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International Management and Strategy

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The field of international strategy concerns the study of international activities of firms and their interactions with foreign governments, competitors, and employees. It seeks to address not only the question of why do firms go overseas, but also how they do it. The globalization of markets, and rapid changes in economic and political systems, has forced a re-thinking of the meaning of location, of competitive advantage, and of the transmission of knowledge among countries. Because of the dominance of the multinational corporation in trade and in world production, international business focuses on the manager's challenge to coordinate and organize people – despite large variations in their national origins and culture – within the boundaries of a single firm that spans borders.

The international business literature has strong roots in international economics that has influenced the discussion of corporate strategy and organizational structure. By 1980, this tradition culminated in the eclectic theory of the multinational corporation that is widely accepted today. This theory in many regards is a more complete statement of why firms exist than the partial theories found in strategy. It is a statement, in current parlance, that emphasizes the capabilities of the firm as subject to transaction costs and location constraints. However, this theory has also undergone an important re-interpretation over the past two decades that has stressed more importantly the view of the multinational corporation as a repository of knowledge that has evolved in specific national settings.

The international business literature shares many similarities with the strategy theories that emphasize the industry as well as the resource-based theory of the firm. The former is not surprising, as both strategy and international business took inspiration from the work of Joe Bain (1956) in the 1950s and 1960s on the industrial economics that determine firm profitability. Moreover, much like industry analysis was shaped by Richard Caves and his student Michael Porter, Caves (1971) had an important influence on shaping the methodological approaches to understanding foreign direct investment. However, the capabilities, or knowledge, approach in international business has more distinctive roots than those found in strategy. Because of the importance of technology transfer in international markets, capabilities in the international literature started from asking why it is hard to transfer technology and knowledge across the borders of countries. From this perspective grew the view that an alternative definition of foreign direct investment was the transfer of organizational capabilities, and organizing principles, across borders and within the boundaries of the firm.

International management and strategy is a field that evolves along with the domain of its inquiry. Given the tremendous changes in the geo-political frontiers of East and West, current studies are far more sensitive to the institutional context of enterprises. It is understood much better now that the capabilities of firms are strongly influenced by national systems and institutions. At the same time that there is a growing appreciation of national context, there is also an awareness that the diminution in transport and communication costs, and the rise of the internet economy, poses fundamental changes in thinking about location and place. These empirical concerns feed back into theoretical understanding. These new phenomena do not so much contradict previous theory as enrich it.

Why Invest in Another Country?

It is helpful to start with the basics. Multinational corporations have long been the primary players in particular industries, for example, consumer products (from toothpaste to electronics), transportation, and chemicals. Choose an industry such as washing machine detergent, and look at the names of the firms that compete in Mexico, France, Japan, Poland, and Saudi Arabia – Proctor and Gamble, Hertel, Kao, Colgate, Unilever. This is a long-standing oligopoly, an industry of a few players who compete and produce in a recognized world market and whose business strategies are dictated as much by what their rivals are doing as by what their customers need. Yet, while all multinationals tend to be part of an oligopoly, not all oligopolistic firms become multinationals or even invest abroad. Why?

The conventional answer had been that foreign investment occurs because money flows to countries that promise higher rates of return. The empirical evidence shows that companies expand their operations elsewhere even when the returns are not that attractive. Moreover this pattern is widespread enough that it cannot be discounted as the result of the mistakes made by overeager managers playing with shareholders' money.

In fact, the rise of multinational corporations, meaning companies that own and exert centralized control over companies in several other countries, was the puzzle that the first generation of scholars in international business sought to solve. Prior to the publication of an MIT doctoral dissertation by Stephen Hymer in 1960, most economists and policy makers indeed thought that differences in the rates of return to capital among countries explained why money moves across borders. It had been hundreds of years since British and Dutch firms began contracting production to local businesses in Asia and elsewhere. American firms such as Singer and Westinghouse built large factories in England prior to 1900. Despite so much history and experience, the naive theory was that direct investment and portfolio investment were the same thing – both were investments seeking higher rates of return on invested capital.

Hymer simply asked why any firm would invest physical capital in a country (exposed as it is to commercial and political risk) when they could invest financial capital in small amounts across many firms and countries. To want to invest and own physical capital in a foreign country, a firm must believe that it has some additional advantage that outweighs the added costs of operating at a distance in an unknown business environment. Moreover, it must also believe that this advantage can only be exploited through the ownership and control over foreign operations. Otherwise a company could rely on exports to tap foreign markets without incurring the troubles of investing abroad. Hymer eliminated the country as an important factor in understanding direct investment. Now the focus would be on industries and firms themselves.

Since Hymer, there has been fairly universal agreement that the distinctive characteristic of direct investment is the intent to *control*. As a consequence, governments define foreign direct investment (FDI) as the controlling ownership of assets by foreign private individuals or firms. In the United States, only purchases of at least 10% of a firm's equity can be considered a direct investment; in other countries, this critical threshold percentage may be set at a different level. Thus, foreign direct investment is quite distinct from foreign *portfolio* investment, which usually implies the ownership of non-controlling equities in companies whose shares are traded in a foreign stock market.

Why Are Some Businesses more International than Others?

Recognizing that multinational corporations tend to populate industries in which only a few firms dominate sales (oligopolistic enterprises), Hymer basically set out a necessary condition for direct investment and multinational corporations – namely, these firms should own some hard-to-replicate proprietary advantage (brand label, technology, efficiency due to size) that enables them to dominate in home markets and, later, foreign markets. Ironically, this tendency to domination that Hymer first came to identify as the outcome of the multinational corporation's advantage is also the quality that is the target of popular political and economic attack – an attack that Hymer later came to join.

These basic ideas were more fully developed by MIT's Charles Kindleberger (1969) and Harvard's Richard Caves and their students. Caves, in particular, constructed a methodological template that came to dominate empirical studies on foreign direct investment (1971). This template consists of finding a measure of direct investment as the dependent variable and then regressing this measure on explanatory proxies for barriers to entry that characterize industries. In this sense, the early work on direct investment set the stage for the latter development in strategy on industry analysis. The oligopolistic theory of direct investment still failed, however, to capture the differences among firms and industries. Why is Boeing, which clearly enjoys important competitive advantages and competes in an oligopoly, still largely a domestic producer that operates internationally through exports? In contrast, why is it that so early in history companies manufacturing tires or sewing machines felt the need to establish similar operations in other countries?

In the decades after Hymer's contribution, there emerged an integrated view that John Dunning, a professor at the University of Reading in England, dubbed the eclectic theory of foreign direct investment (1977, 1980). Dunning employed the acronym of OLI to summarize the theory's three elements: *ownership, location, and internalization*. Ownership is simply the Hymer idea that a firm has to own some unique advantage in order to offset the added costs of competing overseas. Location seems obvious enough: a firm will locate its activities either to gain access to cheap labor, capital, materials and other inputs, or to sell close to its customers and avoid transportation and tariff costs. In the parlance of economics, the sourcing decision is an act of 'vertical' investment – the sales decision represents a 'horizontal' investment.

Entry Mode and Alliances

A tremendous amount of intellectual labor has been invested in the third element – *internalization*. Scholars, such as Peter Buckley and Mark Casson (1976), Alan Rugman (1981) and Jean Francois Hennart (1982), sought to explain why a firm would choose to exploit its advantage internationally through ownership – as opposed to through a joint venture, license, franchise, or a simple export sales agreement. This line of thought bears strong affinities to transaction cost economics of Oliver Williamson, with an important exception. Williamson's (1975) theory of transaction costs was motivated by the desire to explain why vertical integration, even if it entailed some monopoly power, could nevertheless be efficiency improving. The international business literature did not assume that internalization leads to a globally efficient outcome. In fact, Buckley and Casson were explicit in noting that firms sometimes internalize to correct for market imperfections that nevertheless might lead to unusual monopoly powers.

Internalization theory has been most useful to explain the *entry* mode decision, for example, joint ventures, licensing, acquisition. In practice, these different modes of entry into overseas markets are not mutually exclusive. A firm commonly decides to establish a joint venture (share the equity ownership in a foreign operation with another partner) and also allow others to 'rent' its technology by granting them a license to use it. This license sells the right to use the technology against various kinds of payments, usually fees and royalties.

An earlier literature, started by Stopford and Wells (1972), had analyzed the choice of entry modes as determined by the strategy of the firm. They related entry choices also to

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These activities deeply trouble governments and workers. A multinational corporation very often buys and sells across borders within its own network. Ford produces parts in many places in the world, and then ships these parts for final assembly. For some countries, it is estimated that this 'intra-firm' trade is responsible for 30–50% of their international trade in manufactured products.

Given such internal trade, it makes sense not just to produce in countries where the costs are lower, but also to realize profits where the tax rates are lower. This is where arbitrage becomes important. By changing the price at which a transaction between two units of the same company located in different countries is accounted for, companies like Ford can realize a profit either in the country where a car part is made and sold to another subsidiary (by charging a high price), or in the country where the final car is assembled and sold (by buying the part at a low price). In principle, the subsidiary does not care if the price is high or low; its parent company will know how well the subsidiary did without being misled by a transfer price whose only purpose is to lower the total *global* taxes paid by the corporation.

Since multinational corporations tend to be large and visible, they are closely monitored by tax authorities, and therefore are careful to remain within tax laws. But other kinds of arbitrage that defy effective government intervention are also possible and provide huge profit opportunities to multinational corporations. It is astounding, for example, the extent to which exchange rates move. A few years ago, the dollar was worth 70 yen, or 1.4 Deutschmarks. A short period after, the dollar was at more than 140 yen, and 1.9 DM, appreciations of about 100% and 35%. This shift means that if productivity and inflation are about the same in these countries, it is now twice as expensive to produce in the United States as in Japan, and 40% more in the United States than in Germany. To exporters from the United States, these are tough times. And the subsequent sharp drops in the exchange rates of Asian currencies only adds further competitive pressure. But American multinationals also own facilities in Asia and Europe (and, of course, in other countries too). Some of the production done in the United States can be moved to these locations. This shifting is arbitrage in response to exchange rates.

In this and other senses, the contemporary multinational corporation is best viewed as a global network of subsidiaries. Thanks to advances in communication, transportation, and managerial science, managers enjoy an unprecedented degree of flexibility in moving production around, transferring know-how and knowledge from one place to the next, and reacting to threats and opportunities. In short, the national diversity of its global operations has become a source of advantage. The simple hypothesis to explain this advantage is that firms learn better how to run multinational operations over time, and this learning makes subsequent investments easier. But learning how to operate a multinational corporation better does not constitute itself a competitive advantage. However, the idea of the firm as an arbitrageur suggests that multinationality creates the opportunity to exploit the flexibility in its international operations. In other words, multinationality provides a firm with embedded options to respond to profit opportunities.

The theory of the multinational advantage as derived from embedded options was proposed by Kogut (1983, 1985) and formalized in Kogut and Kulatilaka (1995). Caves (1989) also noted that investments in a country set up subsequent investments. In this sense, it is useful to distinguish between 'within-country' and 'across-country' options (Kogut and Kulatilaka, 1995). An across-country option represents the value of multinationality that is recognized by arbitraging borders, such as by shifting production, exploiting tax regimes, or transferring innovations from one country to the next. A within-country option is the value of establishing a platform (brand label recognition, for example) that sets up later investments.

The evidence for the importance of multinational options is suggested by many studies. Rangan's (1998) careful study of production shifting showed that multinationals' exporting patterns are sensitive to exchange rate fluctuations. Kogut and Chang (1996) showed that foreign entry in the United States responds to exchange rate movements conditional on previous entries, as predicted by a within-country option. The evidence, however, for the benefits of multinationality are mixed. Doukas and Travols (1988) found that returns to acquiring firms increased for acquisitions that added subsidiaries in countries where they had no previous presence. Morck and Yeung (1991) found

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from previous entrants. Firms with existing operations in the industry within the target country could draw on their own experiences and had little use for the experiences of previous entrants. The results from the empirical analyses were consistent with these arguments.

Multinational Corporations and their Management

The international strategy literature has often been interpreted as the search for better management practices. It has been unfortunate that there has been a failure to link aggressively the reasoning why certain organizational practices are better to the studies that analyze international strategy directly. This divorce is all the more odd because the seminal work of John Stopford and Lou Wells (1972) explicitly investigated the relationship between organizational choices and the investment in strategic assets, such as R&D. They found, for example, that technology-intensive firms tend to have product divisions and to enter countries by control over their subsidiaries. Over all, they found a passage from a functional organization, to a divisional structure, with some experimentation with matrix dual command.

The findings of Stopford and Wells matched roughly the typology of Howard Perlmutter (1965) regarding three types of firms – ethnocentric, polycentric, and geocentric. Whereas the ethnocentric firm tended to be functionally organized or organized by an international division, the polycentric firm was organized by areas and the geocentric firm by global product divisions. Unlike Stopford and Wells, however, Perlmutter emphasized the human resource dimension to understanding a firm's cognitive orientation toward world markets.

The influence of the Harvard studies on the relationship between form, such as divisionalization, and strategy, such as diversification, is apparent. (See, for example, Chandler, 1962; and the theses organized under Bruce Scott's direction, Channon [1973], and Dyas and Thanheiser [1976].) Yet, at the same time, the influence of Raymond Vernon (1971) is also clear in the dual focus of understanding the strategic basis for organizational choices, as well as in the collection of careful data for the verification of hypotheses. The important contribution of Vernon's group at Harvard was not only theoretical, but also to organize historical observations on 180 American multinationals, and eventually on multinationals from other countries (see Curhan et al., 1977, for the first effort). These data became the basis for many subsequent theses that became books or articles, such as Davidson (1980), Gomes-Casseres (1989), Hladik (1985) and Delacroix (1993). It is a pity that the success of this program of research did not inspire others.

The emphasis on an empirical and historical understanding of firm evolution that bridges strategy and structure is also reflected in a study by Lawrence Franko (1976) on European multinationals. Franko found that many European multinational corporations did not disband their holding structure for the organization of their activities. European multinationals were organized much more by a mother–daughter structure involving a reliance on the transfer of managers than on strict accounting rules. Franko's findings were confirmed for Swedish multinationals by Hedlund (1981) and more broadly for other European multinational corporations. Later work on Japanese corporations also found a pattern different than that observed for American companies (Kono, 1984; Suzuki, 1991).

These European findings lead to a belief that Europe was lagging the US. It was later recognized, however, that European structures provided a favorable entry point into structures that were responsive both locally and globally. Influenced by Lawrence and Lorsch's (1969) distinction between integration and differentiation, Doz et al. (1981) analyzed the challenge facing multinationals in addressing local markets (differentiation) while organizing (integration) globally. Bartlett and Ghoshal (1990) proposed a simple matrix by which products could be mapped into a two-dimensional space representing the pressure to conform to local markets (because of government intervention or national tastes and standards) and the pressure to integrate activities globally (because of scale economies or low transportation costs). These dimensions captured easily the Stopford and Wells distinction between area- and product-organized firms. Area organization tended to reflect relatively stronger pressures for national differentiation, whereas product divisions reflected the dominance of pressures to integrate globally. Thus, this matrix captured the dimensions of competitive environments and organizational structure as one snapshot.

This line of analysis identified that multinational corporations in some industries face unusual demands in the need to respond both to national conditions and to integrate globally. The telecommunication industry is often cited as an example, where government agencies are buyers but research outlays require access to a global market. The early studies on matrix organizations indicated that this form was especially unstable (Davidson, 1976) and underperformed more simple structures (Davidson and Haspeslagh, 1982).

Research in the 1980s culminated in a better understanding of organizational resolutions to this problem. The European weakness in adopting American structures suddenly became heralded as offering greater flexibility in responding to these dual national and global pressures. Prahalad and Doz (1987) discussed the importance of lead country structures, in which certain subsidiaries played a vital role in global strategies. Bartlett and Ghoshal (1989) proposed the transnational corporation as relying on an internal network that provides the flexibility to manage the dual pressures. Hedlund (1986) developed the concept of the 'heterarchy' in which a firm no longer had a single headquarters responsible for world activities, but rather subsidiaries might take on global responsibilities; firms were multi-head in their organization. European firms, such as Asea Brown Boveri, became prototypes for this new organization.

Hedlund developed this idea further with Dag Rolander in proposing that the multinational corporation is a meta-institution (Hedlund and Rolander, 1990). By this, they meant that the multinational created its own capabilities through actively engaging in exploratory search as well as exploiting current markets and assets. This emphasis on the proactive capabilities and innovative search of the multinational corporation distinguished international research from its counterparts in management, in which the focus at that time was on industry competition and organizational inertia. This tradition of seeing firms as proactive players is reflected in more recent work, such as Birkinshaw's (1997) study of subsidiaries seeing entrepreneurial and global roles.

Unlike, however, the earlier studies by Vernon and his colleagues, this line of work has lacked broad empirical studies that provide an adequate survey of changes across a large sample of firms. (One might add the competition around terminological contribution, and the payoff to managerial applications to these contributions, perhaps dampened the incentive to develop academic research programs around these ideas.) The approach of Bartlett and Ghoshal on the 'transnational' corporation led to a number of studies that attempted to validate the concept and to test for performance results (see Birkinshaw et al., 1995, for an excellent representative work). In one of the few in-depth empirical studies, Malnight (1996) analyzed the internal operations of multinational corporations over time at a detailed micro-level of analysis. His results suggest that there were important variations in the timing, sequence, and objective of organizations' adjustments across individual functions over time. International coordination evolves at different paces for different functions. He, thus, was able to explain the structural rhythms of international growth and cross-border management.

The more novel contribution was to emphasize the importance of the internal network to provide the flexible response to local and global pressures. The pathbreaking article by Ghoshal and Nohria (1990) introduced network methods into the international literature. This approach understood that, if the proposition that the multinational corporation is a network, then it should develop managerial systems that support the coordination across borders. With the exception of Hansen's work discussed below, there has been relatively little work in this area.

It is not surprising that the study of the organization of the multinational corporation has been deeply intertwined with strategy. Because global markets and coordination are complex, a good strategy is to develop good management. However, the emphasis on good management had often the unfortunate consequence of suggesting that global advantages are simply the result of better managed firms. In other words, there has often been a disconnect between the organizational line of research and the studies described above on the sources of multinational advantage or motives for entry (the Stopford and Wells study remains one of the few that does both). It is very well possible that clearer progress could have been made if the concern was less over typologies of firms and more directed to understanding the links between organizational structures and strategic advantage. It is still poorly understood how network structures support cross-border flexibility, how information technologies or incentives signal the timing of exercise of embedded options, or how firms organizationally manage currency fluctuations (see, however, Sharp, 1994, and Lessard and Zaheer, 1996).

Strategy and Location

It is not surprising that the literature in international strategy has been deeply concerned with location as a factor in understanding firm behavior. Strategy as rivalry *per se* has been surprisingly of secondary importance in international studies. There are a number of reasons for this. First, strategic positioning across borders present a complex array of multimarket interactions that defy an easy assessment. Second, templates of research were developed for the problem areas of understanding foreign entry and multinational coordination. These templates were not clearly developed for understanding rivalry. Lastly, strategic rivalry became at one time increasingly the province of economics and yet also required often detailed knowledge of a single industry in many national markets.

Vernon's (1976, 1979) product life cycle established a set of ideas that have often served as a theoretical entry into understanding international rivalry. His central idea is that firms start in their home markets carefully attentive to local conditions of supply and demand. Innovations consequently reflect the home market. High labor costs lead to labor saving processes; high incomes lead to a demand for product innovations. Though Vernon did not initially recognize the historical dimension to his argument, this theory very much described the emergence of American multinationals in the post-war period. Later work by Davidson (1980) showed that Europeans tended to innovate around the saving of relatively expensive materials and energy resources. In other words, innovation is influenced by home market conditions. The strategic element in Vernon's thinking was then to argue that as innovations diffuse in the home market, competition eventually pushes firms to export and then later to invest in foreign markets. Thus, home market competition drives the international expansion of firms. Or as Staffan Burenstam-Linder (1961) wrote in his theory of intra-industry trade, foreign trade is simply the extension of the local market to foreign locations. This thesis was re-iterated again in Porter's (1990) study of the country foundations to competition.

This theme of domestic rivalry was developed further by Vernon's student Frederick Knickerbocker (1973) in his historical study of the expansion of US multinationals. Knickerbocker collected data on the concentration ratios of major US industries, very much in the industrial economics tradition of Bain, Caves, and others. He showed that foreign investment decisions by large companies tended to bunch together – that is, tire firms invested at the same time in one country – particularly for industries with high levels of concentration. This bunching was more prominent for industries with high 8-firm measures of sales concentration. Knickerbocker argued that this finding implied that unstable oligopolies tended especially toward follow-the-leader behavior in their timing of foreign investments. Graham (1978) argued that, eventually, foreign competitors retaliate through cross-hauling investments in the home market of their competitors. Choi et al. (1986) used a gravity model to investigate the interpenetration by banks from 14 major financial centers into each other's home centers. The paper finds evidence consistent with exchange of threat behavior and mutual non-aggression pacts. Brander and Krugman (1983) later formalized this idea without knowledge of the previous tradition. This line of work left begging the question of who invests first. Mascarenhas (1992) showed that the first investment tended to be done by the firm who was at a competitive disadvantage in the home market. Thus, it was Ford who invested overseas; General Motors followed. Yu and Ito (1988) showed that this pattern tended to hold for Japan too, in which dominated firms such as Sony or Honda invested first overseas in their markets. More recently, Miotti and Sachwald (2001) found a similar pattern for Korea.

Given the common roots in the industrial economics tradition of Bain, the Caves tradition also reflects the assumption of the importance of home market rivalry. The Caves template identifies variables to describe rivalry in the home market as an explanation of 'pushing' investment into other countries. The early studies by Horst, including his remarkable analysis of the food industry (1974), explored the heterogeneity of firms to understand why some firms invested overseas and others did not. His work, informed by simple yet incisive formal models, emphasized the importance of size and scale as a factor in explaining firm heterogeneity. He also found that foreign investment often was a response to tariffs, a result that has been reconfirmed many times in subsequent work (Kogut and Chang, 1991). Solvell (1987) further developed the Caves–Horst tradition through extensive case studies of international industries.

The development of new economic models of trade by Helpman (1981), Krugman (1991), Ethier (1986) and others stylized the ideas of Burenstam-Linder and Vernon in more formal models. With a few exceptions, the models generally worked with simple consumer utility functions (hence are not in the spirit of Burenstam-Linder's contribution) but rather focused on the combination of scale and location economics. Some of the models suggested a role for a strategic commercial policy. It is fairly widely recognized that such policies are rarely warranted by actual industrial conditions.

An alternative line of modeling, though not specifically international, is Sutton's work on why industries differ in their degrees of concentration (1991). Though his work is largely unexplored in the international area, his models address directly why industry leaders may only be national or regional. In this regard, one of the most important contributions is the study by Baden-Fuller and Stopford (1991) that first demonstrates the persisting higher profits to national players in the white goods industry and second shows how marketing and flexible manufacturing strategies can offset global economies in production.

Location and Technology Pull

John Cantwell's (1989) important contribution was to re-orient dramatically the emphasis away from the push of home rivalry toward the 'pulling' effect of certain regions on direct investment. Through an analysis of patenting over a long period of time, Cantwell established that countries tend to focus in areas of 'comparative technological advantage'. Germany, for example, has maintained a comparative lead in chemical innovation over the course of the last century. Once having established this 'path dependent nature' of investment, Cantwell then showed that foreign investment tended to flow to the locations where a country has a technological advantage. In other words, he added a very important dimension to previous studies, namely, that direct investment flows not only to low cost locations, but also to innovative centers. Suddenly, the puzzle established by such studies as Swedenborg (1979) that foreign direct investment and high labor costs of the host nation are correlated became resolved. The Silicon Valley has high labor costs and high levels of foreign direct investment because firms come to *learn* and to *exploit* local knowledge.

The importance of foreign market conditions had been neglected in earlier work, with the important and major exception of the large literature in business history on foreign expansion of firms (see, for example, Wilkins, 1974, and Chandler, 1962). Very few studies followed through on Graham's observation on the importance of understanding retaliation in the foreign market. Some studies even used American industry data for foreign countries, even though Bain (1966) had shown early on that industry conditions were correlated but varied dramatically across countries. Yamawaki (1988) was the first to make the effort to collect data systematically in both the home and foreign market. In his study on Japanese exporting to the US, he observed that brand labels and high levels of concentration deterred Japanese exports.

Kogut and Chang (1991) utilized Yamawaki's approach to analyze Cantwell's contention of the pull effect of certain regions. They transformed measures of Japanese and US R&D to separate out Japanese direct investment pulled to the US for technology sourcing from the pushing of this investment by rivalry. They found that Japanese investments in joint ventures appeared to be sensitive to the pull of American comparative technological advantage in certain industries. This approach has subsequently been utilized by Miotti and Sachwald (2001) in the context of European and Korean investments.

The pull of regions on foreign investment is of critical importance to understanding the evolution of capabilities on a world basis. As tariffs fall, international competition becomes increasingly influenced by non-tangibles, including the institutional and economic advantages associated with particular countries. Krugman (1989) sought to explain this effect on the basis of scale and dynamic cost advantages, while discounting technological advantages. Porter (1990) suggested a broad framework that stressed home market rivalry, much in the Vernon and Burenstam-Linder tradition, that drove the acquisition of local competence.

Whereas Krugman was indifferent, if not hostile to technological factors (that do not leave a 'paper trace' and hence could not be observed, he claimed), Porter's approach did not seek a micro-analytic understanding of location advantages. More recent work has sought to investigate the paper trace of local advantages at a micro level. Some of this work consists of intense studies of local industry networks, such as the Italian industrial districts (Giannetti et al., 1991), that point to the importance of regional networks. More recent work has built upon Jaffe et al. (1993) on patenting to show that technology accumulates in particular locations. Almeida and Kogut (1999) showed that this aggregate pattern is, at least for semiconductors, a reflection of the extraordinary performance of certain regions, such as the Silicon Valley. Almeida (1996) also showed that foreign semiconductor firms located in the US draw upon this local knowledge.

EVOLUTIONARY STUDIES

The internalization literature was open to the criticism that its proxies for asset specificity could also be used as measures of firm capabilities. Capability-based theories challenged the internalization theory that entry choice, and hence direct investment, is determined by transactional hazards due to market inefficiencies. A capability refers to the organizational and technological competence of a firm in achieving higher rates of productivity or innovation. Such a capability, in turn, reflects underlying principles of organization as well as location advantages.

In many respects, this view point places ownership and location advantages as jointly sufficient explanations for the multinational corporation. Casson (1985) had argued earlier that multinational organizations can exist in the absence of ownership and internalization advantages when there was a gain to arbitraging across borders, such as through tax avoidance. The capability approach logically implies that internalization is not a necessary factor for the explanation for the multinational corporation, though it can be causally important for some kinds of transactions.

The international emphasis on capabilities, and knowledge, arose out of the work on technology transfer and the many historical and empirical studies on the operations of multinational corporations in foreign markets. It was Caves (1971) who first clearly argued that multinational corporations have an advantage in transferring assets across borders because they were quasi-public goods inside the corporation. Their marginal costs of transfer were not zero, as expected of a public good, but lower than their sale or transfer through the market. Similarly, many studies in technology transfer found that foreign countries and firms did not have the absorptive capacity, to use the term common in this literature, to adopt new technologies. The classic studies by Johnson on the transfer of aircraft manufacturing to Japan, or by Linsu Kim (1997) on the absorption of technology by Korea, pointed to organizational and instititutional factors that influenced the cost of transfer.

Caves did not, however, explain his reasoning for the claim that marginal costs should be lower inside the multinational corporation. Teece (1977) had shown that technology transfer across borders entailed considerable costs that varied across projects. This study raised the important question of what constitutes a 'public good'. Kogut and Zander (1993) argued and tested the argument that these costs varied because technology transfer was essentially the transfer of knowledge that was often tacit and poorly understood. They argued that, because replication is the *sine qua non* of an evolutionary theory of the firm, the critical test is whether the governance and entry mode choice is influenced by the difficulty of replication or conventional measures of market hazards. Based on the work of Rogers (1983) and Winter (1987), they built scales to proxy for tacitness and showed that the choice between licensing and ownership was explained by these scales. They concluded that the difficulty of transferring tacit knowledge outside the boundaries of the firm determined the entry mode choice. To them, direct investment is the transfer of hard-to-codify organizational knowledge that a firm acquires as it evolves from its home market overseas. Consequently, direct investment has to be seen, as suggested by the earlier work of Burenstam-Linder and Vernon, as the outcome of an evolutionary process by which the growth of a firm in its home market spills across national boundaries. In this sense, the evolutionary and knowledge theories of the firm provided complementary perspectives on the internationalization of the firm.

It is clear that the terms of 'ownership', 'internalization', and even 'location' do not capture this global role of the multinational corporation. Recent efforts to look at the multinational corporation start with a redefinition of what is meant by ownership. In this new work, a multinational corporation does not simply own an advantage. Rather, a firm is viewed as a repository of valuable knowledge that can be exploited either through new products or through the dissemination of existing products to new locations. This knowledge consists not just of what employees know, but also of the way in which people, machines, and technology are organized and directed. This approach leads to a redefinition of foreign direct investment to encompass the spread of a firm's organizational knowledge across national borders. Direct investment very often consists of technology transfer, but this technology should be broadly understood to include organizational and management skills. Toyota's investments in America surely consisted of real estate and capital equipment. But its knowledge of how to organize workers and suppliers in a new system for fabricating cars is a crucial element that cannot be overlooked.

This approach has the advantage of integrating the many important historical studies on the development of different national and regional patterns in the evolution of multinational corporations (see, for example, the above discussion on differences in patterns in organizational structures among European and American firms). Given the emphasis on understanding the long-term evolution of firm capabilities in specific national settings, historical studies of the rise of banking (Jones, 1993), or multinational corporations (Wilkins, 1974, 1988), or national patterns in competition (Kogut, 1987; Chandler, 1990) provide critical insight into the interaction of location and ownership factors.

Another implication of the evolutionary approach is to pose questions regarding the demography of foreign firms and the factors that influence their growth and survival. Statistically, Delacroix (1993) inaugurated this approach by submitting the Harvard multinational data collected by Vernon and his students to hazard modeling. He found broad evidence for demographic effects on survival of entries. Li (1995) introduced this approach more directly into the international literature through his study of the survival of foreign entrants into the US. About the same time, Mitchell et al. (1993) made a major return to the concerns of Vernon and Burenstam-Linder by asking how international expansion influences the survival of firms in their home market. They explored how changing international presence affected firm survival and market share in industries where firms with international operations did not have performance advantages. They found that international expansion was necessary for firm survival in industries where international operations became associated with performance advantages over time. Moreover, only firms with existing international operations or large market share were able to expand successfully.

Zaheer (1995) returned to a central claim of Hymer that foreign firms start at a disadvantage in a host country. She insightfully renamed this hypothesis the liability of foreignness borrowing from ideas in organizational ecology. The popular claim is that firms, as they gather experience, are less susceptible to such liabilities. She is able to test this idea that opens a window on a much larger issue.

Because of these efforts to understand the dynamics of foreign expansion, the international management literature is systematically incorporating more recent theories of foreign direct investment. The focus is no longer on the one-time entry into a country, or simple analyses of multinational corporations by a few dimensions. We are now forced to understand the evolution of multinational corporations as systems, with subsidiaries competing *without* a liability of foreignness in national markets.

An important consideration is then to rephrase the earlier literature on technology transfer as a hierarchical transfer of knowledge from one country to another. In this new phrasing, technology, or more broadly, knowledge transfer, is a permanent feature of the operation of a multinational corporation. Kogut (1987), Gupta and Govindarajan (1991), and Bartlett and Ghoshal (1990) stressed the importance, and difficulty, of the replication of knowledge for the understanding of the advantage and limitations of multinational corporations. Szulanski (1996) epitomizes the new approach to the study of technology transfer by analyzing the impediments of the transfer of best practices from the perspective of both the sender and receiver. Yet, while these studies break new ground, they are, from another angle, incremental studies to the long line of research on the problems of foreign countries to absorb technologies.

Of the many subsequent studies on knowledge transfer, the article by Hansen (1999) is unique in combining ideas on tacitness with a network analysis of the structure of community in a multinational corporation. He thus merged the efforts of Ghoshal and Nohria (1990) on networks with the empirical measurement of tacitness of Kogut and Zander (1993). His finding that tacit knowledge and structure interact to shape the communication in the firm is the first systematic study of knowledge management that is sensitive to organizational structure. In other words, he moved the level of analysis from the microanalysis of the determinants of transfer to the larger organizational context.

Current Research Studies and Future Research Directions

The field of international management presents a research record in which many debates are now settled. The evolution of the multinational corporation, and the capabilities of different structures, is well studied and

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rate policies in industrial
mies. For example, Spicer
vestern policies in eastern
stressed a single solution
g measures appropriate to
ntexts of these countries.
Gittelman (2000) investi-
nstitutional contexts influ-
examining biotechnology
and the United States.
irms in both countries

performed similarly, with the difference being that the United States simply had proportionally more start-up companies.

The proposition of Williamson (1991) is to understand governance choice on the basis of the effect of institutions, or their absence, on transaction costs. He labels this effect as a 'shift' parameter, suggesting that institutions shift the costs of transacting up or down. Others have offered more nuanced, and yet also more complicated, proposals regarding national systems. Thus Aoki (1990) and Soskice (1990) propose that national systems are tightly coupled and complementary institutions. These proposals of national systems confront the problem of diffusion that suggests a greater resiliency than can be explained by tight complements. Yet, at the same time, their approach rightfully frames the contention of Khanna and Palepu, as discussed above, that a variety of forms can be viable depending on national circumstances. That institutions can influence the growth of their economies and national differences can remain persistent despite global financial markets is shown at length by Garrett (1998).

The increasing concern with institutional effects is apparent also in the revived interest in political risk. Earlier work established that political risk has a domino effect, with the decision of one country to nationalize spreading to other countries (Kobrin, 1985). However, the earlier work on the effect of political factors on direct investment largely stalled due to a lack of empirical measures of risk, if not of adequate theorizing concerning the causes of instability. Recent work shows a shift from simple models of political risk to more sophisticated attempts to understand why certain countries are more risky. Henisz (2000) offers, for example, an analysis of direct investment flows that are influenced by a unique measure of the political stability inside countries.

Sometimes, powerful insights are achieved by simple recognitions. Shaver's (1998) study in many ways offers the conventional test of what determines entry and entry success. However, Shaver observed that entry success was simply not based on governance choice and context, but was also contingent on the wisdom of the initial decision to enter the market. His conclusion was that it was necessary to control for the endogenous strategy choice (the first decision to enter) when looking at performance.

However, once he corrected for endogenous strategy choice, there was no performance difference between new plants and acquisitions. The corrected estimation led to substantially different conclusions regarding strategy performance and showed the importance of considering endogenous strategy choice when empirically estimating performance outcomes and guiding managerial action. Though methodological, this contribution is theoretically very important. It says to researchers in both strategy and international management that performance is an outcome of capability, be it the decision to first invest in a foreign market or to enter a new product market, or to build a plant. Shaver put forth, in other words, an econometrically correct way to sort out capability and governance effects.

Perhaps the most exciting area, though, is the research done on the impact of new technologies on the work and strategies of multinational corporations. Sri Zaheer has initiated this work through her studies on international currency trading and the possibility to compete on global time (forthcoming). With such exceptions as Peter Hagström's (1992) fine study of the 'wired' multinational corporation, there is little research on how multinationals are increasingly deploying information technologies. This is an exciting area of work that challenges the meaning of place and poses far reaching questions about the value of local and virtual communities. The field of international management has shown that theory evolves along with the phenomena under study. The rise of the virtual office will, no doubt, create a broad tension for better theorizing on the role of international institutions and norms, and their interaction with the broad strategies of multinational corporations to exploit these technologies to their advantage.

Thus, current work in international management and strategy poses a far more sophisticated insight into the underlying dimensions of international competition than possible 20 years ago. Location is no longer simply cheap factors, but institutional context. Transportation costs is no longer the cost of expedition but the difficulty in coordinating and innovating at a distance. We understand more about the microbasis of what location means, while we are also more knowledgeable of institutional factors in enterprise, capabilities and behavior.

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