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Entrepreneurial orientation pathways to performance: A fuzzy-set analysis☆

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ABSTRACT

Most prior research on entrepreneurial orientation (EO) aggregates its features into a gestalt construct to investigate its influence on firm performance. This study deconstructs EO into innovativeness, proactiveness, and risk-taking dimensions and focuses on the causal mechanisms by which those factors collectively affect performance. By drawing on the resource-based view of the firm and its dynamic capabilities extension, the study identifies multiple paths of complex causal recipes that can lead to certain organizational capabilities, competitive advantages, and performance. To do that, the study uses fuzzy-set qualitative comparative analysis (fsQCA), a technique that provides a holistic view of the examined interrelationships, compared to traditional net effect approaches that assume symmetric and linear relationships among variables. The study provides key conclusions and insightful implications for managers and researchers.

1. Introduction

Firms are under constant pressure to develop new product offerings that match customer needs better than their competitors (Yalcinkaya, Calantone, & Griffith, 2007). The literature suggests that adopting an EO may help firms in this regard (Soriano & Huarng, 2013). EO refers to the philosophy and decision-making processes that guide a firm's activities and encompasses values and behaviors such as innovativeness, proactiveness, and risk taking (Covin & Slevin, 1989).

Yet although research provides substantial evidence relating EO possession to firm performance, little understanding exists of how EO influences performance (Zahra, Sapienza, & Davidson, 2006). Most studies merge the components of EO into a combined gestalt construct when examining its direct link to performance (Wu, 2013) or the role of mediating variables in this link (Li, Wei, & Liu, 2010). However, a firm can simultaneously present high levels of innovativeness and/or proactiveness and relatively low levels of risk taking; such variances between the components are essential for understanding the role of EO in explaining firm outcomes (Hughes & Morgan, 2007). Further, a review of the literature reveals that although some studies examine the links between the different dimensions of EO and firm performance (Theoharakis & Hooley, 2008), no research investigates the alternative complex combinations (i.e., causal recipes) of the individual dimensions of EO that lead to high performance.

In seeking to address these shortcomings, this study draws on the resource-based view (RBV) and dynamic capabilities (DC) theories to investigate the multiple pathways of complex antecedent conditions by which EO components facilitate product development capabilities, new-product advantage, and performance (Fig. 1).

2. Theoretical background

2.1. RBV theory

The RBV theory envisions the firm as a unique combination of resources and capabilities, which serve as sources of competitive advantage and superior performance (Peteraf, 1993). Resources are tangible or intangible assets that firms use to conceive of and implement their strategies (Peteraf, 1993); capabilities are embedded, complex bundles of skills and processes that enable firms to deploy resources (Eisenhardt & Martin, 2000).

EO refers to a firm's strategic orientation, reflecting the decision-making styles, practices, and methods that direct its activities (Lumpkin & Dess, 1996). An entrepreneurial firm engages in product-market innovation, assumes risks, and has an opportunity-seeking perspective (De Clercq & Zhou, 2014). Accordingly, the core components of

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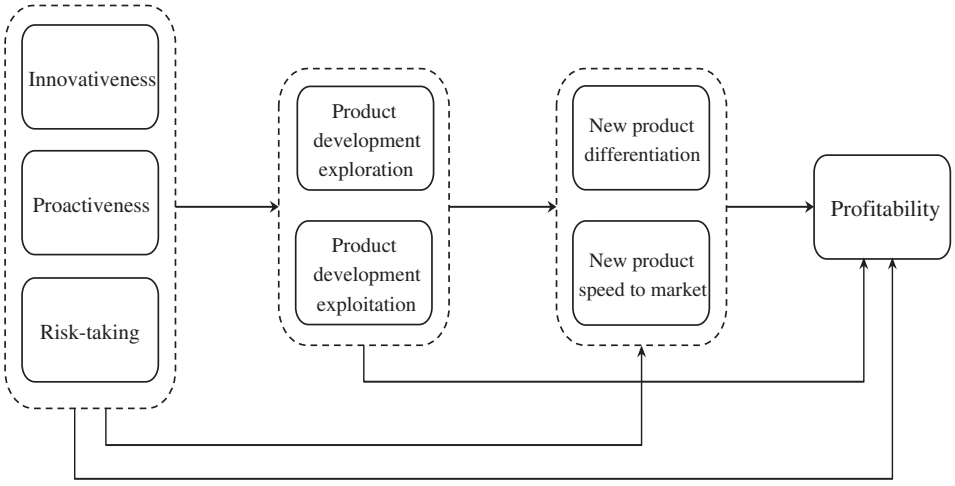

Fig. 1. Conceptual model.

EO are innovativeness, proactiveness, and risk taking (Covin & Slevin, 1989). Innovativeness reflects the firm's tendency to embrace new ideas, favor change, and encourage experimentation (Hurley & Hult, 1998). Proactiveness conveys a forward-looking perspective that aims to spot, anticipate, and act on future market changes (Li et al., 2010). Risk taking reflects the firm's willingness to take bold actions and devote resources to pursue opportunities with uncertain outcomes (Lumpkin & Dess, 1996). Thus, innovativeness, proactiveness, and risk taking embody a set of values and beliefs that shape how the firm intends to conduct business and compete (Hughes & Morgan, 2007). As such, they serve as key strategic resources that guide the firm's attempts to achieve superior performance.

2.2. DC theory

The DC theory suggests that possession of resources is a necessary but insufficient condition for value creation (Newbert, 2007) and maintains that the capabilities through which firms develop and deploy resources, rather than resources per se, help create a competitive advantage and enjoy superior performance (Morgan, Vorhies, & Mason, 2009).

Exploration and exploitation capabilities can serve as the internal processes through which firms deploy innovativeness, proactiveness, and risk taking to match their market environment and facilitate the development of competitive advantage (Eisenhardt & Martin, 2000). Product development explorative capabilities entail pursuing new product development skills, processes, and knowledge, whereas product development exploitative capabilities involve refining and extending existing product development skills, technologies, and paradigms (Atuahene-Gima, 2005; Cui, Walsh, & Zou, 2014). Thus, product development exploration and exploitation are the value-creating mechanisms that allow the firm to gain competitive advantage (Atuahene-Gima, 2005; Zahra et al., 2006).

2.3. New-product advantage and performance

This study focuses on two key features of new-product advantage: differentiation and speed to market. New-product differentiation refers to the quality and uniqueness of a firm's product development efforts (Ramaswami et al., 2009), and new-product speed to market reflects the time efficiency of the firm's product introduction into the market (Fang, 2008). To succeed in the highly competitive global-market environment, firms need not only to develop new offerings with features that are meaningful to customers but also to introduce them into the marketplace in a time-efficient way (Fang, 2008). New-product differentiation and speed to market are powerful determinants of firm performance (Yalcinkaya et al., 2007). Profitability, which refers to return on investment, return on sales, and profits, serves as an ultimate measure for firm performance and success (Vorhies & Morgan, 2005).

3. Methods

3.1. Measures and sampling

The measures of innovativeness, proactiveness, and risk taking derived from Covin and Slevin's (1989) work. The items used to measure product development explorative and exploitative capabilities came from the studies by Atuahene-Gima (2005) and Yalcinkaya et al. (2007). The items used to measure new-product differentiation and speed to market originated from Ramaswami et al. (2009). Profitability items came from Vorhies and Morgan (2005).

This study focuses on manufacturing firms in Portugal. The random sample from the Portuguese National Statistics Institute database contained 2931 firms. The research team contacted all firms by telephone to check their eligibility, explain the study's purpose, identify key informants, and check the accuracy of their e-mail addresses. This process resulted in 1271 eligible firms. Then the identified key informants received an invitation e-mail requesting them to follow a link and participate in the survey. The online survey consisted of an introductory page, an instruction page, four pages of questions, and an ending page. The initial e-mail, together with two reminder e-mails (sent from the same e-mail address), yielded 263 usable responses (20.69% response rate). Respondents commonly held senior-management positions, including managers (32%), chief executive officers (31%), and general managers (13%).

A comparison of respondents and a random group of 48 non-responding firms with respect to firm demographics showed no significant differences between the groups. Additionally, the results of Harman's one-factor test suggest that common method bias is not a significant threat to the validity of this study.

3.2. Overview of fsQCA

Contrary to correlational methods, such as structural equation modeling (SEM), which estimate the net effect of an independent variable on a dependent variable, fsQCA identifies the conditions that lead to a given outcome (Cheng, Chang, & Li, 2013; Schneider, Schulze-Bentrop, & Paunescu, 2010; Stokke, 2007). In this way, fsQCA supplements conventional correlational analyses thanks to its three main advantages: (1) asymmetry (i.e., the relationships between independent and dependent variables are treated as asymmetric), (2) equifinality (i.e., multiple pathways lead to the same outcome), and (3) causal complexity (i.e., combinations of causal antecedent