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Shaker A. ZAHRA

Gerard GEORGE

Singapore Management University, ggeorge@smu.edu.sg

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Absorptive capacity and entrepreneurship

Zahra, Shaker A. and Gerard George

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Ideas for entrepreneurial activities do not necessarily reside within a firm's boundaries. Firms source their ideas and opportunities for entrepreneurial businesses from their competitors or from related industries. Organizations seeking to nurture entrepreneurial activities need to learn about new ideas at their formative stages, understand the strategic implications for their businesses, and creatively assimilate these ideas into their operations. The infusion of new ideas stimulates employee thinking, especially the possibility of combining them with the firm's resources, knowledge, and capabilities. Infusion of knowledge may fuel discordant opinions on strategy, but may also form the basis for the creation of combinative knowledge, which is at the core of innovation and venture creation.

Knowledge and Entrepreneurship

Entrepreneurial firms use different approaches to acquire knowledge. Many firms invest in environmental scanning activities, carefully monitoring and analyzing trends in their industry and elsewhere. Environmental scanning allows companies to identify changing technological, social, political, and economic trends that could affect their businesses. This information is also useful in defining a firm's business and its strategy. The information gleaned from scanning activities, however, is rarely sufficient to develop specific capabilities in a competitive niche. Firms invest in research and development (R&D) activities to build these capabilities to enhance innovation. Organizations also invest in start-up firms inside and outside their industries, hoping to learn more about technological trends and how to build the skills necessary to compete. Firms join strategic alliances and technology consortia, with the intent of learning from their competitors and partners. Some firms use acquisitions as a mechanism to access competencies from other companies in order to renew their existing operations or venture into new arenas.

Definition and Dimensions of Absorptive Capacity

Firms are not assured of significant benefits from their investments in alliances, acquisitions, or other activities aimed at bringing new knowledge into their operations. Structural and cultural factors act as barriers to ideas developed elsewhere; ideas that are often viewed with skepticism and hostility and therefore resisted. Organizations may lack the requisite absorptive capacity, defined as the ability to identify and exploit knowledge within organizational boundaries (Cohen and Levinthal, 1990). Zahra and George (2002) suggested that absorptive capacity is a set of capabilities, composed of routines and resources, to acquire, assimilate, transform, and exploit knowledge. It is important to understand how this multiplicity of capabilities underlying a firm's absorptive capacity may influence entrepreneurial behavior.

Identification

Entrepreneurial activities require breadth and depth of knowledge content pertinent to markets, competitors, customers, and technologies. Organizations promoting entrepreneurial activities have to identify the most useful knowledge for their operations. Identifying this knowledge is a difficult task because competitors attempt to isolate their intellectual property from imitation. Even though competitive intelligence can help in this process, closeness to other companies is crucial to learning and spotting new knowledge, which tends to be tacit in nature. Tacit knowledge is difficult to articulate or share with others. Even when knowledge is explicit, it is embedded in competitor operations and systems, making it difficult for outsiders to identify and imitate. Consequently, entrepreneurial companies actively join alliances and research consortia hoping to gain a first-hand understanding of emerging and possibly radical technologies.

Comprehension

Knowledge is difficult to observe and understand. This is particularly true in the case of tacit knowledge that people acquire by doing or developing as they explore new ways of doing things. Tacit knowledge is difficult to verbalize and those who possess it are often unaware of its existence. This tacitness poses major challenges for entrepreneurial firms that seek to internalize new knowledge from the outside. These firms cannot comprehend easily externally generated knowledge, because it might embody unique characteristics and codes that cannot be deciphered or understood. Organizations combine their knowledge in unique ways, thereby constraining others' ability to unbundle their products and technologies. Alternatively, the recipient firm may not have the knowledge or skills to comprehend the information it has received. Cohen and Levinthal (1990) point out that those companies with even modest amounts of knowledge in a given field are better adept at comprehending incoming knowledge in that area. This is why some entrepreneurial companies devote resources to acquire this knowledge. For example, they send their technical and managerial personnel to professional conferences and encourage them to read new publications inside and outside their field. Firms may also create systems that diffuse knowledge about changing paradigms (e.g., new research findings) and share such information with their employees.

Assimilation

Understanding and comprehending incoming knowledge sets the stage for assimilating this knowledge into the firm's operations. Assimilation means that incoming knowledge becomes an integral part of the firm's knowledge base through routinization and codification. Assimilation of incoming knowledge is difficult because of the structural, cognitive, and political barriers that might exist in the recipient firm. The firm's formal structure often limits its search for new knowledge, keeping focused on knowledge that is consistent with what the firm already knows. Incoming knowledge may disrupt the existing frames of reference and mental models that prevail within the firm about the industry and competition. If incoming knowledge has the potential to change the firm's strategy, it could alter the patterns of resource allocations and corresponding power bases in the organization. Managers, therefore, may discard threatening knowledge or that which does not conform to their expectations. Entrepreneurial firms create task forces to identify best practices by competitors (or even from other industries) and share them with employees.

They also integrate different types of knowledge to glean insights that could be leveraged to develop new products, systems, business models, and even businesses. Knowledge sharing and integration (Zahra, Ireland, and Hitt, 2000) help firms to assimilate incoming knowledge.

Exploitation

Entrepreneurial firms excel in harvesting the knowledge embedded in their operations to capture and exploit new knowledge by building new products, goods, and services. These firms also use this knowledge in building dynamic capabilities that serve as the foundation for their competitive advantage. Dynamic capabilities refer to the set of integrated capabilities for organizational change and renewal that a firm can deploy to achieve differentiation from its rivals. Keeping these capabilities current requires the firm to learn new skills. This type of exploratory learning expands the firm's cognitive map and exposes it to new ideas that may not produce immediate financial gains (McGrath, 2001). Yet this exploratory learning is important for successful long-term performance.

Zahra and George (2002) suggest that companies often fail to exploit their absorptive capacity to the fullest. One reason is the tendency among some companies to emphasize certain types of skills over others in their pursuit of a competitive advantage. As a result, some skills are overused while others are underutilized or even overlooked. This might happen because managers become comfortable and familiar with certain types of knowledge and not others. Further, because absorptive capacity usually embodies multiple types of knowledge at different levels of currency and efficacy, managers cannot always synchronize the use of all knowledge they possess.

Nurturing and Upgrading Absorptive Capacity

Managers define and invest in the development and deployment of capabilities to ensure the continued survival and performance of firms. Such investments require a thorough understanding of industry and market reality, as well as a vision of growth by leveraging the firm's technology. Effectively developing and deploying the routines to acquire, assimilate, transform, and exploit knowledge to create value is at the core of a superior absorptive capacity. Entrepreneurial firms generate value by entering new business niches, creating technological breakthroughs, and by reinvigorating their operations. They do so by investing in building and strengthening their absorptive capacity to keep it current, efficient, and dynamic.

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