

Enhancing SME innovation performance

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Valorization addendum

Knowledge valorization

Universities are powerhouses of research, but policy makers and practitioners often refrain from using academic research to its fullest potential (Nutley, Walter and Davies, 2003). This can be partially attributed to differences in communication style: Researchers typically communicate in complicated, scientific language, whereas policy makers and practitioners need to make accessible decisions in a way that can be understood by everyone (Frenk, 1992). In order to make academic research more accessible, Article 22 has been added to the regulation governing the attainment of doctoral degrees at Maastricht University (2018). It specifies that a doctoral candidate shall include an addendum about valorization to their dissertation. This knowledge valorization refers to “the process of creating value from knowledge, by making knowledge suitable and/or available for social (and/or economic) use and by making knowledge suitable for translation into competitive products, services, processes and new commercial activities”. In this research project, knowledge valorization was encapsulated in the composition of the research assignment and the project team – consisting of not only researchers, but also a policy maker from the province of Limburg and business developers from LIOF – and the close collaboration with SMEs in the province of Limburg. In this chapter, I further detail how this valorization has taken place.

Knowledge valorization process

The main practical objective attached to this research project was to examine to what extent the LimburgMakers subsidy program has structurally enhanced the competitiveness of participating SMEs. Over the course of the project, yearly reports informed all stakeholders about the research results and quarterly meetings took place between policy makers from the Province of Limburg, business developers from LIOF and the research team to exchange important aspects of the research. These included potential research avenues, content and dissemination of the questionnaires, and evaluation and communication of the results. The constant interplay between academics and practitioners benefited the research project in multiple areas: First, it ensured that the research results were relevant for industry stakeholders such as policy makers or SMEs. Identified theoretical research gaps were always cross-checked for their practical relevance. Second, the policy maker and business developers’ networks were leveraged to increase response rates for questionnaires or to find participants for the qualitative study. Third, possible explanations and theories for the results were tested for their viability by making use of the policy maker and business developers’ expertise and experience. Fourth, it enabled the wide dissemination of results: Through the policy maker and business developers’ network the findings of the research were presented at multiple SME network events and to important stakeholders in the field of SME innovation.

Knowledge valorization content

Chapter 2 guides policy makers in their search for robust evidence that innovation subsidy programs result in significant and tangible outcomes. As prior research has shown, innovation subsidies are associated with higher short-term SME R&D input and output, such as patents and external collaboration behaviour (Clarysse et al., 2009). This study shows that innovation subsidies structurally affect internal collaboration behaviour as well. Namely, the findings reveal that receiving innovation subsidies has an effect on the involvement of an SME's employees. Employee involvement is known to be a driving force behind employee satisfaction, innovation performance, firm profitability and organizational effectiveness (Andries and Czarnitzki, 2014; Mendes, 2012; Porter, 1979; Pun and Chin, 1999). These findings provide policy makers with an important new rationale to employ subsidy programs as a tool to stimulate innovation within SMEs, thereby supporting the investments of the province of Limburg in the innovation project subsidies of the LimburgMakers program and potential future programs.

Additionally, this chapter reports a positive effect of employee involvement on SME product innovation performance. In light of this result, managers can boost their innovation performance by ensuring the involvement of their employees. Prior research suggests that showing their commitment toward involvement and offering rewards for employees that display the desired behavior are the most effective ways for SME managers to stimulate employee involvement (Pun et al., 2001).

Chapter 3 provides manufacturing SMEs with a roadmap to how they can achieve a competitive advantage based on service innovations. Price pressure and decreasing product margins, caused by intensifying competition (Gebauer et al., 2005), force SMEs to combine their products with excellent services to distinguish their offerings. The results of this study indicate that collaboration between internal stakeholders and with a diverse set of external partners, such as suppliers, customers and competitors, strengthen an SME's absorptive capacity – the ability to gather and use relevant external knowledge. In turn, absorptive capacity allows the SME to achieve a competitive advantage based on service innovation and evade price pressures and decreasing margins. Therefore, policies aimed at stimulating an SME's internal and external collaboration represent an effective method to strengthen the manufacturing industry. For instance, policy makers can organize network events during which SMEs are incentivized to cooperate with customers, suppliers, competitors, universities or local government. Next to this, a companywide workshop during which employees collectively work on an innovation case can intensify the involvement of employees in innovation efforts. In the province of Limburg, the central player and venue for such initiatives could be the Brightlands Campuses, where business, research and government are intertwined through a triple helix collaboration in the world's leading locations for smart services, sustainable manufacturing, healthy food and innovative diagnostics.

Chapter 4 informs SMEs about the requirements their customers have for servitized offerings. It delivers a taxonomy of requirements for various servitization strategies. Taking the guidelines of this taxonomy into account is important, because not living up to customer requirements is one of the main determinants of failed servitization efforts (Valtakosi, 2017). SMEs can figure out how their offerings should be shaped to meet these requirements by engaging in co-creation with their customers. For instance, responsiveness could mean service within a few hours for one customer, and service within two days for another. However, this manuscript shows that only half of the SMEs in the sample engage in co-creation, despite its widely acclaimed critical role in achieving servitization success (Baines et al., 2009; Green et al., 2017; Tuli et al., 2007). Policy makers need to stimulate SMEs in this province to co-create. The Smart Services Campus is an ideal outlet to facilitate such initiatives, because co-creation is one of the pillars on which this Campus is built.

During the data collection process, two or three customer interviews took place for every SME that participated in this study. Next to the results that were aggregated and reported in chapter 4, important SME-specific insights were generated during the interviews. These insights were made available to every participating SMEs by means of a tailor-made report. An example of these insights was a customer of a software development SME mentioning that the software was too complex in its usage:

The software is installed at many farms, but many farmers tell me they stop using it after a couple of months, because it is just too complex. The program should be much easier to use, much more customer friendly. I should not need to read an instruction manual, I need to fully understand how to use it after 30 minutes of trial and error! (Customer of software development SME)

Without this PhD-study, this feedback may never have reached the software development SME, because it typically does not co-create its offerings with customers. Therefore, these specific insights further assist the 9 participating SMEs from the province of Limburg to servitize successfully.

To conclude, I would like to characterise this dissertation to a child raised by three parents: UM School of Business and Economics, province of Limburg and LIOF. Of course, the parents have had different roles – one provided daily care for the child while the others tended to their jobs – but each parent enriched the child’s upbringing with his or her own, unique life lessons and experiences, granting the infant the strongest possible foundation for the rest of its life. I hope that after reading this dissertation you acknowledge the great value that resides in this type of research collaboration.

