the business sector, the government and the civil society are expected to interact on a systemic basis, to strengthen their connections both within and outside the geographical boundaries and to create synergies for smart specialization. Despite recent developments, measuring and operationalizing the Quadruple Helix models is still a difficult task, which is hindered especially by the lack of relevant data. To fill this gap, our paper aims to investigate the Quadruple Helix configurations in Central and Eastern Europe, while relying on the database of FP7 projects implemented in these countries and their regions (NUT2) between 2007 and 2013. We are particularly interested in investigating the participation in FP7 projects by universities and research organisations (HES & RES), private actors (PRC), public bodies (PUB) and other actors, i.e. NGOs, associations etc. (OTH). Our findings reveal a very mixed pattern of engagement in FP7 projects and suggest different policy interventions to support the smart specialisation approaches and strategies.

Keywords

Quadruple Helix, Regional innovation systems, Smart specialization, Central and Eastern Europe

1. Introduction

In recent years, different conceptual frameworks have been proposed for analysing innovation dynamics in the knowledge-based society; among them, the Triple Helix of University – Industry – Government is one of the most influential models that consider both the relationships between the three institutional spheres and the transformation mechanisms that drive each of the spheres [1]. According to [2], a Triple Helix can be defined - according to systems theory - as a set of components, relationships and functions related to knowledge generation, diffusion and use. The importance of the relationships between actors in the helix system has now grown and is expected to result in new ideas of high level of innovative products and services, as creativity is born through the involvement of intellectuals (university), business, society, and government that provide regulations to support the creation of creative and innovative behavior of the business actors [2]. As pointed out by [3], using the Triple Helix model of university–industry–government relations, "one can measure the extent to which innovation has become systemic instead of assuming the existence of national (or regional) systems of innovations on a priori grounds".

More recently, the Triple Helix model has been further developed and extended. As pointed out by [4] the tripartite model is no longer enough in the context of smart specialisation; in addition, the innovation users or the groups that represent the "demand-side" perspective and the consumers, together with the relevant non-profit organisations representing citizens and the workers should be strongly involved in the so-called "entrepreneurial discovery processes". In other words, the multi-level governance models that characterize the smart policy approaches should be user-oriented and include both the market and the civic society [4].

In the academic literature of the Quadruple Helix [QH] model, the fourth helix has been defined both as "a general backdrop" and as specific actors, such as users of technology and NGOs. One of these need not necessarily exclude the other, although the first interpretation could be perceived as a passive entity, while the other refers to active participators. On the contrary, the fourth helix, understood as a "creative knowledge environment", implies that society in general is activated, and here, the first interpretation coalesces with the other [5]. According to [6]," Quadruple Helix, with its emphasis on broad cooperation in innovation, represents a shift towards systemic, open and user-centric innovation policy. An era of linear, top-down, expert driven development, production and services is giving way to different forms and levels of coproduction with