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Entrepreneurial Capabilities and Resources: Sustainable Competitive Advantage through Innovation and Opportunism

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**ENTREPRENEURIAL CAPABILITIES AND RESOURCES:
SUSTAINABLE COMPETITIVE ADVANTAGE
THROUGH INNOVATION AND OPPORTUNISM**

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ABSTRACT

Firm resource theory specifies the conditions under which resources and capabilities may lead to sustainable competitive advantage. Using the emerging organization as an example, we use firm resource theory to identify some of the resources important to the entrepreneurial capabilities of innovation and opportunism.

INTRODUCTION

Strategic theory suggests that sustainable competitive advantage is derived through ongoing fit of the organization's strengths and weaknesses with the opportunities and threats in the environment (4) (64) (76). Firm resource theory has investigated the organizational side of this equation, that of strengths and weaknesses. Questions that this stream of theory addresses include: How are resources and capabilities¹ accumulated? How are they managed to match the opportunities of the environment? How are advantages sustained? (For a recent review, see Grant (29); see also (7) (8) (21) (35) (45) (49) (50) (54) (58) (60) (61) (62) (84) (86)).

Firm resource scholars have argued that sustainable competitive advantage must rely upon superior resources and capabilities that are imperfectly substitutable, imitable and tradeable (7) (8) (45). Firm strengths that meet these last two criteria tend to be complex, causally ambiguous, knowledge based and accumulated over time (21) (35) (58).

Over the long run, even resources that have met these criteria may lose their superiority through deterioration, imitation and obsolescence (29), or in Schumpeter's (62) terms through creative destruction. Therefore, the only really long term strategy for sustainable advantage is not the deployment of existing resources, but the harnessing of creative destruction to the firm's own advantage. The firm must persistently extend its resources and capabilities, and proactively search for and opportunistically² respond to favorable situations in the environment (71) (74). Innovation on an ongoing basis is the only counter to the erosion of competitive advantage (9) (29) (51) (55).

Our thesis is that the central capabilities of the entrepreneurial firm are innovation and opportunism, and that these are derived from entrepreneurial firm resources, such as particular cultures, structures, and learning modes. These sorts of resources meet the criteria for sustainable competitive advantage.

The Emerging Organization as Example

The emerging organization must be driven by innovation and opportunism, because it has no other means of extracting resources from the environment. Such firms have little organization memory and knowledge (33) and suffer learning disabilities (82). Consequently, they must experiment; they are

¹ We follow Grant's (1991) definitions: firm strengths and weaknesses include both resources (inputs such as capital equipment, money, reputation, human resources) as well as capabilities (the capacity of a team of resources to perform an activity).

² Opportunism is meant in a positive sense (i.e., opportunity seeking behavior), and not in the negative sense implied by agency and transaction cost theory (e.g. shirking, holdup).

test makers who must interpret equivocal situations (19). Because of their smallness and newness (1) (75) they cannot isolate themselves from the uncertainty of their task environment. Employees are often owners whose views of goals and risk are congruent with those of the firm (23) and who are directly subject to the benefits and penalties of the uncertain environment (6).

Most emerging organizations die, but some survive. Those that survive past their startup period institutionalize what they have learned from their survival experiences (23) (27). They develop organizational routines (50), patterns of beliefs (63), invisible assets (35) and capabilities (29). They also face institutional pressures to conform to conventional approaches and avoid change (67) (79). Moreover, a number of theories hold that these organizations try to protect what they have gained from the uncertainties of the environment. Approaches to minimizing uncertainty include those such as sealing off the technical core (77), buffering (53), defensive routines (5), protecting deep structures (28) and internalizing transactions (85). Rational, machine-like structures which arise from attempts to reduce uncertainty (47) emphasize planning, coordinating, and command and control (48).

Paradoxically, bureaucratic and hierarchical structures and processes which attempt to perpetuate known sources of innovation defeat their purpose, because innovativeness requires a context of engaging uncertainty (39) (40) (52) (61) (79) (82) (83). When the organization is protected from uncertainty, it loses the stimulation of an information rich environment which may encourage creativity and risk taking behavior (26). Further, innovation and opportunities involve chance events (39) (40) (82). Protection from the environment minimizes exposure to chance. Therefore, if firms are to retain the innovative and opportunistic capabilities typical of the emerging organization, their managers must learn to manage uncertainty in ways that enhance, not stifle, these capabilities.

Entrepreneurial Capabilities

The prototypical entrepreneurial organization is the fast growing, emerging organization which is attuned to opportunity (25). However, all entrepreneurial organizations, regardless of size or age, have an opportunity bias; a strong commitment to find and fill opportunities without regard to resources controlled (36) (43) (44) (71).

However, recognition of opportunities alone is insufficient. Entrepreneurial organizations must combine opportunism with innovation. Writers from a variety of theoretical perspectives (e.g. international (9), evolutionary economics (49), industrial/organizational economics (54) (55), entrepreneurial (74), strategy (29), and consulting (51) (52)) hold that the ability to generate innovations is the source of durable competitive advantage. However, for the organization that survives its startup to have durable innovative and opportunistic capabilities, it must resolve the control paradox identified above.

Skill in managing this paradox is, therefore, an exemplary capability of the entrepreneurial firm. It is difficult to enumerate the resources supportive of these capabilities since, by definition, capabilities which lead to sustainable competitive advantage are causally ambiguous (58) and idiosyncratic (21). Further, each resource interacts with the others and none can be viewed in isolation of the others (21). Despite these intractable characteristics of its subject matter, the literature on innovation does suggest certain resources which may be common to entrepreneurial capabilities.

Entrepreneurial Resources

Organic Structure

It is widely recognized that organic structure (13), which is participative, flexible and adaptive (22), and which avoids bureaucracy (31),

centralization (20) and hierarchy (39), is associated with entrepreneurial organizations (16) (17) (18). As Schoonhoven, Eisenhardt and Lyman (65) pointed out, these characteristics do not mean a sloppy inattentiveness to environmental information. To the contrary, an organic structure is open to uncertainty and complexity, and thus, is a firm resource supportive of innovative and opportunistic capabilities. Outcome Compensation

An organic structure gives up some control over the organization's actors in order to allow uncertainty to provide its benefits. In the emerging organization, control is satisfied through the goal congruence of the organization with its owner/employees. However, in larger organizations, actors may be only partially included (41); their goals and those of the organization are incompletely congruent (23). Control may be exerted through behavior oriented compensation systems which may reinforce institutional norms, overemphasizing threats and underemphasizing opportunities (36).

Agency theory suggests an alternative response--outcome compensation (23). With such a compensation system, employee are rewarded for achieving specific results through such incentive compensation schemes as ownership, bonuses for project completion, and commissions and profit shares in new products. These systems allow the organization to emulate the owner-managed firm by structuring both financial and psychological incentive systems around desired outcomes, minimizing innovation stifling behavioral controls (31) (46) (57) (59) (61) (83).

Framing

Measures of risk-taking propensity have generally failed to differentiate business founders from other people (11) (12) (69) (90). This is counter-intuitive because new ventures are perceived to be risky; indeed Knight (42) viewed risk taking as a key function of the entrepreneur. These conflicting views are generally reconciled with the argument that entrepreneurs frame risky situations differently than do other people (15) (80).

Research has shown that most individuals have biases against risk taking and opportunity seeking. Tversky & Kahneman (78) have shown individuals tend to make risk averse choices when faced with gains, but risk taking decisions when confronted with losses. Jackson & Dutton (36) found managers often have a threat bias, responding more readily to threats than to opportunities. Similarly, Bateman and Zeithaml (10) found failure framing leads to higher reinvestment than gain-oriented framing.

In contrast to these common risk perceptions, that of the entrepreneur is oriented to opportunities. Therefore, an organization that seeks to be innovative must institutionalize the risk perceptions of the entrepreneur. It must frame decisions so that actors are encouraged and not discouraged to innovate, to take risk, to pursue opportunities; it must create an opportunity bias (36). This bias is institutionalized within the firm through such organizational strengths as outcome compensation related to the success of new projects and ventures (51) (83), flat organizations which eliminate the number of approval levels (39), the celebration of failures (31), market place experimentation (30), and the semi-isolation of product development teams (40).

Culture

The actors in an innovative organization share beliefs in the need for creativity, innovation and opportunism. Culture, using Schein's (63) definition, consists of basic assumptions about the business shared by the organization members. The culture of the emerging organization embraces innovation, experimentation, risk taking and opportunism by encouraging trial and error, allowing failure, supporting new ideas, making sponsors and champions readily available (31) and rewarding people for performance, not behavior (51).

Schein (63) suggested that culture may be the initial competitive advantage of the newer organization and notes the tendency in maturing organizations for culture to de-emphasize innovation. The maturing

organization emphasizes control which protects the organization against shocks at the expense of its ability to recognize opportunities. Thus, control systems based upon shared values, vision and purpose can provide uncertainty controls, with a bias for or against opportunism (34).

As Kanter (39) has written, successful companies develop a counter-culture (which she calls post-entrepreneurial) to the old bureaucratic command and control structure. Miner (46) has found innovative people prefer this kind of environment to hierarchies. Hitt, Hoskisson, Ireland and Harrison (32) made an intriguing speculation, which if confirmed will support the importance of culture to innovation. Finding that R&D intensity declines following acquisition, they suggested that the acquiring firm imposes its control system on the acquired firm, thereby destroying the innovative culture resource of the acquired firm.

Knowledge and Continuous Learning

An important factor of innovation is the ability to learn continuously. Not only does innovation require persistent learning, but capabilities in general are associated with learning. Capabilities are dynamic (21) (29) (49) (54) and involve ongoing coordination among actors and between actors and other resources. Perfecting such coordination requires learning through adaptation, repetition, and experience (29) (50) (81).

Innovation is a knowledge intensive process (40), which requires not only a stock of knowledge (20), but continuous additions thereto (14). Prahalad & Hamel (56) held that collective learning is necessary to develop core competencies. Some of the organizational processes which support continuous learning include trial and error as a result of exposure to an uncertain environment (19) (33) (49) (57), continuous experimentation which leads to knowledge and competence assets (87), and continuous exposure to intense competitive conditions (55) (74).

Boundary Spanning

Entrepreneurial organizations are specialists at spanning boundaries, both external and internal. External boundary spanning increases sources of information, allows increased learning and exposure to opportunities, and imposes market discipline throughout the firm (73) (74). Such activities as developing social networks (2) (24) (70) (72), joint development projects with suppliers (52), close relationships with customers (40), alliances (37) (39) (40) and external information search strategies (38) all increase the permeability of the external boundaries.

Internal boundary spanning increases the ability of the organization to utilize its knowledge resources by promoting the exchange of information throughout the organization. Internal boundary spanning is encouraged through organic organizing and such devices as multidisciplinary teams (31), autonomous work teams and informal internal labor markets (74).

CONCLUSION

Innovative and opportunistic organizations accumulate, manage, renew and exploit particular capabilities and their resource antecedents. Among these antecedents are organic structure, outcome compensation, an opportunity bias in perceiving the environment, organizational values and assumptions which encourage experimentation, knowledge and persistent learning, and the encouragement of both internal and external boundary spanning activities. Resources such as these meet the general criteria, specified by firm resources theory, for sustainable competitive advantage.

The very complexity and causal ambiguity that can make these resources competitive weapons, by the same token makes it difficult to specify them ex ante - or even to identify them ex post facto. Resources and capabilities that are fully understood would not be sources of sustainable competitive advantage. Therefore, we must be cautious about efforts, including ours, to identify those resources which entrepreneurial firms are likely to have. The capabilities of innovation and opportunism with which these firms deploy their

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