Strategizing, Absorptive Capacity and Ambidexterity in SMEs

Introduction

For small and medium sized enterprises (SMEs), their ability to innovate is of crucial importance in order to achieve long term success in both product and service markets (Clark, Staunton, & Rogers, 1993; Rosenbusch, Brinckmann, & Bausch, 2011). This ability is shaped by their aptitude to both create new innovations (exploration) and to capitalize on these innovations (exploitation) (Jansen, 2005; Prajogo & McDermott, 2013), a combination that is conceptualized as an organization's ambidextrous ability. Ambidexterity needs to be nourished and demands that organizations invest resources in building and maintaining it. This paper claims that CEOs' involvement in the strategic process enables SMEs to allocate sufficient resources to building their ambidextrous ability, as well as to allocate resources to organizational capabilities such as its absorptive capacity, which further foster ambidexterity. We add to the academic literature by expanding the understanding of the drivers of ambidexterity in SMEs.

-- *Insert figure 1 about here* --

Theoretical Overview and Hypothesis Building

Ever since the conception of the distinction between explorative and exploitative innovation (March, 1991) there has been a debate on whether organizations should focus one type of innovation or embrace both simultaneously. Although in the early years of this debate the opinion leaned towards a situation in which companies should choose either of the two innovation modes, it has become increasingly clear over the last couple of years that firms should embrace both types of innovation (Jansen, Van Den Bosch, & Volberda, 2006; Prajogo & McDermott, 2013). Focusing solely on exploration might cause an inability to capitalize all

potential benefits of a firm's investments in innovation. Moreover, such a strategy entails a large risk as exploratory innovations are often very costly while success is not guaranteed (Lubatkin, Simsek, Ling, & Veiga, 2006). Conversely, focusing solely on exploitation might cause firms to forego long term opportunities by concentrating too much effort into reaping short-term returns on their innovations (Auh & Menguc, 2005). Firms might then run the risk that a presumed steady income stream evaporates when these innovations become obsolete (Lubatkin et al., 2006).

The potential success firm's reap using an ambidextrous innovation approach has been well documented. Not only do they outperform their explorative- or exploitative-based counterparts, they also are able to mitigate the volatility of innovation success without being bogged down by an inability to explore new innovative options (He & Wong, 2004). However, employing an ambidextrous innovation mode also results in specific challenges. As a firm must manage tensions, contradictions and trade-offs (Chang, Hughes, & Hotho, 2011; Jansen et al., 2006), they are in need of sufficient organizational capabilities and resources. One of the most important capabilities is the one to gather and utilize knowledge (Jansen, 2005). Cohen & Levinthal (1990) state that innovation is related to a firm's ability to manage, maintain, and create knowledge, and it is shaped by combining internal and external knowledge in novel ways (Kogut & Zander, 1992). This capability is conceptualized as a firm's Absorptive Capacity (ACAP) (Cohen & Levinthal, 1990; Zahra & George, 2002), and it enables the firm to gather the information required to get insight in and manage the processes associated with an ambidextrous innovation mode. Therefore we posit that:

H1: SMEs having a high ACAP are more likely to employ an ambidextrous innovation mode.

Winter (2003) makes the distinction between first-order and higher-order dynamic capabilities indicating that first-order dynamic capabilities are characterized as organizational

routines that try to identify *a priori* responses to changes in the organization's environment. Higher-order dynamic capabilities have in essence the same problem-solving nature but allow for more flexibility in that they provide the tools to find the solution instead of already providing a one size fits all solution. However, to build these higher-order dynamic capabilities, organizations needs to devote a higher amount of their resources to their ACAP (Winter, 2003). In particular for SMEs, this might be challenging, as they often suffer from a resource shortage and an inability to develop their capabilities (Verhees & Meulenberg, 2004). Therefore a conscious effort to actively frame their organization in such a way that resources and capabilities are fostered becomes of vital importance.

Strategy enables firms to make effective and efficient use of their resources (Ansoff, 1991). Strategy includes setting long term goals, implementing actions to reach these goals and evaluating actions taken post hoc (O'Regan & Ghobadian, 2004; Stonehouse & Pemberton, 2002). In general the perception exists that SMEs are hardly engaged in long-term strategizing and are therefore largely dependent on *ad hoc*, short term, action-oriented thinking by their management as well as employees (Verreynne, Meyer, & Liesch, 2014; Wang, Walker, & Redmond, 2007). However, upper echelon theory dictates that the nature of a firm is shaped by the characteristics of its managers (Hambrick & Mason, 1984) and that a firm's strategic behavior takes on the idiosyncrasies of its decision makers (Hambrick, 2007; Hambrick & Mason, 1984). Therefore a CEO's active engagement in the different phases of the strategy process, namely initiation, planning, implementation and evaluation (Wooldridge & Floyd, 1990), is of vital importance to frame resources and capabilities and to build organizational capabilities such as ambidexterity.

H2: SMEs in which the CEO is actively engaged in the strategic process are more likely to employ an ambidextrous innovation mode.

A similar rationale can be employed to make the link between a CEO's involvement in a firm's strategic process and a firm's ACAP. The latter can also be classified as higher order organizational capability (Zahra & George, 2002) that needs to be fostered by organizations allocating sufficient resources to its development. Therefore we hypothesize that:

H3: A CEO's involvement in the strategic process has a positive effect on a firm's ACAP.

We hypothesize that strategizing has a positive effect on innovation (H3) as well as ACAP (H2). At the same time our hypotheses state that ACAP has a positive effect on ambidexterity (H1). This suggests that the relationship between strategizing and innovation could be mediated by a firm's ACAP. We do not expect however that ACAP is the only capability that needs to be developed. For example networking capabilities, human resource capabilities and financial capabilities are also deemed to play a role in the creation of innovation in SMEs. As there are potentially more mediators, we expect that the effect of strategizing a firm's ambidextrous capability is only partially mediated by a firm's absorptive capacity. The resulting hypothesis is as follows:

H4: The relationship between a CEO's active engagement in the strategic process and a firm's ambidexterity is partially mediated by a firm's ACAP.

Method

To test the four hypotheses, a sample of 3,700 Dutch SMEs in the manufacturing sector was randomly selected using the REACH database. The total number of questionnaires returned was 366, resulting in a response rate of 9.8 percent which is in line with response rates gotten in similar studies.

Ambidexterity was measured using a scale developed by Jansen et al. (2006) measuring both exploratory and exploitative innovation. To create an ambidexterity measure, several methods are provided by literature (Jansen, Tempelaar, Van den Bosch, & Volberda, 2009). We chose to multiply the explorative and exploitative innovation scores (Gibson & Birkinshaw, 2004; J. J. Jansen et al., 2009). Researchers have however also indicated that not only the cross product effect of exploratory and exploitative innovation should be used, but that the balance between both can also be indicative of the ambidexterity of an organization (He & Wong, 2004). We therefore developed an additional measure that includes both a cumulative and a balance factor. To compute this balance factor we subtracted a firm's explorative innovation score from its exploitative innovation score. This leads to a score ranging from 6 to 0 (real numbers) were 6 indicates a maximum imbalance and 0 indicates a score of perfect balance. We reversed this item to make it fit our regression model. As such the balance score can dampen or enhance the effect of an organization's ambidextrous innovation ability.

Absorptive Capacity was measured using an adapted form of the scale first developed by Jansen, Van Den Bosch, and Volberda (2005). As this scale has been developed with respect to large organizations, we omitted some items which were clearly targeted at a larger organizational setting (Wales, Parida, & Patel, 2013) such as the item targeted at inter-subsidiary communication.

The scale to measure a *CEO's strategic involvement* was adopted from Machold, Huse, Minichilli, and Nordqvist (2011). This 4-item scale measures the engagement of the firm's manager in strategy initiation, long term strategic planning, strategy implementation and strategy evaluation.

Results

Our estimation results confirm all four hypotheses: ACAP has a positive effect on an organizations ambidexterity (H1). A CEO's strategic involvement has a direct positive effect on both an organizations ACAP (H2) and ambidexterity (H3) and ACAP partially mediates the direct relation between CEO involvement and organizational ambidexterity (H4). These results hold for both measures of ambidexterity. Table 1 gives a full overview of the estimation results.

-- *Insert table 1 about here—*

Conclusion

This paper illustrates that a CEO's active engagement in the strategic process has clear benefits for SMEs as it increases an SMEs knowledge management capabilities as well as its ambidextrous capabilities. As such, we add further evidence to the importance of CEOs' involvement in the strategic process of SMEs and underpin the notion that if firms want to establish a strong ambidextrous innovation mode they should make a conscious effort to devote time and resources to building this capability.

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Table 1: Results Regression Analyses[1][2][3]

Tables and Figures:

[1] These results were obtained by building a mediation model using the PROCESS application in SPSS developed by Preacher and Hayes (2008).
[2] Model 1 dependent: Absorptive Capacity; Model 2 dependent: ambidexterity (explorative innovation X exploitative innovation); Model 3 dependent: ambidexterity (explorative innovation X exploitative innovation), including mediation effect; Model 4 dependent: ambidexterity ((explorative innovation X

Dependent Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Independent Variables (Direct Effect)					
CEO's Involvement in Strategic Process	.2464**	1.679**	.873**	4.886**	2.539**
Absorptive Capacity			3.168**		9.260**
Mediating Path (Indirect Effect)					
Strategizing on Innovation through ACAP			.781**		2.286**
Controls					
Age	.000	-.008	-.061	-.020	-.123
Size	.000	-.002	.061	-.009	-.168
E. Competition	-.010	.001	.019	-.121	-.060
E. Growth	.125	.292**	.264**	.937**	.824**
E. Dynamism	.008	.103	.052	.342	.297
High-tech Industry	-.017	.074	.012	.503	.746
R-Squared	***.191***	***.203***	***.335***	***.179***	***.290***
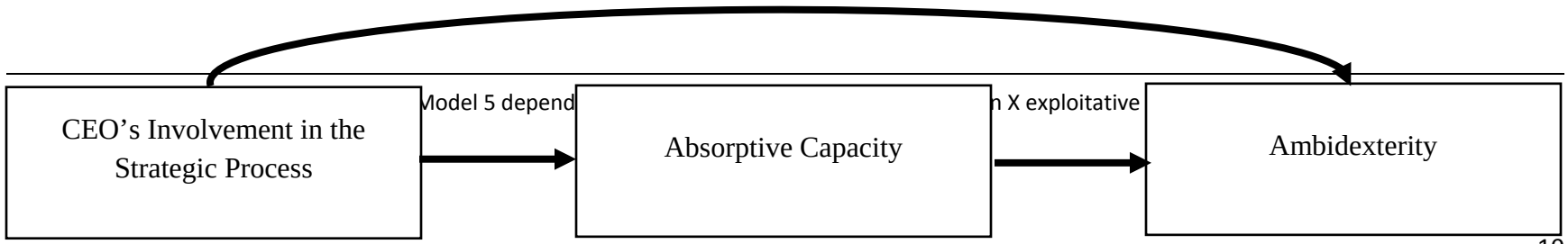
Figure 1: Conceptual Model