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CORPORATE ENTREPRENEURSHIP IN A STRATEGIC CONTEXT: WHAT DETERMINES NEW VENTURING AND STRATEGIC RENEWAL IN SERVICE VERSUS MANUFACTURING INDUSTRIES?



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ABSTRACT

Prior work conceptualizes corporate entrepreneurship strategy as a strategic-oriented, organization-wide reliance on entrepreneurial behavior in pursuit of sustained competitive advantage. Little theory, however, predicts strategic orientation's effect on concrete behaviors that, in turn, beget corporate entrepreneurship and whether begetting behaviors differ across contexts. This study associates entrepreneurial orientation with corporate entrepreneurship through two opportunity-identifying behaviors: responsive sensing and active sensing. I posit and find in distinct samples of manufacturing and service organizations that entrepreneurial orientation affects corporate entrepreneurship through responsive sensing in manufacturing, and through active sensing in manufacturing and services. This research advances theory on context-specific corporate entrepreneurship strategies.

INTRODUCTION

Customers' escalating expectations, changing technologies, and global competition all contribute to shortened lifecycles for existing offerings. Inert organizations increasingly struggle to stay course. As an illustration, the percentage of organizations falling out of market leadership positions increased sevenfold from 1960 to 2008 (Reeves and Deimler, 2011). Organizations must incessantly identify opportunities, while devising strategies for exploiting them to their advantage (Ireland et al., 2003). Corporate entrepreneurship is acting on opportunities by adding new ventures to existing business and strategically renewing existing business to sustain competitive advantage (Guth and Ginsberg, 1990). Corporate entrepreneurship strategy is defined as a strategic-oriented, organization-wide reliance on entrepreneurial behavior in pursuit of sustained competitive advantage (Ireland et al., 2009).

Past work has garnered evidence on the importance of individual elements of a corporate entrepreneurship strategy. For example, more than 100 studies have examined the relationship between strategic orientation, commonly assessed as an organization's entrepreneurial orientation (Covin and Slevin, 1989; Miller, 1983), and performance (Rauch et al., 2009). Yet, little research has simultaneously examined elements of a corporate entrepreneurship strategy—entrepreneurial orientation, opportunity-identifying behaviors, and corporate entrepreneurship in its traditionally recognized forms of new venturing and strategic renewal (Guth and Ginsberg, 1990)—to illuminate relationships among these elements. As a result, past research leaves open questions such as whether entrepreneurial orientation alone may lead to corporate entrepreneurship (and if under what circumstances), whether discernable opportunity-identifying behaviors emanate from an entrepreneurial orientation and if, whether such behaviors ought to differ across contexts to beget corporate entrepreneurship?

In this paper, I attend to these questions by developing and testing theory on whether corporate entrepreneurship strategies differ in their strategic-oriented behaviors that beget corporate entrepreneurship. I contrast two opportunity-identifying behaviors: responsive and active sensing. Organizations' sensing of opportunities is a prerequisite to acting on them to their advantage (Teece, 2007). Responsive sensing refers to identifying expressed yet underserved market needs, while active sensing is unearthing of subliminal market needs that do not exist in expressed form (Narver et al., 2004). In particular, I posit and find in distinct samples of 111 manufacturing and 110 service organizations that the sensing behaviors translating entrepreneurial orientation into corporate entrepreneurship differ between manufacturing and services. Comparing these contexts is important due to the stark differences of service products' intangibility and producer-customer relationships that cocreate services (Vargo and Lusch, 2004; Zeithaml et al., 1985). These differences give rise to distinct competitive imperfections that are likely to influence the sustainability of competitive advantage, and with it apt sensing behaviors. Scholars have highlighted the lack of service sector research in entrepreneurship (Davidsson et al., 2006); a call that is important to heed as services constitute between 70 and 80% of OECD economies and are responsible for almost all net employment growth (Rausch et al., 2011). No study on entrepreneurial orientation and/ or corporate entrepreneurship strategy compares manufacturing and services. As the concept of corporate entrepreneurship strategy is not bounded by a certain context, though, I first consider likely commonalities in strategies across contexts. Next, I elaborate on the service versus manufacturing comparison that leads me to expect context-specific sensing behaviors.

HYPOTHESES DEVELOPMENT

Entrepreneurial orientation is widely used to assess an organization's strategic perspective on entrepreneurship as ingrained in its culture and processes (Covin and Slevin, 1991; Rauch et al., 2009). Entrepreneurial orientation captures the "institutional embodiment of the entrepreneurial perspective" (Ma and Tan, 2006, p. 710), representing an enduring organizational quality that implies the presence of entrepreneurial behavior reflected innovativeness, proactiveness, and risk taking (Covin and Slevin, 1991; Miller, 1983). While outlining the dimensions of entrepreneurial behavior, entrepreneurial orientation is but a partial element of a corporate entrepreneurship strategy because, although the orientation likely gives perspective to organization-wide behavior, it does not specify concrete patterns of behaviors in pursuit of competitive advantage (Ireland et al., 2009). This leads to a definition of entrepreneurial orientation as the "willingness of a firm to engage in entrepreneurial behavior" (Wiklund, 1998, p. 65) or, more concretely, it denotes how a firm seeks to organize itself to identify and exploit opportunities (Wiklund and Shepherd, 2003).

Fundamentally, opportunities exist when competitive market imperfections exist because perfect competition precludes opportunities for competitive advantage (Venkataraman, 1997). In keeping with neoclassical economic theory, this defines when an opportunity exists but not how it is identified (Alvarez et al., 2013), the latter being debated in the entrepreneurship literature. On the one hand, discovery theory with its roots in Austrian economics holds that opportunities arise from exogenous shocks to existing markets that allow entrepreneurial actors to respond by searching for opportunities. On the other hand, proponents of the more recent creation theory argue opportunities to result from entrepreneurial actors' action giving rise to new markets (Alvarez and Barney, 2007). The differences among theories notwithstanding, both assume (and the assumption is so common that it is often unstated) the presence of markets. However, it is "the discussion of the prevalence of customer needs that defines the value component of an opportunity and determines whether a viable market exists" (Webb et al., 2011, p. 537). Hence, market-oriented behaviors that crystallize customer needs are germane to opportunity identification, irrespective if discovered or created.

Marketing scholars in the behavioral tradition define market orientation in service of understanding customer needs as sensing behaviors (Day, 1994; Kohli and Jaworski, 1990; Vargo and Lusch, 2004). Another, more encompassing view of market orientation includes organizational culture, norms, and behaviors (e.g., Slater and Narver, 1995), thus including sensing behaviors but complicating the isolation of behaviors' relationships with antecedents and outcomes. In keeping with a behavioral conceptualization, entrepreneurship and strategy scholars also advance sensing as a focal behavior for responding to and actively shaping environments (e.g., Teece, 2007). In a similar but more explicit vein, marketing scholars distinguish responsive and active sensing, with the former identifying expressed yet unmet needs, while the latter affords insights into subliminal needs that do not exist in expressed form (Narver et al., 2004).

Responsive sensing has multiple behavioral manifestations. Organizations may monitor markets for imbalances in existing supply and demand, like GE did when sensing the opportunity for handheld ultrasounds meeting expressed portability needs not served by existing ultrasounds (Immelt et al., 2009). It can also manifest in organizations' gathering of market intelligence or by measuring customer satisfaction. Generally, the obtained information is historic in that the needs exist in present markets, rendering organizations' market experience valuable (Keh et al., 2007).

In contrast, active sensing identifies subliminal needs customers are unaware of but also likely receptive to a prospective offering. For example, customers were not able to express any need for a personal computer prior to Olivetti offering the first in 1965. Active sensing involves anticipation of what customers may value, otherwise viable markets do not form. Organizations that actively sense build possible solutions to unarticulated needs to trigger customer reactions for refinement. They intensely work with customers to understand their habits and problems, mitigating the risk of creating novelty that is not valued. Olivetti invested years of ergonomic and design research to create the personal computer (Kircherer, 1990). Active sensing also involves discarding experience in existing markets if they hamper the creation of new markets (Narver et al., 2004). With active sensing, organizations identify opportunities that are unlikely to exist independent of their active sensing.

Building from this detailed description of responsive and active sensing, I posit that neither behavior is likely to occur in organizations absent of a strategic perspective that lends organization-wide impetus and, the presence of such a perspective should promote each behavior. For starters, expressed yet underserved needs are principally identifiable by all market participants. Organizations must be distinctively alert and devote effort to being the first responsive sensor (Kirzner, 1997). Unless an organization's orientation endorses such effort, organization-wide responsive sensing is unlikely to occur. Entrepreneurial orientation, as reflected in the preparedness to proactively initiate product-market innovations while taking the inherent risk, coalesces into an organizational quality of beating competitors to the punch (Miller, 1983). The stronger the entrepreneurial orientation, the more ingrained the entrepreneurial perspective should be throughout the organization (Covin and Slevin, 1989, 1991), likely promoting organization-wide responsive sensing for opportunities.

Entrepreneurial orientation should also impel and promote active sensing, albeit for different reasons. The crux with active sensing is that it requires tenacity to identify something customers themselves cannot articulate but are *also* likely receptive to once it crystallizes. Proactivity as in being first to serving customers' needs at relatively low risk is insufficient to promote active sensing for there is no expressed need to be served and much risk to be incurred when shaping subliminal needs. Taking high risks in service of innovating around something customers have a hard time expressing also poises organizations to fail, as this orientation does not promote a symbiosis

of novelty and customer receptivity. Entrepreneurial orientation, reflected in simultaneous innovativeness, proactiveness, and risk-taking, should provide the balanced perspective needed for active sensing to occur. Accordingly oriented organizations are willing to engage in innovation, while proactively considering customer needs and taking calculated rather than undue risks in creating novelty. As the degree with which the three behavioral dimensions are endorsed increases, the greater the effect of entrepreneurial orientation on active sensing should be. Across service and manufacturing contexts, I posit:

Hypothesis 1. Entrepreneurial orientation is positively associated with responsive sensing (1a) and active sensing (1b)

While I expect entrepreneurial orientation to facilitate responsive and active sensing, it is unlikely that both behaviors are equally important for translating entrepreneurial orientation into corporate entrepreneurship, in all contexts. Each sensing behavior is inherently different by the nature of the identified opportunities (expressed yet underserved versus subliminal), and therefore should not universally lead to corporate entrepreneurship in pursuit of sustained competitive advantage. If an identified opportunity is short-lived in the prevailing environment, it won't yield sustained competitive advantage. Organizations pursuing a corporate entrepreneurship strategy are unlikely to act upon such opportunities because opportunity- and advantage-seeking is integral (Ireland et al., 2009; Ireland et al., 2003). Thus, a key way in which contexts differ is in the relative sustainability of competitive advantage. This leads me to analyzing manufacturing versus services, as scholars have mused that services enjoy lower sustainability of attained competitive advantages compared to manufacturing due to unique service characteristics (Song et al., 1999).

Prior research, especially in marketing, has extensively examined differences between services and manufacturing. Building from meta-analyses that reviewed over 100 studies and over 30 years of research (Edgett and Parkinson, 1993; Zeithaml et al., 1985), Vargo and Lusch (2004) offered the most cited analysis of services as characterized by intangibility, cocreation, and relationships. Services involve the exchange of intangibles (i.e., skills and knowledge), while manufacturing concerns the exchange of tangible goods. Second, the value of a service tends to be cocreated, that is, value is perceived and determined by the customer on the basis of value accruing from using the service offered by the producer. Consultants' pay, the value of the knowledge service provided, is often variable with performance as perceived by the customer, for instance. In contrast, value in manufacturing is embedded in the good via its market value as determined by the producer in light of competition, target customers and so on. The customer is the recipient of the good at exchange value. Last, relationships, refers to the cultivated relational producer-customer interaction in services compared to more transactional relationships in manufacturing.

The characteristics of services vis-à-vis manufacturing as elicited by this voluminous literature likely have implications for the sustainability of competitive advantage. Sustainability is a function of barriers to imitation, defined as a barrier restraining or obstructing imitation by competitors (Bharadwaj et al., 1993; Reed and Defillippi, 1990). Imitation entails (1) the identification of what to imitate and (2) the ability to imitate. Barriers may arise from either component to imitation (Jonsson and Regnér, 2009). Service organizations have less means than manufactures to restrain competitors' ability to imitate. The intangibility of services makes it hard to protect them from imitation by intellectual property rights (Song et al., 1999). This relative lack of protection is a profound difference, as service novelties also tend to be less costly and more swiftly matched by competition. Tufano (1989) found when examining new financial securities, that entrepreneurial financial organizations can be imitated in little time and at up to 75% less cost, for example. Conversely, the tangibility of manufactured goods makes it easy for competitors to identify what to

imitate, while also making it easier to spot imitations and protect goods through property rights. Remarkably, four out of ten manufacturers at Hannover Messe (the world's leading trade fair for industrial goods) spot imitations by observing competitors' exhibits during the fair, triggering much legal retaliation (Koehn, 2007). With the tangibility of manufactured goods, the primary source of sustained competitive advantage likely lies in organizational behavior that restrains competitors' ability to imitate rather than clouding what to imitate.

I expect responsive sensing to foster corporate entrepreneurship in manufacturing because entrepreneurial-oriented, responsive sensing provides a mechanism for being the first to identify an opportunity. Being the first to identifying an opportunity that is principally observable by all market participants—as is the case with expressed needs—will foster corporate entrepreneurship in pursuit of sustained competitive advantage in contexts where being first impedes competitors' ability to imitate. As the literature on patent and R&D races has shown, being first to identifying an opportunity promotes organizations' acting on the opportunity to secure imitation-impeding property rights (Lieberman and Montgomery, 1998), for instance. Beyond direct protection, corporate entrepreneurship as promoted by responsive sensing may further deter competitors from also acting on the opportunity in manufacturing settings, where the cost and time to matching a first mover are often considerable (Cohen et al., 2000). Responsive sensing is also likely to promote corporate entrepreneurship where serving expressed needs preempts competitors from serving the same expressed needs. With intangible services, product features are more ambiguous and cocreation allows later movers to tailor imitations to customers (Song et al., 1999). Manufactured goods inhere tangible features customers get used to (Lieberman and Montgomery, 1998), making it harder for competitors to serve the same need as identified by the first responsive sensor who, thus, should be more likely to engage in corporate entrepreneurship. Extending from the proposition that entrepreneurial orientation promotes responsive sensing which, in turn, should foster corporate entrepreneurship in manufacturing, I posit:

Hypothesis 2. Responsive sensing mediates the effect of entrepreneurial orientation on corporate entrepreneurship in manufacturing industries.

Service organizations, in contrast, should strategically engage in behavior that obstructs competitors' identification of what to imitate. Unlike responsive sensing, I expect active sensing to promote corporate entrepreneurship in service contexts because this behavior gives rise to causal ambiguity that can sustain competitive advantage. Causal ambiguity “is the basic ambiguity concerning the nature of the causal connections between actions and results” (Lippman and Rumelt, 1982, p. 420). As results are observable with tangible manufactured goods, competitors have the figurative X on the treasure map, which should make it easier to deduce the actions that lead to the result (Rivkin, 2001). With intangible services and active sensing for opportunities, neither the actions nor the results should be well observable. Causal ambiguity stems from tacitness (non-codifiable insights from learning by doing), complexity (interdependent insights), and specificity (relationship-specific insights). The presence of any of these factors yields causal ambiguity, and barriers to identifying what to imitate rise with the degree to which the factors are present (Reed and Defillippi, 1990). The relational producer-customer cocreation of services provides a distinctive backdrop for active sensing to inhere causal ambiguity. As noted, active sensing involves close collaboration with customers to understand subliminal needs. As customers can't express such needs, the development of a prospective offering inherently involves learning by doing. Further, active sensing should yield highly relationship-specific and tacit insights. Consider consultants who are able to elicit unexpressed needs by being exposed to the type of problems their customers face. Such exposure is often exclusive to consultants holding the relationship

(Bettencourt et al., 2002), making it hard for competitors to identify what to imitate. As service firms come to connect insights across their relationships, this advantage is even more sustainable. With looming sustained advantage, I posit entrepreneurial oriented, active sensing to foster corporate entrepreneurship in services.

Hypothesis 3. Active sensing mediates the effect of entrepreneurial orientation on corporate entrepreneurship in service industries.

METHOD

Sample	Distinct samples of 111 manufacturing and 110 service organizations
IV	Entrepreneurial orientation
DVs	Responsive sensing and active sensing (mediating DVs); Corporate entrepreneurship (i.e., new venturing and strategic renewal)
Controls	Organizational age and size, past performance, environmental dynamism, corporate home country, industry controls
Statistical analysis	Non-parametric partial least squares models with bootstrapped CIs

RESULTS

Four partial least squares models were estimated, associating entrepreneurial orientation with corporate entrepreneurship through responsive sensing in manufacturing (model 1) and services (model 2), as well as through active sensing in manufacturing (model 3) and services (model 4). Across the four models, entrepreneurial orientation was positively associated with both responsive sensing and active sensing, supporting Hypothesis 1. Responsive sensing, in turn, was only positively and significantly associated with corporate entrepreneurship in manufacturing, not in services, supporting Hypothesis 2. In contrast, active sensing was positively and significantly associated with corporate entrepreneurship in manufacturing and services. Thus, Hypothesis 3 is partially supported, as active sensing served as a mediator in services as well as in manufacturing. Entrepreneurial orientation in isolation was only positively and significantly associated with corporate entrepreneurship in services not in manufacturing, controlling for sensing behaviors.

DISCUSSION AND IMPLICATIONS

This study contributes to entrepreneurship theory in several ways. First, it supports a shift in theoretical attention from isolated elements of a corporate entrepreneurship strategy to considering constituting elements in concert. Second, it offers insight on entrepreneurial orientation promoting corporate entrepreneurship, as reflected in new venturing and strategic renewal. Prior work focused on entrepreneurial orientation's effect on generic performance (Rauch et al., 2009). This work also contributes to theory on opportunity identification by contrasting responsive and active sensing as concrete behaviors in corporate entrepreneurship strategies of manufacturers and service firms. In sum, manufacturers should place emphasis on entrepreneurially oriented sensing behaviors to promote corporate entrepreneurship, while corporate entrepreneurship in services benefits from entrepreneurial orientation directly, and through active sensing. These insights are a step in the direction of better understanding the complex relationships between elements of corporate entrepreneurship strategies. Complexities arise not only from the multiple elements and their interrelationships, but also across industry contexts. Yet, these complexities indicate why a corporate entrepreneurship strategy is likely a source of competitive advantage.

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