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STRATEGIC ENTREPRENEURSHIP: IMITATION VERSUS SUBSTITUTION

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ABSTRACT

While entrepreneurship is linked with innovation, entrepreneurial firms often imitate competitors rather than offering new substitute products or services. This research examines the conditions under which entrepreneurs utilize an imitation versus a substitution strategy by integrating entrepreneurial orientation with resource-based view of the firm in considering entrepreneurs' resource accumulation decisions. We apply this integration to the managerial decision of whether to imitate competitors or create substitute products or services.

INTRODUCTION

As an emerging field of study, one of the many questions raised about entrepreneurship is how it differs from other domains such as strategy (Shane and Venkataraman, 2000). Earlier entrepreneurship literature has focused on the identity and attributes of the entrepreneur or on the characteristics of young, start-up firms. This contrasts with a still earlier emphasis on innovation (Schumpeter 1934), and uncertainty (Knight, 1921; Cantillon, 1734). Shane and Venkataraman (2000) have called for a more theory-driven approach that addresses the questions of how promising entrepreneurial opportunities are identified, evaluated, and exploited to actualize opportunities.

It is interesting that while entrepreneurial activity focuses on actualizing promising opportunities, the strategies and actions by which many entrepreneurial firms do so are best described as imitation strategies. Thus, entrepreneurial activity comprises not only innovation but also imitation. To better understand this dynamic, we integrate entrepreneurial orientation (Lumpkin and Dess, 1996) and the resource-based view of the firm (e.g., Barney, 1991; Wernerfelt, 1984) to analyze the decision processes firms use when evaluating imitation versus substitution resource accumulation strategies. Although the resource-based view literature primarily concerns itself with firm performance, that performance is conditioned by a firm's ability to attract and create valuable and rare resource bundles and the conditions of uncertainty that govern resource acquisition and use.

We therefore ask the following question: When are entrepreneurial firms more likely to attempt acquiring innovative resources—a substitution strategy—as opposed to imitative resources? Such decisions are influenced by a myriad of factors including the type of resource involved (Peteraf, 1993; Miller and Shamsie, 1996), external dimensions of the firm (e.g. Dess and Beard, 1984), and internal dimensions such as top management team diversity (Richard, Barnett, Dwyer and Chadwick, 2004).

Specifically, we combine the entrepreneurial orientation literature with the resource-based view of the firm to consider whether firms use different resource accumulation strategies dependent on whether they compete using an imitation or a substitution strategy.

To provide a framework for our arguments, we draw upon the concept of entrepreneurial orientation focusing on entrepreneurial practices, processes, and managerial decision-making activities that lead to a firm's resource accumulation strategies. Among the dimensions that have frequently been characterized as important in such processes are innovativeness, risk taking, and proactiveness. Kreiser, Marino, and Weaver (2002) found in their test of the Covin and Slevin (1989) scale measuring these dimensions of entrepreneurial orientation that the scale's psychometric properties are reliable and valid across multiple countries and cultures. They argue that innovativeness, risk taking, and proactiveness can vary independently and are valid, reliable measures for assessing entrepreneurial orientation and are adequate measures across multiple nations and cultures. To these dimensions Lumpkin and Dess (1996) add competitive aggressiveness and autonomy. Dess, Lumpkin, and McGee (1999) suggest that the multidimensionality of the entrepreneurial orientation construct requires assessment of these various dimensions and argue that little co-variation exists due to the independence of each dimension. We thus direct our attention to these five dimensions—innovativeness, risk taking, proactiveness, competitive aggressiveness, and autonomy— because each requires a different resource bundle to enact strategy. This provides a useful framework for identifying a firm's propensity to engage in entrepreneurial activities that can include imitation or substitution-based resource accumulation.

Before developing our arguments, we suggest a caveat. There is debate as to whether or not the inclusion of competitive aggressiveness and autonomy (Lumpkin and Dess, 1996) are unique variables that add significant variation to the entrepreneurial orientation construct (Covin and Slevin, 1989). Indeed, entrepreneurial orientation may be more unidimensional than had been previously thought given that correlations among the entrepreneurial orientation dimensions tend to be high. Given this caveat, our following arguments should be interpreted with the cautionary note that there may be high multicollinearity among variables. Still, in the interest of exposing fine-grained theoretical distinctions, we treat each variable separately.

In the following sections, we explain how the process of recognizing the characteristics of different resource bundles helps to shape the decision to pursue either imitation-based or substitution-based strategies, and to examine the internal contingencies to entrepreneurial firms that influence decisions to shift resource accumulation strategies between imitation and substitution emphases. We divide our discussion into the following sections. The first section discusses the resource-based view of the firm as it relates to firms engaging in entrepreneurial activity. This is followed by a discussion of the inimitability and non-substitutability prerequisites for such firms to obtain sustainable resource rents. Next, we examine the contingent effects of entrepreneurial orientation dimensions on pursuing either imitation- or substitution-based resource accumulation bundles. We then present a discussion of implications for managers, how the propositions developed in this research might be empirically tested, and suggest future research directions.

THE RESOURCE-BASED VIEW OF THE ENTREPRENEURIAL FIRM

The resource-based view of the firm suggests that when firms exploit bundles of idiosyncratic resources, these firms may gain superior performance when these resource bundles *(1)* have value; *(2)* are scarce; *(3)* are difficult for competitors to imitate; and *(4)* for which strategically equivalent substitutes do not exist or are too costly to present buyers with a reasonable alternative (Barney, 1991). Thus, the differences among firm performance in a given industry may be at least partially explained by the accumulation and exploitation of such idiosyncratic resources (Peteraf, 1993). Penrose (1959)

was among the first to develop this line of thinking by arguing that the possession of superior resources alone is not sufficient to create competitive advantage; instead managers execute strategies that exploit these resources in ways that synergistically leverage resource value.

Although the resource-based view has been primarily employed to discuss the performance differences across existing firms, we take a different approach by considering whether the entrepreneurial opportunity process is related to idiosyncratic resource accumulation. Entrepreneurs differ in their ability to recognize new opportunities; this is partly the result of absorptive capacity, or the ability to recognize new opportunities as a result of an accumulated knowledge base (Cohen and Levinthal, 1990; Venkataraman, 1997). Because entrepreneurs' accumulated knowledge bases are comprised of intangible, tacit, and idiosyncratic knowledge, entrepreneurs' absorptive capacity can serve as the starting point in developing an idiosyncratic resource base.

However, relying on superior knowledge as the starting point for resource accumulation presents problems when considered in light of sustainable competitive advantage. Because knowledge typically diffuses over time, sustainable value, arised from knowledge scarcity, erodes over time, thus potentially eroding the competitive advantage that may have initially resulted from such knowledge. Kogut and Zander (1992) suggest that sustainable competitive advantage requires a "dynamic" accumulation of knowledge, in addition to processes that support a faster and broader inclusion and analysis of new information (Cohen and Levinthal, 1990). The challenge is to slow knowledge diffusion to competitors. Even patent and trademark protection, while valuable, cannot provide absolute guarantees against knowledge diffusion and exploitation by competitors.

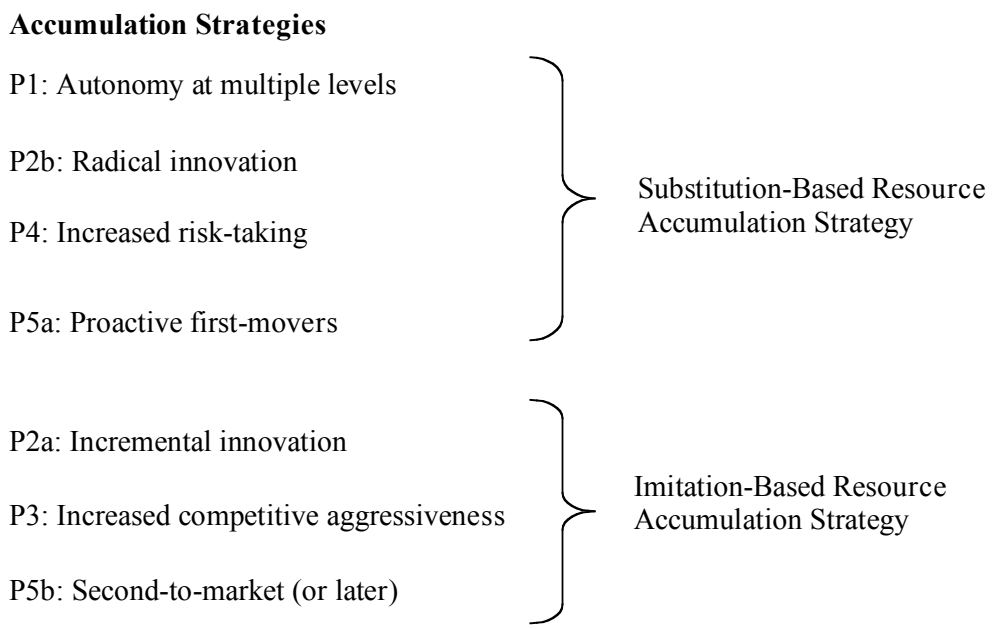
For the entrepreneur, this creates both a challenge and an opportunity. The diffusion of new knowledge provides fresh material to combine with existing stocks of knowledge, but it is also the means by which the value of existing knowledge erodes. The rate of erosion largely determines the returns received from specific resource bundles: rapid erosion eliminates any economic or strategic rents from accruing to the firm. Thus, entrepreneurs seek not only to identify promising opportunities, but also to identify ways to erect mobility barriers around their resources. With dynamic diffusion of knowledge both in and out of the firm, creation of unique resource bundles arises partially from a firm's ability to leverage its knowledge. Rare, inimitable resource bundles created from a firm's stock of knowledge represents an active flow of knowledge gained by a firm from competitors balanced against knowledge losses that diffuse to competitors (Dierickx and Cool, 1989). While the threats from diffusion of knowledge include erosion of a firm's economic profit to a normal profit level, the threats from substitution may be more pronounced. Substitution can render a firm's resources obsolete as competitors destroy the value of competencies through Schumpeterian creative destruction (Schumpeter, 1934).

While the resource-based view sheds light on entrepreneurial new opportunity discovery processes, it also provides a conundrum for opportunity exploitation. The resource-based view presents the key insight that the acquisition of resource bundles occurs under uncertainty. Firms and individuals cannot openly bid for resources that explicitly provide an economic or strategic rent. Otherwise, competitors will bid away any rents in excess of normal profits in accumulating the assets (Barney, 1991). Thus, a successful resource accumulation strategy requires luck, superior knowledge, a willingness to accept greater risk, or a combination of these (Barney, 1986). While we agree with Shane and Venkataraman's (2000) argument that an entrepreneur's idiosyncratic stocks of knowledge may open up new opportunities, nothing precludes other entrepreneurs from being able to identify those same opportunities. This argues for a theoretical separation of entrepreneurial imitation versus substitution resource accumulation strategies.

Fortunately for entrepreneurs, idiosyncratic knowledge, while valuable, is also difficult to value. While the costs for an opportunity can be estimated to some level of precision, estimations of the returns are much less precise (Knight, 1921). Indeed, if the superior knowledge is tacit, how can it be sufficiently communicated such that the entrepreneur can leverage it to create unique resource bundles? Several researchers (e.g., Deeds, DeCarolis, and Coombs, 1997; Stuart, Hoang, and Hybels, 1999) have identified other critical resources that entrepreneurs must acquire in order to successfully exploit an opportunity. These other resources, while valuable, need not be unique, provided that the ability to acquire them is moderately rare and creates a separating equilibrium between those who possess the resource and those who do not (Peteraf, 1993). Thus, the ability to successfully exploit an opportunity may have less to do with the value of the opportunity and more to do with the firm's stock of complementary resources. These complementary resources provide the means to acquire additional resources. The ability to gain additional resources can itself be considered a resource.

We can thus view entrepreneurial firms as comprising both common and scarce resources while promising that opportunity is rare and associated with uncertain returns. What we lack is an understanding of why firms create the specific resource bundles that they do. Some have proposed separating entrepreneurship—the study of new entry to market—from entrepreneurial orientation, the attributes of how the entry to market occurs and the a priori processes involved in the decision (Lumpkin and Dess, 1996). While we appreciate the value to theory building that this separation creates, when it comes to moving from opportunity discovery to opportunity exploitation we see the two as critically linked. We contend that an important internal attribute drives the decision to acquire specific types of resources. In the following section, we examine the effects that entrepreneurial orientation has upon that process and develop propositions to guide future research. Figure 1 illustrates the relationships of our propositions to substitution-based and imitation-based resource accumulation strategies.

Figure 1. Relationship of Propositions to Substitution-Based and Imitation-Based Resource



INTERNAL INFLUENCES: ENTREPRENEURIAL ORIENTATION

Entrepreneurial orientation suggests an independence of action, a willingness to explore new ideas, and attempts to destroy the market leader's position by discovering new markets. Such a perspective derives from Schumpeter's (1934) seminal work on "creative destruction." Entrepreneurial orientation consists of five dimensions: autonomy, innovativeness, risk taking, proactiveness, and competitive aggressiveness (Covin and Slevin, 1989; Lumpkin and Dess, 1996). Although these dimensions are separate from the environment, they interact with the environment to influence the choice of decisions to be made.

Autonomy

Autonomy refers to the independent actions taken to execute an idea. Autonomy can be expressed in terms of centrality of power and decision making, i.e., from firms composed of autocratic leaders at one end of a continuum to those promoting empowerment at the other end. In a highly centralized organizational structure, the top management team exercises authority to decide which resources are to be accumulated. Similar to Hart's (1992) command mode and Bourgeois and Brodwin's (1984) commander model, autocratic leaders impose their vision upon the rest of the firm. This is particularly typical of smaller and newer firms (Mintzberg and Waters, 1985). Autocratic leaders are just as likely to imitate a competing firm in the belief that their management capability will provide the firm with better results as they are to strike out on their own, exploring purposefully for substitute strategic resource bundles.

At the other end of the spectrum, some firms develop organizational structures that drive decision making downward to individuals and small groups. Such firms flatten their hierarchical structure and encourage intrapreneurship (Pinchot, 1985), promoting innovativeness among smaller business units. Burgelman (1983) identified the presence of product champions, who move new ideas through the firm's marketplace for resources. Such autonomy encourages new ideas, which are frequently substitutes for existing products and processes. Thus, depending on how autonomy is managed within the firm, we could expect to observe different outcomes.

Autonomy, then, may be seen in smaller start-up firms even with autocratic management. With decision-making authority concentrated in the top management of these firms, autocratic managers have the discretion to allocate resources to new market possibilities. On the other hand, we expect firms that encourage idea generation from individuals outside the top management team to be more likely to recognize new market opportunities. Greater recognition of new opportunities by these firms should lead to more substitution-based resource accumulation strategies compared to firms with autocratic top management teams.

Proposition 1: *Firms with autonomy at multiple organizational levels are more likely to use a strategy based on substitution rather than imitation resource accumulation.*

Innovativeness

The innovativeness dimension refers to the degree in which a firm engages in developing and sustaining new ideas and processes, especially since these new processes create new products and services. This perspective draws on Kogut and Zander's (1992) work on combinative capability. They contend that firms create new knowledge through the process of refining their existing knowledge. Schumpeter (1934) developed the concept of "creative destruction" which suggests that innovation shifts wealth to greater productive uses. It spurs entrepreneurship as funds flow from existing businesses to newer ones. While by definition innovativeness might suggest employing substitute resource bundles, many improvements center on modifying existing products and processes with incremental changes.

Covin and Miles (1999) argue that innovativeness is part and parcel of corporate entrepreneurship; in fact, they suggest that firms lacking innovativeness should not be

considered entrepreneurial regardless of the presence of other entrepreneurial indicators such as autonomy, risk taking, proactiveness, and competitive aggressiveness. Innovativeness is thus a necessary but insufficient condition for firms debating whether to pursue an imitation or a substitution strategy. The Covin and Miles (1999) typology suggests that differentiation is the typical basis for competitive advantage of entrepreneurial firms focusing on new products or new markets. However, we take the position that fast imitation can lead to competitive advantage without incurring the risks inherent in substitution strategies. That is, while Covin and Miles (1999) suggest that frequent new product introduction and new market entry are modes of sustained regeneration for entrepreneurial firms, we argue that firms should not disregard the potential value-creation opportunities of imitation strategies.

In addition, firms may emphasize incremental process changes that, in total, add significantly to their ability to perform certain functions better than their competitors. For example, a firm may engage in process re-engineering to develop a low-cost leadership position (Porter, 1980). The end product or service may still appear familiar to consumers, while providing the innovator with a valuable advantage. While Schumpeter (1934) encouraged incremental change, such change does present some limits to the creation of new knowledge. To make meaningful changes, firms must sometimes drastically alter their resource bundles. As firms engage in what Hage (1980) characterizes as radical change, they recognize the need to substitute entirely new processes for existing ones. While firms can import entirely new processes from other organizations, frequently they are new processes not in place anywhere else (Hage, 1980). Frequently, firms pioneer advances in both process and product design. Kimberly (1981) describes innovation as a departure from existing technologies or practices and a venture beyond the current state of the art. New features not previously available now provide valuable opportunities for market-based differentiation.

Nahapiet and Ghoshal (1998) suggest that radical change presents itself in phenomena such as double-loop learning (Argyris and Schon; 1978) and paradigmatic change (Kuhn, 1971). Radical changes tend to be more difficult to implement; they are not only disruptive to competitors, but regularly to the firm as well. As such, radical changes are frequently opposed both inside the firm and out. Radical change occurs more frequently when its value is more readily recognized, such as when firms recognize that their existing processes place the firm's viability in jeopardy, or when critical mass to support needed changes occurs (Hage, 1980). Therefore:

Proposition 2a: *Firms with innovative processes that emphasize incremental improvements are more likely to use a strategy based on imitation rather than substitution resource accumulation.*

Proposition 2b: *Firms with innovative processes that emphasize radical change are more likely to employ a strategy based on substitution rather than imitation resource accumulation.*

Competitive Aggressiveness

Competitive aggressiveness describes a firm's emphasis on responding to a competitor's actions rather than to the market in general. Competitive aggressiveness differs from proactiveness by emphasizing reactiveness. Competitive aggressiveness can be found in both market leaders and market followers (Lumpkin and Dess, 1996). When firms high in competitive aggressiveness choose to enter an existing market, they typically sacrifice initial profit margins in order to establish market share. Similarly, when existing firms choose to defend their existing markets from competitors, they frequently offer to match a competitor's best price offer.

Competitive aggressiveness emphasizes quick responses to competitor actions. Pricing tactics are among the quickest changes firms can make. Because they must lower prices quicker than they can lower costs from their products, their emphasis on speed necessarily comes at a sacrifice in profit (Venkatraman, 1989). Similarly, firms

high in competitive aggressiveness may enter markets with a high profile, spending heavily to build consumer awareness quickly (MacMillan and Day, 1987). Competitive aggressiveness seeks to overcome any advantages that have accrued to market leaders while providing the firm with its own set of advantages. Such advantages cannot be created solely by price cuts. Competitive aggressiveness also suggests that firms structure their tactics to address vulnerabilities in a competitor's process. Thus:

Proposition 3: *As the level of competitive aggressiveness increases, firms are more likely to employ a strategy based on imitation rather than substitution resource accumulation.*

Risk Taking

Strategic risk taking suggests a willingness to accept greater levels of uncertainty about the outcome of some action. Miller and Freisen (1978) define risk taking as "the degree to which managers are willing to make large and risky resource commitments, i.e., those that have a reasonable chance of failure" (923). Baird and Thomas (1985) posit three dimensions of strategic risk: venturing into the unknown, committing a relatively large portion of assets, and borrowing heavily.

While virtually all decisions involve uncertain outcomes, some decisions involve greater risk because a firm's top management team may not understand what resources are necessary to execute a decision. Firms may find it difficult to imitate a competitor because they do not know what aspect of the competition to imitate. We contend that under conditions of low causal ambiguity, firms should feel more confident in their ability to determine whether or not to pursue an imitation strategy. Causal ambiguity occurs when the relationship between a specific action and a specific outcome, e.g., rent generation, is unclear and tenuous. As the level of ambiguity increases, imitation becomes an increasingly less certain strategy. If causal ambiguity is low, firms should be able to estimate the level of commitment needed to accumulate imitation and substitution resource bundles. The decision to pursue an imitation versus substitution resource accumulation strategy then becomes a cost-benefit decision as the amount of resources needed for an imitation strategy is less than that needed for a substitution strategy and hinges on which strategy has the higher rent generation potential.

As the cost of acquiring an imitation or substitution resource bundle increases (presenting a capital resource mobility barrier), a firm's willingness to pursue such a bundle increasingly depends on the amount of slack resources available for the firm to employ. Major commitments require firms to forego other opportunities, and the firm's viability is jeopardized should the decision prove incorrect. Similarly, debt financed resources also constrain a firm's other opportunities, because funds generated by the resource must be employed to service the debt. Again, as before, an incorrect decision may jeopardize the firm's viability.

A major cost of acquiring a resource rests with its level of specificity (Williamson, 1981). A resource that can be easily redeployed lowers the acquisition cost given that the resource is less likely to be idiosyncratic to a single productive capability. A firm that makes major commitments to a flexible resource does not have to pass on as many other opportunities as one that relies on resources with highly idiosyncratic asset specificity.

If risk taking is viewed as commitment under uncertainty, then which is more risky: pursuing imitation or substitution resource accumulation strategies? March (1991) suggests that one way for a new market entrant to overtake a market leader is to substitute greater variability-based processes for ones employed by the market leader. Assuming that competitors have had some success, an imitation strategy should be less risky than a substitution strategy with respect to asset specificity. Because a substitution resource bundle has not yet been tried in a market (as opposed to imitating an existing, successful strategy), a substitution strategy involves more uncertainty regarding redeployment of specific assets, ceteris paribus.

Proposition 4: *As the level of risk-taking increases, a firm is more likely to employ a strategy based on substitution rather than imitation resource accumulation.*

Proactiveness

Core to the entrepreneurial concept are assumptions about the importance of seizing opportunities once these opportunities are realized by the firm. Even when the specific strategy needed to pursue an opportunity is not completely clear, inaction is bound to end in failure, while action, even in uncertain environments, poses the greatest opportunity for gains. Firms exhibiting emergent strategy have recently been shown to have higher rates of sales growth than those following a more planned, intended strategy orientation (Covin, Green, and Slevin, 2006). This is consistent with a proactive stance even when projected returns are difficult to estimate. Nearly one-half century ago, Penrose (1959) contended that management's ability to both grasp and execute new opportunities largely determines the firm's growth potential.

The proactiveness dimension concerns itself with how a firm behaves once it discovers new market opportunities. Proactiveness is distinct from both innovativeness and competitiveness aggressiveness. The proactiveness dimension can shape the firm's competitive environment, influence trends, and in some situations, create demand (Lumpkin and Dess, 1996). Proactive strategies focus on anticipating and acting upon market opportunities. Proactive firms are frequently the first to market, and are thus the target of other firms' decisions for accumulating imitation or substitution resource bundles.

Lumpkin and Dess (1996) note, however, that proactiveness does not require being first to market, and that firms can seize new opportunities, even if they are not first to market. Miller and Camp (1985) studied 84 strategic business units and found that the second firm to market was as pioneering as the first and equally likely to succeed. Proactiveness thus can manifest itself in both first mover and second mover strategies. Because first movers create new demand and markets, they would not be, by definition, construed as employing imitative resource bundles. They should, therefore, expect to become targets of some other firm's imitation or substitution resource accumulation strategies. To the extent that a new market emerges from the first mover's combination of existing resources with new ones, we would better classify the proactive behavior for first mover efforts as substitution-based resource bundles. Second movers often succeed because they follow the market leader into a new market, capturing market share before the leader has fully established a dominant position within the market. Such a tactic does not require substitute resources and can effectively employ imitative-based ones. As such, resources built on imitation are often highly effective. Therefore:

Proposition 5a: *When first to market, proactive firms are more likely to use a strategy based on substitution rather than imitation resource accumulation.*

Proposition 5b: *When not first to market, proactive firms are more likely to use a strategy based on imitation rather than substitution resource accumulation.*

DISCUSSION

Firms developing an entrepreneurial orientation benefit from a compounding effect. Early on, the results of an entrepreneurial orientation may consume resources at a faster rate than they achieve performance gains (Dess and Lumpkin, 2005). Over time, however, performance gains compound from year to year, suggesting that the effects of an entrepreneurial orientation can be sustainable (Wiklund, 1999). Still, the plethora of strategic alternatives and their resultant resource accumulation requirements suggest the need for managerial guidance on which resource accumulation paths to pursue. This is a particularly important issue for small firms with limited access to the capital markets; resource accumulation that is less than optimal can create a path-dependent continuity of perennial underperformance. Thus, whether to focus on imitation or substitution resource accumulation is of paramount importance particularly to firms with limited resources.

What is it, then, that causes entrepreneurs to focus on imitation or substitution? Clearly, the decision is influenced by numerous factors, including the type of resource to be acquired, how resource bundles fit with the environment, as well as internal dimensions. Peteraf (1993) suggests that a resource dividing an industry into "haves and have-nots" could provide for a relative, though not absolute, advantage. This has an important implication for entrepreneurs: firms compete not only to identify promising opportunities, but also for the resources necessary to exploit that opportunity. Many of those resources are commodities (e.g., capital); thus, once the firm has acquired those resources, the game shifts to competition based on the quality and value of the promising opportunities of each firm. Following Peteraf's (1993) line of reasoning, we should expect firms to copy competitors when it comes to acquiring those resources that are scarce, but not unique, if they provide a separating equilibrium. Similarly, we should expect to see more imitation after, rather than before, standards within an industry have been set.

Still, there is an advantage to setting industry standards even though this requires a riskier accumulation of resources needed for substitution strategies. Firms employing a substitution resource accumulation strategy have the opportunity to define new parameters. Such first mover advantages may, but do not always, result in a competitive advantage. Clearly, however, these first movers take on substantial risk and unless the resultant competitive advantage is sustained; second movers using an imitation strategy may quickly dissipate the competitive advantage of a firm utilizing a substitution strategy. However, those firms that are successful in setting industry standards using substitution strategies, by defining the rules of the game, may erect entry barriers that, for a time, can hold imitators at bay.

An area for future research is the linkage between cultural diversity, entrepreneurial orientation, and resource accumulation strategies. Prior research has indicated that cultural diversity among top management team members plays a role in gaining a competitive advantage (Barney, 1986). For example, Richard, Barnett, Dwyer, and Chadwick (2004) found a positive relationship linking innovativeness to racial and gender heterogeneity while uncovering a negative relationship linking risk taking to racial and gender heterogeneity. Such findings may be expanded by considering cultural diversity at a national level. National culture serves as a moderator between entrepreneurial orientation and the extent to which firms engage in strategic alliances (Marino, Strandholm, Steensma, Weaver, and Mark, 2002). Similarly, Brown-Johnson and Droege (2004) argue that national culture moderates the level of risk agents are willing to accept. This same line of reasoning could be applied to entrepreneurial orientation and imitation versus substitution resource accumulation strategies.

Empirical testing of the relationships between our propositions and substitution-based and imitation-based resource accumulation strategies may be accomplished by modifying a combination of existing scales. For example, entrepreneurial orientation in terms of innovation, risk-taking, and proactiveness is often measured using the Covin and Slevin (1986) scale. Others have added autonomy and competitive aggressiveness as well as examining entrepreneurial orientation from multi-country and multi-cultural perspectives (e.g., Knight, 1997; Kemelgor, 2002). Ireland, Hitt, and Sirmon (2003) have elaborated constructs or measuring strategic entrepreneurship while Wiklund and Shepherd (2005) have measured a configuration of entrepreneurial orientation and small business performance. Clearly, researchers must proceed carefully in borrowing from existing scales to measure different phenomena; however, such scales provide solid ground from which to build.

We have decomposed the entrepreneurial construct into five dimensions consistent with previous research. However, there may be mediating and/or moderating relationships among these constructs. If this is the case, it may challenge the nature of the relatively linear propositions we have offered. Further research should continue to assess whether the entrepreneurial construct is composed of

three (Covin and Slevin, 1989), five (Lumpkin and Dess, 1996), or perhaps even a single dimension. In addition, future research should consider whether there are moderating and/or mediating relationships among these variables.

CONCLUSIONS

We have addressed some of the internal attributes that influence the imitation versus substitution resource accumulation decision. We have attempted to integrate entrepreneurial orientation with the resource-based view but suggest that further study on this question consider other approaches. The competitive analysis literature offers additional insights into the imitation versus substitution decision. Fruitful research may emerge from a better integration of the resource-based and competitive analysis literature. Similarly, the real option literature (Myers, 1977; Dixit and Pindyck, 1994) suggests several mechanisms firms may attempt in developing superior resource bundles. Conner (1995) argues that firms may benefit from being imitated, especially if doing so creates a "standard" for the firm. Might firms benefit similarly from a competitor's substitute resources, particular if they create legitimacy within an industry?

What remains unfinished are concerns about how best to operationalize the entrepreneurial orientation dimensions within the resource-based framework. Our integration of entrepreneurial orientation and the resource-based view of the firm is a first step in that direction.

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