THE IMPACT OF DYNAMIC CAPABILITIES ON SME SUSTAINABLE PERFORMANCE

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ABSTRACT

This paper addresses the debate on the ability/inability of SMEs to balance social, environmental and economic objectives by integrating insights from the dynamic capabilities literature. Using unique survey data from 297 Dutch SMEs, we propose that integrative dynamic capabilities simultaneously drive all three pillars of sustainability in SMEs.

INTRODUCTION

To add to the sustainable development of the planet, businesses need to embrace corporate sustainability, which means that they must integrate economic, ecological and social goals into their short and long-term practices (Dyllick & Hockerts, 2002). Corporate sustainability has long been perceived as the domain of large corporations, while the significant contribution of SMEs to sustainable development has received less attention (Bos-Brouwers, 2010).

Most previous studies lack an explanation of how environmental and social goals can be achieved in SMEs alongside stable economic outcomes. Research that does address this issue has reported conflicting results. On the one hand, it is argued that SMEs have limited and ad-hoc views on sustainability (Hockerts & Wüstenhagen, 2010). Moreover, due to their financial, human and operational resource constraints, establishing new resources and capabilities for sustainability is costly for SMEs. Addressing corporate sustainability may therefore increase their cost burden and even lead to a loss of competitiveness in the market (Torugsa et al., 2013). On the other hand, some empirical findings suggest that SMEs can act as drivers of all three pillars of sustainability simultaneously due to their idealism, flexibility and innovativeness (Aragon-Correa et al., 2008).

The question of whether and how SMEs can overcome their resource constraints and develop the necessary enabling organizational capabilities to drive all three pillars of sustainability simultaneously remains unexplored. Here, we apply insights from the dynamic capabilities literature to explain how SMEs can simultaneously drive their social, environmental and economic performance. Due to the rapidly changing and unpredictable nature of sustainability, we propose that corporate sustainability requires constant adjustments which can be enabled by dynamic capabilities (Arend, 2014). This paper explores and tests this proposition, suggesting that in the specific context of SMEs, integrative dynamic capabilities are of major importance.

LITERATURE AND HYPOTHESES

Corporate sustainability research has recently applied the dynamic capabilities view. Following Ambrosini and Bowman (2009), we define dynamic capabilities as organizational processes that intentionally modify, change and renew a firm's existing resource base. Research has

suggested that dynamic capabilities can be used to understand corporate sustainability, which is dynamic, complex and characterized by constant and unpredictable change (Arend, 2014). To deal with this complex environment, companies need to be flexible and adaptable, which can be achieved through dynamic capabilities (Arend, 2014).

The current literature is unclear about the relationship between dynamic capabilities and corporate sustainability in SMEs. There are several explanations for this. First, existing research considers different forms or types of dynamic capabilities, resulting in incomplete and even contrasting findings. Second, none of the studies identified focus on the effects of dynamic capabilities on all three pillars of sustainability simultaneously. Third, existing research focuses primarily on dynamic capabilities for resource building in large corporations. It is thus unclear which kinds of dynamic capability are important in the context of SMEs. In order to address these gaps in the literature, the following sections explore which dynamic capabilities are important for all three pillars of sustainability in SMEs.

Dynamic capabilities driving corporate sustainability in SMEs

Some dynamic capabilities may be more important than others, depending on specific firm situations (Ambrosini & Bowman, 2009). We argue that in the specific context of SMEs, integrative dynamic capabilities are particularly important. Integrative dynamic capabilities refer to processes that enable the firm to integrate assets and resources, resulting in new resource configurations (Ambrosini & Bowman, 2009). We distinguish between external and internal integrative dynamic capabilities.

External integrative dynamic capabilities relate to processes that integrate sustainability-related resources and capabilities of parties outside the organization. These processes enable SMEs to address their sustainable performance in two ways. First, they assist firms to constantly integrate the creative and practical sustainability knowledge of their stakeholders (Ayuso et al., 2006). This enables SMEs to address corporate sustainability at lower costs as they do not need to develop all knowledge from scratch or ‘reinvent the wheel’. Second, external integrative dynamic capabilities increase the effectiveness of sustainability initiatives. They enable SMEs to continuously adapt sustainability initiatives to the preferences of consumers, suppliers and local communities, which can in turn increase the effectiveness and market performance of these initiatives (Dangelico et al., 2017). Thus, we arrive at our first hypothesis:

Hypothesis 1: External integrative dynamic capabilities are positively related to the social, environmental and economic performance of SMEs

Internal integrative dynamic capabilities relate to processes that integrate resources and capabilities of individuals within the organization. These processes enable SMEs to address their sustainable performance in two ways. First, they facilitate integration among employees and departments, enabling the continuous exchange of knowledge about practices and resources. This not only results in a decrease in duplicated efforts, but also enables a holistic and low-cost solution to corporate sustainability (Daily & Huang, 2001). Second, internal integrative dynamic capabilities assist SMEs in effectively executing corporate sustainability as they give individual employees the confidence to invest in collective activities such as sustainability (Kitazawa & Sarkis, 2000). Thus, we arrive at our second hypothesis:

Hypothesis 2: Internal integrative dynamic capabilities are positively related to the social, environmental and economic performance of SMEs

Managerial attributes influencing integrative dynamic capabilities in SMEs

The managerial perspective on dynamic capabilities proposes that owners/managers play an important role in the development of dynamic capabilities as they direct operations, decide how resources are to be allocated and sense new opportunities (Augier & Teece, 2009). We argue that two managerial attributes are important for the development of dynamic capabilities in SMEs.

First, transformational leadership is important for the development of internal integrative dynamic capabilities. Transformational leaders build collaborative relationships with their team members, which enables them to facilitate a climate of collaboration and social support in the organization (Gooty et al., 2009). Transformational leaders are aware of the benefits of collaboration in overcoming obstacles and will thus see a greater need to develop processes that internally integrate employees. Therefore, we expect that owners/managers who exhibit transformational leadership will be better able to drive and devote more resources to internal integrative dynamic capabilities. Thus, we arrive at our third hypothesis:

Hypothesis 3: Transformational leadership is positively related to internal integrative dynamic capabilities

Second, the owner/manager's perception of sustainability is important for the development of external integrative dynamic capabilities. Sharma (2000) proposed that owners/managers who perceive environmental issues as a threat do not feel a need to change their organization or devote resources to the acquisition and implementation of resources that achieve environmental goals. Barrales-Molina et al. (2010) found that if owners/managers feel the need to adapt their organization to the external environment, they will promote the generation of dynamic capabilities. Combining these insights, we argue that owners/managers who perceive sustainability as a threat will not feel the need to change their organization, which will, in turn, lead them to direct fewer resources to dynamic capabilities related to sustainability. This leads to our fourth and final hypothesis:

Hypothesis 4: The owner/manager's perception of sustainability as a threat is negatively related to external integrative dynamic capabilities

METHOD

We collected primary data in a carefully designed survey. The population of this study included Dutch-owned small and medium-sized enterprises (5 to 500 employees) in the province of Friesland. We acquired a random sample of 1,500 SMEs and identified the director or senior manager of each company, collecting data in two waves between May and July 2017. In total, 333 firms responded to our survey, with a 20% response rate, which is sufficient for a business mail survey. A comparison of responding to non-responding firms indicated no significant differences in firm size, age and sector. We used several recommended procedural methods to reduce the risk of common method bias. Harman's single-factor test and CFA suggested that common method bias is unlikely to be a problem in our data.

We adopted existing measures from the literature to assess our constructs. Transformational leadership was measured using the Global Transformational Leadership scale (Carless et al., 2000). The manager's perception of sustainability was measured using an adapted version of Sharma's (2000) measure of managers' perceptions of environmental issues. In line with previous research (e.g. Borch & Madsen, 2007), we measured internal integrative dynamic capabilities using a generic measure of employee integration from Den Hartog et al. (2007). External integrative dynamic capabilities were determined by adapting Dangelico et al.'s (2017) measure of dynamic capabilities for external environmental resource integration. We determined social performance using four items from Martinez-Conesa et al.'s (2017) measure of SME social performance in the local community. Environmental performance was measured using six items from Martinez-Conesa et al.'s (2017) measure of environmental performance in SMEs, and economic performance was indicated by the firm's average annual turnover.

We included several sets of variables to control for alternative explanations of the relationships predicted in our model. First, we controlled for organizational size and age, industry types and family ownership. Second, we controlled for the age, gender, education level and tenure of the owners/managers.

RESULTS

We tested our theoretical model using structural equation modelling techniques, applying AMOS graphics 7.0. The structural model provided a good fit to the data (with $\chi^2(12) = 35.94$, CFI = 0.96, RMSEA = 0.08, NFI = 0.95, and SRMR = 0.03). We discuss the findings below.

Hypothesis 1 was supported – the path coefficient from external integrative dynamic capabilities to social performance was positive and significant ($\beta = 0.34$, $p < 0.01$), as was the path coefficient to economic performance ($\beta = 0.12$, $p < 0.01$) and the path coefficient to environmental performance ($\beta = 0.39$, $p < 0.01$). Hypothesis 2 was not supported – the path coefficients from internal integrative dynamic capabilities to social performance ($\beta = 0.08$, ns) and economic performance ($\beta = 0.01$, ns) were insignificant, while the path coefficient to environmental performance was significant but negative ($\beta = -0.12$, $p = 0.02$). Hypotheses 3 and 4 were both supported – the path coefficient from transformational leadership to internal integrative dynamic capabilities was positive and significant ($\beta = 0.37$, $p < 0.01$) and the path coefficient from the owner/manager's perception of sustainability as a threat to external integrative dynamic capabilities was significant and negative ($\beta = -0.31$, $p < 0.01$).

As a test of robustness, we performed several additional analyses. First, we tested an alternative model, including the direct relationships between leadership characteristics and sustainable performance. Second, we estimated our model using an OLS estimation approach. Third, we tested whether our results remained robust for an alternative measure of the owner/manager's perception of sustainability. Fourth, we tested for non-linear relationships between our variables of interest. The estimation results of the robustness tests did not provide different estimates from the SEM analysis or indicated any significant non-linear relationships.

DISCUSSION

The results of this study advance the debate about corporate sustainability in significant ways. First, our framework extended current research by addressing whether and how SMEs can develop the necessary capabilities to simultaneously drive social, environmental and economic performance. We found that external integrative dynamic capabilities positively related to all three

pillars of sustainability. Second, the insignificant and negative effects of internal integrative dynamic capabilities, a finding contrary to our hypothesis, is intriguing, especially considering the dominant view in the corporate sustainability literature that employee cooperation is an important driver of corporate sustainability. The findings add to the corporate sustainability literature by highlighting the ambiguous role of stand-alone internal integration processes in corporate sustainability. In contrast to the conclusions of Arend (2014), our results imply that general dynamic capabilities may not be sufficient to drive corporate sustainability in SMEs. Third, our findings nuance previous dynamic capability frameworks. Our results show that SMEs that possess external integrative dynamic capabilities have an important advantage in relation to sustainable performance, while possessing internal integrative dynamic capabilities does not provide such an advantage. Fourth, our study is among the first to develop and test in detail the indirect links between owners/managers and all three pillars of sustainability in SMEs. We found that while managerial attributes may not always be directly linked to all three pillars of sustainability in SMEs, there are indirect links through dynamic capabilities.

There were several limitations to this study, which point to potential areas for future research. First, this study was constrained by its time frame and sample. Future research could increase the sample size and include country, culture and industry effects. Additional research should consider developments in sustainable performance and the long-term effects of dynamic capabilities. Second, driven by theory, we adopted a meta-level view of the organization. Additional research should consider the dynamics of organizational capabilities and sustainable performance.

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