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3 Where Are the Multinationals Headed?

Raymond Vernon

Four decades ago, the multinational enterprise was widely regarded as a peculiarly American form of business organization, a manifestation of the existence of a *pax Americana*. Today, every industrialized country provides a base for a considerable number of multinationals, which collectively are becoming the dominant form of organization responsible for the international exchange of goods and services. Indeed, by the end of the 1980s, even the larger firms in some of the rapidly industrializing countries of Asia and Latin America had joined the trend (UN Commission on Transnational Corporations 1990; Lall 1991).

For scholars who want to understand the factors affecting international trade in goods and services, these changes are of consummate importance. In the past, whenever the international behavior of multinationals appeared at odds with a world regulated by comparative advantage and capital market theory, the deviation could be treated as idiosyncratic, the basis for a footnote in passing. But today, with multinationals dominating the international traffic in goods and services, the question of what determines their behavior takes on considerable significance.

I cannot pretend to provide a definitive answer to this central question in the pages that follow; that is a labor which will take many minds over an extended period of time. But I have two goals in mind which contribute to that central task. The first is to persuade the reader that explanations of the behavior of multinational enterprise which draw on the national origins of the enterprise as a major explanatory variable are rapidly losing their value, to be replaced by an increased emphasis on the characteristics of the product markets in

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which the enterprises participate. The second is to plant a few ideas regarding the motivations and responses of the multinational enterprise that I believe must figure in any rounded explanation of the behavior of these enterprises in the various product markets they face.

3.1 U.S. Firms Ascendant

The sudden growth of U.S.-based multinational networks after World War II was in fact some time in the making. Many decades earlier, the first signs that large enterprises might find themselves pushed to develop a multinational structure were already beginning to appear. Setting the stage for the development of these multinational networks were the dramatic improvements in the technologies of transportation and communication, coupled with the vastly increased opportunities for scale economies in industrial production. Operating with high fixed costs and low variable costs, a new crop of industrial giants felt especially vulnerable to the risks of price competition. And by the beginning of the twentieth century, these risks were beginning to be realized; the country's industrial leaders, including firms in machinery, metalworking, and chemicals, were coming into bruising contact not only with rivals from the United States but also with some from Europe.

Facing what they perceived to be dangerous and destructive competition, the leaders in many U.S. industries went on the defensive. By the beginning of the century, many of the new industries of the country had organized themselves in restrictive market-sharing arrangements and were reaching out to their European competitors to join agreements that were global in scope.

From the first, however, it was apparent that these restrictive arrangements were fragile responses to the threat of competition, especially for firms based in the United States (Hexner 1945; Stocking and Watkins 1946; 1948). The diversity and scope of the U.S. economy, coupled with a hostile legal environment, made it difficult for U.S. leaders to stifle the appearance of new firms inside the country; those same factors put a brake on the leaders' engaging in overt collusion with European rivals. Nevertheless, global market-sharing agreements persisted at times, especially when patents and trademarks provided a fig leaf for the participants. By and large, though, the role of U.S. firms in these restrictive arrangements was cautious and restrained.

While participating in the international division of markets in a number of products before World War II, many large firms also established the first of their subsidiaries in foreign locations during that period. Commonly, however, large firms used these subsidiaries to implement their restrictive agreements with other firms, as in the case of the Du Pont-ICI subsidiaries located in Latin America. Often, too, firms established such subsidiaries as cautionary moves against the possibility that competitors might be in a position to cut them off from raw materials in times of shortage or from markets in times of glut. U.S. firms that were engaged in extracting and processing raw materials, for in-

stance, typically developed vertically integrated structures that covered the chain from wellhead or mine shaft to the final distribution of processed products; and because other leading firms shared the same fear, partnerships among rivals commonly appeared at various points in these vertical chains, in the form of jointly owned oil fields, mines, and processing facilities. Meanwhile, other U.S. firms, such as General Motors, Ford, and General Electric, established subsidiaries in Europe, to serve as bridgeheads in the event of warfare among industry leaders. Such bridgeheads, consistent with their function, were usually allowed to operate with considerable independence and autonomy (Chandler 1990, 38–45, 205–33; Wilkins and Hill 1964, 360–79; Wilkins 1970, 93–96).

For a decade or two after World War II, the defensive responses of U.S.-based firms to their perceived risks in world markets were a little less in evidence. The reasons were too obvious to require much comment. The proverbial “animal spirits” of U.S. business were already at an elevated level as a result of the technological lead and financial advantages that U.S. firms enjoyed over their European rivals. Dramatic advances in communication and transportation were enlarging the stage on which those spirits could be released. The real cost of those services was rapidly declining; and with the introduction of containerized freight, airborne deliveries, and the telex, the range of those services was widening. These improvements expanded the business horizons of U.S.-based firms, allowing them to incorporate more distant locations in the marketing of their products and the sourcing of their needed inputs.

The first reaction of most U.S. firms to their expanding product markets was to meet demands by increasing exports from the home base. But, as numerous case studies attest, the establishment of local producing subsidiaries soon followed. Almost all of the first wave of manufacturing subsidiaries established in foreign countries after World War II were dedicated principally to serving the local markets in which they were placed.¹ As a consequence, about four-fifths of the sales of such subsidiaries during the 1960s were directed to local markets (Lipsey and Kravis 1982, 3).

The motives of the firms in serving local markets through producing subsidiaries rather than through exports were usually complex. In some cases, for instance, the establishment of a producing subsidiary was simply perceived as a more efficient means for serving the foreign market, a consequence of the fact that sales in the market had achieved a level sufficient to exploit the existing economies of scale in production. But other factors contributed to the scope and timing of these decisions as well. There were indications, for instance, that the decisions taken to establish subsidiaries abroad, whether for the marketing of products or for the production of required materials and com-

1. Even as late as 1975, about two-thirds of the manufacturing subsidiaries of U.S.-based firms were engaged almost exclusively in serving their local markets (Curhan, Davidson, and Suri 1977, 393).

ponents, were often reactive measures, stimulated by and intended as a hedge against some perceived threat. Once a U.S. firm lost its unique technological or marketing lead, as seemed inevitable in most products over the course of time, governments might be tempted to restrict imports in order to encourage domestic production. In that case, the foreign subsidiary served to protect existing market access.

But even without the threat of action by governments, U.S.-based firms frequently faced threats posed by rivals in the product markets in which they operated. And some rich anecdotal evidence strongly suggests that foreign subsidiaries were often created as a hedge against such threats.

That hypothesis may help to explain why, in the first few decades after World War II, U.S.-based firms were engaged in follow-the-leader behavior in the establishment of new producing subsidiaries abroad. Once a U.S.-based firm in an oligopolistically structured industry set up a producing subsidiary in a given country, the propensity of other U.S.-based firms in the oligopoly to establish a subsidiary in the same country was visibly heightened (Knickerbocker (1973, 22–27; Yu and Ito 1988, 449–60). Such a pattern, of course, does not conclusively demonstrate that the follower is responding defensively to the behavior of the leader. Alternative hypotheses also need to be entertained, such as the possibility that both follower and leader were responding to a common outside stimulus or that the follower was responding in the belief that the leader had done a rational analysis equally applicable to both their situations.

However, stimulated by my reading of various individual cases, I am strongly inclined to attribute such follow-the-leader behavior in many cases to the follower's desire to hedge a threat posed by the leader. Although the follower may be unsure whether the leader has properly analyzed the costs and benefits of its move in establishing a foreign subsidiary, the follower is understandably fearful of allowing a rival to enjoy the benefits of undisturbed exploitation of its foreign opportunities. As long as the number of rival producers in the market is small, therefore, following the leader often seems to entail smaller downside risks than failing to follow. Failing to follow a leader that was right in making its move would give that leader an unrivaled opportunity to increase its competitive strength, whether by increasing its marketing opportunities or by reducing its production costs; if the leader was wrong, the follower's risks from committing the same error would be limited by the leader's having shared in it.

If the hedging of a threat was sometimes necessary for the growth of U.S.-based multinational enterprises, however, it was certainly not sufficient for such growth. Still to be explained was why in so many cases U.S.-based firms chose to establish producing subsidiaries rather than to exploit their strengths through licensing or other contractual arrangements with a local firm. In some cases, the high transaction costs associated with searching out and dealing with local firms may provide an adequate explanation. But here too, I am inclined

to put heavy weight on explanations that see the establishment of a subsidiary in part as a hedge against various risks. Whenever licensing agreements are negotiated, both parties face the uncertainties generated by asymmetrical information; the licensee is uncertain of the value of the information it is to receive, while the licensor is uncertain of the use to which the licensee proposes to put the information. Moreover, enforcing the provisions of any licensing agreement carries both parties into areas of major uncertainty, based partly on the difficulties of monitoring the agreement and partly on the difficulties of enforcing its provisions.

In any event, the late 1960s registered a high watermark in the spread of the multinational networks of U.S.-based industrial enterprises, as the number of foreign affiliates added annually to such networks reached an all-time high (UN Commission on Transnational Corporations 1978, 223). For at least a decade thereafter, the number of foreign affiliates added annually was much reduced. Without firm-by-firm data of the kind compiled by the Harvard Multinational Enterprise Project for the period up to 1975, it is hard to know more precisely what was going on at the firm level during the succeeding years. But the rate of growth of these networks appeared to pick up again in the late 1980s.

The high rate of growth in recent years, however, appears to be based on somewhat different factors from those that prevailed in earlier decades. Anecdotal evidence indicates that U.S.-based firms continue to use their multinational networks to transfer newly generated products and processes from the United States to other countries. But with the U.S. lead greatly diminished in the generation of new products and processes, it is doubtful that the transmission of new products and processes from U.S. parents to foreign subsidiaries plays as important a role in the business of U.S.-based enterprises as it did some decades ago. Indeed, by the 1990s, the ostensible purpose of some U.S.-based firms in establishing foreign subsidiaries in Japan was not to diffuse existing skills but to acquire new skills for their multinational network in the hope that their Japanese experience would strengthen their competitive capabilities in markets all over the world.² With Japanese and European firms acquiring subsidiaries in the United States at the same time for the same purpose, it was apparent that the distinctive characteristics of U.S.-based multinational networks were beginning to fade.

Another factor that began to change the behavior of U.S.-based enterprises was the increasing familiarity of their managers with the problems of operating in foreign environments. At least until the 1970s, in their decisions when and where to establish subsidiaries in foreign countries, U.S.-based firms had been

2. See "American Business Starts a Counterattack in Japan," *New York Times*, Feb. 24 (1992, p. 1). A survey conducted by Japan's Ministry for International Trade and Industry in January 1990 reports that 38 percent of the foreign direct investors in Japan responding to the survey listed "engineering skill is high" as a reason for their investment, while 18 percent listed "collection of technical information and market information." Reproduced in *Nippon 1991* (1992, 109).

giving a heavy preference to the familiar. Careful analyses of the geographical sequence by which these firms established manufacturing facilities abroad demonstrated a historically heavy preference for setting up the first foreign production unit in Canada, with the United Kingdom taking second place and Mexico third.³ By the 1960s, U.S.-based firms were bypassing Canada for Europe and Latin America as the first point of foreign manufacture; by the 1970s, although Europe and Latin America continued to provide the principal first-production sites, Asian sites were beginning to turn up with increasing frequency⁴ (Vernon and Davidson 1979, 52, 134–35).

The role played by experience during these early postwar decades could be seen even more directly by trends in the reaction times of U.S.-based firms in setting up foreign production facilities. Where new products were involved, U.S.-based firms characteristically set up their first production sites within the United States. Eventually, however, they set up production sites abroad as well; as these firms gained experience with producing in a given country, the time interval involved in setting up production facilities in the country for new products showed a marked decline. Moreover, as the number of foreign production sites in any product increased, the time interval in setting up another facility in a foreign country also declined. By the 1970s, therefore, U.S.-based firms were beginning to show less hesitation in setting up production subsidiaries abroad for their new products and were scanning a rapidly widening circle of countries for their production sites.

The pattern toward which U.S.-owned multinational networks seem to be moving, therefore, is one in which the parent firm in the United States is prepared to survey different geographic locations on their respective merits, with a much reduced presumption in favor of a U.S. location. Instead, when assigning tasks to the various units of their multinational networks, U.S. business managers are increasingly likely to discount the distinction between home-based and foreign facilities, except as governmental restraints compel them to recognize that factor. This does not mean that the role played by geography is altogether obliterated. U.S.-based firms, for instance, continue to rely on Latin America more than on Asia to provide their low-cost labor needs, while the reverse is true for Japanese firms.⁵ But the sense of uncertainty associated with producing outside the home economy has substantially declined, and the pref-

3. The generalizations are based on an unpublished study of the manufacturing subsidiaries of 180 U.S.-based multinational enterprises as of 1964. The 180 firms, whose multinational networks are covered in the computerized files of the Harvard Multinational Enterprise Project, were all large U.S.-based firms with substantial foreign manufacturing facilities (Vaupel 1971).

4. The study is based on the same multinational enterprises as those in Vaupel (1971). Conclusions in the two paragraphs following are based on data in the same study.

5. United Nations data affirm the preferences of U.S.-based and Japan-based firms for direct investment in nearby locations during the years 1971 to 1986, as well as the tendency of these geographical preferences to decline over time (UN Centre on Transnational Corporations 1988, 518–20. table A.5).

erence for nearby production locations such as those in Latin America over more remote locations such as those in Asia has declined as well.

For enterprises operating in oligopolistic markets, however, a major source of uncertainty remains. Even when such enterprises are fully familiar with the foreign environments in which they are obliged to operate, they are still exposed to the predatory and preemptive tactics of their rivals in the oligopoly. The reasoning that led the international oil and minerals firms to develop vertically integrated structures before World War II, therefore, can be glimpsed in more recent decades in the behavior of U.S.-based firms operating in oligopolistic markets. For instance, U.S.-based oil companies, having been separated from some of their captive crude oil supplies by the nationalizations in the 1970s, remain unwilling to rely upon the open market for the bulk of such supplies despite the existence of a large public market for the product. Facing the latent threat posed by the vertical integration of the Saudi and Venezuelan state-owned oil companies, U.S.-based firms are repairing and strengthening their upstream links.⁶

Such cautionary behavior is not confined to the raw materials industries. Similar behavior is apparent among U.S. firms in the electronics industry: under pressure to reduce the costs of labor-intensive components, firms such as IBM and Texas Instruments have chosen to manufacture a considerable part of their needs within their own multinational networks rather than to rely upon independent suppliers. A major factor in that decision, according to many observers, has been the fear that predatory rivals might withhold the most advanced versions of those components from competitors while incorporating them in their own products. (U.S. Congress 1991, 97–100; Schwartz 1992, esp. 149; Teece 1987, 65–95.)

For some U.S.-based enterprises, it was only a small step from using their foreign subsidiaries as feeders for manufacturing facilities in the United States to using those facilities to fill requirements arising anywhere in the network; by the 1980s, it had become apparent that this process was well advanced (Lipsey 1988). Of course, in practically every multinational network, the parent unit in the United States typically continued to occupy a unique position: characteristically, the parent's U.S. sales still accounted for the bulk of network sales, its U.S. facilities were responsible for the most important research and development work in the network, and its U.S. offices still coordinated some of the network's functions that might benefit from a centralized approach, such as the finance function. But the direction was clear. Although the centralized functions of the network would presumably remain in the United States indefinitely, the historical and institutional forces that resisted the geographical

6. For an account of the downstream movements of the various state-owned oil companies, and of new upstream ties forged by Gulf Oil, Sun Oil, Citgo, and Texaco, see *Business Week* 1988.

diffusion of other functions to locations outside the United States were growing weaker.

A more novel trend, however, has been the growing propensity of U.S.-based firms to enter into alliances of one kind or another with multinational networks based in other countries—typically, in other highly industrialized countries. Such alliances, for instance, sometimes take the form of a joint subsidiary established to perform a specified function or of an exchange of licenses in a specified field. At times, the arrangements link suppliers to their customers; at other times, the parties involved in such limited linkages appear to be direct rivals. A considerable literature is already developing regarding the operation of these alliances (Contractor and Lorange 1988; Gomes-Casseres 1989; Lewis 1990; Lynch 1989; Parkhe 1991). Although the definitions are muddy and the data far from complete, such alliances seem to be concentrated in industries in which barriers to entry are high and technological change is rapid and costly.

Part of the motivation for these alliances is apparent: an effort of each of the participating firms to reduce the risks associated with lumpy commitments to new research and development projects and to ensure that they are abreast of their competitors in their research resources. The alliances, therefore, are not much different in function from the jointly owned mines and oil fields that rival refiners and marketers shared in decades gone by, such as ARAMCO in Saudi Arabia, Southern Peru Copper in Peru, and HALCO in Guinea. Moreover, with common interests linking rivals to their suppliers and to one another in these new alliances, the likelihood that any one of the rivals might steal a technological lead on the others is obviously reduced. As with the partners in the raw material subsidiaries, therefore, there may well be a sense among some of the partners in the new alliances that their ties with rivals and suppliers could be used to reduce the harshness of future competition among them.

In one respect, however, many of the new alliances differ from those in the raw material industries. In industries with rapidly changing technologies and swiftly changing markets, the interests of the participants in any given alliance are likely to be relatively unstable; such firms will be constantly withdrawing and regrouping in order to satisfy their rapidly shifting strategic needs. Nevertheless, the possibility remains very real that these arrangements will serve at times to take the edge off the competition in some product markets.

For all the evidence that defensive motivations have been dominating the behavior of U.S.-based enterprises, there are various signs that the animal spirits of some U.S. managers can still be roused. One sign of such spirits is the global spread of U.S.-based firms in various service industries, including fast foods, advertising services, and management consulting. Some of these service-oriented firms developed multinational networks simply by following their multinational clients abroad in an effort to maintain an existing relationship; others, relying on a technological or managerial capability that their foreign rivals had not yet matched, bravely set out to master new environments

without any apparent defensive motivation. Such initiatives, it appears, depend on the extent to which enterprises feel protected by some unique firm capability, such as a technological or managerial lead, or a patent or trademark.⁷ But whether such situations are common or not in the future, defensive responses can be counted on to compel many large firms in the United States to maintain and extend their multinational networks.

3.2 Emergence of the Europeans

European industry often enjoys a reputation among Americans for sophistication and urbanity that equips them especially for the role of global entrepreneurs. But their performance as a group after World War II presents a very mixed picture.

In the decades just prior to World War II, the principal strategy of the leading European firms was to protect their home markets from competition, not to seek out new foreign markets. When they established subsidiaries in foreign countries, they tended to concentrate on countries to which their home governments had close political ties (Franko 1976, 81). And their typical reaction to the threat of international competition in those decades was to develop market-sharing arrangements along national lines.

In the immediate postwar period, European firms continued to cling to their home markets. Absorbed in the rebuilding of their home economies and saddled with the need to catch up technologically, they had little slack to devote to the establishment of new foreign facilities. True, enterprises headquartered in some of the smaller countries that possessed a technological edge, such as the pharmaceutical companies of Switzerland and the Netherlands and the machinery firms of Sweden, often felt compelled to set up subsidiaries outside their home countries in order to exploit their technological lead and to finance their ongoing innovational efforts; and the subsidiaries they set up in foreign countries typically operated with greater autonomy in foreign locations than did subsidiaries of some of their U.S. rivals. Moreover, manufacturing firms headquartered in the larger European countries were not altogether averse to establishing producing subsidiaries in areas over which their home governments still exercised strong political or economic influence. Between 1945 and 1965, for instance, British parents established about four hundred manufacturing subsidiaries in Australia, Canada, and New Zealand. (Harvard Multinational Enterprise Project data banks).

The disposition of European firms to identify closely with their home governments has some of its roots in history. Until recently, many were family-owned enterprises, with a long history of dominance in some given city or

7. The reader will recognize this theme as a major element in John H. Dunning's "eclectic theory." For his view of U.S. foreign direct investment trends in relation to the theory, see Dunning (1985, 66-70).

region. Some were so-called national champions, accustomed to especially favorable treatment by their governments in the provision of capital and the purchase of output (Michalet 1974, 105–25). The idea of maintaining close ties to their home government when operating abroad therefore represented an easy extension of their relationship at home.

After 1960, the emergence of a common market on the European continent began to affect the strategies of European firms. At first, however, these developments did little to encourage European firms to set up subsidiaries in other countries within the area. For one thing, the promise of a duty-free market among members of the European Community actually served to eliminate one of the motivations for creating such subsidiaries, namely the threat that frontiers might be closed to foreign goods. And with land distances relatively small and national markets relatively limited in size, the economic reasons for establishing such subsidiaries often did not appear compelling.

On the other hand, by the 1960s, U.S.-based companies were beginning to set up their subsidiaries in Europe in large numbers. Data from the Harvard Multinational Enterprise Project show that whereas, in the fifteen years between 1945 and 1959, U.S. parents had established some three hundred manufacturing subsidiaries in Europe, between 1960 and 1975 these parents established nearly two thousand manufacturing subsidiaries in Europe. Typically, the first landing of the U.S. invaders was in the United Kingdom, despite that country's delay in entering the European Community; but the U.S.-based firms were not long in establishing subsidiaries on the continent as well.

One might have expected the appearance of these subsidiaries to stimulate moves to renew the restrictive market-sharing agreements of the prewar period, but the environment following the end of World War II was much less conducive to such agreements. For one thing, rapidly expanding markets and swiftly changing technologies generated an environment that made agreements difficult. In addition, although enforcement of U.S. antitrust laws had grown lax in the postwar period, the European Community itself had adopted and was occasionally enforcing some exemplary measures aimed at preventing enterprises from dividing up the European market (Goyder 1988, esp. 71–133).

Eventually, however, most large European firms were led through the same defensive cycle that some U.S.-based firms had already experienced. Having reestablished export markets for their manufactured goods in many areas, including the Middle East and Latin America, they faced the same kind of threat that had moved their U.S. counterparts to set up producing subsidiaries abroad, namely the fear of losing a market through import restrictions. By 1970, manufacturing firms based in Europe were adding affiliates to their multinational networks in numbers over twice as high as those recorded by their U.S. counterparts (Harvard Multinational Enterprise Project data).

Moved largely by defensive considerations, European firms were adding rapidly to their holdings in the United States. There they showed a strong preference for investing in existing firms rather than in wholly new undertakings,

and a strong disposition to team up with a U.S. firm in the process.⁸ Such entries, some European managers supposed, would give them exposure to the latest industrial technologies and marketing strategies, thus strengthening their ability to resist the U.S. onslaught in their home markets and in third countries.

By the end of the 1960s, however, the Europeans had begun to have less reason to fear the dominance of U.S.-based firms. The differences in technological achievement between U.S. firms and European firms had obviously shrunk, and access to capital no longer favored the Americans. Not surprisingly, then, some of the motivations that lay behind the expansion of the European networks grew more nearly akin to that of the Americans—that is, largely defensive moves aimed at protecting a foreign market from import restrictions or copycat responses to the initiatives of rivals in setting up a subsidiary abroad (Flowers 1976).⁹ In an apparent response to such stimuli, the number of European-owned subsidiaries appearing in various parts of the world increased rapidly (Harvard Multinational Enterprise Project data).

These new transborder relations have not wholly obliterated the distinctive national traits that have characterized European firms. German enterprises, for instance, continue to huddle in the shelter of their big banks, French companies in the protective cover of their national ministries. Moreover, despite the existence of the European Community, European firms continue to owe their existence to their respective national enabling statutes, which reflect wide differences in philosophical values and political balance. The United Kingdom, for instance, cannot agree with its continental partners on such fundamental issues as the responsibilities of the corporation to its labor force; whereas the British tend to see corporate managers primarily as the agents of their stockholders, continental governments generally take the view that labor has a quasi-proprietary stake in the enterprise that employs it, which stake managers are obliged to recognize. Differences such as these have served to block projects for the creation of a European company under the European Community's aegis.

Nevertheless, cross-border mergers are growing in number in Europe. In 1987, among the large industrial enterprises based in the community, only 75 cases were recorded in which a firm based in one EC country gained control of a firm based in another, but by 1990 the number had risen to 257 (European Commission 1991, 228). Indeed, in this universe of large industrial firms, the number of such transborder acquisitions in 1990 for the first time exceeded the number of like acquisitions involving firms in a single member country.

8. In the period from 1960 to 1970, about 80 percent of the manufacturing subsidiaries established by European parents in the United States were through acquisition or mergers with U.S. firms. The comparable figure for manufacturing subsidiaries of U.S. parents in Europe for the same period was 67 percent (Harvard Multinational Enterprise Project data).

9. The assumption that the spread of European networks was due in part to follow-the-leader behavior, at least until the 1970s, is fortified by some unpublished studies undertaken by Fred Knickerbocker (1973), whose analysis of the behavior of U.S.-based manufacturing subsidiaries is cited elsewhere in this chapter.

In part, the trend toward cross-border mergers is a consequence of the many liberalizing measures that the member countries of the European Community have taken with regard to capital flows. In addition, however, there appears to be a visible weakening of the family conglomerate, a distinctly national form of big business. In Italy, for instance, where that kind of structure has been particularly prominent in the private sector, the country's leading family conglomerates have fallen on especially hard times.¹⁰

The disposition of many firms to cling to the shreds of their national identity will lead many of them to hesitate over transborder mergers and consolidations in which they are not the surviving entity or, when they finally succumb to the pressures for merger, to insist on retaining a minority interest in the subsidiary that has been joined to the network of the foreign-based firm. That same disposition suggests why European firms appear to give a heavier preference to consortia and alliances as a way of combining their strengths with a foreign firm than U.S.-based competitors would do. But, because I see such arrangements as fragile over time, I see transborder mergers as the preferred vehicle in spite of the obstacles. Such mergers may still generate resistance and hostility in some countries.¹¹ A few decades from now, however, the national differences in Europe's business communities are likely to prove no more important than the differences between Texas-based enterprises and Massachusetts-based enterprises in the United States.

In explaining the growth of the networks of firms based in Europe, then, I return to some of the same themes that were stressed in the case of U.S.-based firms. The summary of the factors that have pushed U.S.-based enterprises to develop and expand their multinational networks in the past decades stressed the continuous improvements in the technology of communication and transportation as the powerful exogenous factor; the decisions of the U.S.-based firms to expand their enterprises were seen in large part as a response aimed at reducing the uncertainties and countering the threats that accompanied such developments. I feel sure that these generalizations will carry the observer a considerable distance in understanding the behavior of Europe-based firms as well.¹² Over time, the differences that heretofore have distinguished U.S.-based from Europe-based multinational networks are likely to diminish as the conditions of their founding and early growth begin to lose their original importance.

3.3 Latecomer Japan

Studying the factors behind the growth of multinational enterprises based in Japan, a phenomenon of the past two or three decades, will bring us back to

10. For an account of the troubles of the Agnelli and Pirelli family conglomerates, see *Financial Times* (1992a).

11. For a rich account of such hostilities in France's reactions to the Agnelli family's efforts to acquire control over Perrier, see *Financial Times* (1992c).

12. A study of European banking confirms the existence of each of the major tendencies identified above. See Campaigne (1992).

the same defensive motivations, including the need of Japanese enterprises to protect their interests against the hostile acts of foreign governments and business competitors, and their desire to build up competitive strengths by exposing themselves to the most challenging technological and marketing environments.

Indeed, the defensive motivations that commonly lie behind the creation and spread of multinational enterprises are likely to act even more powerfully on the Japanese than on their U.S.-based and Europe-based competitors. To see why, it helps to review briefly the evolution of Japan's industrial structure (see, e.g., Wilkins 1990, 585–629).

From the earliest years of the Meiji restoration in the last decades of the nineteenth century, the industrial structure of Japan exhibited some distinctive national characteristics. Dominating the core of Japan's modern economy were half a dozen conglomerate organizations, each with its own captive bank, trading company, and portfolio of manufacturing and service enterprises. The conglomerate structure, well developed before World War II, was modified only a little by Japan's loss of its foreign territories and by the ensuing occupation. Japanese firms lost their investments in the territories its armies had occupied, but these investments had largely been controlled by the so-called new *zai-batsu*, companies that depended for their existence on Japan's foreign conquests and that had very little stake in the home economy itself.

In Japan proper, the holding companies that sat at the apex of each conglomerate were liquidated during the occupation. But the member firms of the conglomerates maintained their old ties by cross-holdings of stock and by shared memories of past loyalties. And in the 1960s and 1970s, as foreign enterprises began to show some interest in acquiring control over Japanese firms, member firms within each conglomerate systematically built up their cross-holdings even further as a means of repelling foreign boarders (Ito 1992, 191).

From the early emergence of these conglomerate organizations, a fierce rivalry existed among them—but a rivalry based much more on comparative rates of growth and market shares than on nominal profits. Within each conglomerate, the financing of the contest was left to the conglomerate's captive bank rather than to public capital markets. But the general scope and direction of the lending by these banks to their affiliates were largely determined by continuous consultation with key government agencies, especially the Ministry of Finance, the Bank of Japan, and the Ministry for International Trade and Industry (MITI).

By the 1980s, however, it was becoming apparent that major changes were taking place in the conglomerate structures. Perhaps the most obvious change was the dramatic shift in the financing practices of the industrial firms. As the rate of growth of the Japanese economy slowed up a little in the 1980s and as the need to finance capacity expansion grew less urgent, Japanese firms found that internally generated cash was going a much longer way toward meeting their capital needs.

At the same time, under pressure from foreign sources and from Japan's own

financial intermediaries, the Ministry of Finance was gradually relaxing its tight controls over the development of internal capital markets, thereby providing Japanese companies for the first time with a real option for raising their capital needs through the sale of securities in public markets. Concurrently, Japanese firms were being granted permission to raise capital in foreign currencies by selling their securities abroad or borrowing from foreign banks. Japanese banks, trading houses, and other service facilities, therefore, were strongly represented in the outflow of direct investment from Japan to major foreign markets.¹³ And because Japanese manufacturing firms were always a little uncomfortable when dealing with foreigners as service suppliers, the existence of those service facilities in foreign markets eased the way for the manufacturers to establish their foreign subsidiaries outside of Japan (Gittelman and Dunning 1992, 237–67).

In accounting for the changes in the character of the multinational networks based in Japan, however, one must place particularly heavy emphasis on the increasing technological capabilities of these enterprises. In the very first stages of the development of multinational networks by Japan-based firms, in the 1960s and 1970s, some scholars entertained the hypothesis that these firms would develop a pattern of foreign direct investment quite different from that pioneered by U.S.-based and Europe-based firms (Kojima 1978, 85–87). At that stage, Japan's penetration of foreign markets for manufactured goods was most in evidence in South and Southeast Asia and was heavily concentrated in relatively simple items such as batteries, noodles, radios, and other consumer goods—items in which Japan's comparative advantage was already fading. Given the unsophisticated nature of the products and the lack of a need for after-sales services, Japanese producers usually used their affiliated trading companies as their agents in these foreign markets; indeed, in many cases, the Japanese producers were not large enough even to consider marketing their own products abroad and so had no choice but to rely on trading companies.

In these cases, when the risk that the government might impose restrictions became palpable, the trading company typically took the lead in establishing a local production facility, often through a three-way partnership that combined the trading company with a local distributor and with the erstwhile Japanese exporter (Yoshino 1976, 95–126). From this early pattern, it appeared that the Japan-based multinational enterprise might root itself much more deeply in its foreign markets than did the U.S.-based and Europe-based companies, with results that might prove more benign from the viewpoint of the host country.

By the 1980s, however, the patterns of foreign direct investment by Japanese firms were converging toward the norms recorded by their U.S. and European rivals (Encarnation 1992, 9–35). As with U.S.- and Europe-based firms, the

13. In the 1980s, the relative importance of services in the outflow of foreign direct investment from Japan was substantially higher than for FDI outflow from the United States, the United Kingdom, West Germany, or France (UN Centre on Transnational Corporations 1991, 16, table 6).

object of Japanese firms in establishing a producing subsidiary in a foreign country was commonly to protect a market in a relatively differentiated product that originally had been developed through exports from Japan.

Compared with U.S.-based or Europe-based firms, however, the stake of Japanese firms in the export markets of other industrialized countries soon grew very large.¹⁴ The spectacular growth of Japanese exports to the markets of such countries exposed Japanese firms once more to threats of restrictive action on a major scale. At this advanced stage, however, the markets to be protected were considerably different in character from those that the first generation of Japan-based multinationals had developed. One difference was in the identity of the markets under siege, now located mainly in the United States and Europe. Another was the nature of the products involved; these were relatively sophisticated products, such as automobiles, camcorders, and computer-controlled machine tools. And a third was the channels of distribution involved; such sophisticated products were usually marketed through channels under the direct control of the manufacturers rather than through trading companies.

The networks that Japan-based firms created in response to the new threats came closer to emulating those of the U.S.-based and Europe-based firms with multinational networks. Moreover, as with their European rivals, many of the foreign acquisitions by Japan-based firms were explained by a desire to acquire advanced technological skills; this motive was especially apparent in the acquisition of various medium-sized high-tech firms in the United States (Kester 1991; Kogut and Chang 1991).

Although the multinational networks that Japan-based firms produced in this second generation bore a much greater resemblance to the networks of their counterparts from other advanced industrialized countries, some characteristic differences remained. One such characteristic was the high propensity of Japan-based multinationals to control their producing subsidiaries tightly from Japan. Symptomatic of that fact was the near-universal use of Japanese personnel to head their foreign subsidiaries.¹⁵ A striking illustration of the same desire for control was the limited leeway allowed subsidiaries in the acquisition of capital equipment. Australian subsidiaries of Japanese firms, for instance, possessed far less leeway in the selection of new machinery than did the subsidiaries of U.S.-based or Europe-based firms (Kreinin 1988). Some signs existed in the 1990s that a few Japanese firms were breaking away from their traditional controls and giving their foreign subsidiaries greater leeway, but the illustrations were still exceptional (*Economist* 1992).

14. Data on the identities of the world's leading multinationals in the latter 1980s, with partial statistics on their respective stakes in foreign markets gleaned primarily from annual reports, appear in UN Commission on Transnational Corporations (1978, 287-316).

15. For instance, a study of the U.S. subsidiaries of Japanese electronic firms reports that only 2 percent of Japanese electronics firms in the United States had U.S. chief executive officers (U.S. Congress 1991, 99).

The early reluctance of Japan-based firms to develop a multinational network and the tendency of the foreign subsidiaries of such firms to rely upon their established sources in Japan have been attributed to a number of different factors. They have been variously explained as a consequence of the relative inexperience of Japanese firms with the novel problems of producing abroad, as a result of the heavy reliance on the consensual process in firm decision making, or as a consequence of the extensive use of just-in-time producing processes, which demand the closest coordination between the firms and their suppliers (Kester 1991, 109). Introducing strangers into the system, according to the argument, entails major modifications in firm practices that cannot be achieved overnight.

Nevertheless, by the end of the 1980s, Japan-based firms were expanding their multinational networks at an unprecedented rate. What is more, their manufacturing affiliates in the United States and Europe were drawing a considerable fraction of their inputs from sources located in the host country (Gittelman and Dunning 1992, 40). Moreover, it appeared that some of the very factors that had slowed the growth of Japan-based multinational networks in the past could be expected to reinforce the expansion rather than to slow it down. For example, the desire of Japanese firms to rely on Japanese sources means that the foreign subsidiaries of major Japanese firms are pulling large numbers of satellite suppliers with them into foreign locations. While this has not been an unknown phenomenon in the establishment of the multinational networks of firms based in the United States, it appears to be an especially powerful force in the case of Japan-based firms (Wilkins 1990, 612–16).¹⁶ Moreover, if one pair of authoritative observers is to be believed, Japanese firms already are being drawn into Europe by the conviction that they must assimilate some distinctive regional emphases if they are to be successful in major industries, such as automobiles and electronic equipment (Gittelman and Dunning 1992). Finally, given the intense rivalry of Japanese firms, with their stress on market share, it is not unreasonable to expect a pattern of copy-cat behavior even stronger than that observed with respect to firms based in other countries.

Whether the Japanese government will seek at some point to restrain the overseas movement of its firms through administrative guidance is unclear; but even if it makes such an attempt, there is no certainty that the attempt would prove effective. The growing financial independence of Japanese firms means that the Ministry of Finance and MITI have lost one of their principal sources of coercion. The Japanese firms' commitment of a large proportion of their assets to foreign locations means that they will be exposed to stimuli not strik-

16. A hint of the strong tendency of Japanese firms to buy from enterprises with which they have close links appears also in Gittelman and Dunning (1992). See also *Financial Times* (1992a), an account of Nissan's impact on northeast England.

ingly different from those affecting their U.S. and European rivals. Developments such as these promise to contribute to the movement of Japan-based multinationals toward the norms typical of multinationals based in other countries (Lipsey 1991, 87).

3.4 Patterns of the Future

In the future as in the past, some powerful exogenous factors will influence the spread of multinational enterprises, including changes in the technologies of transportation, communication, and production. But it is not easy to project the consequences of such changes. For instance, if just-in-time manufacturing takes on added strength, the clustering tendency of related enterprises should grow stronger; but if flexible manufacturing processes gain in strength, smaller and more self-contained plans could dominate, reducing the tendency toward clusters (Auty 1992; Dunning 1992, esp. 158–62). Despite uncertainties of this sort, however, I anticipate that multinational networks and transborder alliances, already a major factor in international economic flows, will grow in importance.

3.4.1 The Response of Governments

How governments will respond to that situation is a little uncertain. Although globalization and convergence may prove to be major trends defining the behavior of multinational enterprises in the future, it is implausible to assume that national governments will stand aside and allow such behavior to develop as it may. With jobs, taxes, payment balances, and technological achievement seemingly at stake, governments are bound to act in an effort to defend national interests and respond to national pressures. Their efforts, involving carrots in some cases and sticks in others, will continue to pose threats and offer opportunities to the multinationals.

Some governmental responses will take the form of restrictions, unilaterally adopted, aimed at holding inbound and outbound foreign investment in check. But from all the signs, political leaders in the major industrialized countries seem aware that national autarky is not an available option unless a country is prepared to absorb some overwhelming costs. That recognition explains why so many countries now eye the possibility of developing regional blocs—areas large enough to satisfy the modern requirements of scale and scope, and small enough to promise member countries that they will exert some influence in shaping their joint economic policies.

There is surface plausibility to the idea that such blocs may figure importantly in the future, a plausibility reflected in the preeminence of Japanese interests in South and Southeast Asia, European interests in Africa, Eastern Europe, and the Middle East, and U.S. interests in Latin America. But it is easy to misinterpret the significance of those concentrations. As already sug-

gested, they may reflect little more than the myopic learning process of business managers, and increasing experience may push them toward scanning over a wider geographical range.

In any case, when seen through the eyes of the managers of multinational enterprises based in the industrialized areas, the managers' principal stake by far lies in other industrialized areas, not in the hinterlands of their respective "regions." That has been the case for decades, and it has shown no signs of changing in recent years. To be sure, such enterprises will not hesitate to use the influence of their respective governments to promote their interests in these regions. But from the viewpoint of the firms, such efforts will be a sideshow compared to their respective stakes in other industrialized economies.

At the same time, the influence that individual governments are in a position to exert over their respective multinational enterprises appears rapidly on the decline. Although governments have been known to remain blind to the obvious for remarkably prolonged periods of time, that ineluctable fact should eventually lead them to limit their unilateral efforts at control. Where control of some sort still seems necessary or desirable, the option remaining will be to pursue mutually agreed-upon measures with other countries. In the decades ahead, the United States, Europe, and Japan are sure to find themselves addressing the feasibility and desirability of international agreements that define more fully the rights and obligations of multinational enterprises. Although most other countries may be slower to address the issue, a few such as Singapore and Mexico along with the non-European members of the Organization for Economic Cooperation and Development (OECD) are likely to be involved as well. Already some of the elements of an international system are in place with respect to a few functional fields, such as the levying of corporate income taxes. It does not stretch the imagination very much to picture international agreements on such subjects as the competition of governments for foreign direct investment, the threats to market competition posed by restrictive business practices and mergers, the rights and obligations of multinational enterprises in national political processes, and other issues relating to the multinational enterprise.

3.4.2 The Development of Theory

In the past, as multinational networks appeared and grew, some researchers concerned with understanding the causes of their behavior found it useful, even indispensable, to distinguish such enterprises according to their national base. If I am right in seeing strong tendencies toward national convergence, distinctions based on the national origin of the network are likely to lose their analytic and descriptive value, and distinctions on other dimensions are likely to grow in importance. Even more than in the past, distinctions based on the characteristics of the product market and the production process are likely to prove particularly fruitful.

As I observed earlier, many multinational enterprises created global net-

works in response to perceived threats and operated under circumstances in which ignorance and uncertainty were endemic. For the most part, the enterprises operated in product markets with significant barriers to entry, including static and dynamic scale economies, patents and trademarks. With the passage of time, however, a considerable proportion of these multinational enterprises overcame their sense of acute uncertainty in foreign markets, especially as the products and their related technologies grew more stable and standardized.

These tendencies often reduced barriers to entry, increased the number of participants, and elevated the role of price competition. In the production and sale of metals and petroleum, for instance, the number of sellers on world markets inexorably increased, and the role of competitive pricing grew. In big-ticket consumer electronics, an intensification of competitive pricing among multinational enterprises also has become commonplace, despite the persistent efforts of sellers to differentiate their products. In such cases, there is considerable utility in models that cast the participants as fully informed actors operating in a market in which their choices are known, under conditions in which some scale economies exist (Helpman and Krugman 1985, 225–59; Grossman and Helpman 1991, 197–200). I see no reason why models based on these assumptions should not generate useful first approximations to the behavior of multinational enterprises in a considerable number of industries.

Other models may also have something to contribute, such as those that view multinational networks as the consequence of decisions by firms to internalize certain types of transactions. The international market for the sale of technology and management skills, for instance, is a grossly inefficient market from the viewpoint of both buyer and seller (Teece 1986; Galbraith and Kay 1986). Internalization can be viewed as a response to those inefficiencies, in a setting in which the enterprises are otherwise fully aware of the set of choices they confront and of the facts bearing on those choices (Casson 1987, 1–49; Williamson 1971).

Models based on the internalization hypothesis therefore fit comfortably into the structure of the models described earlier, which are based essentially on a neoclassical framework driven by costs and prices. But they have tended to crowd out the analysis of other motivations that seem at least as important in explaining the behavior of the managers of such enterprises. For instance, various measures taken by the firm to create a multinational network may be driven by another motive, namely a desire to avoid being exposed to the predatory behavior of rivals, including the risk that such rivals might cut off needed supplies or deny access to a distribution system during some future contingency.

That possibility pushes the modeler in a very different direction in attempting to explain the behavior of multinational enterprises. Such enterprises continue to figure prominently in many product markets that have not yet attained a stable middle age. In such markets, the number of producers is often sharply limited, products and related services are often highly differentiated,

technologies are in flux, and price differences are not the critical factor in competition. Moreover, externalities of various kinds commonly play a dominant role in locational decisions, as when enterprises try to draw on various national environments to produce the stimuli they think will improve their competitive strengths. Firms engaged in producing microprocessors, aircraft engines, and wonder drugs, for instance, are strongly influenced by one or another of these factors.

Needless to say, where the number of rivals in a market is low, that fact fundamentally conditions the strategies of the participants. Some of them may long for the security of a market-sharing arrangement and may even take some tentative steps in that direction, such as entering into partnerships with some of their rivals. But developing an effective market-sharing arrangement is usually difficult and dangerous.

In any event, when a limited number of participants are involved in a product market, theorists must entertain the possibility that the firms that are engaged in such markets see any given transaction as only one move in a campaign stretching across time. In each transaction, the principal objective of the firm is to strengthen its position in relation to its rivals or to neutralize the efforts of its rivals to steal a march; with that objective paramount, share of market becomes a critical measure of success. In such circumstances, invading a rival's principal market may prove a useful defensive strategy, aimed at reducing the rival's propensity for warfare elsewhere. And, given the imperfect knowledge under which each firm is assumed to operate, a policy of following a rival into new areas of supply and new markets may be seen as a prudent response to the rival's initiatives.¹⁷

Of course, by shedding many of the assumptions underlying the neoclassical model, models built on such behavioral assumptions relinquish the support provided by a comprehensive body of well-explored theory. Instead, the analyst is thrown into a world of uncertain outcomes, explored so far largely by game theorists, specialists in signaling theory, and others outside the neoclassical mainstream. It is hardly surprising, therefore, that most of the scholars who have sought to model the behavior of the multinational enterprise have avoided the implications of high uncertainty and limited numbers, preferring instead to concentrate on hypotheses that require less radical departures from neoclassical assumptions.

Nevertheless, any serious effort to project the behavior of multinational enterprises in the future will have to recognize that the players in many major product and service markets will see themselves as engaged in a campaign against specific adversaries in a global market, with individual decisions being shaped in light of that perception. At different times and places, there will be

17. Casson (1987, 53–83) and Bower (1992) omit any reference to such possibilities. See also Graham and Krugman (1989), where such possibilities are presented not in the theory section of the report but in an annex entitled "Industrial-Organization Explanations of Foreign Direct Investment."

efforts to call a truce, efforts to weaken specific adversaries, and efforts to counter the aggressive behavior of others. The behavior that emerges will not be easily explained in terms of models that satisfy neoclassical conditions. Therein lies a major challenge for those who are attempting to cast light on the behavior of multinational enterprises through systematic modeling.

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Comment Richard E. Caves

Raymond Vernon writes about the changing activity patterns of multinational enterprises from a long and intense involvement with the subject. His observations cover important trends or attributes in three areas of their operations: (1) multinationals based in different countries become more similar over time, just as U.S.-based leviathans grow less dominant and the national sources of multinationals more diffuse; (2) public policies remain important constraints and threats affecting multinationals' decisions; (3) foreign investment is influenced importantly by strategic considerations such as denying tactical advantage to oligopolistic rivals. I shall comment on each of these areas.

That the activities of multinationals based in different countries grow more homogeneous is clearly correct and rests on a number of underlying trends. As noted by Vernon, one of these is that, among different countries' largest firms,

institutional differences that differentially affect their potential performance (such as predominant family ownership) are dying out. This is true for the simple Darwinian reason that inefficient institutions tend not to survive forever, although institutional differences can coexist that do not differentially affect firms' performance as foreign investors.

A second source of reduced difference lies in increasingly similar comparative-advantage patterns, broadly defined, of the major industrial countries. With labor-intensive manufacturing gravitated to the newly industrializing countries, the developed nations that are the principal homes of multinational firms exhibit increasingly similar patterns of comparative advantage in trade. This similarity is evidenced by the large increase in intraindustry trade among the OECD countries that has occurred since World War II. This increased similarity in comparative-advantage patterns translates (it can be argued) into increased similarity in nations' patterns of foreign investment.

A third factor, harder to pin down, is greater homogeneity of both tastes and technology among the industrial countries. *Homogenization* is perhaps not quite the right word: the operative force is awareness of differences in consumption sets and ways of doing things that translates into selective adoption of foreign ways and things, driven by greatly reduced costs of international communication and travel. For potential multinational firms, this trend lowers many components of the fixed cost of adaptation to a foreign environment. This trend is especially evident in the development of Japan's multinational firms. Japanese foreign investment in the United States during the 1970s and 1980s was driven by its complementarity with Japanese exporting activities and Japan's growing research capability, as one would expect. In the 1980s, it also came to be positively related to industries' advertising intensities, as Japanese firms demonstrated the capability to steer around the national style differences that seem to prevail in most advertising-intensive products (Drake and Caves 1992).

Regarding countries' interventions in multinationals' activities, Vernon argues in essence that the trend is more of the same. Significant amounts of foreign investment take place, he feels, to avert profit losses caused by the importing country's restrictions on the foreign firm's exports. Governments are certainly growing no less solicitous about preserving substantial (if limited and inexplicit) property rights of workers in their jobs. Because domestic firms' property rights in their rents are much less secure, foreign investment that threatens only investors' rents is viable where exports that threaten both investors' rents and employees' job opportunities are not. (The glorious confusion surrounding this public policy preference is illustrated by the debate in the United States over what is a foreign automobile.)

Although I basically agree with Vernon's *plus ça change . . .* judgment, I suggest that invasive public policies have been somewhat muted by the increased symmetry of the industrial countries' positions as sources and hosts of foreign direct investment. Xenophobic reactions to foreigners, as suppliers of

imports, investors, owners of property, and so on, can be taken for granted. Those familiar with other countries' complaints about U.S. multinationals two and three decades ago can only regard with bemusement the rise of exactly the same complaints about foreign multinationals in the United States during the past decade. Nonetheless, when xenophobia clamors for translation into public policy, the interests of multinationals based in the afflicted country demand to be weighed in the balance. The result, I suggest, is an important damper on restrictive policies analogous to the one on trade policies that Milner (1988) documented, which was due to increasing symmetries of trade positions. Independently, the developing countries have chosen less restrictive policies since the 1960s, part of their more general recognition of the productivity-raising effects of market-based incentive structures. That a code of conduct toward multinational enterprises was even on the table for discussion in the Uruguay Round under the General Agreement on Tariffs and Trade testifies to the increased similarity of nations' policy preferences; a quarter-century ago, broad international agreement on the treatment of multinationals would have been inconceivable.

Statistical research has shown that much of the variance in the activity levels of multinational enterprises can be explained by transaction cost factors that call for internalization within the enterprise to avert what would otherwise be contractual failures in arm's-length transactions. This explanation for multinationals and their activity levels is nonstrategic in the sense that expansion abroad by one firm does not directly affect the payout in reduced transaction costs to a parallel expansion by its market rival. Vernon urges, however, that a large amount of foreign investment is strategic and influenced specifically by oligopolistic interaction of competing firms. (I am not sure how he would define *large*: the criterion might be the proportion of foreign investment decisions ranked in some upper tier by dollar amount.) In view of the great interest that industrial economics has recently taken in game theory and strategic interactions, this position merits close examination.

Vernon starts by noting the familiar evidence of the extent of international collusion and market-sharing agreements in important industries between World Wars I and II. It might be attractive for researchers to revisit this evidence in light of modern game theory, in order to characterize more precisely what processes were at work. The role of foreign investment in this process has always, to me, seemed problematic, because the division of markets involves a pledge to forgo investing in some nations. If the deployment of subsidiaries as threats or hostages was indeed involved, the evidence would make excellent grist for modern students of industrial organization who are oriented toward game theory.

The pattern that Vernon finds prevalent, however, is the one discerned by Knickerbocker (1973): parallel and imitative foreign investments by competing firms in a U.S. oligopoly in the same host country markets and period of time. The mechanism seems to be the following. The oligopolists are few

enough that they can sustain a price exceeding marginal cost in any market where they operate, and scale economies are (implicitly) not sufficiently large to inflict substantial losses if all firms invest in a given foreign market and period of time. A firm that does not join the investment race suffers a certain loss of profits on its exports to that market (local production is assumed to convey a substantial marketing advantage); that firm also takes the risk that, by virtue of experience in the foreign market, a rival might acquire some new competitive asset that could be used to improve its competitive position in the home market.

This model seems coherent in identifying imitative foreign investments as a prisoners' dilemma game; it conveys the interesting implications that the direct profits of foreign investments could be negative and that such unprofitable rounds of advantage-seeking investments could continue until the oligopoly's core excess profits were eliminated. Knickerbocker claimed to confirm the model empirically by showing that imitative foreign investment bouts occur more commonly in U.S. industries that are concentrated and therefore prone to the recognition of oligopolistic interdependence.

The theoretical coherence and empirical validity of this model strike me as issues that remain important. One reason why they deserve attention is the apparent prevalence in recent years of races among large international firms to undertake mergers that cross national borders but stay largely within a narrowly defined product or service market. Such international horizontal mergers, creating or extending multinational enterprises, seem to have occurred in pharmaceuticals, branded food products, major home appliances, and the entertainment (motion pictures, recordings) and publishing industries, among others.

These mergers pose an interesting problem for industrial economics, because they contain elements not fully explained either by the Knickerbocker-type model summarized previously or by the models of horizontal mergers that are standard in the literature of industrial organization. The latter models focus on the incentives that might exist for mergers between direct competitors in a homogeneous market, with the nonnourishing conclusion that the incentive is pervasive if the firms are price competitors (Bertrand behavior) and almost nonexistent if they are quantity competitors (Cournot). None of these industrial-organization models explain merger waves or races, nor do they explain why (as apparently happens) the short-run supply strategy of the acquired firm or business is often left independent of the acquirer's supply decisions. Knickerbocker's model is also insufficient to explain the absence of coordinated policies.

I have argued (Caves 1991) that an explanation might lie in extension of the theory of real options, constructed along the following lines. Consider an international horizontal merger in an industry whose national product markets are independent for purposes of short-run price or quantity competition but potentially interdependent in the application of innovations, design changes,

or other such investment-type forms of nonprice competition. Assume that Nature periodically reveals new opportunities for such investments; assume also that the speed with which a firm can seize an opportunity depends on its having in place an appropriate coalition of resources. Assume finally that an international horizontal merger extends this coalition of resources and therefore increases the number of possible opportunities that the firm can seize. The international horizontal merger then becomes analogous to the purchase of a portfolio of real options.

The value of such an acquisition does not depend on any immediate redeployment of the assets of the acquired unit, so that apparently passive acquisitions can be explained. Furthermore, one firm's improvement of its response capability is adverse to the expected profits of its competitor; possibly (though not necessarily), the competitor's best reply is to make a similar acquisition in order to shrink or nullify the rival's conditional advantage. The occurrence of waves of similar acquisitions can thus be explained. The normative implication is not that horizontal mergers point toward monopolistic restriction of output but that they represent strategic rent-seeking in oligopolistic markets.

My effort to test this model in a way similar to Knickerbocker's yielded negative results, perhaps because it was not targeted closely enough on those internationally concentrated industries for which the model is a priori plausible. Nonetheless, the approach does seem useful for extending Vernon's (and Knickerbocker's) insight concerning strategic foreign investments with the theory of horizontal mergers in industries that give scope for strategic behavior.

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Discussion Summary

Robert Feenstra questioned *Raymond Vernon's* conclusion that the patterns of foreign direct investment now coming from the industrialized Asian economies would be increasingly harmonized with the former patterns from the United States. He noted that the trade patterns from the Asian countries show

marked differences from those of the United States and Europe, partly in response to the differences in market structure of the countries. In addition, the market structures of the Asian countries are not explained well by the transactions cost theories developed in a U.S. context. On this basis, *Feenstra* suggested there should be some interesting differences in the patterns of direct investment from the Asian and western economies, rather than harmonization.

Donald Lessard and *Kenneth Froot* questioned why firms might follow each other in establishing production facilities in a foreign market. There was some agreement that this action depended on an "option value" from establishing overseas facilities or merging with foreign firms. *Edward Graham* described a model of this type, with two countries (A and B) and two firms (1 and 2), both of which are initially located only in country B. If firm 1 moves into country A, then firm 2 might choose to follow because it believes A has some superior information about market conditions there: the "option value" reflects the possibility that demand might be especially high or costs low in that country.

There was some discussion of the model described by *Graham*, with *Feenstra* asking whether firm 2 would have entered country A in any case and *Froot* arguing that there must be some initial distortion present for this "leader-follower" behavior to occur. *Lael Brainard* noted that there was not a good model of this behavior in the industrial organization literature, but she suggested two approaches that might help. First, there has been increased attention recently to locational choices within a country (such as the agglomeration of firms), and these factors might help to explain locational choices across borders. Second, it has been empirically established that transportation costs and distance are important determinants of trade patterns, and we might expect them to also be determinants of foreign investment.

In response to the last point, *Peter Petri* argued that "distance" can reflect many different factors, so we should be wary about its interpretation. *Richard Caves* suggested that cement production, a good example of an industry in which transportation costs are obviously important, was now experiencing some international mergers, so a case study might be useful. *William Zeile* noted that the latest data on foreign investment in the United States would be available from the Bureau of Economic Analysis, U.S. Department of Commerce in July 1992 and would include information on the cement industry.