



Dynamic capabilities, environmental dynamism, and competitive advantage: Evidence from China



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ABSTRACT

Some scholars hold that dynamic capability is one of the key in searching for competitive advantage in strategic management. But there are still debates on the definition and effects of dynamic capabilities and the role of environmental dynamism. In the context of Chinese-like emerging economies, from a strategic process perspective, this study defines dynamic capability as the firms' potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely decisions, and to implement strategic decisions and changes efficiently to ensure the right direction, and also explores the relationship between dynamic capabilities and competitive advantage and, the role environmental dynamism plays. With an empirical study of 217 enterprises in China, this study finds that dynamic capabilities do significantly positively affect competitive advantage, and environmental dynamism is a driver rather than a moderator.

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1. Introduction

To gain a competitive advantage is the “Holy Grail” of strategic management research (Helfat & Peteraf, 2009, p. 91). But with the ongoing global financial crisis, climate change and other worldwide problems, enterprises find that to obtain and maintain competitive advantage is increasingly difficult, only temporary advantages are possible (D’Aveni, Dagnino, & Smith, 2010).

Some scholars explain the cornerstones of competitive advantage from the resource-based view (RBV) (Barney, 1991; Peteraf, 1993; Wernerfelt, 1984), but recently, the increasingly volatile environment challenges the original propositions of the RBV as being static and neglecting the influence of market dynamism (Eisenhardt & Martin, 2000; Priem & Butler, 2001; Wang & Ahmed, 2007), and scholars put forward a number of dynamic concepts, such as absorptive capacity, integrative capacity, construct capacity, higher order capacity and so on to explore and explain the ways toward success. Based on the demands in practice and the findings in RBV, evolutionary economics and behavior theory, Teece, Pisano and Shuen (1997) extend RBV to the context of dynamic environment and propose that enterprises should constantly adapt, reconfigure and renew their resources and capabilities to address environmental change, which is now the universal concept of dynamic capabilities.

However, as a field of research domain, dynamic capabilities research is still in its infancy (Di Stefano, Peteraf, & Verona, 2010; Helfat & Peteraf,

2009). Current studies focus on the definition, antecedents, nature, processes and consequences of dynamic capabilities (Ambrosini, Bowman, & Collier, 2009; Easterby-Smith, Lyles, & Peteraf, 2009; Helfat et al., 2007; Katkalo, Pitelis, & Teece, 2010; Loasby, 2010; Teece, 2007; Zahra, Sapienza, & Davidsson, 2006; Zollo & Winter, 2002; Zott, 2003), with sharp conflicts regarding to the definitions and effects of dynamic capabilities, and the role environmental dynamism plays. The growing research on dynamic capabilities provides successive and distinct definitions, which create confusion over the meaning and utility of the construct (Barreto, 2010; Di Stefano, Peteraf, & Verona, 2010; Helfat & Winter, 2011). Some scholars believe that dynamic capabilities are the key to competitive advantage (Ambrosini & Bowman, 2009; Helfat & Peteraf, 2009; Helfat et al., 2007; Teece, 2007; Teece et al., 1997), while some others argue that dynamic capabilities do not manifest the characteristics of heterogeneity, thus cannot be a source of competitive advantage (Arend & Bromiley, 2009; Eisenhardt & Martin, 2000), and the role of dynamic capabilities is limited (Zott, 2003) and indirect (Wang & Ahmed, 2007). Many researchers claim that environmental dynamism plays an important moderating role between dynamic capabilities and competitive advantage (Romme, Zollo, & Berends, 2010; Wu, 2010), while others believe that environmental dynamism is an important driving force of dynamic capabilities (Teece, 2007).

Previous studies in this area mainly focus on firms operating in Western developed markets and little is known about what dynamic capability is and its relationship with performance in transition economies. Since there are many differences between developed markets and transition economies, this narrow focus limits theoretical completeness and is a significant gap in the literature. Thus, the study uses China as a testing ground for the universality of the Western-

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generated theory for three reasons: China's size in population and organizations, its vast differences from Western societies, and its increasing integration into the world economy (Lin & Germain, 2003).

To address these research gaps, this study explores the definition and effects of dynamic capabilities and, the role of environmental dynamism in the emerging economy of China. As such, this research contributes to existing literature by entailing the new research context: China, and clarifies the debates on the effect of dynamic capabilities and the role of environmental dynamism.

The remainder of this paper proceeds as follows. Section 2 presents focal constructs of interest and the relationships among them and develops related hypotheses. Section 3 then outlines the study methodology, and Section 4 shows the empirical results. Finally, the paper presents discussions and conclusions of the findings.

2. Literature review and research hypotheses

2.1. The concept of dynamic capabilities

The original definition of dynamic capabilities is a firm's ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments (Teece et al., 1997). To avoid the tautology of defining capability with capability, from the process perspective, Eisenhardt and Martin (2000) propose a broad definition that dynamic capabilities are a set of specific and identifiable processes such as product development, strategic decision making and alliancing. From the routine perspective, Zollo and Winter (2002) define dynamic capabilities as a learned and stable pattern of collective activities directed to the development and adaptation of operating routines. Drawing on the entrepreneurship perspective, Zahra et al. (2006) define dynamic capabilities as the abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriately by its principal decision-maker(s). According to prior literature, Helfat et al. (2007) propose a simple but integrated definition that dynamic capabilities are the capacity of an organization to purposefully create, extend, or modify its resource base. Based on previous literatures, Barreto (2010) proposes that a dynamic capability is the firms' potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base.

Among the researches to define and explain dynamic capabilities, scholars decompose dynamic capabilities from different views, such as content and process perspectives, ontology and epistemology perspectives and so on to unveil the rich and multidimensional contents (Helfat et al., 2007; Najmaei, 2010). However, most scholars deconstruct dynamic capabilities from the process perspective (Narayanan, Colwell & Douglas, 2009), in which some studies deconstruct dynamic capabilities into perception/ search, decision/selection, reconfiguration/deployment and so on (Barreto, 2010; Helfat et al., 2007; Pandza & Thorpe, 2009). While inaugurating the concept of dynamic capabilities, Teece et al. (1997) also propose a 3P framework (i.e., processes, positions and paths), arguing that the competitive advantage of firms lie with their managerial and organizational processes, shaped by their specific asset position, and the paths available to them. However, this framework focuses only on what firms do rather than why doing so. Hence, Teece (1998) proposes another framework, explaining dynamic capabilities from the perspectives of opportunity-sensing capacity and opportunity-seizing capacity. Then after ten years, he proposes and elaborates the new framework, that is, sensing, seizing and reconfiguration (Teece, 2007). Helfat et al. (2007) hold that dynamic capabilities are composed of search, selection and deployment capacities. Even if deployment capacity attracts more attention, search and selection capacities are also important. Barreto (2010) explains dynamic capabilities from four dimensions, that is, the propensity to sense opportunities and threats,

to make timely decisions, to make market-oriented decisions and to change its resource base.

Although the definition of Barreto (2010) overcomes some important limitations of current definitions about dynamic capability such as vague, confusing, tautological, there is still room for improvement. First, this definition applies well to perfect market-oriented economy, but not necessarily to transition economies. In Chinese-like economies where the market mechanism is not so perfect, to make "market-oriented decisions" may not conform to the reality. The reasons may be that, on one hand, as China is still undergoing economic transformation, the product market, factor market and capital market are still far from maturity; on the other hand, central and local governments are still playing important roles in resource allocation. So sometimes market-oriented decisions are not enough, firms should also consider political factors and relational factors (or to say, *guanxi*) in their business operation (Park & Luo, 2001). Second, discussion of processes within organizations often relates to "implementation" of strategy or deployment of resources and capabilities (Helfat et al., 2007). As Helfat et al. (2007) suggest, dynamic capabilities include capacities not only for identifying the need or opportunity for change, formulating a response, but also for implementation of a course of action. Thus, this study defines dynamic capabilities as:

a dynamic capability is the firms' potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely decisions, and to implement strategic decisions and changes efficiently to ensure the right direction.

In line with the definition, this study also decomposes dynamic capabilities into three dimensions from the process perspective, namely, strategic sense-making capacity (Neill, McKee, & Rose, 2007; Pandza & Thorpe, 2009; Weick, Sutcliffe & Obstfeld, 2005), timely decision-making capacity (Benjaafar, Morin, & Talavage, 1995; Shafman & Dean, 1997) and change implementation capacity (Harreld, O'Reilly, & Tushman, 2007; Noble, 1999).

Strategic sense-making capacity is the process to develop cognitive maps, to sense and interpret the stimuli or change in the reference frameworks to effectively search for and analyze information from internal and external environment (Neill et al., 2007; Pandza & Thorpe, 2009). The foundation for business existence is to gain profits by providing products or services that meet customers demand. Therefore, firms should be sensitive to external environmental change to discover new market opportunities and potential threats, thus strategic sense-making capacity is one of the key organizational capacities for firm survival in the changing environment (Zahra & George, 2002). In view of the internal environment, strategic sense-making capacity helps firms to discover the advantage and disadvantage of current resource bases, contributing to the improvement of asset orchestration (Helfat et al., 2007). According to the comprehensive analysis to environmental change and current resource base, firms get better understanding to both themselves and competitors.

Timely decision-making capacity is the process to quickly formulate, evaluate and choose strategic orientations to timely adjust with environmental changes (Shafman & Dean, 1997). To align decision-making with the changing environment, organizations should construct an appropriate tangible or intangible information system with the help of information technology to provide an effective platform for the quick and right decision-making to timely renew the operating activities and staff behaviors (Sher & Lee, 2004). Besides, firms should also quickly deal with different conflicts in the strategic decision-making process, adopt quick remedies to unsatisfactory customers.

Change implementation capacity is the ability to execute and coordinate strategic decision and corporate change, which involves a variety of managerial and organizational processes, depending on the nature of the objective and the specific tasks required (Harreld et al., 2007; Helfat et al., 2007).

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