The Links Between Innovation, Strategy and Internationalization Processes: A Comprehensive Literature Review

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Abstract: Globalization of the economy has revived the interest on the theme of internationalization of companies. There may be several motives for a company to expand its markets, but whatever they are, the success of the process depends on specific and characteristic assets that the company possesses and on their capacity to provide competitive muscle. Among other strategic choices, the development of innovation capabilities is a possible path to provide the firm with knowledge and organizational assets that confer it a competitive edge. Knowledge assets are increasingly important in a interconnected and open world market, where traditional localized competitive factors, such as low labour costs, are rapidly losing appeal as drivers of sustainable and continued value creation. In a highly competitive international market, innovation and internationalization seem to be themes that are intrinsically related to each other, in the sense that knowledge and innovation capabilities seem to be a necessary prerequisite to an internationalization process. However, per se, innovation capabilities, and the assets behind it, may not be enough to a successful endeavour. In the absence of privileged, localized knowledge of the national market, strategic considerations are of paramount importance to the internationalization process. Strategic actions are important, not only at the planning stage but also at the implementation stage. It is argued in this paper that these aspects, knowledge, innovation and strategy, are crucial to understand actual internationalization processes and dynamics. This paper intends to examine the above concepts and the links between these factors and their effects on business performance and competitiveness and comprehend internationalization processes. It provides a comprehensive review on the literature regarding the possible connections between the three concepts and it identifies the main ideas and variables that have been suggested and are being regarded. It provides a useful synthesis and it suggests future research paths.

Keywords: innovation, strategy, internationalization, strategy implementation, review

1. Introduction

The research developed on the strategic management field since its origins has been focused on the understanding of the factors and determinants that makes a firm success or fail in its relationship with his environment, typically by looking at the interplay between the internal and external aspects and how to manage such process. Several different theories and models have been developed to explain these issues and to propose pathways to action (Axelsson, 1992).

Companies have to deal with the new and tremendous challenges posed by the so-called fourth industrial revolution on their competitive landscape. The rate of technological change and the speed at which new technologies become available, the globalization, the information age and the increasing knowledge intensity leads to hyper competition where the firm’s survival becomes even more difficult. There is a relative gap on the literature regarding the knowledge about these complex processes and competitiveness at an international level (Rumelt, Schendel, & Teece; 1994), although Internationalization is an increasingly important strategic choice for many firms, including small ones. The capacity to internationalize seems to be intrinsically related to knowledge and innovation capabilities, and the capability to implement strategic options. The paper explores the under researched links between these issues and provides insights that may be useful to understand the internationalization processes.

2. Literature review

2.1 Strategy

It may seem odd, but the first reference to the concept of Strategy or Strategic Management dates back to the Old Testament of the Bible, in the context of the challenges faced by Moses in conducting his people out of Egypt, and which are discussed by some Greek authors like Homer and Euripides. The etymology is related to the Greek word Strategos, a ‘general’, which in turn comes from roots meaning ‘army’ and ‘lead’ (Bracker, 1980). The Greek verb Stratego means to ‘plan the destruction of one’s enemies through effective use of resources’.
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This etymological origin contains itself some critical issues related to strategy that even nowadays are still essential to the company’s survival and reveals its strong military connotation and influence, since its meaning was associated with military operations. This influence throughout the history is also visible on the teachings contained on some famous treatises of the military strategy that can be easily translated to the modern business strategy.

In *The Art of War* (IV BC), written by the Chinese general Sun Tzu, the most ancient and famous military treatise, the first chapter is dedicated to strategy and it highlights the planning importance (Tzu, 1988), linked to resource availability. According to Mintzberg (1990) this treatise established the foundations of the positioning school on its “first wave” which he labelled as the “military maxims”. On ancient Greece, this concept assumed a political and management direction with Pericles (450 BC), a politician - general, and its meaning was associated with skills attributable to management like leadership, the exercise of power and persuasion (Mintzberg and Quinn, 1996).

In spite of its importance and inspirational influence throughout history, being discussed by many well-known writers, politicians and the armed forces, strategy will only be related with business in 1944, with the work of Von Neumann and Morgenstern called *Theory of the Games and Economic Behaviour* (Ferreira, 2011). This pioneer work applies math to the decision making process in competitive situations. According to Mintzberg (1990) it was Newman (1951) the first author applying the word strategy on the management literature.

Strategy only emerged as field of study during the 1960s (Pettigrew, Thomas, & Whittington, 2002), with the pioneering works of Chandler (1962), Ansoff (1965), Learned, Christensen, Andrews, & Guth (1965/1969) and Andrews (1971).

Chandler (1962) connected business growth in some US large companies and the organizational innovation (*Multidivisional Organizational Form*) needed to support that growth, establishing a clear distinction between Strategy and Structure (Rumelt et al., 1994). To Chandler (1962:13-14) “Strategy can be defined as the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals” while Structure was defined as “the design of the organization through which the enterprise is administered”. Changes in the external environment leads to a change in strategy which conducts to a change on the structure to make strategy work (Hoskissom, Hitt, Wan, & Yiu, 1999). Only in the 1980s, this approach - known as Chandler’s *dictum or Maxim*: “structure follows strategy” – was challenged by authors like Hall & Saias (1980) and Mintzberg (1990).

Hall & Saias (1980) inverted this thesis arguing that “strategy follows structure”, because organizational judgement regarding firms’ environment and capabilities is influenced by structural features, like bureaucracy (Johnson, Scholes, & Whittington, 2008).

Mintzberg (1990) suggests a different point a view “…structure follows strategy as the left foot follows the right in walking”. He argues that strategy and structure have reciprocal interactions (Johnson et al., 2008), none of them precedes each other, and both boost the organization since structure also inhibits, affects and leads strategy.

Andrews and his partners agreed with the idea of strategy developed by Chandler. Strategy is “the pattern of objectives, purposes, or goals and major policies and plans for achieving these goals, stated in such a way as to define what business the company is in, or is to be in, and the kind of company it is or is to be” (Learned at al., 1969:15). This idea of strategy was complemented with the “distinctive competence” concept developed by Selznic (1957), and a certain suggestion of the environment uncertainty that managers and companies have to deal with (Rumelt et al., 1991). The term “distinctive competence” alludes to “the things that an organization does especially well in comparison with its competitors” (Snow & Hrebiniak, 1980). The evaluation of the external environment allows to identify potential factors of success based on threats and opportunities while an internal evaluation allows to identify the distinctive competencies based on the strengths and weaknesses of the companies, being these two perspectives the basis of the strategy formulation process (Rumelt et al., 1994). Strategy Formulation and Implementation are two distinct interconnected processes of Corporate Strategy (Hoskissom et al., 1999), being strategy formulation an “analytical objective” and strategy implementation is a “a comprised set of primarily administrative activities” (Rumelt et al., 1994).
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Ansoff (1965) is seen as the founder of the strategic planning school (Mintzberg, 1990). He is also appointed as the father of the strategic management concept and the vision statement creator, along many other important concepts and tools on strategic planning and corporate strategy (Martinet, 2010). To Ansoff (1965), strategy is the “common thread” among the activities of the organization and its products and markets, and it has four components: scope of products and markets; growth vector; competitive advantage and synergy, being the main focus of his work the strategic decisions (Hoskisson et al, 1999). The work of Thompson (1967) played additionally an important role on this matter, with the introduction of the concepts of “cooperative and competitive strategies and coalition formation, a forerunner of network and strategic alliance strategies. His work also contributed to the understanding of implementation of corporate strategy through his notion of interdependence between business units. Pooled, reciprocal, and serial interdependence are associated with corporate strategies of unrelated diversification, related diversification and vertical integration, respectively.

Together, Chandler, Andrews and Ansoff established strategic management as a field of study (Rumelt et al, 1994). The main focus of the research was with the internal competitive resources, through the identification of firm’s best practices, a concern that can also be seen on the work of early classic writers like Chester Barnard’s (1938), Philip Selznick (1957) and Edith Penrose (1959) according to Hoskisson et al. (1999).

On the seventies, strategy moved from the basic concepts to their application in business practice, giving ground and body to research on the field as we know it nowadays, where consulting firms like The Boston Consulting Group or Bain and Mckinsey played a major role, along the professional societies and the appearance of the first journals on strategy. Particularly, with the creation of the important conceptual tools of the “experience curve” and the “growth-share matrix” (Rumelt et al, 1991), the Boston Consulting Group established a “sharp, clear line between operational decision making and corporate strategy” (Rumelt et al 1994). Also in the seventies, three streams of work, in Harvard and Purdue University, can be identified in order to try to experiment and know the relationship between strategy and performance. At Harvard, two opposite trends of research begin taking form, one following the work of Chandler whose main objective was testing the relationship between firm performance and diversification strategies, while the other stream, based on the industrial organization economics (I/O) view, was focused on industry structure and competitive position. At Purdue, the main research objective was to explore the relationship between the organizational resources decisions and the companies’ performance, whose results showed for the first time the differences in performance and strategy that exists within industry (Rumelt 1991;1994).

According to Hoskisson et al. (1999), evolution of research on the seventies shifted the emphasis from the internal characteristics of the firm to an external perspective where the main focus of study was the industry structure and the firm’s competitive position on industry. This perspective came out essentially from the industrial organization economics filed. The roots of the theoretical approach can be traced on the works of Bain (1956,1968) and Mason (1939) with the “S-C-P paradigm” (Structure Conduct Performance), which analyses and evaluates the relationships between three market elements: structure, conduct and performance.

It is widely accepted that Porter (1980,1985) was the main influence on the field during the eighties, employing the IO economics concepts. Porter developed an analytical tool, the Porter’s Five Forces Model, which allows to evaluate the industry attractiveness making the task of competitor analysis easier. Porter also suggested that firms can use competitive strategies (generic strategies: low cost leadership, differentiation and focus) in order to obtain competitive advantages in their crusade for survival and profit (Rumelt et al 1991;1994).

Additionally, two intermediate theories from subfields of organizational economics, the transaction costs economics and the agency theory received much interest on research, expanding the use of economic theory. The main contribution of these theories was changing the focus from the industry level to the firm level. TCE was applied to analyse the M-form (M-form was associated to a better firm performance), hybrid forms of organizations (like joint venture, licensing and franchising) and international strategy, which helped to explain the international modes of entry choice. Topics addressed by researchers applying the agency theory were mainly related with innovation, corporate governance and diversification. Some results of this line of research were interesting and shed different light on the theme. For instance, managers probably use unrelated diversification as a strategy to growth in order to reduce their employment risk, or, in order to achieve more personal profits managers may feel tempted to increase the firm size through diversification, or innovation activities could be influenced by the manager’s risk-averse caused by the high levels of uncertainty of the R&D investments resulting in competitive and performance losses (Hoskisson et al., 1999).
Also during the 1980s, the focus of the research on the field backed again, gradually, to its roots, with a renewed emphasis on internal resources, although in the 1980s Porter’s theory of competitive strategy was dominant. Wernerfelt (1984) labelled this new approach the “resource based view of the firm” where he suggested a link between competitive advantage and company’s resources. He proposed a competitive advantage theory supported by the resources that an enterprise controls instead of stipulating their product markets. The capacity of a firm in obtaining advantages on the implementation of their product market strategies could be influenced by the contention among firms for resources regarding their resources profile (Barney & Arikan, 2005). Resources were defined as “anything could be thought of as strength or weakness of a given firm”, more specifically “tangible and intangible assets which are tied semi permanently to the firm” (Wernerfelt, 1984).

Hoskisson et al (1999) argued that “the central premise of RBV addresses the fundamental question of why firms are different and how firms achieve and sustain competitive advantage”. They distinguished two groups of researchers’ work in order to provide the answer: one, following Wernerfelt’s work, focused more specifically on the explanation of “how differences in firm’s resources realized superior firm performance” and another concentrate “on examining specific resources which gave rise to sustainable competitive advantages”.

Important members of the first group of authors include Rumelt (1984), Barney (1986) and Dierickx & Cool (1989), who established some essential foundations of the resource-based logic (Barney & Arakin, 2005). Rumelt (1984) explored the economic rent generation and the firm’s proper characteristics. Barney (1986) introduced the concept of “strategic market factors” which defines the “tradability” of the resource factors, while Dierickx & Cool (1989) suggested a differentiation in terms of assets (flows or stocks).

According to Barney & Arakin (2005) the most important works on the other parallel stream of research were the theory of the invisible assets developed by Itami (1987) and the work on the “competence-based theories of corporate diversification” developed by Prahalad & Bettis (1986) and Prahalad & Hamel (1990).

To Itami (1987) the invisible assets – information-based resources such as technology, customer trust, brand image, and control of distribution, corporate culture and management skills - are an essential condition to achieve competitive success, although the tangible (visible) assets are necessary to operations, since they are “hard and time consuming to accumulate, can be used in multiple ways simultaneously, and are both inputs and outputs of business activity” (Barney & Arakin, 2005).

Prahalad and Bettis (1986) introduced the concept of dominant logic to describe the relationship between performance and diversification. They defined dominant logic as “the way in which managers conceptualize the business and make critical resources allocation decisions”. This dominant logic is determined by the “beliefs, theories and propositions that have developed over time based on manager’s personal experiences” and it is related with the “cognitive orientation and the knowledge structures used by top managers in making their strategic decisions”. To the authors, while unrelated businesses requires multiple dominant logics, a single dominant logic can be used to strategically manage related business (Knecht, 2013).

Prahalad and Hamel (1990) enlarged the dominant logic concept in a most important paper that introduce the term of corporation’s “core competence” which was defined as “the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies”. They stated that a firm should focus on a set of distinctive competences.

Barney (1991) argued that not all of the resources have the potential to establish a competitive advantage and he identifies four needed characteristics so that a resource can be a source of competitive advantage: Value, Rarity, Inimitability and Organization (the VRIO Framework). Through this framework it is possible to evaluate the level of importance of the firm’s resources.

The research on the RBV moved forward to be more specialized. Some research sub-streams looking at some internal resources, like the knowledge based view of the firm, or the strategic leadership, recently emerged on the field (Hoskinsson et al., 1999). As mentioned above, knowledge assets are increasingly important in an interconnected and open world and we will explore below its relationship with strategy and innovation.
2.2 Knowledge and Innovation

Many writers elected knowledge as the principal resource that can be under control by a firm and established a “knowledge based theory” to explain a persistent corporate superior performance (Barney & Arakin, 2005). Hoskisson et al (1999) argued that the “knowledge-based view (KBV)” or “knowledge based theory” is built upon the resource based theory (RBV) and extends this concept considering companies as knowledge heterogeneous entities.

To Nonaka (1994) knowledge is a many-sided concept with many interpretations. He defines it as a “justified true belief”, and considers knowledge, in a view of the knowledge theory creation, as “a dynamic human process of justifying personal beliefs as part of an aspiration for the truth”, distinguishing it in this way from the “traditional epistemology”. In this way, knowledge is the asset that drives strategy and it is the main feature that distinguish KBV from other schools of thought in strategy (Takeushi, 2013).

Polany (1966) divided knowledge into two groups: “explicit/codified” knowledge (transferable in an easy way) and “tacit knowledge” (one that is not amenable to transfer). However, tacit knowledge has been pointed as an important source of competitiveness between organizations and can only be evaluated by action (Ferreira, 2011).

Takeushi (2013) argue that strategy formulation and execution is the outcome of “a subjective, interactive process driven by human beings based on their beliefs and here-and-now judgments and actions taken within particular contexts”. These statement adds three new perspectives to the traditional schools of strategy: (1) people are on the heart of strategy; (2) “strategy as a dynamic process” and (3) a “social agenda of strategy”. Tacit knowledge is grounded on person’s instinct, emotions, intuitions, ideals, experience and actions and it originates strategies that really works. But the traditional management theories neglect human subjectivity, since knowledge is viewed as one more resource like land and capital. Manager’s usually focus on explicit knowledge, as this kind of knowledge is classified, quantified and widespread. The interaction between tacit and explicit knowledge (which Takeushi defined as the “epistemological level”) is the drive force on knowledge creation in firms and they are complementary (Nonaka, 1994). With emphasis on the knowledge creation process through the conversion between tacit and explicit knowledge, Nonaka (1994) established four different types of knowledge conversion (The SECI Model): (1) Tacit to Tacit (Socialization); (2) Tacit to Explicit (Externalization); (3) Explicit to Explicit (Combination) and (4) Explicit to Tacit (Internalization). He argues that organizational knowledge creation is an “upward spiral process, starting at the individual level moving up to the collective (group) level, and then to the organizational level, sometimes reaching out to the inter organizational level” (which Takeushi defined as the “ontological level”). This sentence highlights not only the active role of top management in the knowledge process creation, but also the middle and lower levels that are, on other schools of thought, ignored or are a “necessary evil”. He also highlights the role of the context where the people interactions occur - the “ba”- to create new knowledge. Bo, can be “physical” or “virtual” providing a platform for individual progress and /or organizational knowledge (Ferreira, 2011). On a fast changing environment, disruption is perpetual and it requires to all types of managers the ability to decide “just in time” and just “now” the utility of their decisions. Moreover, the fourth industrial revolution demands that strategy focus also on creating social value in order to improve the quality of life for all people around the world (Takeushi, 2013). That is what he calls “Phronesis” or “Practical wisdom” which he defines as “the high-order tacit knowledge acquired from practical experience that enables humans to make prudent judgments and take timely action appropriate to a particular context and situation, guided by values, aesthetics and ethics”. Including phronesis within strategy “allows the firms to create another spiral at the teleological (purpose) level”, since “phronesis is know-what-sould-be-done for the common good”. According to the author, this is an opposite view regarding the two types of knowledge postulated by Aristotle, the episteme (scientific knowledge or know-why) and the technē (skilled-based technical know-how).

Strategy and innovation are distinct concepts both in terms of definition and function and the capacity to make changes in the competitive position of firms justifies the continued growth of the importance of innovation. Thus, strategy and innovation are complementary and feed on each other being innovation a source of competitive advantage (Dobni, 2010; Barbosa & Romero, 2013). Dobni (2010), also argued that is necessary to integrate innovation and strategy practices, in order to achieve a better performance.
Innovation is also viewed as a main type of organizational knowledge creation (Nonaka, 1994; Nonaka & Toyama, 2005) although this term is defined differently by different researchers (Seidler-de Alwis & Hartmann, 2008). It also has been interpreted as a knowledge process in which new products and services are the outcome (Kör & Maden, 2013). The relationship between knowledge and innovation, and the knowledge management worth to improve innovation generates little controversy on literature (Swan, 2007). According to Kör & Maden (2013) innovation is also positively connected with knowledge acquisition. They examined the links between knowledge management processes and innovation types in organizations and they found a positive impact of knowledge management processes on innovation types (i.e., administrative and technical). They also found that knowledge management processes are also positively connected to innovativeness.

Revisiting the work of Darroch (2005), Allameh and Abbas (2010) one can find a positively and strong connection between knowledge management practices (knowledge acquisition, dissemination and responsiveness) and innovation levels (new to the world, new to the firm, new products to existing ranges, improve existing products, change products to reduce costs and reposition existing products). Regarding the connection between radical innovation and knowledge management practices they found that they were stronger than the relationship between such practices and other types of innovation which points to an inconsistency with the results obtained by Darrow, which argues “that a firm with a capability in knowledge management is less likely to develop new to the world innovations” and is “also consistent with a view presented earlier by Tushman and Anderson (1986) who attest that incremental innovations are competence enhancing, while radical (i.e. new to the world innovations) are competence destroying”.

Regarding family firms, Price, Stoica & Boncella (2013) founded that knowledge resources and innovation have a major influence on family firm performance.

To Nonaka & Takeushi (1995) “knowledge creation fuels innovation” and the SECI Model provides an understanding on how the required continuous innovation in firms can be stimulated. However, many knowledge management actions are principally seen, and addressed in the literature, as components of information systems, and not as components of a wider and more personal communication system, although managers understand the importance, in terms of business strategy, of having some knowledge advantage relative to their competitors (Zack, 1999). The organizational capacity to innovate that depends on this communicational environment, is defined by the continuous interaction between technical and market knowledge, and it seems to be an essential factor in order to flourish in a hypercompetitive environment (Popadiuk & Choo, 2006).

### 2.3 Internationalization

As mentioned above, increased globalization goes hand in hand with rapid technological change, and companies have a new challenge in terms of competition and access to competitive resources on the global market. They can be obtained through strategic alliances, foreign subsidiaries or other cooperative strategies, and the immersion in networks on an international scale seems to be very important to create competitive advantages. Thus, identification of organizational characteristics and the strategy that enable companies to improve their innovative approach are nowadays, with the challenge to internationalize their activities, essential to increase their competitiveness.

The entry mode choice in a foreign market is a challenge and a critical decision, and will have a great impact in the company’s performance. Researchers have identified a large number of practices and models concerning the entry choices modes that a firm could adopt, but there is not an agreement on which is the best entry strategy in foreign markets (Nakos, 2011).

A widely known model on internationalization processes is the Uppsala process model developed by Johanson and Vahline (1977). This model reveals two patterns of the internationalization process: 1) the establishment of a chain, which represents the gradual order that firms follow in their international operations - regular export; independent representative; sales subsidiary and manufacturing; 2) companies make their investments in the markets that they can better understand in order to reduce the uncertainty in new markets (the notion of psychic distance). This concept is related to factors that hamper information flows between firms and the market, such as differences in language, level of education, business habits, cultural environment, legal environment and political systems. The Uppsala model was updated by the authors (Johanson and Vahline, 2009)
to incorporate the effect of networks on the internationalization process, acknowledging that learning processes of companies, and their commitments, are as much linked to the network of relationships as to national institutional aspects. Another behaviourist model is suggested in the literature, the IMODEL (Innovation – Related Internationalization model), originally developed by Bilkey and Tesar (1977). This model points to various stages of the export process, in which each one is an innovation for the company by anticipating the trends, whether in the foreign markets, or in the domestic markets (Além & Cavalcanti, 2005).

Another important model that explains the shape of internationalization is the Eclectic Paradigm of Dunning (1980), or the OLI model (Ownership, Localization and Internalization) which is based on a rational approach in which companies, on their approaches to foreign markets, are looking particularly at three types of competitive advantages, associated according to the highest probability of economic profit (Barcellos, 2010): (1) Companies (Ownership) Advantages, including the access and/or ownership of resources that create value, (2) Advantages of Location, including those provided by the places where they settle and finally, (3) Internalization Advantages, which are those related to intramural production advantages, instead, for example, of advantages related to association agreements with local companies (Barbosa and Romero, 2013).

3. Conclusion

Through this work we intended to study the interaction between the processes of strategy, knowledge, innovation and internationalization, since there are few studies that integrate these issues and analyse the interdependence between these areas, and the relationships between them are somehow diffuse and scattered, despite the explicit recognition that these areas are closely related and that it is difficult to understand one of the processes without understanding the interrelationships with the other processes.

One can say that there seems to be, at least, four intersection points between the themes that were addressed above: 1) an intersection between strategy and knowledge, whereby the latter was incorporated in the latest versions of the resource based theories of the firm as a fundamental and dynamic resource that requires strategic decisions to enable it as factor of competitive advantage; 2) an intersection between knowledge and innovation, and the possible ways by which the management of the former can be translated into the latter; 3) an intersection between strategy and innovation, perceived by the resource based perspective and also by the contingency approach, as a consequence of the relationships that exist between knowledge management practices and the impact of those practices in the provision of product or service innovation; 4) an intersection between innovation and internationalization, and concomitantly between knowledge and internationalization, explicitly incorporated by the IMODEL and implicit in the network relations of the Uppsala model.

There is clearly a connection between the themes, and the recognition of that connection raises several questions, that can be formulated as possible research avenues, yet to be explored in many cases. Some of them can be enumerated. What types of knowledge may be positively related to internationalization processes? Which types of information and knowledge flows are important in international networks? What actors in those networks are most important to enable and facilitate internationalization processes? How is strategic management affected? What are the implications for organizational structure? What are the tools and processes, useful and effective, that a company can use to mobilize and coordinate their resources to achieve higher business performance? What is the relationship/role of the context as it regards constraints in the production of knowledge? These and other questions arise out of the links that were identified between the concepts and processes addressed in the above review.

References


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