



INNOVATION PROCESSES IN SMES: EXPLORING THE INFLUENCE OF VARYING DEGREES OF CONTROL

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Abstract

Previous research in the field of product innovation management has focused on large firms. This is unfortunate because small and medium-sized enterprises (SMEs) have features that clearly distinguish them from their larger counterparts and also play an important role in the global economy. In addition, SMEs often have more varying control of the whole innovation process – from identification of a customer need to delivering customer value – compared to larger companies. This article addresses this research gap by exploring how SMEs with growth ambitions, and varying degree of control, can leverage their innovation process. The article outlines results from a SWOT analysis utilizing data from a multiple case study of eight SMEs. Both ‘product owning’ companies (with either in-house or outsourced manufacturing) as well as manufacturing industry subcontractors were sampled. The results show indications of the influence of varying degree of control of the innovation process – relating to different phases, how knowledge and competence are considered and being reliant on others – and how SMEs and their offerings can be considered as parts of larger systems.

Keywords: Organizational processes, Case study, Organisation of product development, SWOT, Established SMEs

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1 INTRODUCTION

Small and medium-sized enterprises (SMEs) play a very important role in the global economy, as they constitute about 99% of the total number of firms. Moreover, SMEs have, during the last five years, created around 85% of new jobs thereby providing two-thirds of the employment in the private sector in the EU. For these and other reasons, the European Commission considers SMEs as key players for ensuring economic growth, job creation and innovation in the EU. (EC, 2016) At the same time it is generally accepted that the business climate demands increasing innovativeness from companies to obtain or retain competitiveness (Cheng et al, 2012) or even a necessity for staying in the marketplace (Kline and Rosenberg, 1986). This is not least applicable for SMEs, since innovation is considered to be a significant factor for compensating disadvantages caused by their small size (Storey and Greene, 2010, Löfqvist, 2014). Despite the importance of well-functioning innovation processes in SMEs, most product innovation management research has so far focused mainly on large firms – or has failed to distinguish between large and small firms (Moultrie et al, 2007). As a comparison, special features of SMEs are well documented since more than half a century (Penrose 1959). This neglect of research on the innovation process in SMEs is unfortunate, because imposing large firms' practices on small firms is not likely to be fruitful, if the unique characteristics of small firms are not taken into account (Berends et al, 2014). In fact, research on innovation processes in SMEs has identified that these companies do not embrace activities that in large companies are considered to be fundamental for successful innovation (Scozzi et al, 2005). Potential reasons for this are that innovative developments are usually challenging for SMEs because they are subject to the "liability of smallness", i.e. compared to larger companies they generally have limited time and financial resources, smaller or non-existent R&D departments, a less multidisciplinary competence base as well as tend to use less structured approaches to innovation (Storey and Greene, 2010, Parida et al, 2012). These challenges experienced by SMEs are likely to affect the design process and design management. In addition, the product development process in SMEs – in which design is a fundamental part – is a long-neglected research area (Hörte et al, 2008) and consequently warrants increased attention. One explanation to why mainly larger companies' perspective is addressed in research on improved product development process is given in Dubberly (2004:6): At small scale, the cost of "not efficient and not repeatable" ad hoc development processes that "constantly must be reinvented making improvement nearly impossible" may be neglected, while for larger organizations improvements need to be addressed. However, if smaller companies can find ways to make efficient use of their innovativeness, despite these challenges, their advantages of being less bureaucratic, more adaptive to changes, and having more specialized knowledge (ibid) may help to develop and sustain their competitive advantage. Still, too little evidence regarding how innovation processes in SMEs relate to the internal and external factors that differentiate them from larger companies, particularly in the area of product development and design, can be found in academic publications. This aim of this paper is to contribute to a deeper understanding of innovation processes in SMEs and how these can be leveraged related to internal and external factors influencing the process. This is achieved through a multiple case study of eight SMEs, all of which conduct product innovation activities and have growth ambitions. Cases include companies that partly control their innovation process (e.g. manufacturing subcontractors that do not own the rights to the physical product, or companies that own their product and have outsourced production partly, or as a whole), as well as companies that have full control of their innovation process, from identification of customer need to delivering customer value. The study is based on empirical data from multiple sources and was guided by the following research question: How can SMEs with growth ambitions, and varying degree of control, leverage their innovation process?

2 THEORETICAL FRAMEWORK

In a study of the R&D behaviour of SMEs, Hölzl (2009) showed that high-growth SMEs are only more innovative compared to non-high-growth SMEs in countries close to the technological frontier (i.e. a classification based on the technological and economic position of the countries using a mixture of R&D and economic indicators). In other words, high-growth SMEs derive much of their drive from the exploitation of comparative advantages, sometimes present outside of the company. Internal factors (within the realm of a company) and external factors (outside) will therefore not only influence the growth of a company directly, but also indirectly. Internal awareness of external factors, such as changes

in the market (Grundström et al, 2012) or changes in the technological frontier (Hölzl, 2009), can also be considered as important conditions for growth. However, insights about external factors need to be acted upon to really make a difference, often referred to as “absorptive capacity” (Cohen and Levinthal, 1990) in the innovation management, and entrepreneurship literature. This action often has to do with existing or new offerings for existing or new customers, i.e. the innovation process resulting in varying innovation outcomes (Jacoby and Rodrigues, 2007). With this said, available empirical evidence on the relationship between innovation and firm growth is mixed, something that can be partially explained by the fact that innovation is not merely a means for growth (Hölzl, 2009). It is often pointed out as a key to successful business development, but the relationship between investments in innovation and R&D activities, and profitable long-term growth is still unclear (Rao and Coad 2008, Coad 2009, Stam and Wennberg 2009). Yet, recent research point at unclear correlation between innovation, measured as investments in R&D, and long-term rapid growth, and in some cases even negative effect (Stam and Wennberg, 2009). Instead, it appears that “the average firm” experiencing only modest growth, may grow for a number of reasons, while innovation is of crucial importance for a few extremely fast-growing firms (Rao and Coad, 2008). This was confirmed in a study of gazelle companies, where the “high growers”, were more profitable, invested more in R&D, had a larger share of turnover from new customers and new products than the “low growers” (Grundström et al, 2012). Although the claim that innovation is a determinant for growth is not supported by empirical studies on companies with average growth (Coad, 2009), other studies have shown that exceptionally fast-growing companies tend to be more innovative (Rao and Coad, 2008) and that the likelihood of growing increases with product innovation Hölzl (2009).

2.1 Characteristics of the innovation process

Crossan and Apaydin (2010) suggested a definition of innovation that indicates the broad scope of the concept, including the view of innovation both as an outcome and as a process. Since innovation as a process always precedes the outcome, efforts have been made to improve the innovation process – hoping to achieve more innovative outcomes (Howard, Culley and Dekoninck, 2008). Because the character of the innovation process changes over time it can be beneficial to separate between its constituting phases (Björk, 2011). There are consequently several models aiming to clarify key phases or components of the innovation process found in the literature. Regardless of model there are some key characteristics of the innovation process that will be essential, as highlighted by the following quote: "A perceived market need will be filled only if the technical problems can be solved, and a perceived performance gain will be put into use only if there is a realizable market use" (Kline and Rosenberg, 1986, pp. 289). Based on the reasoning above, the innovation process is in the present paper considered to consist of the following four phases: (1) Need finding, (2) Ideation, (3) Implementation and (4) Commercialization. This separation is deemed appropriate for two reasons: firstly, due to the fact that these phases are considered to offer a granularity that is appropriate for analysis of the empirical data, and secondly, because they pin-point areas that generally are considered as essential for any innovation process (regardless of the size of the company or other provider). With this said, the identified phases are not necessarily executed in a sequential manner, but in contrast iteration and overlap of the phases are often seen in practice. Here, the phases are described in more detail:

1. *Need finding*: It is the customers’ needs that will motivate them to seek benefits of a new product or offering (Danneels, 2002). If a new innovative solution fail to satisfy a need, the customers’ interest and their willingness to acquire the solution will most likely be low. For this reason, a customer orientation, i.e. listening closely to customers to meet or even exceed their needs, has during the past decade been highlighted as key for successful product development (Ericson, 2007). Christensen, Kaufman and Shih (2008, pp. 105) stress that this is a serious issue since “more often than not, failure in innovation is rooted in not having asked an important question, rather than in having arrived at an incorrect answer”.
2. *Ideation*: Ideas for how to satisfy a need are fundamental for innovation, highlighting the importance of idea generation and idea development or conceptualization. From an organizational perspective ideation can on the one hand be regarded as a way to propel an idea forward, and on the other hand as a prerequisite for good decision-making (Karlsson, 2015). Both perspectives will be influenced by the fact that an idea does not have one source of origin, but is developed from many pieces of knowledge and values combined over time (Gish and Hansen, 2013). For this reason, the interaction among individuals – and consequently also the networks of individuals

involved in the generation, development and evaluation of ideas – are considered to positively influence ideation (Kijkuit and Van den Ende, 2007). Through these social networks there is potential to get divergent viewpoints (Björk and Magnusson, 2009) e.g. through bridging different knowledge domains, to connect individuals in order to achieve increased cooperation (Obstfeld, 2005), and to reach resource sharing benefits (Ahuja, 2000), thereby positively influencing ideation as well as innovation. In the end of the conceptualization phase there should be a solution proposal described by such characteristics that ‘the difference that matters’ compared to existing products or offerings is evident, i.e. a concept (Andreasen, 2011) has been developed that will facilitate later development phases.

3. *Implementation*: Still, innovation only occurs when a creative idea or concept is put into practice (Levitt, 2002). In fact, Schilling defines innovation as “the practical implementation of an idea into a new device or process” (2010, pp. 18), a definition emphasizing that a concept needs to be further developed and realized. Implementation therefore requires a subsequent narrowing of the wide set of alternatives that was the result from the conceptualization phase, and that conceptual ideas are increasingly specified, for example in order to reach a reliable and repeatable production (Ulrich and Eppinger, 2004). In turn, this requires, for physical parts of the product or offering, embodiment and detailed design (Howard et al, 2008), as well as testing, refinement and production ramp-up activities (Ulrich and Eppinger, 2004). If this implementation is delayed, badly managed, or aborted the expected benefits of an innovative idea will not be achieved (Linton, 2002).
4. *Commercialization*: Last but not least, innovation also requires that a design has been converted into value, something that only can be achieved when the designed product or process has been introduced to a user (Redelinguys, 2000), emphasizing the importance of commercialization. Commercialization is concerned with making a process or product a commercial success (Crossan and Apaydin, 2010), something that is of great importance for innovation as it requires much time, effort and costs and therefore must be commercially viable (Jacoby and Rodrigues, 2007). Important in this phase is to consider how the new product or offer will be marketed as well as how the value will be delivered to the customer or user.

These four phases of the innovation process are expressed in general, regardless company size. However, on the one hand, many obstacles and limitations regarding innovation in SMEs are stressed in the literature (Scozzi et al, 2005), and on the other hand, characteristics of SMEs can also constitute particular strengths for product innovation (Berends et al., 2014). In the next section therefore, it is further looked into how specific characteristics of SMEs influence the innovation process.

2.2 Characteristics of SMEs and their relation to the innovation process

One often mentioned characteristic that differentiates SMEs from larger companies is the way their processes are structured and operationalized. In large companies a staged process, following a series of steps – often characterized by few iterations and rigid reviews – is a popular tool to control and intervene in projects (Cooper, 2001; Unger and Eppinger, 2011). Traces of staged processes can be found also in SMEs (Leithhold et al, 2016), although these processes are seldom formalized or routinized to the same degree (Löfqvist, 2014). One underlying reason for this informality in processes is that it is not considered as necessary since very few innovation endeavours are pursued at a time. Consequently, the systematic and persistent R&D activities that generally are considered to increase effectiveness in larger companies are practically absent in SMEs (Hözl, 2009). Also, the organizational structure distinguishes SMEs from larger companies. A dynamic-lean structure (Nooteboom, 1994) in combination with the fact that separate departments often are missing and that employees have multifunctional roles (Löfqvist, 2014) enables a holistic view for both management and employees in SMEs. However, the same set-up often results in a constant occupation with operational tasks that can lead to lack of time for strategic thinking (ibid). In fact, the lack of work flexibility and infrastructure, relating to organizational slack, has been highlighted as the most serious obstacles to innovation development in SMEs (Scozzi et al, 2005). SMEs also have limited time and resources, with the consequence that they often prioritize existing business (short term) over product innovation projects (longterm), which results in a preference for smaller improvements over more radical steps (Gulari and Fremantle, 2015). In turn, the result is often limited spread of risk and a vulnerability to discontinuity (Nooteboom, 1994). Recent research has also shown that that the resources available affect how goals are set, i.e. goals in SMEs tend to become resource-driven, step-wise and open-ended (Berends et al, 2014). In addition, limited internal resources sometimes do not suffice when innovating or conducting new product development, which leads to

SMEs getting involved in some form of open or networked innovation (Grundström et al, 2012). Last but not least, SMEs also display different behaviours compared to larger companies. For example, a high degree of flexibility (Tidd and Bodley, 2002) and effective intra-firm communication (Scozzi et al, 2005) are often highlighted as main competitive advantages for SMEs. These characteristics can on the one hand facilitate organizational learning and adaptability, but on the other hand, when combined with an ad-hoc management style (Nooteboom, 1994) and little emphasis on learning (Scozzi et al, 2005), mean a risk for a lack of structured organizational memory that can have consequences on the innovation process.

3 RESEARCH DESIGN

A case study design was chosen as it allows a holistic view and enhances deeper understanding of the phenomena under study, in this case to further understand innovation processes in SMEs and how these can be leveraged related to internal and external factors influencing the process. Moreover, the case study approach is appropriate when aiming to answer research questions of a ‘how’ or ‘why’ character, and was therefore considered applicable for this study. (Yin, 2014)

In this study, four criteria form the basis for the sampling of case companies (in line with recommendations by Eisenhardt, 1989): (1) Being an established SMEs with growth ambitions – thereby ensuring an interest in achieving innovations as well as stable business activities, facilitating analysis of innovative processes compared to younger more fluctuating businesses. (2) The company should be partaking in an innovation process, i.e. they transform customer needs and deliver value to the customer with the help of their processes. (3) The company develops and/or produces physical products, in contrast to purely services. However, their offering may be of product-service systems (PSS) character. (4) The company should have control over its innovation process (parts or whole). The forth criteria is assessed to be relevant for SMEs because a large proportion of SMEs developing and/or producing physical products are subcontractors. The criteria resulted in the sampling of eight SMEs with varying degree of control over their innovation process (see Figure 1).

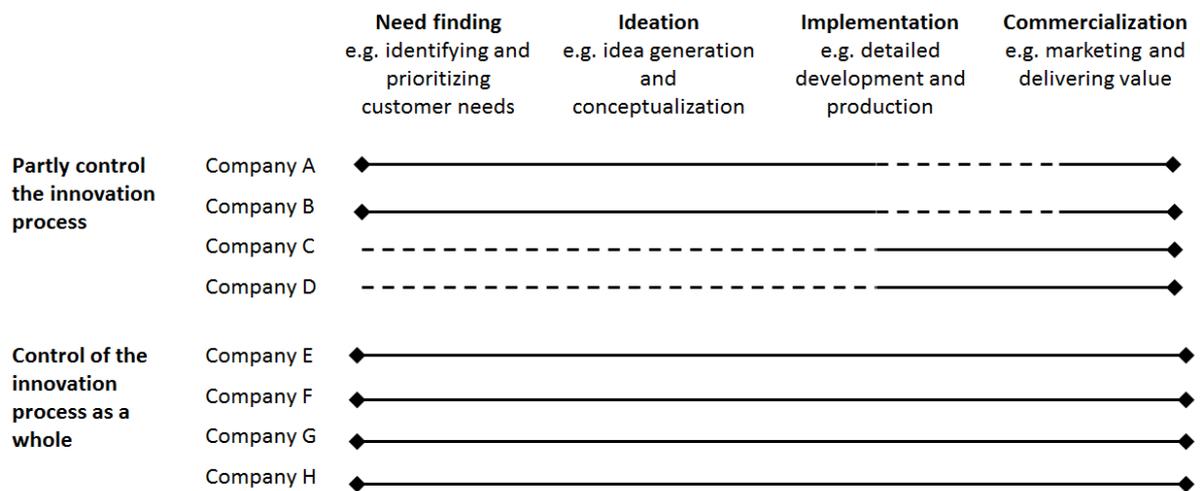


Figure 1. The case companies’ degree of control over their innovation process

Common characteristics: All selected firms are owner-managed, although this was not a criterion. All are SMEs according to the EU SME definition, i.e. less than 250 employees and turnover less than 50 M€. Notably the selection stretches from *micro-firm* (one company, with less than 10 employees) up to *small firms* (the rest of the 7 selected firms have less than 50 employees). See Table 1 for descriptions of the case companies and their offers.

Table 1. Descriptive information of sampled companies

Company	No of Employees / Turnover (2015)	Description of business
A	6 / 1,3 M€	Development, manufacturing and retailing via internet of functional clothing for children. National market.
B	14 / 3,1 M€	Develops and sell submersibles used for inspection and minor operations as well as software for reporting and documentation. Global market.
C	17 / 3,9 M€	Offers contract manufacturing in plastics; extrusion and molding of plastic products to manufacturing industry. National sales to global companies.
D	16 / 3,3 M€	Offers contract manufacturing in metals; manufacturing of metal parts (large and small dimensions with high precision) as well as trading, service, maintenance and repairing of metal tools for plastic molding. National sales to global companies.
E	35 / 4,5 M€	Delivers complete lubricating systems, components for automatic and manual lubrication, and equipment for handling lubrication, services for testing of customer applications and installation at customer site. International market.
F	9 / 2,4 M€	Technical consultants within industrial technology that develop and manufacture ultrasonic flow meters, test and trial of customer applications at own facilities and installation at customer site. International market.
G	27 / 4,8 M€	Development, manufacturing and retailing of electronic forklift (and other) special trucks. International market.
H	28 / 4,0 M€	Development and manufacturing of electric equipment, and design, manufacturing and installation of vessel subsystems. International market.

All companies participate in an executive management R&D program, established in 2011. In this program, firms from various industries take part in a group of 6-8 companies led by academics and business consultants, based on the idea of sharing experiences between business leaders with the purpose of boosting company growth. A prerequisite for participation in the program is that the owners have outspoken growth ambitions in terms of turnover. This context enables openness concerning the owner-managers' and companies' situation and allows extensive access to key informants and information for participating researchers, with high level of trust and uninhibited dialogue between researchers and company managers. One or two of the authors led, participated or observed workshop sessions, where companies meet to discuss and share experiences concerning specific growth challenges, including internal and external factors. Both as a part of, and besides this program, multiple methods for data collection were employed – including company visits, interviews with company managers and employees and secondary data (e.g. web site, brochures, newspaper articles, financial data and ownership information). This data was compiled to create rich case descriptions, which constituted the main data source in this study.

SWOT analysis, a well-established tool constructed to investigate the environment of a company through the use of four different factors, two internal and two external (Shinno et al, 2007) was used when analysing the data. The internal factors outline strengths and weaknesses whereas the external factors outline opportunities and threats (Houben et al, 1999). By increased understanding of how strengths can be used to realize opportunities and how weaknesses can enlarge threats or slow down progress, a SWOT analysis enables insights on how an enterprise can maintain or improve its position in its environment (Helms and Nixon 2010).

The following steps formed the analysis. First, extracts from the data concerning factors that influence or is influenced by the innovation process were compiled in a spreadsheet together with meta-data regarding data source and part of process (i.e. the four innovation process phases). In a second step, extracts were provided with “labels”, i.e. a digest of the essence. The labelling strictly derived from the extract in order to come as close as possible to the original meaning, and strived to use the same words

as used in the empirical data. One data extract could result in multiple labels, i.e. the extract was sometimes possible to decompose. In the third analysis step each label was categorized as a strength, weakness, opportunity or threat, in accordance with the SWOT factors. Fourth, clustering of the labels resulted in the identification of overarching influencing factors.

The categorization and clustering was conducted by one of the authors and thereafter discussed with all authors to achieve consistency and reliability. One of the authors had not participated in the data collection, and could therefore take the role of external analyst (as suggested by e.g. Creswell, 2009). Even unconscious bias could otherwise appear if a researcher has in-depth knowledge about case data. Hence, the advantage of having one “outside” observer was used to improve the overall validity of the research.

4 EMPIRICAL FINDINGS

The analysis of the empirical data enabled the identified internal factors (strengths and weaknesses) and external factors (opportunities and threats) to be put in relation to the companies’ degree of control over their innovation process, as well as the different phases in the innovation process. In order to identify patterns in the data the identified labels were distributed to the different phases of the innovation process distinguishing between companies with control of the innovation process in its entirety or partly. While the distribution of strengths, weaknesses, opportunities and threats do not necessarily imply relative importance, they reflect which issues the company representatives chose to raise when describing their environment and situation.

The results reveal that strengths dominate all phases of the innovation process, regardless the level of control (partly or whole). In fact, when the results from all case companies are combined strengths exceed 50% of the labels in every phase. There is a relatively lower proportion of strengths in the Need finding (52%) and Commercialization (59%) phases compared to Ideation (62%) and Implementation (78%) phases. As can be expected external factors were found more frequently in the Need finding and Commercialization phases – Opportunities and Threats in the Need finding phase and Opportunities in the Commercialization phase. However, when taking the degree of control over the innovation process into consideration it is revealed that the companies experience different situations. In the Need finding phase, companies that have control over their innovation process as a whole highlight more opportunities whereas companies that are partly in control bring forward threats to a higher degree. In the Commercialization phase, it seems that companies that partly control the innovation process predominantly emphasize external factors, and in particular opportunities, in comparison to companies having control of their innovation process as a whole. The comparison between the overarching influencing factors for the different company groups (part vs. whole) revealed some significant differences and notable similarities (see Table 2).

Table 2. Differences and notable similarities in strengths, weaknesses, opportunities and threats between companies with varying degree of control over their innovation process, identified overarching influencing factors in italics

Strengths	Weaknesses
Companies that are partly in control of their innovation process highlight the <i>possibility to influence development processes</i> (i.e. at the customer). This factor was not mentioned in this regard by companies that control the innovation process as a whole. Noteworthy is also that both company groups bring up <i>internal intentions</i> (such as their own willingness or seeing potential within certain areas) as strengths.	Companies that partly control their innovation process highlight issues relating to <i>process rigidities</i> , something that was not brought forward to the same degree by companies that control the innovation process as a whole. Moreover, companies in full control of the innovation process mention <i>lack of internal competence</i> , whereas companies that are partly in control highlight risks relating to <i>dissemination of knowledge</i> – both issues relate to knowledge and competence, but in different ways.
Opportunities	Threats
The <i>possibility to influence development processes</i> (i.e. at the customer) was identified as an opportunity for companies that are partly in control of their innovation process. This was not the case for companies that control the innovation process as a whole.	<i>Reliance on others</i> emerged as a threat for companies that have control of the innovation process as a whole. In contrast, companies that partly control their innovation process seem to emphasize threats more in relation to <i>market characteristics</i> (e.g. presence and sales cycles).

On a more detailed level the results show that companies that have outsourced their manufacturing (Company A and B) highlight a larger proportion of threats and a smaller proportion of strengths compared to companies that have in-house manufacturing (including manufacturing industry subcontractors C and D and 'product owning' companies E, F, G, and H with in-house manufacturing). The weaknesses stemming from process rigidities e.g that production needs to be planned long in advance since third-party producers need time to prepare their production, is experienced by companies partly in control of the process (companies A, B, C, D). The possibility to influence the development processes (often the customers' development process) was found to be brought up both as strengths and opportunity by companies (A, B, C, D). This is in contrast to companies that control the innovation process as a whole (E, F, G, H), which highlight being reliant on others as a threat or even as a weakness, in terms of e.g. risking dissemination of knowledge.

5 DISCUSSION AND CONCLUDING REMARKS

In order to help SMEs in developing their design practices it is essential to add to the limited theory regarding product development and innovation processes in small enterprises (Löfqvist, 2014). The aim of this paper is to contribute to a deeper understanding of innovation processes in SMEs and how these can be leveraged related to internal and external factors influencing the process. This study highlights some aspects relating to varying degree of control of the innovation process, showing that different degree of control might require different approaches, e.g in how to relate to customers' development processes or reliance on partners or supplier. This makes the innovation process of SMEs different from larger organizations, that are less sensitive to changes in the environment and where control and structure of the product development is focused in order to become more efficient (Dubberly, 2004). Although previous research indicates that SMEs only occasionally make use of structured models (Leithold et al, 2016) this study shows that the division of the innovation process in four phases provided a relevant framework since strengths, weaknesses, opportunities and threats could be identified in all four phases. Still, in contrast to theory on innovation processes that often distinguish the supply side from the demand side, this study reveals a connection between Need finding and Commercialization. This connection indicates that SMEs often identify needs in the selling situation, or the other way around, that needs are identified within the sales process and taken back to the company's development engineering activities. It also indicates that market and specific customer needs are gathered and secured before innovation activities are implemented. A strong customer focus was evident not only in these two phases but also in the other intermediate phases (cf Danneels, 2002). This observation points to the importance of regarding the SME innovation process as a whole (Kline and Rosenberg, 1986). Having a holistic view can be even more critical for SMEs compared to for larger firms that have specific and material R&D budgets. Results indicate that SMEs' varying degree of control over their innovation process has implications for how knowledge and competence are considered, as well as the perception of being reliant of others. Companies that partly control the innovation process experience weaknesses in relation to process rigidities resulting in an early narrowing of alternatives. According to Ulrich and Eppinger (2004) this might be an obstacle to reach a reliable and repeatable production. Companies that fully own their production, experience less rigidity since they can make later and more flexible decisions concerning their manufacturing (Tidd and Bodley, 2002; Unger and Eppinger, 2011). The factors "possibility to influence development processes" and "reliant on others" reveal that SMEs often are parts of a larger system involving other actors (e.g. customers, partners, suppliers etc.). As a consequence, companies that are partly in control might need to be more formalized in their innovation activities since they clearly interact with external parties. A certain level of formalism and knowledge about system development methodology might be useful for SMEs with product innovation activities, especially those that partly control the process. Though SMEs suffer from by the "liability of smallness" (Storey and Greene, 2010, Parida et al, 2012) and need to adapt and be responsive to its environment, it was surprisingly to note that the SWOT analysis showed an overrepresentation of strengths in how the company representatives perceive their situation. There can be multiple explanations, such as that strengths are much easier for respondents to highlight, compared to internal weaknesses, external opportunities or threats. Moreover, that all sampled companies have growth ambitions can bias the data towards strengths, or and it can indicate one of the most important strengths – a strong conviction and a belief in the own ability to succeed – indicating a clear "play to win" attitude. In fact, this study is in line with a previous observation that high-growth SMEs have a self-perception of being in control, both

in regards to on-going market trends and focus of the innovation process (Grundström et al, 2012). A final remark is that even as the neglect of research on the innovation process in SMEs is recognized, with enlightening illustrations on their specificities (Scozzi et al, 2005), this study gives at hand that SMEs managing their innovation processes, controlled partly or as a whole, do not operate as solitaires but interact with other market players, intensively as the contract manufacturers strive to do, or at certain points relating to Need finding or Commercialization, as product-owning companies do. A first attempt to answer the stated research question is therefore that SMEs with growth ambitions can leverage their innovation process by 1) viewing it holistically, 2) being aware of affecting internal and external factors, particularly relating to Need finding or Commercialization, and 3) reflecting on its role played in the larger system. However, for the specific SME the answer to how this will be achieved depends on the degree of control over the innovation process. From a theoretical point of view, the results of this study emphasize the importance of viewing the innovation process of SMEs not as an isolated phenomenon but as a process frequently influenced by external factors or as a part of a system.

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