WORKING PAPER NO.281

The Capabilities Perspective & The Multinational Corporation: Rebuilding the Internationalization Process Model

By

Anirvan Pant

March 2009

Please address all your correspondence to:

Anirvan Pant
Doctoral Student (Corporate Strategy & Policy)
Indian Institute of Management Bangalore
Bannerghatta Road
Bangalore – 560 076
e-mail:

THE CAPABILITIES PERSPECTIVE & THE MULTINATIONAL CORPORATION: REBUILDING THE INTERNATIONALIZATION PROCESS MODEL

Anirvan Pant

Doctoral Student (Corporate Strategy & Policy)

Indian Institute of Management, Bangalore

e-mail: anirvanp04@iimb.ernet.in

ABSTRACT

The Internationalization Process Model, identified closely with the Uppsala School, provides International Management with a model of how firms expand beyond their national boundaries that is remarkable in terms of its spare and elegant construction. It has, however, been criticized on account of its inability to take explain the heterogeneous paths to foreign expansion that multinational corporations have taken over the past three decades. In this paper, I propose that the theoretical core of the internationalization process model can be reinvigorated and made richer by infusing arguments from the capabilities perspective into its organizational learning framework. I also propose, through the revised model, that agency at the subsidiary level is a key driver of the pace and pattern of internationalization. The revised model attempts to correct for several theoretical anomalies in the internationalization model and provides a plausible explanation for heterogeneity in the internationalization paths of multinational corporations.

Keywords: internationalization process, capabilities, organizational learning, subsidiaries

INTRODUCTION

The theme of internationalization, in business research, is concerned with the pace and pattern of expansion of firms into foreign countries. Welch & Luostarinen (1988) define internationalization as "the process of increasing involvement in international operations." Melin (1992) argues that "internationalization is a major dimension of the ongoing strategy process of most business firms" since internationalization "comprises both changed perspectives and changed positions." This argument makes eminent sense when we view the act of managing across borders as one of managing across different kinds of contexts – geographic, institutional, market, and resource. This view of internationalization is reflected in the two seminal models of internationalization – Raymond Vernon's (1966) Product Life Cycle model and the Uppsala internationalization process model. Both are growth-stage models and involve sequential movement across one or more of the business contexts mentioned above. Both models view process as a 'developmental event sequence', i.e., they "take an historical developmental perspective and focus on the sequence of incidents, activities and stages that unfold...." (Van de Ven, 1992).

The fundamental contribution to the Uppsala model came from Johanson & Vahlne (1977). The Uppsala internationalization process model has been "respected as axiomatic, largely owing to its intuitive logic and theoretical parsimony" (Petersen, Pedersen & Sharma, 2004). However, its assumptions about the pace and imperatives of internationalization and the nature of organizational learning during the internationalization process have been repeatedly criticized (Melin, 1992; Andersen, 1993; Forsgren, 2002). Building upon the core premises of the Uppsala model, I propose a reconfiguration of the Uppsala Internationalization model using the Dynamic Capabilities framework (Teece, Pisano & Shuen, 1997; Eisenhardt & Martin, 2000; Zollo & Winter, 2002; Winter, 2003). I contend, in this paper, that this revised model can address the bulk of the criticism directed at the Uppsala model.

The rest of the paper is structured into four sections. The next section presents a review of the Uppsala model in terms of its key concepts and arguments and also discusses the major points of criticism against the model. Thereafter, the relevant concepts from the strategic management literature on capability creation and dynamic capabilities are presented. In the fourth section, the proposed model is described and propositions are developed, followed by concluding comments in the fifth section.

THE 'UPPSALA' MODEL: A REVIEW AND CRITIQUE

The development of the central ideas of the Uppsala model can be traced to Johanson & Wiedersheim-Paul (1975) and Johanson & Vahlne (1977). The 'establishment chain' theory, developed by Johanson & Weidersheim-Paul, pivoted on the argument that the involvement of firms in international operations followed the pattern of an establishment chain, i.e., the firm begins by exporting to the host market via independent representatives and follows it up with the establishment of a sales subsidiary and may ultimately set up manufacturing facilities. Johanson & Vahlne (1977), in what proved to be the seminal paper in this stream of literature, explained the behavioral underpinnings of the 'establishment chain' pattern by relating acts of increasing commitment (to the host market) to incremental enhancements in the knowledge about the host market and a consequent and gradual reduction in the perception of risk associated with operating in a foreign market. Thus, Johanson & Vahlne (1977) see progression in the establishment chain as a reflection of increasing commitment to the host market. This 'commitment' is "not a strategy of optimum allocation of resources to different countries where alternative ways of exploiting foreign markets are compared and evaluated; but the consequence of a process of incremental adjustments to the changing conditions of the firm and its environment" (*ibid.*)

In the Uppsala internationalization process model, the key barrier to international growth is 'psychic distance' defined as "the sum of factors preventing the flow of information from and to the market. Examples are differences in language, education, business practices, culture, and industrial development" (*ibid.*) In order to deal with the uncertainty resulting from psychic distance from a foreign country, a firm would take small, incremental steps in increasing its illiquid exposure to the said foreign country. As 'experiential knowledge' about the specific and idiosyncratic characteristics of the foreign market increased, there would be a reduction in the uncertainty associated with engaging with that market and therefore, an increase in the commitment to that market. The internationalization process is, then, seen as one driven by a steady increase in experiential knowledge and a corresponding shrinkage in the psychic distance between the home country and the host country, as far as the firm under consideration is concerned.

In their model, 'experiential knowledge' is the 'critical' knowledge because "it cannot be so easily acquired as objective knowledge. In domestic operations, we can to a large extent rely on lifelong basic experiences to which we can add the specific experiences of individuals, organizations and markets. In foreign operations, however, we have no such basic experiential knowledge to start with. It must be gained successively during the operations in the country" (Johanson & Vahlne, 1977). Further, they argue that "on the basis of objective market knowledge, it is possible to formulate only theoretical opportunities; experiential knowledge makes it possible to perceive 'concrete' opportunities – to have a feeling about how they fit into the present and future activities." In sum, the characteristics of knowledge in the Uppsala model are that it is market specific, experience based, embedded in individuals, and not easily disseminated through the organization (Petersen et al, 2004).

The Uppsala model is, at heart, a 'learning' model. And it is on that front that it has received its most severe critique. Reviewing the criticism of the Uppsala model, Melin (1992) says that the explanatory value of the model is limited on account of the determinism inherent in the model, its low relevance to the later stages of internationalization, and the reduced importance of psychic distance 'as the world becomes more homogenous.' Taking this further, we can see that the deterministic nature of learning in the model deprives it of an ability to explain the following exceptions to the paced, sequential pattern of internationalization that it espouses:

1. Firms that have large resources, can take on greater commitments in one go, and can therefore gain experiential knowledge faster (Andersen, 1993).
2. Market-specific knowledge need not necessarily be gained via the route of experience, if that market is stable and homogenous (*ibid.*).
3. Generalization to the specific market by firms' experiences in similar markets (*ibid.*).
4. The gain of market-specific knowledge through business relationships with other firms, by tapping their knowledge base (Forsgren, 2002)
5. The use of mimetic learning from organizations with a high degree of legitimacy, may allow the firm to skip intermediate steps of learning (*ibid.*).
6. The "internationalization process taking place in experienced companies which have learned through decades of international activities" (Melin, 1992).
7. Market withdrawal or reduction of commitment as a consequence of greater experiential knowledge.

The model has been indicted on other counts too. The model assumes stability of the personnel in the host market who hold the experiential knowledge and does not take into account the role of the top management in determining the pace and pattern of internationalization. Further, arguing that there exists a negative relationship between experiential learning and incremental behaviour, Forsgren (2002) suggest that it is more logical to propose an increasing, rather than steady, pace of internationalization. And, perhaps most importantly, Forsgren (*ibid.*) also points to the absence of 'learning through searching' in the model. The model depicts learning about current activities, in which organizations are geared towards exploring the current practices and technologies, as the only mode of learning. Learning through searching, on the other hand, "emphasizes the enlargement of the set of possible alternatives" (*ibid.*)

I propose here that a significant part of this criticism of the Uppsala internationalization process model can be dealt with by incorporating a dynamic capabilities view in the learning cycle of the Uppsala model. The next section, therefore, reviews the essential concepts from the strategic management literature on capability creation and dynamic capabilities.

ROUTINES, CAPABILITIES, AND DYNAMIC CAPABILITIES

There is a broad consensus in the strategic management literature that routines, capabilities, and dynamic capabilities are distinct concepts with distinct roles in securing sustained competitive advantage for firms. This section looks at the key expositions relevant for model development in this paper.

With an orientation towards the creation and sustenance of competitive advantage, we can order routines, capabilities, and dynamic capabilities in an ascending hierarchical fashion. Routines can be defined as "behavior that is learned, highly patterned, repetitious, or quasi-repetitious, founded in part upon tacit knowledge – and the specificity of objectives" (Winter, 2003). An organizational capability may, then, be defined as "a high-level routine (or, collection of routines)" (Winter, 2000) that may be differentiated from routines on several levels: First, capabilities are necessarily 'substantial in scale and significance' whereas routines are not necessarily so. Second, while routines may get triggered directly by certain stimuli in the environment and may therefore be invisible to the management, capabilities are "necessarily known in the minimal sense that that the control levers and their intended effects are known" (*ibid.*) Third, in the case of capabilities, it is incumbent upon the management to actively manage the input flow but not so in the case of routines (*ibid.*)

Collis (1994) provided a three-dimensional view of organizational capabilities. He tells us that there are three categories of organizational capabilities, viz.,

a. those that 'reflect an ability to perform the basic functional activities of the firm';
b. those that 'share the common theme of dynamic improvement to the activities of the firm'; and

c. those that 'comprise the more metaphysical strategic insights that enable firms to recognize the intrinsic value of other resources or to develop novel strategies before competitors'

Capabilities b. and c. are capabilities of a higher order and correspond to what Teece, Pisano & Shuen (1997) later called 'dynamic capabilities.' There is, thus, a direct association between 'capabilities' and 'dynamic capabilities.' In a similar vein, Winter (2003) points out that while 'capabilities', per se, are the 'how we earn a living now' capabilities, 'dynamic capabilities' are "those that would change the product, the production process, the scale, or the customers (markets)..."

Further, Winter (2000) contends that, "learning may itself reflect a dynamic capability of the organization, if its approach to learning is a systematic and persistent feature of the organization." However, Helfat & Peteraf (2003) counter that, "Learning, change, and adaptation do not necessarily require the intervention of 'dynamic' capabilities as intermediaries." In other words, "all capabilities have the potential to accommodate changes" (*ibid.*)

Zollo & Winter (2002)'s definition of dynamic capabilities, linked to operating routines, is reasonable and addresses the redundancy of the term 'change' referred to by Helfat & Peteraf (*ibid.*): "a dynamic capability is a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness."

Eisenhardt & Martin (2000) sought to reduce the vagueness and tautology surrounding the concept of dynamic capabilities by locating 'identifiable and specific routines' that serve as dynamic capabilities. Defining dynamic capabilities as "the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve and die", they name specific dynamic capabilities and classify them under three broad categories:-

a. Resource – integrating dynamic capabilities, e.g., product development routines.

b. Resource – reconfiguring dynamic capabilities, e.g., resource allocation routines.
c. Resource – releasing / Resource – securing dynamic capabilities, e.g., alliance & acquisition routines.

In this sense, dynamic capabilities acquire the same meaning as the term 'architectural competence' used by Henderson & Cockburn (1994) to refer to the ability of certain firms to "integrate [component competencies] in new and flexible ways to develop new architectural and component competencies as they are required." The same meaning is captured in Kogut & Zander's (1993) idea of 'combinative capabilities.' In a commentary upon the work of Kogut & Zander (*ibid.*), Tallman (2003) explains that "common architectural knowledge about the structure of a technology and its interaction with the organization will make transferring component knowledge easier and cheaper within the firm."

This paper acknowledges, as a premise, Kogut & Zander's (1993) notion of firms as "social communities that specialize in the creation and internal transfer of knowledge" and the MNC as an organizational vehicle with superior efficiency in transferring knowledge across borders (*ibid.*). The use of 'dynamic capabilities' in this paper corresponds closest to the definition given by Zollo & Winter (2002) above. As a matter of convenience, however, I use the term 'capabilities' throughout the paper.

A REVISED MODEL OF THE INTERNATIONALIZATION PROCESS

This paper proposes that the Uppsala internationalization model can be reconfigured by injecting a role for dynamic capabilities in its learning cycle. The only other comparable effort discovered in the literature is a capability-driven framework of the multinational firm by Tallman & Fladmoe-Lindquist (2002) whose 'strategy content'-oriented focus was on "how firms can create new value for themselves to increase their long-term profitability" (*ibid.*). Thus, there is an absence of an organizational capabilities-based model of the internationalization process. By taking the Uppsala model apart and reconfiguring it, this paper seeks to make a contribution in this direction. The proposed model is presented in figure 1.

Figure 1 about here

The Decision to Initiate Internationalization

The first step towards internationalization, in the Uppsala model, is the initiation of exports to a foreign country. Thereafter, independent sales agents, sales subsidiaries and full-fledged manufacturing subsidiaries may follow, in that order. Johanson & Vahlne (1977) explain this incrementalist approach to internationalization as a consequence of the fear of psychic distance. But they do not probe the driving factors of internationalization. In seeking to answer the question, 'what prompts firms to go international?', I continue with the Uppsala school's fundamental premise that traces its roots to Sune Carlson, the founder of the Uppsala international business research group (Bjorkman & Forsgren, 2000). The premise is that "international business is against human nature.....[and that] doing business abroad was like taking cautious steps into unknown territory rather than a consequence of rational choice based upon economic analyses" (*ibid.*)

With this premise, I argue that the initiation of internationalization may follow two paths or 'logic', not entirely independent. The first, or the 'capability exploiting' logic imbibes a Penrosian reasoning. As firms engage in productive activity, there is an expansion of the firm's 'production opportunity set' – the set of opportunities for exploiting currently-owned resources that the firm is aware of. The desire to the firm's management to 'understand' and 'exploit' its resources in a better fashion serves as a propeller into newer markets. In Penrose's (1959) words,

> "A firm is basically a collection of resources. Consequently, if we can assume that businessmen believe there is more to know about the resources they are working with than they do know at any given time, and that more knowledge would be likely to improve the efficiency and profitability of their firm, then unknown and unused productive services immediately become of considerable importance, not

only because the belief that they exist acts as an incentive to acquire new knowledge, but also because they shape the scope and direction of the search for knowledge."

Following the work of Hymer (1960), it is understood that the firm-specific advantage is not efficiently tradeable on the market and, therefore, the MNC needs to come into existence in order to internalize the foreign operation. But why would the firm itself be interested in going international? I argue, then, that the firm would be willing to accept the uncertainty of operating in unknown, foreign markets if it believes it stands to gain in terms of its awareness of its own resources, products or technologies. This awareness can help it exploit more effectively its existing resources.

The second logic of initiation of internationalization can be described as a 'capability seeking' logic. This logic finds the firm's management seeking solutions to technological or resource hurdles 'confronted' by them in the course of exploiting their capabilities. Dorothy Leonard-Barton's (1992) dual notions of 'core capabilities' and 'core rigidities' are helpful in understanding this logic. Leonard-Barton (*ibid.*) defines a core capability as the "knowledge set that distinguishes and provides a competitive advantage." She writes that the content of core capabilities is "embodied in employee knowledge and skills and embedded in technical systems." Knowledge creation and its control are driven by 'managerial systems' and permeated by 'values and norms.' The other face of a 'core capability' is a 'core rigidity' Firms seeking to deploy their core capabilities are incessantly plagued by corresponding core rigidities which manifest themselves as low strength in and low status for non-dominant disciplines, outdated physical systems, weak managerial contribution obstructing norms and lackadaisical employee attitude. Every core capability can manifest as a core rigidity, due to the very logic of exploitative learning (March, 1991). At the moment of 'confrontation', the firm becomes aware of the nature of the core rigidity and the obstruction it causes to the deployment of its core capability. I argue that the firm then engages in 'problemistic search', defined by Cyert & March (1963) as the "search that is stimulated by a problem (usually a rather specific one) and is directed towards finding a solution to that problem." Problemistic search "has a goal [and is] interested in understanding only insofar as such understanding contributes to control over the problem" (Cyert & March, 1963).

Under the second logic, *sometimes*, the solution that is visible after a problemistic search would appear to call for a change of geographical / resource market context. This may happen when the firm perceives a need to create a new establishment unaffected by its current structural rigidities, or when it wishes to harness location-specific advantages in distant countries. Such contexts are not replicable because "individual countries may be characterized by path dependencies in their knowledge development trajectories. These path dependencies are themselves idiosyncratic and shaped by institutional and systemic elements which are hard to replicate elsewhere, such as government technology policies, business government interactions in the innovation field, the functioning of business networks, the role of the nonbusiness infrastructure including universities and research centers, etc" (Rugman & Verbeke, 2001).

This logic is visible in the case of the setting up of R&D units as subsidiaries by foreign firms. The interesting point to note here is that, contrary to what the Johanson – Vahlne (Uppsala) model tells us, the second logic leads to a case of 'stage skipping.' Instead of the sequential stage-wise entry pattern (starting with exports) embodied in the Uppsala model, we have located a rationale for an entry pattern in which the firm moves directly to set up a subsidiary with at least one functional establishment, e.g., Research and Development. The internationalizing firm, in this case, is not venturing, uncertainly, into a foreign product market. It is, on the contrary, venturing into a foreign resource market where, it has reason to believe (following the problemistic search) that it shall be able to resolve the hurdle caused by the core rigidity. Such a firm need not be concerned with gaining experiential knowledge of the product market and will not find it comforting to use incremental steps.

It will often be that internationalization processes that start out with a capability-exploiting logic will encompass creation of new capabilities along the way. But, the key point of difference between the capability-exploiting and the capability-seeking logic is that the first kicks off with the specific aim of deploying abroad existing capabilities while the second is concerned, from its very beginning, with creation of specific new capabilities[1]. This argument is captured in the first set of propositions below.

Proposition 1.1 Firms that initiate internationalization in order to exploit existing capabilities are likely to use the incremental mode of entry, and will be observed sequentially progressing through each stage.

Proposition 1.2 Firms that initiate internationalization in order to seek new capabilities are not likely to use the incremental mode of entry, and will be observed skipping the early stages of entry.

The Establishment of Subsidiaries and 'Imperfect Replication'

Since subsidiary establishments are set up by individuals who, more often than not, have spent a considerable time under the socializing influence of the parent firm, they are expected to influence the establishment in such ways that the subsidiaries seem to be mirror images of the parent. In their classic work on the 'Strategy of the Multinational Enterprise', Brooke & Remmers (1970) discuss how "the foreign subsidiary will naturally have a much simpler organization, but it is likely to mirror head office to some extent......This mirror effect may not be produced by instruction from head office, but by an almost unconscious development along the lines of communication." The 'mirror effect' will probably occur to a higher degree in what White & Poynter (1984) call 'miniature replicas' or 'marketing satellites[2]' but to a lower degree in a pure R&D subsidiary. Nevertheless, as long as key senior personnel in the newly established subsidiary have been deputed from the parent firm, we may still expect the 'mirror effect' to occur. This idea is visible in Narayanan et al (2003) who posit that senior managers act

[1] It is also possible that the parent firm may acquire new capabilities from abroad without initiating internationalization at all, such as by entering into research joint ventures.

[2] 'a miniature replica business produces and markets some of the parent's product lines or related product lines in the local country.......businesses with marketing satellite strategies market into the local trading area products manufactured locally. Process and product development also occur at central locations.' (White & Poynter, 1984)

as “information arbitrageurs’ linking pockets of tacit knowledge with relevant problem solving contexts.”

Interestingly, the imperfect manner in which the replication occurs creates opportunities for subsidiaries to create new routines that may result in the creation of new, valuable capabilities. Yamin (1999) says that organizational routines do not travel very well and cites Nelson & Winter (1982) who acknowledge that although ‘perfect replication is a theoretical possibility, the feasibility of close (let alone) perfect replication is quite problematic.’ In other words, routines from the parent are imperfectly replicated at the level of the subsidiary. Yamin (1999) goes on to suggest that since subsidiaries inherit an incomplete ‘template’, “they are forced to engage in a process of search for market and other knowledge about the local environment, knowledge which, due to its often tacit, localized, and experiential nature will not be transparent to the parent.” This search anticipates the development of idiosyncratic capabilities by the subsidiaries.

Winter & Szulanski (2001)’s work on ‘replication as a strategy’ can be utilized in the context of the internationalization process. They use the term, ‘arrow core’ to denote the ‘ideal informational endowment for a replicator of a particular business model.’ For the capability exploiting logic of internationalization initiation, knowledge of the arrow core will be continue to rise as the internationalization progresses and experiential learning grows. This binds the subsidiary into a fairly narrow range of landscape over which new capabilities can be developed. This can be expected because past exploitation in a given domain makes future exploitation even more efficient. As a result, they engage with greater commitment in that activity, ‘thus further increasing exploitation and the opportunity cost of exploration’ (Levinthal & March, 1993). For the capability – seeking logic of internationalization initiation, on the other hand, there is no arrow core even though there may be a mirror effect. The subsidiary, in this case, can be expected to develop capabilities that are distant from the current capabilities of the parent. This idea can be explained using Gavetti & Levinthal’s (2000) discussion of the differences, at three levels, between experiential and cognitive search. First, in experiential search, actors evaluate alternatives based upon at least partial implementation of an alternative, followed by experiencing the outcome, after which the prior action may be revised. Contrarily, cognitive search does not need enactment of an activity in order to evaluate it. "Actors evaluate alternatives based on their understanding of the world and the probable consequences of engaging in the proposed behavior" (Gavetti & Levinthal, *ibid.*) Second, alternatives are explored sequentially and one-at-a-time in the case of experiential search while the cognitive search process simultaneously explores several sets of alternatives. Third, cognitive search is characterized by high variation in the spatial distance of ideas from the existing behavior while experiential search is marked by search in the neighbourhood of current behaviour. According to Gavetti & Levinthal (2000), thus, experiential search is backward-looking while cognitive search is forward-looking. Due to the probability of lower imperfection when parent characteristics are replicated at the level of the subsidiary in the case of capability exploiting logic as compared to the capability seeking logic (as discussed above), the following propositions are stated:-

Proposition 2.1 Internationalization initiated on a capability exploiting logic shall be marked by experiential search, post-establishment, and shall be associated with the development of backward looking, incremental, co-located capabilities.

Proposition 2.2 Internationalization initiated on a capability seeking logic shall be marked by cognitive search, post-establishment, and shall be associated with the development of forward looking, discontinuous, distant capabilities.

Capability Triggers in Subsidiaries

Earlier, I discuss the nature of capabilities, relative to existing capabilities in the parent establishment, that may be developed in the multinational subsidiary, given the intent behind the initiation of internationalization. It does not, however, spell out the triggers of capability creation and how they may impact the process of internationalization. This issue is now taken up. Capability creation will occur in response to a stimulus, that may originate in the subsidiary and its local environment or the MNC network that comprises the parent and the sister subsidiaries. In my model, capability development at the subsidiary may occur as a consequence of any of three 'triggers':-

1. Asymmetries
2. Market Discovery
3. Charter

Danny Miller (2003) defines asymmetries as "inimitable differences between [the relevant firm] and other firms that in their initial states could in no way be considered valuable." The asymmetries might exist in the form of "teams, projects, contacts, knowledge or even business units that were truly distinctive and could not be imitated by others at a cost that would afford economic returns" (Miller, 2003). An essential trait of asymmetries found by Miller (*ibid.*) was that "they were not connected to engines of value creation and were as apt to be liabilities as assets." In order to convert asymmetries into 'core capabilities', organizations need to do three things well – a. discover the asymmetries and locate the potential for value in them; b. "turn asymmetries into capabilities by strategically embedding them within an organizational design configuration that exploits them and sustains their development"; c. identify opportunities in the market that offer attractive returns on deployment of the asymmetry-derived capabilities (Miller, *ibid.*). Multinational subsidiaries are 'thrown' into diverse sets of resource and institutional contexts. Thus, at the level of the multinational corporation as a whole, it is clearly possible to envisage the existence of several asymmetries available to subsidiaries that can be converted into capabilities.

Hohenthal et al (2003) describe market discovery as "finding out about a market in a wide sense........an unexpected finding associated with some surprise." They discuss two sets of concepts – problem and opportunity discoveries; and strategic and operative discoveries. An opportunity discovery is one that 'supports, facilitates, or speeds up the firm's strategy' while a problem discovery is one that is consequent upon a obstruction faced in the carrying out of ordinary day-to-day work. Strategic and operative discoveries differ based upon the degree of influence that the discovery can play in determining the future direction and content of the firm's activities. Hohenthal et al (2003) propose that operative discoveries have an impact on the pace and pattern internationalization of the firm if they, i.e., the discoveries, occur in series. Strategic discoveries, on the other hand, have a 'radical' impact on the process of internationalization. They argue that while strategic problem discoveries have a strong negative impact on international expansion, strategic opportunity discoveries have a strong positive impact on international expansion.

A 'charter' connotes a formal assignment of a task by the parent. The grant of a charter may, however, be often preceded by exploratory activity that uncovers valuable asymmetries or stumbles upon a market discovery. Galunic & Eisenhardt (1996) define a charter, in the context of multidivisional corporations, as "the businesses (i.e., product and market arenas) in which a division actively participates and for which it is responsible within the corporation. Birkinshaw (1996) uses the term 'mandate' in a similar sense when he defines it as "a licence to apply the subsidiary's distinctive capabilities to a specific market opportunity."

If a potentially valuable asymmetry is located by the subsidiary, then the parent may agree to commit more resources to the host market, leapfrogging to a certain extent the gradualist nature of experiential learning. However, since asymmetries are location-bound, i.e., they are not fungible across the MNC network of subsidiaries, this act shall serve, over time, to concentrate the pattern of internationalization on the focal subsidiary to the relative neglect of other frontiers of internationalization(i.e., subsidiaries). Further, if the parent follows up the location of such an asymmetry with the grant of a mandate, it shall not only concentrate the pattern of internationalization, but shall also accelerate its pace. The discovery of strategic market opportunities will make it more attractive for the parent to commit resources to the host market. The parent may overlook the need for gradual increments to experiential knowledge and commit a large tranche of resources at one go. In the case of a strategic problem discovery, however, the opposite can be expected and the parent may reverse the process of internationalization or, at least, withhold further tranches of investment. These three arguments are captured in propositions 3.1 to 3.3 below.

Proposition 3.1 If a process of internationalization is punctuated by the location of a potentially valuable subsidiary-specific asymmetry, it shall lead to a concentrated rather than dispersed pattern of internationalization

Proposition 3.2 If the location of a potentially valuable subsidiary-specific asymmetry is followed by the grant of a mandate from the parent, it shall accelerate the pace of internationalization.

Proposition 3.3 If a process of internationalization is punctuated by a strategic opportunity discovery or a strategic problem discovery, it shall accelerate or decelerate (even reverse) the pace of internationalization, respectively.

Johanson & Vahlne (1977) argue that market commitment shall follow, incrementally, increases in experiential knowledge. Increases in experiential knowledge may lead to the location of valuable asymmetries, market discoveries or grant of mandates. Asymmetries and market discoveries may act to punctuate the incremental process of internationalization. In doing so, they alter the pattern and pace of internationalization in different ways not taken into account by Johanson & Vahlne (1977).

Capability Creation by Subsidiaries

While the previous section looked at triggers of capability creation, this section examines how capabilities are actually created, borrowing substantially from Zollo & Winter (2002). Learning mechanisms shape the creation of dynamic capabilities (as defined by them and discussed in section 3), say Zollo & Winter (2002), which subsequently shape the operating routines of the organization. Learning mechanisms themselves can be seen, in that sense, as dynamic capabilities of a second order and are of three kinds:- tacit experience accumulation, knowledge articulation, and knowledge codification(*ibid.*). Tacit experience accumulation contains 'experiential wisdom' that is developed through trial-and-error learning and by the exercise of selection and retention on routines as they are developed. Unlike experience accumulation, knowledge articulation and knowledge codification are deliberate learning mechanisms. Knowledge articulation builds 'collective competence' through 'collective discussions, debriefing sessions, and performance evaluation processes.' "By sharing their individual experiences and comparing their opinions with those of their colleagues, organization members can achieve an improved level of understanding of the causal mechanisms intervening between the actions required to execute a certain task and the performance outcomes produced" (*ibid.*) Knowledge codification involves "stepping up the learning effort from a simple sharing of individual experience to developing manuals and other process-specific tools" (*ibid.*) Knowledge codification entails prior knowledge articulation though it is not necessarily so the other way round and implies an effort to understand the 'causal links between the decision to be made and the performance outcomes to be expected' (*ibid.*)

These three learning mechanisms enable, in the model presented here, the evolution of dynamic capabilities in subsidiaries, the creation of which is triggered by location of asymmetries / market discoveries / grant of mandates. The process of knowledge creation that evolves dynamic capabilities then moves through the stage of variation and selection. For example, given that a potentially valuable asymmetry has been located in the subsidiary, variation comes into play in the form of a variety of ideas that are generated in order to effectively exploit the asymmetry. Next, in the selection stage, ideas are evaluated for their potential in relation to a "shared understanding of the organization's prior experience, as well as in the context of established power structures and existing legitimization processes" (Zollo & Winter, 2002). In this manner, a subsidiary may acquire a certain dynamic capability in, say, product development routines. Overt learning may occur until a 'satisficing' point that would depend upon the aspiration level of the subsidiary (Winter,2000).

In the development of dynamic capabilities, over time, the use of knowledge articulation and knowledge codification routines can be expected to rise as parents and subsidiaries become adept at the utilization of these learning mechanisms ('learning by doing', Arrow (1962)). Since tacit experience accumulation is associated with experiential search and knowledge articulation and codification are associated with cognitive search, we can make certain inferences based on arguments made in sections 2 and 4.2. That is, since over time, knowledge articulation and codification shall increase in effectiveness (with regard to creation of dynamic capabilities), the subsidiary shall tend towards a purposive use of these learning mechanisms as opposed to tacit experience accumulation. With this tendency, the use of cognitive search mechanisms shall increase and, therefore, we shall witness the development of forward looking, discontinuous, technologically distant (from the parent) capabilities. Given that capabilities with a high variance of distribution can be expected to trigger several new rounds of search for new capabilities, market commitments shall increase at an accelerated pace. This means that, irrespective of whether the initiation of internationalization was based on a capability-exploiting logic or a capability-seeking logic, both shall converge towards processes that develop discontinuous, newer capabilities at an accelerated pace. This convergence is, then, driven by the very existence of subsidiaries since each subsidiary is established on an imperfect replication of the parent's capability repertoire and has to, therefore, improvise in the social context in which it finds itself. Further, knowledge articulation and knowledge codification can help 'unbound' location-bounded capabilities. Therefore, the capabilities developed at one subsidiary can be transferred to sister subsidiaries and the parent with increasing ease over time, resulting in a diffusion of the internationalization process. These arguments are summarized in propositions 4.1 & 4.2.

Proposition 4.1 Increasing use of knowledge articulation and knowledge codification learning mechanisms induces a movement towards the evolution of highly dissimilar, distant capabilities and, consequently, an accelerated pace of internationalization.

Proposition 4.2 Increasing use of knowledge articulation and knowledge codification learning mechanisms induces a movement towards the evolution of highly dissimilar, distant capabilities and, consequently, a diffused pattern of internationalization.

Capability Legitimization & Capability Replication

An important premise in the previous section was that the development of specific dynamic capabilities by subsidiaries shall be followed by an increase in the commitment of the parent to the host country domain of the said subsidiary. This may, however, not necessarily be so. The recognition of subsidiary capabilities by the parent and the subsequent show of commitment is more a fallout of a political process than a simple matter of choosing the best rationally sensible alternative. Burgelman (1983) spoke of two kinds of strategic behavior by divisions in multidivisional firms – induced strategic behaviour which takes place inside the current structural context and autonomous strategic behaviour which takes place outside of the current structural context, where structural context is defined as "the interlocking set of rules, procedures, norms and manifested authority that define the bounds, sometimes in unforeseen ways, within which organizational members may operate." Burgelman (1983) goes on to assert that even though autonomous strategic behaviour takes place outside the current structural context in order "to be successful, it needs to be eventually accepted by the organization and integrated into its concept of strategy."

The development of new dynamic capabilities by subsidiaries leads to a cascade of new operating routines that may be utilized by the subsidiary to make new products in new ways. However, the capabilities created may be deployed only when the parent sanctions their use. Even if the capabilities can be deployed in the geographical base of the subsidiary without legitimization by the parent, it shall be necessary to secure the parent's backing in order to diffuse the said capabilities throughout the MNC network. Forsgren & Pahlberg (1992) argue that the subsidiary that has built up specialized resources may use them to increase its influence on the strategic decisions in the MNC or enhance its autonomy from the control of the parent and sister subsidiaries. The subsidiary that wishes to use its resource to increase its influence within the MNC network shall be particularly interested in getting its capabilities legitimized by the parent. External legitimization may also be said to occur when the subsidiary deploys its created capabilities in its geographical base and is able to secure high economic returns. However, it must be kept in mind that external legitimization gives no guarantee that the parent shall approve of the subsidiary's actions. The attitude of the corporate office of Johnson & Johnson to the introduction of a cosmetics line by its Philippine subsidiary, which turned out to be highly successful, is a case in point (Dawar & Frost, 1999).

The disinclination of the parent to approve of subsidiary capabilities acts as a major dampener of subsidiary capabilities. Birkinshaw & Ridderstrale (1999) use the metaphor of a 'corporate immune system' that views a subsidiary initiative with suspicion as an 'alien body' and seeks to destroy it. Birkinshaw & Ridderstrale (*ibid.*) explain the motivation of the 'corporate immune system' in these words: "[since] the merits of any given initiative cannot be known in advance, so the expectation of actors within the [parent] organization of its likely value is such that they would prefer to make a Type I error (reject a promising initiative) than make a Type II error (let through a rogue initiative)."

If this is how the corporate immune system works, the implication is that subsidiaries that hope to get their capability-building initiatives legitimized would have to ensure that the case is made as compelling as feasible when it goes for corporate approval. In other words, subsidiaries should expect that their capabilities shall be 'contested' by the structural context of the multinational corporation and be prepared to fight the resistance. This can be done by use of tactics such as persistent selling of initiative to fight resistance, use of (limited) personal relationships with corporate mangers to circumvent and / or fight major areas of resistance, avoidance of conflict with competing divisions, early generation of external market acceptance, and avoidance of all parts of the corporate immune system in early stages (Birkinshaw & Ridderstrale, *ibid.*). This, in turn, implies that in several cases of successful legitimization of a subsidiary capability, the diffusion of the subsidiary capability in the MNC network would be at a 'tipping point'[3]at the time of legitimization. Post-legitimization, there would, then, be an accelerated pace of capability diffusion throughout the MNC network, along with increases in resource commitments. This initiates a wave of internationalization – a kind of second-order internationalization. This diffusion would occur through the process of replication. In the words of Zollo & Winter (2002), "[The] diffusion process requires the spatial replication of the novel solutions in order to leverage the newly found wisdom in additional competitive contexts." Successful replication occurs when the 'template', i.e., a working example of the successful business model or set of routines, guides replication.

[3] 'Tipping point' is a term originally from the domain of Sociology. It was observed, in the 1960s, that as blacks started moving into white neighbourhoods, whites would start leaving gradually but after the proportion of blacks reached a certain threshold, whites would evacuate that neighbourhood en masse. This proportion of blacks, in the population of a neighbourhood, at which whites left the neighbourhood in droves is known as 'tipping point.'

Rugman & Verbeke (2001) distinguish between the MNC's firm-specific advantages (FSA) and the country-specific advantages (CSA) that can be obtained from locating subsidiaries in host countries. Due to the strong institutionalizing influence of host countries, it can be expected that the capability developed by the subsidiary would be strongly permeated by the corresponding CSA. If the capability thus developed is non-location bound, it can be diffused rapidly through the MNC network by the subsidiary. It, then, retains control over the capability and its diffusion and, correspondingly, over the subsequent pace and pattern of this 'thread' of internationalization. On the other hand, if the capability developed at the subsidiary level is location-bound, the parent shall have to intervene in order to transform it into a non-location-bound FSA and then diffuse the capability throughout the network. In this case, the parent shall be able to maintain its hold over the pace and pattern of internationalization emanating from the subsidiary's capability development.

Continuing the same argument, if the subsidiary controls further internationalization emanating from its capability, it shall have incentives, later on, to choose its partners / sources of capability renewal in such a way that "these activities enhance the power of the subsidiary within the multinational by propagating a perception of the value of the subsidiary's resources and others' dependence upon them" (Tregaskis, 2003). A subsidiary may choose local (host country) networks to generate new knowledge in order to evolve new capabilities and intra-organizational networks (e.g., with sister subsidiaries) to gain credibility and securing others' dependence upon themselves (*ibid.*) In this case, increments of experiential knowledge accrue to the subsidiary and not to the parent. However, if the subsidiary capability is location bound and the parent has the higher capability to transform it into a non-location bound FSA, the increments of experiential knowledge accrue to the parent. The arguments of this section lead to propositions 5.1 and 5.2.

Proposition 5.1 The replication of a non-location bound subsidiary capability, post-legitimization, triggers off an internationalization trajectory in which the pace and pattern are influenced by the subsidiary that owns the capability 'template.'

Proposition 5.2 The replication of a location bound subsidiary capability, post-legitimization, triggers off an internationalization trajectory in which the pace and pattern are influenced by the parent.

As Zollo & Winter (2002) comment, the function of the replication process is not to simply diffuse the capability through the MNC network, but also to "contribute new (raw) information that can provide the diversity needed to start a variation phase of a new knowledge cycle. The application of the routines in diverse contexts generates new information as to the performance implications of the routines employed...... This evidence, if properly collected and processed, can further illuminate the context-dependent cause-effect linkages between decisions and performance outcomes. It can thereby prime the initiation of a new knowledge cycle." Thus, the evolution of dynamic capabilities within the MNC and the consequent impulses of internationalization can be envisaged as proceeding through a variation-selection-replication-retention cycle (*ibid.*).

As the capabilities developed by the subsidiary are pulled into the strategic context (Burgelman, 1983) of the MNC and accommodated by the structural context, and as the replication process proceeds, the subsidiary might settle into a rent-appropriating and exploitative learning routine. This is partly a response to rising costs of explorative behaviour. As a result, as experiential knowledge is further enhanced, the core capability shows up as a core rigidity. This 'confrontation' triggers off, again, the mechanism of problemistic search and the whole process starts all over again. The difference is that, this time, the process of internationalization may be driven by the quest of one or more subsidiaries for resolutions of their core rigidities. Thus, path dependant cycles of capability creation and replication through explorative and exploitative learning drive the internationalization process.

CONCLUSION

The specific internationalization decision cannot be divorced from the firm's past (the firm as a repository of embedded knowledge), its future (existing capabilities as platforms for future capabilities) and the social context 'within which the knowledge is developed, exploited and transferred' (Verbeke, 2003). The centrality of the third aspect, i.e., social context, in creation of new capabilities, dictates that the absence of a subsidiary-oriented model of internationalization in the extant literature be made up. This view gets support from the findings published in several papers over the years. An early empirical study of the R&D subsidiaries of 7 US multinationals by Ronstadt (1978) found that such capability-seeking subsidiaries quickly evolve to take on, by their own initiative, higher order work. It can, therefore, be inferred that their capability-creating activity pushes the MNC into new patterns of internationalization. Zander's (1999) empirical study of the introduction of new technologies by 23 new multinationals suggested that "units outside the country of origin, over time, account for an increasing proportion of all new technologies that are introduced within the multinational network" and also that "foreign units are associated with a significantly higher probability of entry into new and more distantly related fields of technology and to create a long-term drift into new technological capabilities."

A capabilities-driven model of internationalization provides theoretical support to Pervez Ghauri's (1992) empirical observation on Swedish multinationals in S E Asia that, over time, the structure of the MNC is transformed from center-periphery (in which subsidiaries constitute the periphery) to center-center. In the latter case, subsidiaries acquire resources and influence and preside at the center of their own networks of local partner firms and dependant sister subsidiaries. 'Heterarchy' (Hedlund, 1986), marked by the existence of different kinds of centers (product-wise, geographical, etc.) then characterizes the MNC.

The rise of a heterarchical form of organization in the MNC as a consequence of the internationalization process also means that the coordination of MNC-wide activities is that much more difficult. One of the reasons is the deepening embeddedness of subsidiaries in their host country business networks (Forsgren & Pahlberg, 1992) and the parent's growing ignorance of the subsidiary's network contexts (Holm et al, 1995). Andersson & Forsgren (1996) argue, in fact, that the subsidiary's role is shaped more by interaction with the actors in its business network than by any direction from the headquarters: "the role the subsidiary plays in the MNC can be explained by the resources and capabilities that it is able to inoculate into the division because of its external network" (Andersson & Forsgren, 2000). Schmid & Schurig (2003) found evidence that "relationships to external network partners, especially those to external market customers, have a great influence on the development of critical capabilities in foreign subsidiaries." Further, since subsidiaries are subject to dual forces of institutionalization (Rosenzweig & Singh, 1991) – from the parent and from the host country – the inertial tendencies that flow from local host country adaptation get cancelled out (Yamin, 1999). This makes subsidiaries powerful engines of capability creation and internationalization in MNCs. Thus, Holm et al (1995) suggest that the "internationalization process is a consequence of the parent not knowing rather than knowing about global market conditions".

This view, however, ignores the simple fact that the parent continues to be, in most cases, the most resource-rich. Ignorance of subsidiary network contexts may lead to a growing disinterest in the subsidiary's activities (even divestment – Birkinshaw, 1996) or a gap between how the parent and the subsidiary perceive the latter's role (Birkinshaw et al, 2000). In extreme cases, "a loss of uniting identity, routines, or ways of exploring new technology among the dispersed units may....result in de-internationalization and the dissolving of parts of the multinational network" (Zander, 1999).

Asserting that "embracing of international heterogeneity through differentiated subsidiaries should ultimately aim to pursue a cohesive and coherent enrichment of group-level capability", Pearce (1999) makes the parent responsible for ensuring that "originality is allowed to challenge the limits of current group scope in a logically progressive fashion but not in ways that could be disruptive and undermine the synergistic value of existing attributes." The parent can maintain a degree of control on the pace and pattern of internationalization in the MNC in at least two ways: First, by using its legitimizing power. The parent uses its legitimizing power when "at a critical juncture, [it] recognizes the center of excellence and provides resources for the knowledge dissemination to the global network" (Rugman & Verbeke, 2001). Second, the parent can deploy its dynamic capabilities to influence the internationalization process. Eisenhardt & Martin (2000) have noted three types of dynamic capabilities (see Section 3). Given that, over time, newer technologies emanate more from foreign subsidiaries, we can expect that control of resource integrating (dynamic) capabilities shall shift to the subsidiaries. By the same logic, over time, the parent may hone its resource-reconfiguring capabilities and resource-securing dynamic capabilities. The latter would include the parent's ability to transform a location-bound subsidiary specific advantage into a non location bound firm specific advantage. The parent may then, in an exercise of 'architectural competence' (Henderson & Cockburn, 1994) be able to "acquire the benefits of the diverse resource structure by integrating the capabilities developed in one place so that they can be used in other parts of the MNC" (Andersson, 2003).

This paper attempts to correct for the limitations of the Uppsala model. Some of the specific limitations addressed in this paper are the low relevance of the Uppsala model to the later stages of internationalization; inability to account for the firm that generalizes its experiential knowledge to similar markets (use of replication strategy); declining importance of psychic distance (by highlighting the capability seeking logic); role of top management (by stressing the need to be integrated into the strategic context); accelerating pace of internationalization; and most importantly, the high level of determinism in the Uppsala model. It is with regard to the final point that the propositions discussed are most useful; while the bare model recreates the internationalization model, the contingencies inherent in the propositions flesh it out and remove the determinism. This point is emphasized by Araujo & Rezende (2003) when they say that the process of internationalization can be understood "in terms of a number of overlapping processes whose coupling may vary across geographical and temporal contexts.......[leading to] a variety of trajectories where gradualism, discontinuity, reversals as well as leapfrogs, are equally possible." The model proposed in this paper takes stock of these issues and thereby improves upon the Uppsala model. The attempt, however, has its own set of limitations. These are, briefly, an exclusion of the competitive drivers of internationalization, the nature of knowledge flow mechanisms within the MNC network that facilitate the process, and a de-emphasis of the parent's role, in later stages, in infusing new capabilities into the network

Underneath this explanation of the internationalization process is a schizophrenic view of strategy-making in the MNC. A 'strategy making dichotomy' exists, says Regner (2003), between the organizational centre and the periphery which is rooted in 'disparate managerial contexts and knowledge structures.' In applying the analogy of centre and periphery to the parent and the subsidiary, I am borrowing into the MNC domain Regner's (*ibid.*) idea that strategy making is inductive at the periphery and deductive in the center. He says, "Strategy activities in the periphery assist in assimilating, coordinating and combining to the companies' novel knowledge from various external actors and industries into new strategic knowledge. .... In contrast, the activities in the centre primarily support the adaptation, cultivation and perfection of prevailing knowledge, while improving the existing strategy." This fundamental gulf between the parent and the subsidiary can explain the stiff resistance put up by the 'corporate immune system' to subsidiary initiatives. And yet, the role of conflict in sharpening the internal debate on capabilities and the definition of the strategic context is undeniable: "For the periphery it mobilizes energy, furthers the coordination and combination of knowledge and sharpens arguments. For the centre, it forces an adaptation over time of the historic strategic views and finally triggered macro strategic change" (*ibid.*). Perhaps, then, the 'contested' nature of subsidiary-driven capability is, itself, the source of organizational renewal in the MNC that manifests itself in the pace and pattern of the internationalization process.

References

Aharoni, Y. 1966. The Foreign Investment Decision Process: Boston, Division of Research, Graduate School of Business Administration, Harvard University.

Andersen, O. 1993. On the Internationalization Process of Firms: A Critical Analysis. Journal of International Business Studies, 24(2): 209-231.

Andersson, U. & Forsgren, M. 1996. Subsidiary Embeddedness and Control in the Multinational Corporation. International Business Review, 5(5): 487-508.

Andersson, U. & Forsgren, M. 2000. In Search of Centre of Excellence: Network Embeddedness and Subsidiary Roles in Multinational Corporations. Management International Review, 40(4): 329-350.

Andersson, U. 2003. Managing the transfer of capabilities within multinational corporations:-the dual role of the subsidiary. Scandinavian Journal of Management, 19(4): 425-442.

Araujo, L. & Rezende, S. 2003. Path Dependence, MNCs and the Internationalisation Process: A Relational Approach. International Business Review, 12: 719-737.

Arrow, K. J. 1962. The Economic Implications of Learning by Doing. The Review of Economic Studies, 29(3): 155-173.

Birkinshaw, J. 1996. How Multinational Subsidiary Mandates are Gained and Lost. Journal of International Business Studies, 27(3): 467-495.

Birkinshaw, J. & Ridderstrale, J. 1999. Fighting the corporate immune system: a process study of subsidiary initiatives in multinational corporations. International Business Review, 8(2): 149-180.

Birkinshaw, J., Holm, U., Thilenius, P., & Arvidsson, N. 2000. Consequences of perception gaps in the headquarters-subsidiary relationship. International Business Review, 9(3): 321-344.

Bjorkman, I. & Forsgren, M. 2000. Nordic International Business Research. International Studies of Management & Organisation, 30(1): 6-25.

Brooke, M. Z. & Remmers, H. L. 1970. The strategy of multinational enterprise: organisation and finance: Longman.

Burgelman, R. A. 1983. Corporate Entrepreneurship and Strategic Management: Insights from a Process Study. Management Science, 29(12): 1349-1364.

Collis, D. J. 1994. How Valuable are Organizational Capabilities? Strategic Management Journal, 15 (Special Issue (Winter)): 143-152.

Cyert, R. M. & March, J. G. 1963. A Behavioral Theory of the Firm. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Dawar, N. & Frost, T. 1999. Competing with Giants-Survival Strategies for Local Companies in Emerging Markets. Harvard Business Review, March-April: 119-129.

Eisenhardt, K. M. & Martin, J. A. 2000. Dynamic Capabilities: What Are They? Strategic Management Journal, 21: 1105-1121.

Forsgren, M. & Pahlberg, C. 1992. Subsidiary influence and autonomy in international firms. International Business Review, 1(3): 41-51.

Forsgren, M. 2002. The Concept of Learning in the Uppsala Internationalization Process Model: A Critical Review. International Business Review, 11: 257-277.

Gavetti, G. & Levinthal, D. 2000. Looking Forward and Looking Backward: Cognitive and Experiential Search. Administrative Science Quaterly, 45(1): 113-137.

Ghauri, P. 1992. New structures in MNCs based in small countries: a network approach. European Management Journal, 10(3): 357-364.

Hedlund, G. 1986. The Hypermodern MNC-A Heterarchy? Human Resource Management, 25(1): 9-35.

Helfat, C. E. & Peteraf, M. A. 2003. The Dynamic Resource-Based View: Capability Lifecycles. Strategic Management Journal, 24: 997-1010.

Henderson, R. & Cockburn, I. 1994. Measuring Competence? Exploring Firm Effects in Pharmaceutical Research. Strategic Management Journal, 15(Special Issue (Winter)): 63-84.

Hohenthal, J., Johanson, J., & Johanson, M. 2003. Market Discovery and the International Expansion of the Firm. International Business Review, 12: 659-672.

Holm, U., Johanson, J., & Thilenius, P. 1995. Headquarters'Knowledge of Subsidiary Network Contexts in the Multinational Corporation. International Studies of Management & Organization, 25(1-2).

Hymer, S. 1960. The International Operations of National Firms: A Study of Direct Foreign Investment. Massachusetts Institute of Technology, Cambridge.

Johanson, J. & Paul-Wiedersheim, F. 1975. The Internationalization of the Firm - Four Cases. Journal of Management Studies, 12: 305-322.

Johanson, J. & Vahlne, J.-E. 1977. The Internationalization Process of the Firm - A

Model of Knowledge Development and Increasing Foreign Market Commitments. Journal of International Business Studies, 8(1): 23-32.

Kim, W. C. & Mauborgne, R. A. 1996. Procedural Justice and Managers' In-Role and Extra-Role Behavior: The Case of the Multinational. Management Science, 42(4): 499-515.

Kogut, B. & Zander, U. 1993. Knowledge of the Firm and the Evolutionary Theory of the Multinational Corporation. Journal of International Business Studies, 24: 625-645.

Leonard-Barton, D. 1992. Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development. Strategic Management Journal, 13: 111-125.

Levinthal, D. A. & March, J. G. 1993. The Myopia of Learning. Strategic Management Journal, 14: 95-112.

March, J. 1991. Exploration and Exploitation in Organizational Learning. Organization Science, 2(1): 71-87.

Melin, L. 1992. Internationalization as a Strategy Process. Strategic Management Journal, 13: 99-118.

Miller, D. 2003. An Asymmetry - Based View of Advantage: Towards an Attainable Sustainability. Strategic Management Journal, 24: 961-976.

Narayanan, V. K., Kemmerer, B., Douglas, F. L., & Guernsey, B. 2003. The Social Construction of Organizational Capabilities: A Multilevel Analysis. In B. Chakravarthy & G. Mueller-Stevens & P. Lorange & C. Lechner (Eds.), Strategy Process - Shaping the Contours of the Field: Blackwell.

Nelson, R. & Winter, S. 1982. An Evolutionary Theory of Economic Change. Boston:

Harvard Business School Press.

Pearce, R. 1999. The evolution of technology in multinational enterprises: the role of creative subsidiaries. International Business Review, 8(2): 125-148.

Penrose, E. 1959. The Theory of the Growth of the Firm. Oxford: Oxford University Press.

Petersen, B., Pedersen, T., & Sharma, D. 2004. The Role of Knowledge in Firms' Internationalisation Process: Wherefrom & Whereto?: Copenhagen Business School.

Regnér, P. 2003. Strategy Creation in the Periphery: Inductive Versus Deductive Strategy Making. Journal of Management Studies, 40(1): 0022-2380.

Ronstadt, R. C. 1978. International R&D: The Establishment and Evolution of Research and Development Abroad by Seven US Multinationals. Journal of International Business Studies, 9(1): 7-24.

Rosenzweig, P. M. & Singh, J. V. 1991. Organizational Environments and the Multinational Enterprise. The Academy of Management Review, 16(2): 340-361.

Rugman, A. M. & Verbeke, A. 2001. Subsidiary-specific advantages in multinational enterprises. Strategic Management Journal, 22(3): 237-250.

Schmid, S. & Schurig, A. 2003. The development of critical capabilities in foreign subsidiaries: disentangling the role of the subsidiary's business network. International Business Review, 12: 755-782.

Tallman, S. & Fladmoe-Lindquist, K. 2002. Internationalization, Globalization, and Capability-Based Strategy. California Management Review, 45(1): 116-135.

Tallman, S. 2003. The Significance of Bruce Kogut's and Udo Zander's article, 'Knowledge of the Firm and the Evolutionary Theory of the Multinational Corporation'. Journal of International Business Studies, 34: 495-497.

Teece, D. J., Pisano, G., & Shuem, A. 1997. Dynamic Capabilities and Strategic Management. Strategic Management Journal, 18: 509-533.

Tregaskis, O. D. 2003. Learning networks, power and legitimacy in multinational subsidiaries. International Journal of Human Resource Management, 14(3): 431-447.

Van de Ven, A. H. 1992. Suggestions for Studying Strategy Process: A Research Note. Strategic Management Journal, 13: 169-188.

Verbeke, A. 2003. The evolutionary view of the MNE and the future of internalization theory. Journal of International Business Studies, 34(6): 498-504.

Vernon, R. 1966. International Investment and International Trade in the Product Cycle. Quaterly Journal of Economics, 80(2): 190-207.

Welch, L. S. & Luostarinen, R. 1988. Internationalization: Evolution of a Concept. Journal of General Management, 34: 34-57.

White, R. E. & Poynter, T. E. 1984. Strategies for Foreign-Owned Subsidiaries in Canada. Business Quaterly, 49(2): 59-69.

Winter, S. G. 2000. The Satisficing Principle in Capability Learning. Strategic Management Journal, 21: 981-996.

Winter, S. G. & Szulanski, G. 2001. Replication as Strategy. Organization Science, 12(6): 730-743.

Winter, S. G. 2003. Understanding Dynamic Capabilities. Strategic Management Journal, 24: 991-995.

Yamin, M. 1999. An Evolutionary Analysis of Subsidiary Innovation and 'Reverse' Transfer in Multinational Companies. In F. Burton & F. Chapman & A. Cross (Eds.), Multinational Enterprise, Transaction Costs and Internal Organisation: 85-102: Macmillan.

Zander, I. 1999. Whereto the multinational? The evolution of technological capabilities in the multinational network. International Business Review, 8(3): 261-291.

Zollo, M. & Winter, S. G. 2002. Deliberate Learning and the Evolution of Dynamic Capabilities
Organization Science, 13(3): 339-351.

Figure 1.

A Revised Model for the Internationalization Process