

**On the adaptation of the firm to the International Business Environment: A
knowledge-based and evolutionary perspective**

ABSTRACT

This paper advances on the importance of the adaptation of the firm to the International Business Environment (IBE). The IBE is a distinguishing factor in international business studies and the firm's adaptation to the environment has been presented as a basic survival strategy. We argue that adaptation is indeed a dynamic and largely internally driven process that leads the firm to co-evolve with the external environment. The ability to adapt to different international business environments is developed over time through the firm's experiences and built into its routines. Adaptation is both suggested to incorporate the elements of a planned strategy and of random variation in search for local peaks given bounded rationality, imperfect information and the current pool of resources and capabilities. The ability to adapt to the environment may be conceptualized as a knowledge-based capability and a potential source of competitive advantage for the multinational corporation.

Keywords: Adaptation, International Business Environment, MNC, capabilities, evolution, environmental stability.

INTRODUCTION

*“Environmental conditions determine which systems survive and thrive:
those best adapted are most likely to prosper.”*

- Scott (1998: 104)

Organizations are open systems with multiple interactions with the surrounding environment (Aldrich, 1979; Nelson & Winter, 1982; Scott, 2002). The environment provides firms with the resources and offers opportunities for market-product expansion, but also imposes constraints. To survive and prosper firms need to possess the right fit, or configuration, with their environment (Miller, 1992). However, both the environments and the firms are in continuous change and co-evolve (Nelson & Winter, 1982; Aldrich & Ruef, 2006).

Organizational adaptation to the International Business Environment (IBE) is difficult. First, it requires firms to recognize the need to respond and adapt to environmental changes; and even then they are not always able to do so. Technological changes or discontinuities, for example, have been shown to lead to high failure rates (Tushman & Anderson, 1986) with the explanation residing in the failure to adapt, and the inertia caused by the focus on the firms' existing capabilities (Leonard-Barton, 1992, 1995). Second, adaptation involves the knowledge of multiple environmental dimensions on the multiple countries where the firm is present, increasing its complexity (Ghemawat, 2001, Guisinger, 2001). This is frequently difficult given bounded rationality of the decision making agents (Simon, 1957) and the interplay among the environmental dimensions. Third, to be able to adapt, firms must hold the necessary skills, capabilities or resources to do so. However, in conditions of environmental uncertainty and instability, it is hard to even identify which resources and capabilities are valuable let alone maintain a long term competitive advantage (Simon,

Hitt & Ireland, 2007; Shepherd & McKelvey, 2009; Cantwell, Dunning & Lundan, 2010).

The strategy literature has tried to answer the questions of why firms differ and why there are performance differences between firms (e.g., Hawawini et al., 2003; Mackey et al., 2007; Sirmon et al., 2007). The international business literature, on the other hand, seeks to explain the motives that lead firms to invest abroad or internationalize their operations (e.g., Dunning, 1988; Buckley & Ghauri, 1999; Makino et al., 2002). This paper integrates both areas and suggests that one of the reasons why multinationals differ is that they deploy different strategies and capabilities to adapt to the IBE.

In this paper we develop a co-evolutionary argument in explaining how firms develop an adaptation capability to survive and prosper in the context of complex and difficult to understand IBEs. Adaptation is posited to occur at three levels: first, it encompasses both the “traditional” and observable adaptation to the external market, second it is reflected in the internal business processes, and third, it is a co-evolving effect whereby firms, populations of firms, and environments change together. We further explore how firms are affected by changes in specific dimensions of the IBE.

The support on recent literature, such as the knowledge-based view of the firm and the evolutionary, permits us the distinction between two main alternatives: first, that adaptation is essentially characterized by random variation, which evidences a sub-rational process that just seeks to improve the current state of affairs. Second, that adaptation is really an intentional process characterized by intentional variation and the use of best practices. In this respect it is worth noting that international expansion is a major form of strategic variation in organizations (Aldrich, 1979). Our discussion contributes to the essential questions in business and international strategy: “why are

firms different” and “what accounts for firms’ different performances”. It is likely that the factors that make firms different – in our argument an adaptation capability to different foreign business environments - underlie a competitive advantage.

This paper is organized as follows. First, we briefly review a set of concepts relevant in analyzing the IBE and firms’ adaptation. In the second section, we put forward a number of conceptually-driven propositions. Finally, a broad discussion and some avenues for future scholarly inquiry conclude this paper.

THE MULTINATIONAL CORPORATION AND THE INTERNATIONAL BUSINESS ENVIRONMENT

The International Business Environment (IBE) is the distinctive underlying feature of International Business (IB) research. Nehrt, Truitt, and Wright (1970: 2), for example, suggested that the IB research is “concerned with the interrelationship between the operations of the business firm and international or foreign environments in which the firm operates”. Guisinger (2000, 2001), in a similar vein, argued that the IBE is the distinctive feature that distinguishes IB research from other management disciplines. Confirming the importance of the environment, Scott (2002: 21) wrote that “every organization exists in a specific physical, technological, cultural and social environment *to* which it must adapt. (...) [earlier scholars] tended to overlook or underestimate the importance of organizations-environmental linkages (...) and indeed the number and variety of these connections are impressive”.

Multinational corporations (MNCs) are exposed to a higher level of environmental complexity than purely domestic firms. The environmental complexity increases as firms move to different foreign markets (Ghemawat, 2001) augmenting the likelihood of failure. Indeed, there are numerous anecdotal stories (Ricks, 1999) of errors and misadaptations that have resulted in problems for MNCs ranging from a

“poor image” to unsuccessful foreign ventures. Notable is that both internationally inexperienced MNCs as well as those more experienced have gone through such failures, as described in Ricks ‘*Blunders in international business*’.

Given the complexity associated to the management of geographically dispersed firms (Casson & Lundan, 2000; Guisinger, 2000; Landier, Nair & Wulf, 2009), the first step is to truly understand what specifically constitutes the IBE. To a large extent, the IBE has been treated as a set of uncontrollable and exogenous variables that are out there (Young, 2000). Several authors (Crossland & Hambrick, 2007; Guisinger, 2000) noted there is not a commonly accepted definition of the environment, let alone a standard method for measuring differences between domestic and foreign environments.

It is well accepted that the IBE is multidimensional. For example, Ghemawat (2001) posited a framework for accessing the distance between countries. This framework identified four important dimensions of the IBE: Culture, Administration, Geography and Economy (CAGE). With a more comprehensive taxonomy, Guisinger (2000, 2001) identified eight environmental dimensions that compose the IBE: Econography, Culture, Legal system, Income level, Political risk, Tax regime, Exchange rate, and Restrictions (ECLIPTEr). This taxonomy prescribes eight quantifiable dimensions to characterize any IBE. Other taxonomies exist, such as the PEST – which stands for political, economic, sociocultural and technological factors, and the PESTLE – which adds the legal and environment dimensions to the analysis of the environment.

Adaptation in international business studies

“The essence of international business is the adaptation that firms must make when they encounter unfamiliar and difficult surroundings in foreign locations”.
- Guisinger (2000)

In the traditional international business view, adaptation is treated as a passive reaction to external environmental changes, as a response to contingencies (Pettigrew, 1985) or to the deterministic role of the external environment in the organizations

(Tushman & Anderson, 1986). Adaptation, in this view, is the search for a better isomorphic fit (be it normative or mimetic), in a fairly random search for local peaks (Levinthal, 1997). That is, in this view, adaptation is not an actual strategy but rather a set of actions that aim at overcoming a specific disadvantage, inefficiency or gap.

Although adaptation to the IBE has not had a major emphasis in IB studies, its importance is frequently implicit. One example of adaptation in IB literature is found in the internationalization model of the Uppsala school (e.g., Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977, 1990; Andersen, 1997). Stated simplistically, the concept of the evolutionary approach is that firms evolve gradually in their internationalization process through a model of knowledge and experience acquisition that enables the firms to evaluate the risks and opportunities. Firms internationalize their operations first to psychically closer countries and as they gain more experience seek increasingly psychically more distant countries and commit a larger pool of resources. Thus, the entry mode strategy is not completely decoupled from adaptation.

Another example of how adaptation has not seen its importance fully recognized is found in Dunning's (1981, 1988) Ownership- Location- Internalization (OLI) paradigm. O, L and I decisions are posited to drive efficiency, but adaptation is left out. To tap this absence on the Eclectic paradigm, Guisinger (2001) proposed the Ownership- Location- Mode- Adjustment (OLMA) paradigm, to incorporate the adaptation to the IBE as a main dimension in firms operations and decisions. More recently, some authors implicitly consider the importance of the adaptation to the IBE in the context of relations within a business network (Andersson, Forsgren & Holm, 2007). Other scholars have focused on the new organizational forms that emerge from the firm's adaptation to the environment (Volberda, 1999). Recently, researchers focused

on the impact of adaption along the value chain (Rugman & Verbeke, 2008) and some authors consider it a strategic resource (Ferreira, Li, Serra & Armagan, 2008).

The MNCs are exposed to a multitude of IBEs from which they depend for essential resources, clients, financial resources, and broad wealth of inputs. Moreover, MNCs operating in foreign environments face a liability of foreignness (Hymer, 1976), that accrues from the lack of knowledge and insufficient adaptation to the environment. As such, the MNCs face a set of constraints that differ from those of purely domestic firms. Hence, an inclusive theory of the MNC must consider the adaptation to the IBE. To understand the MNC, the researcher needs to have a comprehensive view of how the MNC interacts with each of its surrounding environments. The existence of pressure to adapt to local environments was noted by DiMaggio and Powell (1983) who defined isomorphism as the pressure exerted upon an organization to resemble existing firms in the same environment. In line with institutional theory, organizations must comply with the rules, norms and behaviors set forth by the institutions in the places where they operate, to build legitimacy (Meyer & Rowan, 1977; DiMaggio & Powell, 1983; Scott, 1995) or according to Kanter (1997) their “license to operate”. When firms enter unfamiliar environments, they face unfamiliar contexts with rules defined by the political, social, legal and economic institutions to which they must comply. This necessity for legitimacy challenges the corporation to adapt.

Learning and knowledge strategies

Evolution in the environment forces the firm to learn and to adapt to new constraints (Aldrich & Ruef, 2006). March (1991) suggested a model of exploitation and exploration in organizational learning. Lewin, Long and Carroll (1999) defined exploration as “[e]xperimenting with ideas, paradigms, technologies, strategies, and knowledge in hope of finding new alternatives that are superior to obsolete practices”.

Conversely, exploitation “[l]egitimizes refining, standardizing, routinizing, and elaborating established ideas, paradigms, technologies, heuristics, and knowledge” (Lewin et al., 1999). While exploration is associated with the discovery of new opportunities, innovation, building new capabilities, investment in the firm’s absorptive capacity (Koza & Lewin, 1998), exploitation is associated with improving the use of the existing capabilities, technologies and assets that the firm holds. It is important to balance these two pressures to, on one hand, assure current viability and, on the other, to insure future prospects (Lavie & Rosenkopf, 2006).

Koza and Lewin (1998) and Lewin et al. (1999) suggested that while in stable environments an exploitation behavior may lead the firm to obtain a competitive advantage, in unstable environments the exploitation strategy may lead the firm to be stuck in a competence trap (Levinthal & March, 1993). The core competencies become ‘core rigidities’ (Leonard-Barton, 1992, 1995) when the challenges require a new set of capabilities or resources but the firm is unable to attain them. This suggests that the firm’s history constrains its behavior, therefore searching for market opportunities tends to be mainly in the surrounding landscape - that is: a local search. The outcome is that firms find it easier to use of the existing set of resources in developing market offerings and in entering into unfamiliar markets.

Adaptation should stop when the marginal costs supersede the additional benefits derived from it. The implementation of this rationale is not free from difficulties. On one hand, adaptation is a process of search for a peak in the landscape (Levinthal, 1997) and as such is based in trial-and-error. That is, the benefits are assessed after the costs have been incurred, meaning the *ex ante* costs are needed to capture uncertain, probabilistic (*ex post*) benefits. On the other hand, the search for alternatives may only be carried within local landscape boundaries, which does not guarantee more that a local

maximum. That is, adaptation may need to be multi-dimensional and occasional adjustments in single variables are insufficient (Winter, 2000). Therefore we argue that adaptation, besides incorporating the elements of a planned strategy, as suggested previously, is also a process of search for a best maximum peak, achieved through an experimental trial-and-error process.

To conclude, while exploration and exploitation processes or strategies lead to variation, the exposure to the IBE determines the selection, and the ability to adapt determines the likelihood of success, as we suggest in the model of figure 1. For example, exploratory processes induce variation in the population of MNCs with undetermined effects on the success or failure of firms. On the other side, it is not likely that exploitative processes generate significant additional variation. In this case a significant change in the IBE may lead the MNC to be selected out.

Additional insights may be drawn from co-evolutionary theory, where both adaptation and learning may occur, driving the likelihood of success. McKelvey (1997) and Scott (2002) suggested that the evolution of the firm cannot be dissociated from the evolution of the surrounding environment. Evolutionary theory has been used to explain different patterns of survival and growth (Aldrich & Ruef, 2006). Lewin et al. (1999) argued that new organizational forms evolve in the interplay between the environment and firms' strategies in conditions of environmental uncertainty. Burgelman and Grove (2007) proposed a framework that aims at balancing the adaptation to the current environment and the ability to adapt to an evolving environment to achieve corporate longevity.

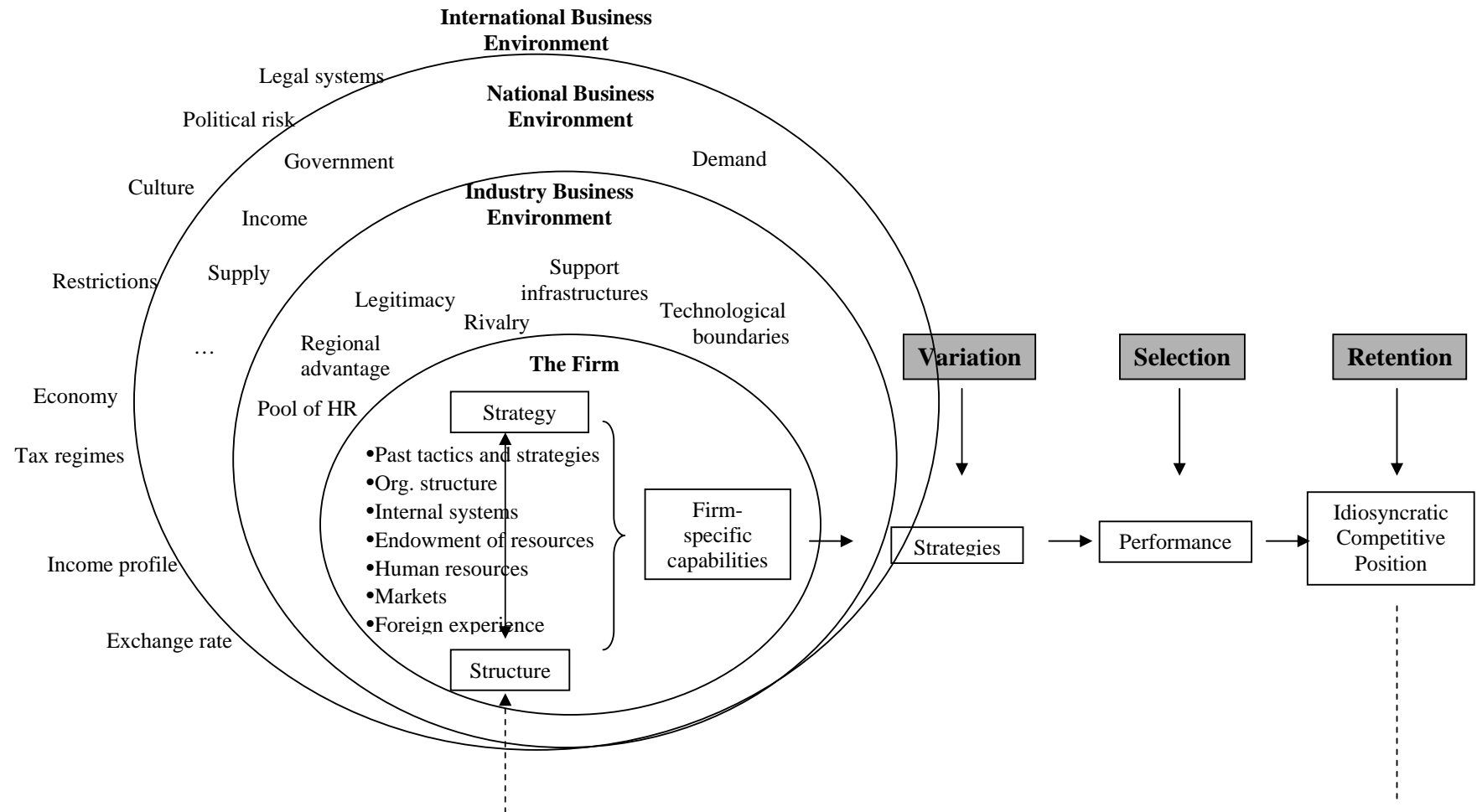
The co-evolutionary theory suggests that adaptation occurs at two levels: macroevolution - that represents the adaptation of the firm to its external environment, and microevolution - that represents the internal adaptation of the firm's processes,

tasks, routines, structures (McKelvey, 1997; Shepherd & McKelvey, 2009). The macroevolution and microevolution concepts have peculiar interest for the MNC due to the diversity of IBEs the firm is subject to. The interest lies as well in the potential role of the subsidiaries in integrating resources and knowledge, but also as bridging and buffering structures. Bartlett and Ghoshal (1989) and Andersson et al. (2007), for instance, suggested a network view of the MNC where the subsidiaries have specific roles and attributions that co-evolve with the environment. Regardless of the specific perspective, various streams of research have noted how firms co-evolve with their environments. Firms are thus selected in or selected out – and thus retained or not – according to their performance and future viability in a certain environment. It is likely that the firms' viability depends on their adaptive response to environmental stability-instability (Cantwell, Dunning & Lundan, 2010).

CONCEPTUAL DEVELOPMENT

In this section we develop the concept of adaptation as an active strategy. An integrative model of the firm and its multi-level environment is depicted in figure 1. In the first level, are the components (tangible and intangible) and routines of the firm that interact to build the firm's distinctive competences and pool of alternative strategies. The second level defines the immediate industry environment. The third level encompasses the broader national setting that was argued by Porter (1990) to be the foundation of the competitive capacity of the firm. Beyond the last boundary are the International Business Environment dimensions as an umbrella that determines the actual set of viable possible conducts available to the MNC.

Figure 1. A unified view of the firm and its environment



In figure 1 we also represent the evolutionary process. Environmental changes, and specifically how firms respond to these changes, causes variation. Firms are selected in or out, depending (at least partly) on their pool of capabilities and resources that permits them to perform given the environment. Only those best fitted should survive, being retained – albeit it is likely that the best performers develop a set of new resources and capabilities that renders them an idiosyncratic competitive position. We delve into the underlying arguments below.

To adapt to the environment – whether or not the action taken comprises proactive attitude - involves: (a) a process of systematically collecting information on all IBE elements; (b) the systematic processing of the collected information, with the goal of enhancing environment knowledge; (c) the systematic identification of the more vulnerable internal resources and the best external opportunities, which contribute to a better environmental fit¹; and (d) the implementation of the “best practices” more adjusted to the environment. Hence, we suggest that adaptation has the elements of a planned strategy, not only of blind variation.

Each IBE dimension is likely to have a somewhat diverse impact on the MNC’s adaptive strategies (see Table 1). Each dimension imposes a different set of opportunities, threats, challenges, and constraints. For example, if cultural diversity is considered a threat when operating in a foreign IBE, the MNC is likely to prefer having a high content of local citizens in their organization chart, occupying executive roles. But, if the political risk proves to be dominant, a set of alliances and interlocking directorates with public officials may hedge against potential hazards. Similarly, if the income profiles of the countries are significantly diverse the adequate strategy may be to adapt the product to fit into the local habits and incomes or positioning the product in

¹ The fit refers to an environment and is used to indicate a state of better performance or increased odds of survival of the firm in a particular setting.

a specific market segment. The exchange rate threat may be best overcome through the internal practice of transfer prices and local (or external) supplies. These examples must then be combined with the nature of change in the IBE dimensions. That is to say that the IBE dimensions are not static; they co-evolve to embed the simultaneous evolution of firms and extraneous environments (local and international).

Table 1. Examples of specific strategic actions for different dimensions of the IBE

| Environment dimensions | Strategies |
|-------------------------------|--|
| Economy and demography | <ul style="list-style-type: none"> - Export vs. investment - Product adaptation (e.g. climate, sports) |
| Culture | <ul style="list-style-type: none"> - Local personnel (or expatriates) - Product adaptation - Teach consumers |
| Legal systems | <ul style="list-style-type: none"> - Alliances and JVs - Structural differentiation - Labor contracts and outsourcing |
| Income profiles | <ul style="list-style-type: none"> - Product adjustment and market positioning - Price alignment - Distribution outlets |
| Political risk | <ul style="list-style-type: none"> - Interlocking directorates - Lobbying - Executive recruiting |
| Tax regimes | <ul style="list-style-type: none"> - Location (e.g. Chinese SEZ and open cities) - Consider exporting - Transfer prices |
| Exchange rates | <ul style="list-style-type: none"> - Transfer prices - Local content and consumption - Inventory management |
| Restrictions | <ul style="list-style-type: none"> - Local production (Greenfield, M&A, JVs) - Local content of products - Product specification and regulation standards |

To fully understand the dynamics of the co-evolution process, we need to understand adaptation as an intended strategy and analyze the changes in the IBE. For instance, we may observe political changes such as the European Union (EU) integration and the end of the cold war to see how the patterns of global production

changed, driven by a strategy of rationalization of production sites. This was a strategy pursued by most MNCs. Other environmental changes, such as the economic recession in some Asian countries in the 90s lead MNCs to seek less risky modes of foreign operation and to favor the local financing for their investments. Finally, the institutional variations such as the mass education, reduction of bureaucratization, or the importance of international standards (e.g., ISO 9000) alters how firms manufacture and sell their products and even where they seek suppliers.

Environmental stability and strategies

A conceptual formulation of how firms adapt, or should adapt, to the IBE may depart from a simple definition contrasting two broad states: stable and unstable environments. It is understood that environmental stability signifies the relative pace of change, the frequency, or perhaps the radicality of the changes in the environment. The following discussion is based on this distinction for simplicity purposes. A more detailed examination, or a diverse conceptualization, of the changes occurring does not add significant contribution for a theoretical discussion. In this line, some MNCs are subjected to environments that are unstable, while others operate in fairly stable surrounding environments. The strategic responses of the MNCs to stable or unstable environments must necessarily be diverse (Nelson & Winter, 1998).

Table 2 below summarizes and extends on the propositions formulated in the following sections. The ability to pursue exploitation and exploration strategies is dependent on the stock of knowledge held and the absorptive skills to acquire new knowledge, process it and implement appropriate strategies (March, 1991; Lewin et al., 1999). In stable environments, neither is essential as the firm faces predictable patterns of behaviors from the various agents in the market. That is, in stable environments, a process of replication (Nelson & Winter, 1982) of what worked well in the past is a

likely candidate to succeed. In sum, in stable environments, MNCs tend to exploit/defend - for which they invest in the various markets deploying strategies that favor the replication of the resources and capabilities already held. For instance, preferring greenfield investments or acquisitions over other entry modes, investing in manufacturing, in internal control systems, and so forth.

However, in unstable environments, replication is not enough. Active strategies are called upon, and these require the firm to be able to detect to which environmental factors it must adapt and learn (eventually through trial-and-error experiences) how to implement the strategies. Firms in unstable environments are likely to dedicate efforts aimed at augmenting their capabilities (Bosch, Volberda & Boer, 1999), possibly engaging more often in the exploration of novel opportunities. In fact, a variety of actions may be taken. For instance, when the environment is unstable, and impacted by increasing technological complexity, the firm may find difficult to hold *per se* the resources and knowledge needed to adapt and thus may search for cooperative models of relationships with external partners (Lavie & Rosenkopf, 2006). In unstable environments, MNCs may be driven to engage more often in exploration moves - or prospecting - for which they seek to develop, for example, international or local formal partnerships (e.g., IJVs) or informal ties, invest in R&D, augment the product portfolio, and so forth. As represented in table 2, another possible strategy in unstable environments is the divestment. Divestment refers to abandoning resources and activities that hold less value under the specific environmental conditions. By divesting from less valuable resources, the firms gain slack for other investments (Sirmon & Hitt, 2003; Uhlenbruck, Meyer, & Hitt, 2003). In other words, divesting those resources that are not sustaining a competitive advantage and that cannot be recombined in a more valuable manner is a strategic option.

Sharp environmental changes increase variation, and consequently the selection rates, and leads to mutations in organization forms. Structural differentiation among firms is therefore likely to emerge during or after periods of significant change. Central to evolutionary arguments is that evolution is blind variation with selective retention (Campbell, 1960)

Stable environments are more likely to result in less variation and more uniform strategies and structures across firms, while unstable environments are more likely to increase variation. Any form of variation is subjected to internal and external selection pressures. While in some instances firms need to encourage variation – for example, when there are market opportunities worth pursuing in a different manner or when the firm needs to cope with uncertainty – in other instances variation needs to be avoided – for example, when the environment is stable (Burgelman, 2002). Managers strategize deliberately by managing variation and the selection and retention pressures.

TABLE 2. Environmental stability and adaptation

| | | |
|--|--------------------------------------|---------------------------|
| <p><u>Strategies in unstable environments</u></p> <p>International strategic alliances and joint ventures R&D efforts Develop new network ties (bridging ties) Service markets at distance Flexibility mechanisms with control of routines Differentiated product portfolio Develop new capabilities Network to compete for industry standards Divest</p> | <p>EXPLORE (prospect)</p> | <p>⇒ Variation</p> |
|--|--------------------------------------|---------------------------|

| | | |
|--|----------------------------|-----------------------|
| <u>Strategies in stable environments</u> Cross-border acquisitions Greenfield manufacturing investments Geographical expansion with local service of markets Bureaucratic control systems Expansion based on current products & skills Develop manufacturing and marketing Network to compete for market share | EXPLOIT (defend) | ⇒ No variation |
|--|----------------------------|-----------------------|

Note: Stable environments are less likely to impose a continuous adaptation pressure, instead they favor replication patterns. In unstable environments, a continuous adaptation pressure may exist. The firm may seek to balance exploitative strategies in the current markets and explorative strategies in new markets.

Strategies of replication in exploitative behaviors

March (1991) suggested that adaptation is a matter of searching for the best fit through exploitation and exploration strategies. When the environments are stable, the MNCs may continue with their current portfolio of products and markets that proved to work well in the past – that is, firms may react by replicating past conducts and strategies (Nelson & Winter, 1982).

It is reasonable to suggest that this adaptation will likely consist of the replication of historical patterns of action – or, in other words, of past experience of exploitation and exploration patterns. The strategy of replicating past exploitation and exploration strategies depends on their past success. That is to say, the strategy of the firm to adapt to the environmental changes, at least in the initial stages of the change process, is largely path dependent and idiosyncratic (Lewin et al., 1999) to the specific firm. In proposition form:

Proposition 1. *MNCs are more likely to replicate past exploitation and exploration strategic action patterns when first subjected to environmental changes.*

Simultaneously, when the environment is stable and the MNC firm has some specific ownership or internalization advantage (Dunning, 1981, 1988) the conditions for geographic expansion into new markets are met. The MNC may therefore exploit its

specific advantages in new national markets where they supposedly hold an advantage *vis-a-vis* the local firms (Jaffe, Nebenzahl & Schorr, 2005). This is, in fact, the rationale supporting that MNCs have some advantage over local firms that they are able to exploit to overcome the traditional liabilities of foreignness (Barnard, 2010).

Lewin et al. (1999) suggest that the firms' co-evolution with their environment results from the "interplay between forces internal and external to organizational environments". So, in moments, or phases, of stability, the firms and populations suffer minor (adaptation) changes by elaborating and reinforcing the existing dominant organizational resources and structural form. Notwithstanding, in stable environments a pattern of replication may be extended to the new markets. The MNCs may exploit the pool of resources and capabilities held, given that they serve well the purpose. To a large extent, this was the foundation for the international expansion of the North American MNCs during the 70s and 80s, of such firms as McDonalds, Levi's, Coca-Cola, Catterpillar, and so forth. These MNCs operated abroad in an identical manner as their operations at home.

Proposition 2. *In stable environments, the MNCs are more likely to expand faster to new markets exploiting the current pool of competences, skills and resources.*

Hence, when the IBE is stable, the MNC may consider continuing using the same routines, norms, procedures and keep the same portfolio of products, technologies and markets (Zander & Kogut, 1995). Stable environments are prolific arenas for the maintenance of the *status quo* and the MNCs are encouraged to keep on "doing the same things" in a mimetic process of past strategies. The MNC's capacity to adapt to the IBE is built upon the stock of resources, skills, competences and knowledge. That is, how MNCs strategize when facing new environments is, at least partly, determined by prior experiences, routines, and skills (Cohen & Levinthal, 1990). When the pressure to

adapt is reasonably low, as occurs in stable environments, the existing MNC's capabilities (or skills, according to Nelson & Winter, 1982) generate a considerable level of inertia that hinder a radical transformation. It rather permits that the MNC just makes minor improvements both at the operational and organizational level. Despite these adaptations, the MNC still relies on its competences to compete in the foreign environments and do not attempt to develop new competences.

Proposition 3. *In stable IBEs, the MNCs are more likely to continuously search for exploitative adaptations (or strategies).*

Prospecting new modes of operation in exploratory behaviors

In unstable environments, the environmental changes tend to be both more frequent and more pronounced. In these instances, MNCs are challenged to prospect for new modes of operation, as well as for new resources and capabilities because the MNCs that keep focused in their existing pool of capabilities are more likely to fail. That is, in unstable environments the MNCs may need to develop exploration skills (March, 1991) to search for new markets (Gavetti & Levinthal, 2000). For example, a technology destroying change (Tushman & Anderson, 1986) shifts the focus of the industry and renders useless a significant portion of the competences based on tangible assets (Tripsas & Gavetti, 2000).

Winter (2000) and Teece, Pisano and Shuen (1997) stated that capabilities are reflected in the firm's output and contribute to its survival and growth, but implies that the awareness of those capabilities is essential for its exploitation or use with intention. Teece et al. (1997) defend that learning may itself be a dynamic capability. Augier and Teece (2007) extend the dynamic capabilities argument to the MNCs, stating the difficulty of replicating competences, capabilities and routines held in the headquarters or other subsidiaries. In this regard it is important for the MNC to develop the capability

to scan and understand environmental changes and detecting to which changes it must respond. Winter (2000) postulated that the creation of new capabilities requires the firm to make investments in tangible and intangible assets and in cross-boundary relationships. Relationships are thus possible strategic options for international adaptation.

Levinthal and March (1993: 105) contend that long term survival of an organization depends on its ability to “engage in enough exploitation to ensure the organization’s current viability and engage in enough exploration to ensure its future viability”. The dilemma is that the returns associated with exploration are distant in time and highly variable, while the returns associated with exploitation are proximate in time and more certain. Hence, the MNCs must balance certain and uncertain returns to survive while keeping good development prospects. However, Lewin et al. (1999) also argue that when pursued to the extreme, exploitation hinders the firm’s survival by creating a “competence trap”. That is, the continued focus on capabilities or resources leads to the replication of past actions that may now be obsolete, given changes in the environment.

In moments of higher instability there may be a need to make more pronounced changes to adapt. That is, firms learn to adapt to unstable environments by developing incrementally new resources and capabilities that endow them the ability to face higher levels of uncertainty (e.g., Brown & Eisenhardt, 1997).

Proposition 4. *In unstable IBEs, MNCs that continuously search for exploitation adaptations, which lead either to minor improvements or to a “competence trap”, are more likely to be unsuccessful.*

Experience and the pattern of capabilities or skills available to the MNC evolve slowly from the prior endowment, in response to market opportunities (Penrose, 1959)

or threats. Langlois and Steinmueller (2000) evidenced this effect through three case studies where the technological change contributed to broaden the firms' capabilities and the changes in end-user demand gave advantage to some capabilities over others. They conclude that strategy is not about creating capabilities but about using the capabilities that better respond to the present circumstances (or environmental discontinuities).

Conversely, Helfat and Raubitschek (2000: 966) wrote that "expansion into new product-markets, including perhaps different customers, may require additions to core and integrative knowledge". That is, the exploration of new market opportunities demands flexibility and adaptation of the existing set of resources (Volberda, 1999), and eventually the development of new resources, to tap into the market (Grant, 1991; Teece et al., 1997). Nelson and Winter (1982: 106) claimed that "flexibility involves variation of the organizational performance in response to variation in the environment".

The MNCs' strategies are idiosyncratic in that they are the result of past strategies that position the firm in a rugged landscape with only a few observable local peaks (Levinthal, 1997). Local peaks are positions that provide the MNCs with above normal returns compared to the other observable firms in the same business. In unstable environments the match between the MNCs' capabilities held and those required needs to be assessed. It seems reasonable to suggest that, at least in some instances, the best strategy might be the total exit - divesting - from the current markets. In other instances, the building up of a pool of resources and capabilities (Ferreira, 2008) may be justifiable if the market is particularly attractive. Then, when the MNC perceives high environmental change or instability it is more likely to start new exploration paths, searching for new markets or diversifying the product portfolio.

Proposition 5. *In unstable environments, the MNC is more likely to either divest from the operations abroad that are not tied to the current competences or expand only to foreign markets perceived to be high peaks.*

DISCUSSION AND CONCLUDING REMARKS

This paper discusses the importance of the adaptation of the firm to the International Business Environment. In this discussion we use two main theoretical strands, the knowledge-based view and the evolutionary theory. The ability to adapt is a valuable capability for MNCs that have subsidiaries dispersed across the world that may permit them to overcome the traditional liabilities of foreignness (Hymer, 1976; Barnard, 2010). The ability to adapt is embedded in the firms' routines, is tacit, is socially complex, and is causally ambiguous, therefore it is difficult to imitate and non-tradeable (Barney, 1991; Barney & Arikan, 2001; Ferreira et al., 2008). Our paper contributes to the recurrent questions: "why are firms different" and "what accounts for firms' different performances". Path dependent effects and differentiated adaptation to the co-evolving environment are likely to account for a large share of the variance. In fact, in a traditional view, only the fittest are able to survive (Friedman, 1953; Spencer, 1987), but it is possible that in competitive markets, the firms' viability is established in comparison to other competitors and thus to survive and prosper, firms only need to be fitter than their competitors (Shepherd & McKelvey, 2009). Firms' differential performance may be the outcome of the choices made on how they respond to the environment and how soothe responses allow the firms to leverage, augment or recombine their pool of resources. According to Zahra and George (2002) it is through organizational learning that firms gain flexibility to adapt and evolve (see also Levinthal, 1997; Uhlenbruck et al., 2003; Aldrich & Ruef, 2006).

Environmental instability and uncertainty poses strategic hazards for firms. Under uncertainty firms cannot be sure of which resources or capabilities have the potential to generate a competitive advantage. It seems reasonable to suggest that in unstable environments building up additional resources or capabilities entails larger risks (although some amount of flexibility is required). Bowman & Hurry (1993) posit that in these instances firms should explore as a manner to access other opportunities and create a portfolio of real options (McGrath & Nerker, 2004). In sum, in unstable environments it is far harder to either respond to changes and to identify which resources are of strategic importance.

In this paper we briefly put forward a set of simple propositions on how firms may cope with environmental instability but it is important to also understand how firms' strategies may be adjusted and how it affects their competitive advantage. For instance, it seems evident that in conditions of instability the leveraging of the firms capabilities may only render a short term advantage. It is also evident that the majority of the recombinations of resources engineered are likely to be short-lived because these combinations will lose value as additional changes occur. That is to say, any competitive advantage will most likely be short-term and only the capability to continuously adapt to changing environmental conditions (Ferreira, Li, Serra & Armagan, 2008) may contribute to at least maintain a parity positions *vis-a-vis* other competitors.

The co-evolutionary theory answers the question 'why do firms differ?' in the form: firms manage and strategize their co-evolution in different ways. According to Nelson and Winter (1982) strategies differ across firms because they have different interpretations of opportunities, because firms have different skills, and these skills

are embedded in the organizational structure, which is better suited for some strategies and not for others.

Given the firms' unique histories, and idiosyncrasies, the markets are composed of diverse firms. Lewin et al. (1999) argued that exploitation adaptations are directed primarily toward incremental improvement of existing capabilities and efficiency. But these are less likely to be sources of competitive advantage because exploitation adaptations are highly imitable, and therefore any advantages that may accrue are likely to be temporary and competed away. That is, the returns generated by exploitation strategies are unlikely to be a source of above-average returns in the long run. Conversely, exploration strategies are more likely to generate above-average returns in the future (March, 1991).

In this paper we did not seek to be exhaustive. Rather we set to establish a direction and pointed out a few illustrative distinctions resorting to a simple continuum from stable to unstable environments. Other typologies of the environment could have been used but to little, if any, gain. More promising is the pursuit of the many future research avenues. For example, it is probable that the strategies of inexperienced MNCs' may resemble a random walk whereby they continuously adapt to all pressures. On the other hand, experienced MNCs are probably more likely to intentionally select to which changes they adapt and which they ignore. Future studies may delve into understanding whether more experienced firms are able to attain industry maximums and not only local peaks. Even if experienced firms have a better grasp of where are the industry maximums and the local peaks, they may not be able to reach them due to some form of constraint – for example legal constraints as evidenced by anti-trust legislation; or restrictions, as evidenced by import quotas to industries for which concentration of production in a single platform is the global maximizing strategy.

While many questions remain unresolved it would be interesting to understand when should the MNCs pursue more adaptive strategies. Apparently, as we argued, exploratory strategies are better suited for some environmental scenarios than others. Moreover, adaptation has the properties of a capability (Ferreira, Li, Serra & Armagan, 2008) in that as MNCs become ever more internationally experienced it is probable that they develop the capability of operating in foreign markets and in different environmental conditions.

Future studies may also examine the importance of the managers' role as they exert strategic choices on the location, timing, and mode (Martin et al., 1998) in conditions of imperfect information (Simon, 1957). For the MNCs, bounded rationality is more important because of the complexity and multidimensionality of the IBE. Firms' idiosyncrasies emerge not only from their path dependent histories but also from idiosyncratic resources, prior strategies (experience) and information. While these influence firms' relative performances, they also determine which firms are retained and which are excluded.

Future research may evolve in a number of different paths. For instance, given specific environmental changes, how do firms adapt or fail to adapt? Should the firm respond to every "little" change or adapt to "larger" changes and cycles? And at what point should firms stop adapting to the environment, and favor random variation, to focus only on major issues? These questions seem fairly unattended in the extant research, and are worth pursuing in understanding how capabilities develop over time.

Other themes and theories could have been used to explore the adaptation of the firm to the IBE. For example, social networks scholars have suggested that the firm looks for referent others to perceive solutions that other firms have developed for similar problems (e.g., Winter, 2000). However, each firm has specific path

dependencies, different expectations, heterogeneous resource endowments (Wernerfelt, 1984), and diverse objectives (Nelson & Winter, 1982). The idea is that idiosyncratic events and firm-specific factors overwhelm higher level, more generalized theories of firm adaptation for explaining performance. However, this does not mean that we do need to study adaptation, quite the opposite. The interest is manifest in this Lewin et al. (1999: 535) quote: “firm strategic and organizational adaptations co-evolve with changes in the environment and organization population and forms, and that new organizational forms can mutate and emerge from the existing population of organizations”.

Firms’ adaptation is largely idiosyncratic and no single theory may be prescriptive (Madhok & Phene, 2001) as to what is the extent of appropriate adaptation. Our study argued that the MNCs ability to adapt to the IBE may be a source of competitive advantage in a co-evolutionary process that is simultaneously random and systematic. While a large body of research takes a static and deterministic perspective of the environment, we noted that managerial strategies are deployed to seek different forms of adaptation to the environment. These strategies may be partly the result of the managers’ expectations, partly mimetic of what other competing firms are doing, and partly fuelled by the MNCs’ own resources and capabilities.

REFERENCES

- Aldrich, H. & Ruef, M. (2006) **Organizations evolving**, 2nd ed. London: Sage.
- Aldrich, H. (1979) **Organizations and environments**. Englewood Cliffs, NJ, Prentice Hall.
- Andersen, O. (1997) Internationalization and market entry mode: A review of theories and conceptual frameworks, **Management International Review**, 37 (2): 27-42.
- Andersson, U., Forsgren, M. & Holm, U. (2007) Balancing subsidiary influence in the federative MNC: A business network view, **Journal of International Business Studies**, 38 (5): 802-818.
- Augier, M & Teece, D. (2007) Dynamic capabilities and multinational enterprise: Penrosean insights and omissions, **Management International Review**, 47 (2): 175-192.

- Barnard, H. (2010) Overcoming the liability of foreignness without strong firm capabilities: The value of market-based resources, **Journal of International Management** (article in press: doi:10.1016/j.intman.2010.03.007).
- Barney, J. & Arikan, A. (2001) The resource-based view: Origins and implications. In Hitt, M., Freeman, R. & Harrison, J. (Eds.) **Handbook of strategic management**: 124-188. Oxford: Blackwell.
- Barney, J. (1991) Firm resources and sustained competitive advantage, **Journal of Management**, 17 (1): 99-120.
- Bartlett, C. & Ghoshal, S. (1989) **Managing across borders: The transnational solution**, Boston, Harvard Business School Press.
- Bosch, F., Volberda, H. & Boer, M. (1999) Coevolution of firm absorptive capacity and knowledge environment: Organizational forms and combinative capabilities, **Organization Science**, 10 (5): 551-568.
- Bowman, E. & Hurry, D. (1993) Strategy through the options lens: An integrated view of resource investment and the incremental choice process. **Academy of Management Review**, 18: 760-782.
- Brown, S. & Eisenhardt, K. (1997) The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations, **Administrative Science Quarterly**, 42 (1): 1-34.
- Buckley, P. & Ghauri, P. (Eds.) (1999) **The internationalization of the firm**. London: Thomson Business Press.
- Burgelman, R. & Grove, A. (2007) Let chaos reign, then rein in chaos – repeatedly: Managing strategic dynamics for corporate longevity, **Strategic Management Journal**, 28 (10): 965-979.
- Burgelman, R. (2002) **Strategy is destiny**. New York: Free Press.
- Campbell, D. (1960) Blind variation and selective retention in creative thought as in other knowledge processes. **Psychological Review**, 67: 380-400.
- Cantwell, J., Dunning, J. & Lundan, S. (2010) An evolutionary approach to understanding international business activity: The co-evolution of MNEs and the institutional environment. **Journal of International Business Studies**, 41: 567-586.
- Casson, M. & Lundan, S. (2000) Conclusion: Methodological issues in international business, in Casson, M. (Ed.) **Economics of international business: A new research agenda**, U. Northampton MA: Edward Elgar.
- Cohen, W. & Levinthal, D. (1990) Absorptive capacity: A new perspective on learning and innovation, **Administrative Science Quarterly**, 35: 128-152.
- Conner, K. (1991) A historical comparison of resource-based logic and five schools of thought within industrial organization economics: Do we have a new theory of the firm? **Journal of Management**, 17: 121-154.
- Crossland, C. & Hambrick, D.C. (2007) How national systems differ in their constraints on corporate executives: A study of CEO effects in three countries, **Strategic Management Journal**, 28: 767-789.
- DiMaggio, P. & Powell, W. (1983) The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields, **American Sociological Review**, 48: 147-160.
- Dunning, J. (1981) **International production and the multinational enterprise**, London and Boston. Allen & Unwin.

- Dunning, J. (1988) The eclectic paradigm of international production: a restatement and some possible extensions. **Journal of International Business Studies**, 19 (1): 1-31.
- Ferreira, M.P., Li, D., Serra, F. & Armagan, S. (2008) Adaptation to the international business environment: A resource advantage perspective, **Revista Contemporânea de Contabilidade**, 1 (110): 11-29.
- Ferreira, M. P. (2008) Building and leveraging knowledge capabilities through cross-border acquisitions. In Tallman, S (Ed.) **New generations in international strategy**. Edward Elgar Publishing, Ltd.
- Friedman, M. (Ed.). (1953) Methodology of positive economics. In **Essays in positive economics** (pp. 3–43). Chicago, IL: University of Chicago Press.
- Gavetti, G. & Levinthal, D. (2000) Looking forward and looking backward: Cognitive and experimental search, **Administrative Science Quarterly**, 45: 113-137.
- Ghemawat, P. (2001) Distance still matters. The hard reality of global expansion. **Harvard Business Review**, 79 (8): 137-147.
- Grant, R. (1991) The resource-based theory of competitive advantage: Implications for strategy formulation. **Califórnia Management Review**, 33 (3): 114-135.
- Guisinger, S. (2000) A Curmudgeon's view of the discipline of international business, paper presented at the **Academy of International Business meeting**, Phoenix, AZ, 2000.
- Guisinger, S. (2001) From OLI to OLMA: Incorporating higher levels of environmental and structural complexity into the Eclectic paradigm, **International Journal of the Economics of Business**, 8 (2): 257-272.
- Hannan, M. & Freeman, J. (1984) Structural inertia and organizational change, **American Sociological Review**, 49: 149-164.
- Hawawini, G., Subramanian, V. & Verdin, P. (2003) Is performance driven by industry-or firm-specific factors? A new look at the evidence. **Strategic Management Journal**, 24 (1): 1-16.
- Helfat, C. & Raubitschek, R. (2000) Product sequencing: Co-evolution of knowledge, capabilities and products. **Strategic Management Journal**, 21 (10/11): 961-979.
- Hymer, S. (1976) **The international operations of national firms: A study of direct foreign investment**, MIT Press: Cambridge, MA.
- Jaffe, E., Nebenzahl, I. & Schorr, I. (2005) Strategic options of home country firms faced with MNC entry, **Long Range Planning**, 38 (2): 183-195.
- Johanson, J & Vahlne, J-E. (1990) The mechanism of internationalisation, **International Marketing Review**, 7 (4): 11-24.
- Johanson, J. & Vahlne, J. (1977) The internationalization process of the firm: A model of knowledge development and increasing foreign market commitment, **Journal of International Business Studies**, 8: 22-32.
- Johanson, J. & Wiedersheim-Paul, F. (1975) The internationalisation of the firm: Four Swedish cases, **Journal of Management Studies**. 12: 305-322.
- Kanter, R. (1997) The institutional perspective on management, **Harvard Business Review**. May.
- Koza, M. & Lewin, A. (1998) The co-evolution of strategic alliances, **Organization Science**, 9 (3): 255-264.
- Landier, A., Nair, V. & Wulf, J. (2009) Trade-offs in staying close: Corporate decision making and geographic dispersion, **Review of Financial Studies**, 22 (3): 1119-1148

- Langlois, R. & Steinmueller, W. (2000) Strategy and circumstance: The response of American firms to Japanese competition in semiconductors, 1980-1995, **Strategic Management Journal**, 21: 1163-1173.
- Lavie, D. & Rosenkopf, L. (2006) Balancing exploration and exploitation in alliance formation, **Academy of Management Journal**, 49 (4): 797-818.
- Leonard-Barton, D. (1992) Core capabilities and core rigidities: A paradox in new product development. **Strategic Management Journal**, 13: 111-126.
- Leonard-Barton, D. (1995) **Wellsprings of knowledge: Building and sustaining the source of innovation**. Boston: Harvard Business School Press.
- Levinthal, D. & March, J. (1993) The myopia of learning, **Strategic Management Journal**, 15: 45-62.
- Levinthal, D. & Myatt, J. (1994) Co-evolution of capabilities and industry: The evolution of mutual fund processing, **Strategic Management Journal**, 15: 45-62.
- Levinthal, D. (1997) Adaptation on rugged landscapes, **Management Science**, 43 (7): 934-950
- Lewin, A., Long, C. & Carroll, T. (1999) The coevolution of new organizational forms, **Organization Science**, 10 (5): 535-550.
- Mackey, A., Mackey, T. & Barney, J. (2007) Corporate social responsibility and firm performance: Investor preferences and corporate strategies. **Academy of Management Review**, Vol. 32, No. 3, 817-835.
- Makino, S., Lau, C., & Yeh, R. (2002) Asset-exploitation versus asset-seeking: Implications for location choice of foreign direct investment from newly industrialized economies, **Journal of International Business Studies**, 33 (3): 403-421.
- Madhok, A & Phene, A. (2001) The coevolutionary advantage: Strategic management theory and the eclectic paradigm. **International Journal of the Economics of Business**, 8: 243-256.
- March, J. (1991) Exploration and exploitation in organizational learning, **Organization Science**, 2 (1): 71-87.
- McGrath, R. & Nerker, A. (2004) Real options reasoning and a new look at the R&D investment strategies of pharmaceutical firms. **Strategic Management Journal**, 25: 1-21.
- McKelvey, W. (1997) Quasi-natural organization science, **Organization Science**, 8 (4): 352--380.
- Meyer, J. & Rowan, B. (1977) Institutionalized organizations: Formal structure as myth and ceremony, **American Journal of Sociology**, 83 (2): 340-363.
- Miller, D. (1992) Environmental fit versus internal fit, **Organization Science**, 3 (2): 159-178.
- Nehrt, L., Truitt, J. & Wright, R. (1970) **International Business research: Past, present and future**. Indiana University Graduate School of Business.
- Nelson, R. & Winter, S. (1982) **An evolutionary theory of economic change**. Belknap Harvard.
- Penrose, E. (1959) **The theory of the growth of the firm**. Basil Blackwell, Oxford.
- Pettigrew, A. (1985) **The awakening giant: Continuity and change at ICI**. Oxford: Basil Blackwell, 1985.
- Porter, M. (1990) **The competitive advantage of nations**. New York: The Free Press.
- Ricks, D. (1999) **Blunders in international business**. 3rd edition, Wiley-Blackwell, Cambridge, MA.

- Rugman A. & Verbeke, A. (2008) A new perspective on the regional and global strategies of multinational services firms, **Management International Review**, 48 (4): 397-411.
- Scott, R. (2002) **Organizations, rational, natural and open systems**. 5th edition, Prentice Hall.
- Scott, W. (1995) **Institutions and organizations**, Thousand Oaks, CA: Sage.
- Shepherd, J., McKelvey, B. (2009) An empirical investigation of organizational memetic variation, **Journal of Bioeconomics**, 11 (2): 135-164.
- Simon, H. (1957) **Administrative behavior**. 2nd edition, New York, MacMillan.
- Sirmon, D. & Hitt, M. (2003) Managing resources: Linking unique resources, management and wealth creation in family firms. **Entrepreneurship Theory and Practice**, 27: 339-358.
- Sirmon, D., Hitt, M. & Ireland, R. (2007) Managing firm resources in dynamic environments to create value: Looking inside the black box, **Academy of Management Review**, 32 (1): .
- Spencer, H. (1897) **The principles of sociology**. New York: D. Appleton & Co.
- Stinchcombe, A. (1965) Organizations and social structure, In March, J. (Ed.) **Handbook of Organization**. Chicago, IL., Rand McNally, 142-193.
- Teece, D., Pisano, G. & Shuen, A. (1997) Dynamic capabilities and strategic management. **Strategic Management Journal**, 18 (7): 509-533.
- Tripsas, M. & Gavetti, G. (2000) Capabilities, cognition, and inertia: Evidence from digital imaging, **Strategic Management Journal**, 21: 1147-1161.
- Tushman, M. & Anderson, P. (1986) Technological discontinuities and organizational environments, **Administrative Science Quarterly**, 31: 439-465.
- Uhlenbruck, K., Meyer, K. & Hitt, M. (2003) Organizational transformation in transition economies: Resource-based and organizational learning perspectives. **Journal of Management Studies**, 40: 257-282.
- Volberda, H. (1999) **Building the flexible company: How to remain competitive**, Oxford: Oxford University Press.
- Wernerfelt, B. (1984) A resource based view of the firm, **Strategic Management Journal**, 5: 171-180.
- Winter, S. (2000) The satisficing principle in capability learning, **Strategic Management Journal**, 21: 981-996.
- Young, S. (2000) What do researchers know about the global business environment?, **International Marketing Review**, 18 (2): 120-129.
- Zahra, S. & George, G. (2002) Absorptive capacity: A review, conceptualization, and extension. **Academy of Management Review**, 27: 185-203.
- Zander, U. & Kogut, B. (1995) Knowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test. **Organization Science**, 6 (1): 76-92.