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Born solution providers – Dynamic capabilities for providing solutions

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A B S T R A C T

Our investigation draws on a qualitative study, which explores the anomaly of *Born Solution Providers*. Compared to the traditional assumption that product companies shift toward solutions during the maturity phase, companies can already offer solutions in the market development phase. We investigate the dynamic capabilities for providing solutions in the market development phase. Our findings reveal a microfoundation of dynamic capabilities. This microfoundation is structured into 10 dimensions along sensing, seizing, and reconfiguring activities. Within these 10 dimensions, we disaggregate the dynamic capabilities into individual skills and organizational routines. Interestingly, organizations utilize routines underlying the options for each dimension (e.g., routines for sensing internal and external opportunities, seizing standardization, and customization), but they tend to stick to routines for one of these options. Individual skills enable organizations to balance the options. Our results suggest that these individual skills evolve through higher-order processes, namely, single- and double-loop learning activities.

1. Introduction

Product companies increasingly bundle products and services into solution offerings, rather than selling only products (Davies, Brady, & Hobday, 2006; Sawhney, Balasubramanian, & Krishnan, 2003; Tuli, Kohli, & Bharadwaj, 2007). As solution providers, companies can increase their revenue, profitability, and customer satisfaction (Cusumano, Kahl, & Suarez, 2015; Eggert, Hogreve, Ulaga, & Muenkhoff, 2014; Ulaga & Reinartz, 2011). Existing research has typically assumed that product companies differentiate themselves increasingly through customer solutions, as product markets increasingly reach the maturity phase (i.e., increasing competition and eroding product margins) (Matthyssens, Vandenbempt, & Berghman, 2006). However, there is also an interesting anomaly (Kuhn, 1970) to this assumption, which we call *Born Solution Providers*. Instead of waiting until product markets reach the maturity phase, born solution providers provide solution offerings already in the market development phase.

Xerox is an example of such a born solution provider in the market development phase for photocopier machines. When Xerox introduced its first plain paper photocopier machines, it was not merely a product firm selling new machines together with services (e.g., spare parts, repair service), and in doing so representing a substantial shift toward solutions in the maturity phase. Instead, Xerox was a born solution provider, bundling products and services such as maintenance, repair, insurance, and pay-per-copier usage services (e.g., paying for copies) into solutions in the market development phase.

During market development, born solution providers face a situation in which customer needs and the competitive situation are still in a state of flux, leading to frequent changes in the business environment. Product technology is still relatively immature, which makes the provision of customer solutions difficult (Cusumano et al., 2015). Thus, dynamic capabilities such as the ability to respond to changes in the business environment are a key success factor (Eisenhardt & Martin, 2000; Teece, 2007; Zahra & George, 2002).

We apply a theoretical perspective on dynamic capabilities to born solution providers. We focus on companies attempting to enter emerging markets during the market development phase. By answering the research question *"Which dynamic capabilities enable product companies to become born solution providers?"*, our study makes the following contributions to the literature. We broaden the empirical focus to the market development phase and to emerging markets (Luoto, Brax, & Kohtamäki, 2016). Born solution providers prevail existing theoretical assumptions. We advance the research on solutions and services in product companies from its current, nascent, theoretical stage to a more mature stage (Kowalkowski, Gebauer, & Oliva, 2017). Furthermore, we provide a microfoundation of dynamic capabilities in terms of individual skills and organizational routines (Stefano et al., 2010; Teece, 2007).

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2. Theoretical background

2.1. Born solution providers

Solution providers are defined as product companies that bundle products and services into solution offerings, rather than selling only products (Davies et al., 2006; Sawhney et al., 2003; Tuli et al., 2007). Solutions are "individualized offers for complex customer problems that are interactively designed and whose components offer an integrative added value by combining products and/or services so that the value is more than the sum of the components" (Evanschitzky, van Wangenheim, & Woisetschläger, 2011, p. 657). In other words, "a solution provider integrates goods, service and knowledge components into unique combinations that solve strategically important customer specific problems" (Storbacka, 2011, p. 699).

Differentiation through solutions becomes increasingly important as companies proceed through the market development, growth, and maturity phases. Specifically, increasing price competition, eroding product margins, and commoditization tendencies associated with the maturity phase compel product companies to move toward solutions (e.g., Davies, 2004; Galbraith, 2002; Storbacka, 2011). Born solution providers do not wait until product markets reach the maturity phase, but provide solution offerings as early as the market development phase.

The market development phase describes the early stage in a product life cycle, a phase also termed the "ferment" and/or introductory phase (Cusumano et al., 2015; Kotler & Armstrong, 2010). During this phase, product technology is new, and it is unclear to customers and producers how products will perform, what problems will emerge during the product usage, and what product characteristics will be important for attracting customers and optimizing life-cycle costs. Further difficulties arise because these companies have little knowledge of customer needs that will arise during product usage. Products are simply too new for the company to gain insights into providing solutions to improve efficiency and effectiveness for product usage and/or for addressing strategic customer needs. Even if companies were to provide such solutions, they would be less likely to pay off, because the installed product base is still too low to provide the solutions in a cost-efficient manner (Cohen, Agrawal, & Agrawal, 2006; Fang, Palmatier, & Steenkamp, 2008).

Of course, emerging markets are promising for born solution providers because they offer attractive growth rates and often exhibit relatively little competition. However, emerging markets make product technologies even more uncertain. Born solution providers face a situation in which it remains unclear whether technologies developed in industrialized markets are readily applicable to emerging markets (London & Hart, 2004). Customers in emerging markets are quite sensitive to price, which puts even more emphasis on cost and functionality.

2.2. Dynamic capabilities

While operational capabilities enable companies to earn a living in a specific business environment (Winter, 2003; Zahra, Sapienza, & Davidsson, 2006), the dynamic-capability view considers explicitly how the external business environment influences the capabilities and how they are transformed into competitive advantages (Priem & Butler, 2001; Teece, Pisano, & Shuen, 1997). Dynamic capabilities refer to a firm's ability to integrate, build, and reconfigure competences, so as to address rapidly changing business environments (Eisenhardt & Martin, 2000; Teece et al., 1997). Zollo and Winter (2002, p. 340) defined dynamic capabilities as "a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness." Similarly, Helfat et al. (2007, p. 4) stated that "a dynamic capability is the capacity of an organization to purposefully create, extend, and modify" its operational capabilities. Dynamic capabilities are vital for anticipating, enforcing, and responding to changes in the business environment and for altering operational capabilities.

Conceptualizations of dynamic capabilities distinguish, for example, between adaptive, absorptive, and innovative capabilities (Wang & Ahmed, 2007) as well as between renewing, incremental, and regenerative ones (Ambrosini, Bowman, & Collier, 2009). Dynamic capabilities involve three activities: sensing opportunities and threats, as well as the need to change; seizing the opportunities sensed and fending off threats; and reconfiguring operational capabilities to maintain competitiveness (Teece, 2007). Underpinning these three generic capabilities are microfoundations, defined by Teece (2007, p. 1319) as "distinct skills, processes, procedures, organizational structures, decision rules, and disciplines."

Accordingly, this microfoundation includes individual skills and organizational routines. The latter originates from the literature on routines driving corporate development (March, 1991). Routines are rules, tools, and procedures that companies apply (Felin & Foss, 2009). Individual skills capture the attitudes, expertise, and cognitive skills (e.g., managerial foresight, instrumental cognition, or entrepreneurial alertness). Sensing, seizing, and reconfiguring activities are the "ingredients" of dynamic capabilities (Eisenhardt & Martin, 2000), whereas the organizational routines and individual skills are the "recipe" that creates dynamic capabilities (Newbert, 2005).

Sensing new opportunities involves searching processes, which are related to the business environment (Teece, 2007). The sensing capability is similar to the notion of market-focused learning, which refers to a firm's market-searching effort and is connected to the processes enabling a firm to anticipate market developments and customer requirements, needs, and preferences (Weerawardena & O'Cass, 2004). Seizing captures how companies address and take advantage of the sensed opportunity by conducting activities, such as delineating the products and services, as well as defining the most suitable business model for taking advantage of opportunities (Teece, 2007). Seizing also refers to fully utilizing investments in the sensed opportunities (Helfat & Peteraf, 2009). Reconfiguring enables companies to continuously realign the operational capabilities with the seized opportunities, and is about altering existing operational capabilities and creating new ones (Weerawardena & O'Cass, 2004).

2.3. Dynamic capabilities for providing solutions

Despite their vital role, there has so far been little research on dynamic capabilities for moving toward solutions. Existing research derives dynamic capabilities either from general discussions on capabilities for moving toward solutions, or discussions on dynamic capabilities for extending the service offering (see Table 1).

2.3.1. Capabilities for providing solutions

Researchers generally agree that compared to product companies, solution providers must reconfigure multiple capabilities to address a broader set of heterogeneous customer segments and diversified customer needs. Such multiple capabilities cover system integration, production, delivery, technical application, partnering, marketing, and business consulting competences (Ceci & Prencipe, 2008; Davies, 2004; Shepherd & Ahmed, 2000). Besides the positive association between providing solutions and competitive advantages, there is a risk that developing such multiple capabilities may dilute core competences and ultimately erode competitive advantages (Ceci & Masini, 2011).

Providing solutions requires capabilities for seizing the organizations so as to become more customer-centric; to customize solutions (e.g., personalized packages for service, support, education, consulting); and to manage organizations in the context of customer segments, teams, and profit and losses. Solutions demand convergent thinking, which combines products and services in a way that is best for customers (Galbraith, 2002).