

Multinational Industry and National Differences

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This chapter examines the structure of multinational industry and how differences in the policies of national governments have affected that structure. It finds that differences in government policy and corporate behavior among nations may have broad implications for national sovereignty, for standards of living in the United States and other countries, and for international standards vis-a-vis wages, the environment, and workplace conditions.

This chapter is also intended as a primer for readers who may not have extensive experience with or knowledge of multinational enterprises (MNEs). Readers familiar with the complexities of MNEs and the policy environments in which they operate may wish to proceed to later chapters.

The development of the multinational enterprise is a logical extension of the rise of the modern industrial corporation in the 19th century. At first, businesses pursued scale and scope within their domestic markets. However, competition at home, opportunities abroad, the need to reduce financial and other risks, and foreign barriers to imports led increasing numbers of firms to establish and then expand overseas operations. These facilities have become important conduits for trade, investment, and technology flows.

At the same time, this expansion of business activity has brought companies and nations into ever more direct competition. As technology and management practices diffuse, workers in the Organization for Economic Cooperation and Development (OECD) countries increasingly find themselves in direct competition with one another, and with workers who are willing to accept lower wages, benefits, and workplace health and safety conditions. As they capitalize on these differences, multinationals can inadvertently become vehicles for declining standards.

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As the structure and behavior of the world's leading industrial firms has changed, so too have the nations represented in their ranks. In the early 1960s, most MNEs were based in the United States. In 1966, for example, 61 percent of the world's largest companies were based here. By comparison, in 1991 firms based in the United States accounted for only 31 percent of these companies. Since the early 1970s, the number of large MNEs based in Europe, Japan, and South Korea has increased dramatically.

But the decline in dominance of U.S.-based MNEs is not due solely to impersonal market forces in other regions of the world. Many national governments actively intervene through such mechanisms as domestic content restrictions and tariffs to ensure that high value-added activities are conducted within their national boundaries. Indeed, many foreign governments systematically favor national champions and actively discriminate against foreign firms. Firms based in protected markets can use profits they might otherwise have been unable to achieve, along with government support, to underwrite expansion abroad and/or to exclude firms based abroad from their key domestic markets. Alternatively, if uncompetitive in technology, cost, or other factors, they can use their privileged position to forestall exit from the industry.

Taking into account such host government pressures and the traditional reluctance of the U.S. Government to intervene on their behalf, some U.S.-based companies have transferred operations and sourced abroad more than they otherwise might have. In the absence of effective government policies to the contrary, many U. S.-based firms can be expected to continue to respond to host government pressures in ways that may not contribute to their long-term inter-

ests and the strength of the U.S. economy and technology base.

The first section of this chapter describes what a multinational enterprise is and considers why a firm's managers might decide to locate distribution and production operations in foreign markets. Different corporate forms that function as de facto MNEs, such as strategic alliances and risk-sharing partnerships, are described. A typology of MNEs is offered, with attempts to explain the implications for national policy and international business of each type of enterprise identified.

In the second section, national differences among firms are analyzed, with the conclusion that government policy regimes strongly influence the behavior of their own national firms as well as foreign firms attempting to enter or conduct business in their national markets. The chapter finds that the dominance of U.S. firms among the ranks of the world's largest has diminished markedly over the past 25 years, and suggests that this is due in part to strategies that other nations deploy to enhance their domestic firm's competitiveness.

In the final section, some implications of MNE behavior are discussed. The analysis suggests ways in which MNEs can contribute to or reduce trade conflicts among nations. It addresses the influences that different kinds of MNEs exert on labor, wage, and environmental standards globally.

THE STRUCTURE OF MULTINATIONAL INDUSTRY

The development of the modern industrial corporation in the 19th century led firms to pursue economies of scale and scope.¹ Scale means the size (volume) of the production facilities. In

¹ See Alfred D. Chandler, Jr., *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, MA: Belknap Press of Harvard University Press, 1977); Alfred D. Chandler, Jr., *Scale And Scope: The Dynamics of Industrial Capitalism* (Cambridge, MA: Belknap Press of Harvard University Press, 1990); Alfred D. Chandler, Jr., "The Enduring Logic of Industrial Success," *Harvard Business Review*, March-April 1990, pp. 130-140.

technologically advanced, capital-intensive industries, large facilities can usually manufacture less expensively than small ones because fixed costs can be shared among a greater number of units. Scope refers to the ability of large facilities to use similar raw, semifinished materials and intermediate production processes to make a range of different products.

Much of the cost advantage of large production facilities depends on a high rate of capacity utilization that enables investments and other fixed costs to be spread over a large number of units. To ensure a sufficient volume of sales, firms invest in national and international marketing and distribution organizations. Firms also invest in professional management to coordinate and monitor their operations, and to allocate resources. Modern management information systems and organizational design can drastically reduce the resources devoted to coordination and monitoring by the firm, providing potential advantages in response time and cost.

Why Firms Establish Foreign Operations

Initially, most firms serve their overseas and domestic customers from a single domestic production and research and development (R&D) base.² In a nearly perfectly competitive world, with no barriers to entry and very low transportation costs, it would be more attractive to expand existing facilities rather than establish new plants abroad. In the real world, however, transportation costs are often substantial, currency values fluctuate, and governments actively intervene to influence market outcomes. In addition, competitors seek to gain market power—for example, by exploiting advantages of scale and scope, product

differentiation, political influence, government financial support, strategic alliances among two or more companies, and differential pricing.

A firm may establish overseas operations to attract local capital, limit risk from currency fluctuations, serve its foreign customers, or reduce the manufacturing costs of products intended for its domestic customers. Such an action can take place in response to competitive pressures, as a means of reducing risk or enhancing profitability, and as a direct result of government policies intended to force firms to locate part of their value-added chain within the host country.

Overseas production and R&D operations can enhance a firm's efficiency if they are located in a region particularly strong in a desired capability. Locating facilities in areas with low-cost labor, energy, or other inputs may significantly reduce costs.³ In some cases, overseas manufacturing can significantly reduce transportation and inventory costs of finished products. Local operations may help a firm adjust its products or services to meet distinctive differences in consumer taste, as well as regulatory or other requirements.⁴

Overseas operations can facilitate the penetration of markets controlled by entrenched firms. They can also be used to rapidly develop new markets and preempt foreign or local competition. Overseas operations may be used to deny opposing companies a protected domestic base from which to subsidize an export drive into key markets in the United States or elsewhere.

Host government policies often influence both the decision to establish overseas facilities and their nature. Governments and businesses engage in dynamic and iterative relationships. Govern-

Z Christos N. Pitelis and Roger Sugden, *The Nature of the Transnational Firm* (London: Routledge, 1991).

³For example, the assembly of automobile wiring harnesses and windshield wiper systems is very labor-intensive. U.S. tariffs on completed assemblies are low. Not surprisingly, such work has migrated to low-labor cost areas such as Mexico. U.S. Congress, *Office Of Technology Assessment, U.S.-Mexico Trade: Pulling Together or Pulling Apart?*, ITE-545 (Washington DC: U.S. Government Printing Office, October 1992), p. 147.

⁴Michael Porter, "The Competitive Advantage of Nations," *Harvard Business Review*, March-April 1990, pp. 73-93.

ments often seek to induce firms to transfer into the country more of the value-added chain than the domestic market would otherwise support, while firms seek to shape and respond to government policies in the most cost-effective manner.

Government-imposed barriers to entry, such as tariffs and local content requirements, provide firms the opportunity to participate in protected markets. If the market is large enough, such policies can lead firm to set up facilities, transfer technologies to local suppliers and competitors, and establish joint ventures that would otherwise not have taken place.

As discussed in box 2-A, companies consider a wide variety of issues when adding or rationalizing capacity. Some countries impose trade-balancing requirements as part of the price for participating in a protected market. A firm may be willing to build a product in a potentially lucrative protected market, and export it to its home market to meet trade-balancing laws---even if the cost of supplying the product to the firm's domestic market is increased. For example, if transportation, inventory, and investment costs are taken into account, U.S. automobile manufacturers building for U.S. markets often find it more expensive to manufacture in Mexico than in the United States. However, to meet the requirements of the Mexican Auto Decrees and thereby participate in Mexico's profitable protected market, they export vehicles from Mexico to the United States, even when this is more costly.⁵

Previous expenditures can lock in a firm, reducing its ability to respond to change. Industries with large capital investments and low profit margins are more susceptible to lock-in than those with high margins and low capital commitments. Plant and equipment that become rapidly obsolete can be abandoned more readily than those with a long productive life. Accordingly, the automobile

industry is more locked in by its investments than the semiconductor industry.

Strategic Alliances and Risk-Sharing Partnerships

Strategic alliances and risk-sharing partnerships often are attempts by firms to expand their scale and scope. (For discussion of strategic alliances, see chapter 5.) These alliances can extend the financial, technical, and political reach of the firm. They can enhance market access, distribution networks, and manufacturing capabilities, or impose market discipline. They can speed products to market, reduce financial and technological risk, lower investment requirements, add or streamline capacity, and lower costs. Such alliances can increase flexibility by expanding the boundaries of the firm. In some circumstances, they can facilitate the development of legal cartels or serve as vehicles for tacit or explicit collusion to fix prices or allocate markets.

The strategic alliance formed by IBM, Siemens, and Toshiba, for the design of dynamic random access memory semiconductors (DRAMs), represents an alliance to reduce joint costs among three large powerful MNEs in a highly competitive industry. The industry is characterized by intense competition, short product lifecycles, escalating R&D and manufacturing investments, and prices that fall rapidly over time. Profitability depends upon getting to market before price erosion starts and then cutting costs faster than the price erodes. At the same time, costly investments are necessary to expand capacity fast enough to capture sufficient market share to maintain the cycle. Although demanding and expensive, the technology is relatively well-understood, limiting the useful life expectancy of proprietary knowledge. As a result, new firms with access to

⁵ *U.S.-Mexico Trade*, op. cit., footnote 3.

Box 2-A—Rationalizing Production: Considerations Vary

Many observers mistakenly suggest that firms seek low labor costs to the exclusion of other considerations when either adding capacity or restructuring their operations. Firms balance many factors in reaching such decisions, including manufacturing philosophy, product quality, workforce quality and costs, transportation costs, capital costs, competitive position, market characteristics, capacity utilization, labor relations, plant corporate cultures, and the local supplier base. No single factor can be expected to dominate.

Legal and other requirements make it difficult and expensive to lay off workers in France and the Netherlands, Britain's lower wages and benefits notwithstanding.¹ Plants located in Europe, especially Britain, often have restrictive work rules and union demarcation lines that hinder productivity. British workers are often less productive because of their relatively low levels of education and training. Despite all this, Hoover recently chose to close a plant in Dijon, France and transfer the work to its plant in Scotland where excess capacity existed, labor costs were less, and the union made concessions to improve productivity in exchange for financial compensation to the workers.²

GM intends to transfer automobile production from a joint venture with Valmet, a Finnish Government-owned company, to its German operations. The move will increase capacity utilization in Germany and reduce transportation costs for components.³ Hitachi has closed television assembly facilities in the United States and transferred some of the work to Mexico and Malaysia.⁴ Hyundai has transferred its personal computer operations to the United States to facilitate timely product development and delivery.⁵

As these examples show, labor costs do not always outweigh other considerations. Nevertheless, firms can and do attempt to balance differences in labor and social costs, workplace practices, and the regulatory environment. The greater the competition, the more interested the firm will be in reducing costs. In the absence of translational standards, regulatory bodies and enforcement, such activities, in aggregate, are not unlikely to exert downward pressure on wages, benefits, and workplace practices that are unrelated to plant efficiency.

¹ This discussion is based on: Robert Taylor, "Hoover Unveils Tough Deal at Glasgow Plant," *Financial Times*, Jan. 26, 1993, p. 6; Robert Taylor, "Hoover Workers Get Lump Sum for Deal," *Financial Times*, Feb. 3, 1993, p. 9; David Goodhart, "Social Dumping: Hardly an Open and Shut Case," *Financial Times*, Feb. 4, 1993, p. 2; David Buchan, "French Promise to Make Hoover Pay Dear," *Financial Times*, Feb. 4, 1993, p. 2; and Robert Taylor, "Dijon Cleans Up Scottish Jobs in Reversal of Hoover Move," *Financial Times*, Feb. 5, 1993, p. 12.

² To ensure efficient operation of the Glasgow plant, Hoover was forced to compensate its workers for the abandonment of restrictive work rules, demarcation lines, and a reduction in the premium rate paid to third shift workers. These payments ranged between 2,650 and 3,150 pounds per worker. See: Taylor, "Hoover Workers Get Lump Sum for Deal," *op. cit.*, footnote 1.

³ Kevin Done, "GM Ends Finnish Production," *Financial Times*, Jan. 29, 1993, p. 14.

⁴ "Company News: Hitachi Closing California Plant," *The New York Times*, Jan. 15, 1992, p. D4.

⁵ John Markoff, "Hyundai to Move Its PC Unit to U.S.," *The New York Times*, Apr. 20, 1992, p. D3.

substantial financial resources are still able to enter, even as unprofitable competitors depart.⁶

The IBM-Siemens-Toshiba alliance appears to provide its members with important advantages, including reduced financial and technological

risk, lower individual firm R&D and investment costs, a quicker development cycle, and enhanced profitability. The coalition may provide the possibility of at least tacit market discipline.

⁶ Many new and some existing semiconductor producers receive considerable financial support from their national governments. Their pursuit of market share at the expense of short-term profits has a depressing effect on prices, lowering the profitability of other participants. Poor profitability can drive out participants dependent on the private sector for capital.

Operational control of development is vested with IBM, probably the most capable player, reducing technological risk for the participants. Three firms pooling their investment and resources in an alliance with clear operational control and lines of responsibility should be able to develop the product more quickly than any could alone. If the venture is well-managed, the costs to each of the participants will be less than if they had proceeded alone, even if total development costs are greater.

Reduced development times make it likely that the individual member's DRAMS will get to market sooner, commencing a premium prior to the entry of new competitors. Early production should give important cost advantages over later entrants, an advantage that could be accentuated if at least two of the partners share manufacturing experience, leading to faster joint cost reductions than would otherwise have been possible.

Significant cost advantages on the part of the three partners should support an aggressive campaign to add capacity. This should, therefore, reduce the incentive for competitors to add capacity ahead of demand and to initiate price warfare to gain market share. Any resulting increase in market discipline would further enhance the coalition's profitability in the product.

MULTINATIONAL FIRMS TAKE DIFFERENT FORMS

The Office of Technology Assessment (OTA) has identified six types of multinational firms. In the case of large diversified MNEs, different divisions or subsidiaries may fit into different categories. As a result, the categories are not intended to be rigid or mutually exclusive. Rather, they capture the major differences that are relevant to the development of public policy. (See also table 1-1.) The six types of MNEs may be described as:

- resource-based,
- export-oriented,
- regional,
- translational,
- global, and distributed.

Resource-based firms were the earliest widespread form of MNE. They are oriented to agricultural products or the extraction and processing of natural resources, and their processing for sale in the industrialized countries. Firms set up operations where the natural resources are found and/or can be produced cheaply. Minimal processing is undertaken, generally to reduce transportation costs or to ensure quality. Oil companies, mining companies, and firms that market products that include inputs based on tropical agricultural commodities often take this form.

Export-oriented firms have their principal production operations located in their domestic market and export to other national markets, although they may have final assembly, service, support, sales, and marketing operations abroad. R&D and design activities are usually concentrated in the domestic base. Firms pursue such a strategy for four major reasons. First, sales abroad may be too low to provide the economies of scale for the establishment of efficient-sized overseas units. Second, higher factor costs can discourage the establishment of production operations abroad. Third, government policies in the home base,⁷ coupled with relatively open target markets, make it desirable to export rather than establish production facilities in additional countries. Fourth, the firm may enjoy a monopoly that makes it unnecessary to respond to or preempt competitors.

Export-oriented firms that receive protection or direct government support at home can pose a severe threat to competitors located in more open

⁷ This may include a protected national market and financial assistance (e.g. subsidies, R&D contracts, export financing, and low-cost capital).

markets, and accordingly may contribute significantly to rising trade friction. If the position of these firms depends on a technological monopoly or economies of scale, they may find themselves targeted by other governments eager to ensure that domestic firms participate in the industry.

Regional MNEs are firms that have optimized their operations, including production, around a regional market, but have not yet achieved significant sales and operations outside the region. Declining barriers to entry and intensifying competition have made this an increasingly tenuous strategy in industries such as mainframe computers, minicomputers, central office digital switch equipment, and automobiles. However, firms can grow and prosper when: products have high transportation costs; strong regional differences in product specifications and/or consumer preferences exist; there are high regional barriers to entry (perhaps associated with regional trading blocs); and global competitors are evenly matched, precluding expansion outside of traditional markets. Relatively weak companies may find themselves confined to this role and under attack from larger global competitors.

Traditionally, many European MNEs and U.S. firms fit this description. Government ownership, with its emphasis on employment, may severely inhibit companies' attempts to move beyond this role. Regional companies often resort to international strategic alliances as a means of expanding the resources available to them.

Transnational MNEs are firms that have begun to locate production operations globally, but depend heavily on their domestic market and operations for their competitive position, key production operations, and R&D. Such a firm would be unable to sustain its competitiveness if these operations were significantly reduced. Overseas operations usually do not include the most

technologically and organizationally difficult portions of the production process. R&D outside the domestic base is limited at best, and primarily intended to customize the product to local requirements and taste. Firms assume the transnational form for a variety of reasons. These include:

- Matching costs and revenues.
- Transportation costs, factor inputs, manufacturing philosophy, or market growth that make it more efficient to manufacture, or at least assemble, in the regional market.
- Barriers to entry, such as tariffs and established brand preferences.
- Government restrictions intended to induce the firm to establish operations or to exclude imports.

Global MNEs have replicated the full value-added chain, including substantial product development and often research operations, in more than one national or regional market. In theory, such a firm might survive if it sustained the loss of its operations in its domestic market. In many cases, this form of organization reflects the long-term consequences of host government policies intended to exclude or limit imports. As international sales and assets increase, the firm may no longer depend on its domestic national market for scale and scope. This is most likely to occur in firms whose domestic base is in small but technologically advanced nations, such as Canada and some European countries. Development of regional trading blocs in Europe and North America could over time further reduce the importance of the domestic base and increase the importance of the regional base for such firms.

Distributed multinationals are firms that have optimized their sourcing, production, and R&D

base globally.⁸ In some circumstances, this can provide the firm with advantages in factor costs, economies of scale and scope, and experience curve effects that outweigh government interventions to restrict or impose conditions on market access and subsidize or support national champions. As a result they can be thought of as MNEs that have limited the influence of both their domestic base and host government's policies on their organizational structure. The actions of distributed MNEs are driven by the global markets and global competition. In its purest form, such a firm would have little allegiance to its historic domestic base beyond advantages relating to the size and openness of the market, the availability and cost of scarce factors, and government policies.

Distributed MNEs are particularly responsive to the policies of host governments, although the response can take the form of exit from a particular market or geographic location. Countries with more restrictive FDI and trade policies are likely to receive a greater proportion of work and manufacturing facilities from distributed MNEs than might otherwise have been the case. This is emphasized when local markets are strong or expanding.

In many cases, the decisions that influence the nature of the firm are affected by economies of scale and other advantages that can lead firms to center specific activities, products, or processes in either national or regional markets from which

they serve their regional and/or global markets.⁹ Where they exist, agglomeration economies of scale reinforce such decisions on a firm or industry-wide basis.¹⁰ Organizing the firm on a distributed basis is less attractive if barriers to entry are high, governments effectively intervene to shape business resource allocation decisions, transportation costs are prohibitive, or there are factors specific to the market.

Factors That Influence Form

When economies of scale allow (and the policies of the domestic base government do not preclude), firms expanding overseas can be expected to locate an increasing proportion of their assets in their major overseas markets. Determining an appropriate form for a firm is a complex process with numerous factors. Table 2-1 seeks to compare the relative importance of selected criteria that determine the form of organization that an MNE will gravitate toward over time. Domestic government policies-especially protected national markets-are often relatively more important to the *export oriented* MNE. Host government policies-including protected markets-make an important contribution in the *regional, translational, global and distributed* forms of MNEs.

As competition intensifies, minimum efficient economies of scale grow larger, customers become more demanding, and firms become more sophisticated in their relationships with their

⁸ Nike is an example of such a company. Design and marketing expertise is centered in the United States. Manufacturing is provided by subcontractors in the Far East. Working capital is provided by Nissho Iwai, a trading company. Subcontractors, with Nike's assistance, are constantly being relocated to take advantage of the best cost and quality available. Nike closed its manufacturing operations in the Philippines, Malaysia, Britain, and Ireland when these sites proved uncompetitive, and manufacturing is shifting from Taiwan and South Korea to lower-cost sites in China, Indonesia, and Thailand. See: Mark Clifford, "Spring in Their Step," *Far Eastern Economic Review*, Nov. 5, 1992, pp. 56-57.

⁹ For example, Philips has recently decided to concentrate global production of cathodes at a single plant in Blackburn, Lancashire in the United Kingdom. In 1993, 60 percent of its global production was located at this site and the balance at Sittard in the Netherlands. "UK to Get All Philips Cathode Work," *Financial Times*, Feb. 3, 1993, p. 9.

¹⁰ For example, the size of the market and rapid technological change provided by the Japanese, Korean, and Taiwanese consumer electronics industry and the strength of the Japanese semiconductor manufacturing machinery sector provide additional incentives to locate semiconductor manufacturing facilities in the region. Each such facility located in the region reinforces the advantages of locating facilities there.

Table 2-I—Factors Influencing Type of Multinational Enterprise

	Resource	Export	Regional	Translational	Global	Distributed
Domestic base market size ... , , .	High	Low	Medium	Medium	Low	Medium
Transport costs	High	High	Medium	Medium	Medium	Low
Low-cost inputs	High	Low	Medium	Medium	Medium	High
Economies of scale	Medium	High	Medium	Medium	Medium	High
Technology	Low	High	Medium	Medium	Medium	Medium
Government financial assistance ...	Low	High	Medium	Medium	Medium	Medium
Government ownership	Low	High	Medium	Low	Low	Low
Currency risk	Low	Low	Medium	Medium	Medium	Medium
Domestic government policy	Low	Medium	Medium	Low	Low	Medium
Protected national market ,	Low	Medium	High	Medium	Medium	Low
Protected regional market	Low	Medium	High	Medium	Medium	Medium
Host government policy	Low	Low	High	High	High	High
Host country market size	Low	Low	Medium	High	High	High

SOURCE: Office of Technology Assessment, 1993.

domestic and host governments. In these conditions, the overall structure of international business may tend toward a more *distributed* mode. For some products, generally those characterized by low transportation costs and/or large economies of scale, firms may source from a single location. For products where coordination, transportation costs, inventory costs, government-induced barriers to entry, and differences in taste and standards prove prohibitive, a firm may organize its operations on a regional basis.¹¹ Diffusion of technology means that competitiveness will increasingly depend on the effectiveness of the process of research, development, design, production, distribution, and marketing rather than on any single element of the process. This heightens the importance of the firm correctly identifying which configuration is the most appropriate for each of its operations. As chapter 5 suggests, international strategic alliances are one available avenue to help meet these requirements.

NATIONAL DIFFERENCES

MNEs resist sudden changes in their structure and organization. Previous investments in plant, equipment, technology, people, corporate culture, distribution channels, and organizational structure all tend to limit their freedom of action. In the absence of dramatic differences in government policies or rapid technological change, MNEs can be expected to evolve gradually from one form of organization to another.

However, each of the three regions—Europe, North America, and East Asia—tend to produce different characteristics in their MNEs. For example, firm based in Japan and South Korea are more likely to be *export-oriented* MNEs. Firms based in Europe are more likely to correspond to the *regional* or *translational* form. Many MNEs based in the United States are either *global* or *distributed*. This section examines some of the factors that account for strong regional tendencies in the dominant types of MNEs.

¹¹Louis T. Wells, Jr., *Conflict or Indifference: US Multinationals in a World of Regional Trading Blocs*, Technical Papers No. 57 (Paris: Organization For Economic Co-operation and Development 1992), pp. 26-27.

Table 2-2 identifies some historical factors that may help to explain these regional variations. There are important differences in several factors, including the time at which industrialization took place and the relative size of the domestic market. Table 2-2 also suggests important differences in government policies and the support provided to domestically based firms. Asymmetries in government policies have had a profound influence on the differences in firm organization by region.

The Influence of Location

Traditionally, U.S. firms first established themselves in their domestic market before expanding abroad. Capital markets have been very efficient in the United States, encouraging a focus on short-term results. Until recently, sufficient economies of scale were present in the domestic market to ensure competitiveness without need of scale and scope in foreign markets. When U.S. firms ventured abroad, they faced numerous restrictions on their operations, which encouraged them to produce in local markets. As a result many U.S.-based MNEs historically viewed their international facilities as an adjunct to their domestic operations and chose to expand internationally in one of three ways: licensed production; joint ventures and distribution arrangements; and production in the host market.

More recently, U.S. firms have sought to configure themselves around regional markets. This can give them an advantage relative to competitors whose primary market is a single national market. It does not, however, automatically provide an advantage over *export-oriented* and *distributed* MNEs that compete globally.

Firms based in more open markets may find it uneconomical to remain horizontally and vertically integrated. They frequently respond to competitive pressures by shedding less critical

operations, or exiting an industry segment. The relative openness of the U.S. market ensures U.S.-based companies will often face intense competitive pressure in their core domestic market. Often, companies based abroad enjoy a sanctuary home market. As a result, U.S.-based MNEs tend to be relatively more specialized than their international competitors of comparable size.

Firms that compete globally but lack a sanctuary home base often choose to source from direct or potential competitors.¹² As they gain economies of scale and scope, suppliers based in protected markets may exploit such relationships to compete directly with the purchaser in its core markets. The long-term consequences of relationships with suppliers based in protected markets must be weighed carefully if the firm based in the more open market is to avoid undermining its own competitiveness.

In some industries, such as automobiles, protectionist policies in various national or regional markets forced U.S. firms to replicate virtually the entire value-added chain, or to export products to gain credits to import. European and some Japanese firms also have been forced at times to undertake similar operations. For example, both Nissan and VW (as well as the U.S.-based MNEs of GM, Ford, and Chrysler) manufacture and export from Mexico. The threat of protectionism was a major factor in the timing of the decision by such firm as Honda, Toyota, and Nissan to assemble vehicles in the United States.

Managers must weigh the costs and benefits of responding to host government pressures. In their calculations, U.S. business leaders are aware of the traditional reluctance of the U.S. Government to intervene with host governments to offset local pressure on their foreign affiliates. They must also consider the penetration of the U.S. market by

¹² Firms based in sanctuary markets may also be forced to source from direct or potential competitors. For example, manufacturers of 486 PC clones based in Asia until recently have been forced to buy their microprocessors from Intel because there were no other suppliers available.

Table 2-2—Historical Factors Influencing Firm Organization

	Europe	United States	Japan
Present dominant form of MNE	Regional/ translational	Translational/ distributed	Export
Period of peak competitiveness	Pre-1945	1945-80	1980+
Period of modern industrialization	Early 1900	Early 1900	Post 1945
Domestic market			
Size	Medium	Large	Medium
Accessibility	Medium	High	Low
Attractiveness of regional market			
Size	Medium	small	Medium
Accessibility	Low	Low	Medium
Government protection	High	Low	High
Overall level of government support	High	Low	High
Incentives to export	Medium	Low	High
National treatment of FDI	Medium	High	Low
Present efficiency of capital markets	Medium	High	Low

SOURCE: Office of Technology Assessment, 1993.

imports, U.S. national treatment of FDI, and the relative lack of export incentives for U.S.-made products. In such circumstances, management could be expected to respond to host government restrictions and inducements, when not unprofitable to do so, at the expense of their U.S. operations. This in turn can lead to important industrial capabilities being relocated faster or to areas other than what a free market might dictate.

With few exceptions, European-based MNEs have received a greater degree of protection and direct government support than have U.S. firms. A major exception is the defense aerospace sector, in which levels of support provided by national governments are similar. However, even here the commercial aircraft built by European aerospace firms generally have received greater levels of government support than have their U.S. competitors. Japanese aerospace companies have

also benefited from high levels of government support.¹³ In certain countries, most notably France and Italy, firms are often at least partly owned by the government, or are explicitly designated as national champions.¹⁴ Relatively protected markets have encouraged firms to engage in a wider range of activities than their U.S. competitors, both horizontally and vertically. European MNEs tend to have a strong regional focus, although where products are transportable and distinctive competence is intact, worldwide export of finished goods is common.

European firms are powerful competitors in telecommunications, often due to their ability to exploit domestic protected markets and other government assistance. They are still powerful in consumer electronics, although many find the transition to the *distributed* MNE form from *regional*, *global*, and *translational* forms to be

¹³ For a discussion of government support of the commercial aircraft industry, see Chapter 8, "Government Support of the Large Commercial Aircraft Industries of Japan, Europe, and the United States" in U.S. Congress, Office of Technology Assessment, *Competing Economies: America, Europe and the Pacific Rim* (Washington, DC: U.S. Government Printing Office, October 1991), pp. 341-362.

¹⁴ In 1992 there were 10 French, 3 Italian, and 3 Spanish government-owned companies in the Fortune 500 International list. There were no British, German, or Japanese government-owned corporations in the group.

traumatic. European companies remain important competitors in machine tools and electrical systems, and are first-rank contenders in petrochemicals and pharmaceuticals. In most areas of aerospace, European firms, often making heavy use of government subsidies and components sourced in the United States, remain contenders. European firms are competitive in consumer products and durables, although rationalizing these industries on a regional basis is proving a challenge, leading toward further consolidation in the industry.

In industries characterized by rapid change, state sponsorship has often led firms to fail to expand globally in time to compete effectively with U.S. and Japanese companies pursuing global economies of scale and scope. European semiconductor companies, for example, remain relatively weak despite a 14-percent tariff on semiconductors and billions of dollars in subsidies and support. As competition has intensified, European computer firms, such as Bull and Siemens-Nixdorf, have fared poorly against U.S. and Japanese-based rivals.¹⁵ Financial support of national champions can be massive. For example, since the early 1980s, the French Government has provided Bull, its national computer champion, with financial support equal to 15 billion French francs.¹⁶ Several national champions have been acquired by U.S. or Japanese-based MNEs.¹⁷

Historically, European firms have followed two major approaches to their international operations. The first was to organize as *export-oriented*

MNEs, that is, to manufacture domestically and sell globally. The second was to set up a full value-added chain, generally excluding corporate R&D, in major national or regional markets. European firms often purchase subsidiaries that are then run as autonomous units. Historically, European MNEs have been the largest source of foreign direct investment (FDI) in the United States,

In the post-World War II period, Japanese and South Korean firms have enjoyed substantial protection from imports and FDI.¹⁸ They have benefited from government financial and regulatory assistance, infant industry policies, outright protection, and government targeting of selected industries. At the same time, their governments have encouraged and directed domestic firms to seek economies of scale from exports. Until recently, the predominant form of organization has been as *export* MNEs. Many firms, however, are beginning to establish international operations and have begun to draw on the international capital markets, reducing the influence of the domestic government. Despite this, many of these firms have shown a much greater reluctance to transfer higher-value activities to their overseas operations than have either U.S. or European firms. Some Japanese automakers grant their U.S. operations less autonomy and source a higher percentage of components from their domestic operations than do U.S. automobile companies in Europe.¹⁹

¹⁵ Both NEC and IBM have equity stakes in Bull.

¹⁶ Richard L. Hudson, "Bull Weighs Expanding Ties to Other Firms," *The Wall Street Journal*, May 28, 1993, p. A5D.

¹⁷ For example, ICL has been acquired by Fujitsu and Phillips computer operations by DEC.

¹⁸ See chapters 6 and 7 of *Competing Economies*, op. cit., footnote 13, pp. 237-337.

¹⁹ Honda was the first Japanese automobile company to begin assembly of automobiles in the United States. Domestic Content for corporate average fuel economy (CAFE) standards exceeds 70 percent. However, on a component basis it may be as low as 50 percent. (See box 4-A.) The average European content of GM and Ford vehicles, according to the automakers, exceeds 95 percent, in large measure because the vehicles are engineered, designed, and sourced in Europe.

ASYMMETRIES IN GOVERNMENT POLICIES, OWNERSHIP, AND CONTROL

In 1971, the world of multinational enterprises was dominated by U.S.-based firms.²⁰ Today competition from firms based in Europe and Asia, most notably Japan, may threaten the survival of key U.S.-based MNEs in a range of industries. As discussed below and in chapters 3 and 6, important differences in government policies, capital markets, and industry structure have influenced the rise of large numbers of new competitors based in Asia and Europe.

Asian firms, especially those in Japan and South Korea, have increased their share of the Fortune 500 International list the fastest, reflecting the advantages of both a rapidly growing protected domestic market and government policies intended to encourage exports and target selected global industry segments.²¹ In several key industries—such as consumer electronics, automobiles, and mainframe computers—considerable excess capacity exists on a global basis. As consolidation takes place, asymmetries in government policies can influence the probability of survival and the distribution of potential gains among otherwise evenly matched competitors or facilities.

The decline in relative importance of the U.S. economy has been matched by a decline in the relative importance of U.S.-based MNEs. International competitors are much more numerous and their relative size has placed them on a much more even footing. Japan now has the second greatest number of large multinationals, comparable to the United States or the European Community (EC) as a whole. Asymmetries in government policies among Europe, the United States, and

Japan have led firms to configure themselves in very different ways.

The United States has pursued a policy of national treatment of foreign investors. With some important exceptions, such as quotas on textiles and agricultural products and the ‘voluntary restrictions’ on imports of Japanese manufactured automobiles, the United States has been relatively open to imports and FDI. Moreover, it has not intervened to prevent firms from reconfiguring themselves in response to the policies of other governments.

As noted above, many European governments have protected national markets and limited imports.²² The extraordinary support they provide their national champions can include direct cash infusions, preferential access for government procurement, the creation or tolerance of national cartels, and other market allocation mechanisms. In some industries, such as telecommunication digital switches, the government may even own the primary customer. This strengthens the linkage between public policy and domestically based MNEs.

In Asia, governments have pursued three major strategies toward industrialization. The first is import substitution. The second is to provide an attractive location for MNE global export platforms. The third is to nurture domestically based, export-oriented MNEs.

Countries that traditionally pursued import substitution policies, such as India, sought to use protected national markets and other government assistance to supply the domestic market with local production. Among policies to support this strategy are the exclusion of international competitors, import licensing, domestic content require-

²⁰ Raymond Vernon, *Sovereignty at Bay: The Multinational Spread of U.S. Enterprise* (New York, NY: Basic Books, Inc., 1971). As early as 1902, concern was expressed in Europe regarding the invasion of American-based firms. Overseas investment of U.S.-based firms as a percent of GNP was the same in 1966, at 7 percent, as it was in 1914. See Alfred Chandler, *Scale and Scope*, op. cit., footnote 1, p. 369.

²¹ *Competing Economies*, op. cit., footnote 13, pp. 7-13

²² Office of the U.S. Trade Representative, *1993 National Trade Estimate Report on Foreign Trade Barriers* (Washington, DC: U.S. Government Printing Office, 1993).

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ments, government ownership of major domestic firms, foreign exchange controls, and the granting of monopolies to favored domestic or international firms. Because of inadequately sized national markets, isolation from the global economy, and a lack of leading edge technology, import substitution has been unsuccessful on its own, leading an increasing number of countries to seek alternative solutions. However, as both Japan and South Korea have demonstrated, it can be an important component of government industrial policy.

Some countries, such as Malaysia, Singapore, and Thailand, have concentrated on providing an attractive environment from which MNEs can serve both regional and global markets. Their policies include facilitating access to existing pools of low-cost and increasingly skilled labor, targeting of specific industries for encouragement and support, aggressively investing in education and training, and providing financial and tax incentives. They have also allowed relative freedom of operation for the MNEs and their supporting suppliers and subcontractors in movements of goods, services, and capital. With some exceptions, most notably the automobile industry, relatively little effort has been invested in developing domestic firms to compete abroad with large MNEs. These countries contribute few firms to the Fortune 500 International. However, the lack of direct domestic competitors heightens the attraction for foreign-based MNEs, in part because technology leakage to competitors is less likely.

The governments of Japan and Korea have pursued industrialization through promoting competition among domestic firms, protected domestic markets, direct government intervention and

assistance, the aggressive pursuit of exports to achieve economies of scale and scope, and acquisition of technology from abroad. Support has included industrial targeting, provision of low-cost capital to favored firms, restricted government procurement, restrictions on FDI, import licensing, aggressive investments in education and worker training, government-led research consortia, and the encouragement of cartels and other market sharing mechanisms.²³ Box 2-B discusses one of the most famous examples of a U.S.-based firm, Texas Instruments, being forced to trade proprietary technology for unequal market access.

In general, European firms' sales have traditionally been more concentrated in domestic and regional markets than their Asian counterparts.²⁴ Large U.S. firms, by contrast, have a greater percentage of their assets outside their national and/or regional base. Japanese and Korean firms are more likely to be substantial net exporters from their domestic base of operations, and to have a lower ratio of overseas assets to overseas sales.

Ownership and control also varies by nationality of the firm.²⁵ Different types of investors have different objectives and financial performance requirements, leading to differences in MNE cost of capital, patience of capital, and planning horizons. If the true cost of capital converges, then differences in MNE behavior on the basis of national origin should begin to close. Differences in government policies will affect both the degree and the rate of convergence.

In the United States, ownership is often concentrated in large institutional investors, such as pension fund managers under pressure to maximize short-term profitability. U.S. capital mar-

²³ See chapters 6 and 7 of *Competing Economies*, op. cit., footnote 13, pp. 237-337.

²⁴ Roger Abravanel and David Ernst, "Alliance and Acquisition Strategies for European National Champions," *McKinsey Quarterly*, 1992, No. 2, pp. 44-62; and OTA MNE database.

²⁵ The discussion of the influence of ownership, control, and cost of capital that follows is W on Michael Porter, *Capital Choices* (Washington, DC: Council on Competitiveness, June 1992).

Box 2-B—Trading Technology for Unequal Market Access in Japan: Texas Instruments

One of the most famous examples in which a U.S.-based company struggled to gain even unequal access to the Japanese market is provided by Texas Instruments (TI).¹ TI held fundamental patents, was politically influential, and was both a market and technological leader in its industry. Nevertheless, lengthy negotiations were required with the Japanese Government before TI gained permission to establish wholly owned manufacturing operations in Japan. TI agreed to license key technologies to Japanese firms and to consult with the Japanese Ministry of International Trade and Industry (MITI) on a regular basis regarding its plans and future operations in Japan.

Texas Instruments enjoyed important patent rights due to its ownership of Kilby's patents, which made the integrated circuit possible. Early efforts to establish first a wholly owned physical presence and then a manufacturing facility in Japan were rebuffed. TI's 1960 application for Japanese patents was delayed as a result of industry pressure until 1969.²

In 1966, manufacture of integrated circuits began in Japan. Intervention by the U.S. Secretary of Commerce proved fruitless. As production volumes and experience grew, the major domestic firms became more willing to countenance limited competition **in their home market. This**, coupled with the threat of legal retaliation for patent infringement on planned exports, led the major electronics firms, acting through their trade organization, to fashion a new strategy to deal with TI.

Negotiations between MITI and TI continued. Official appeals on the part of the U.S. Government were rebuffed. In late 1966, TI was able to force both Sony and Sharp to withdraw products from the U.S. market.

In April of 1966, over 4 years after the process began, an agreement was reached. This required that TI establish a 50/50 joint venture with Sony for 3 years. At the end of the 3 years TI could seek government permission to buy out Sony, and TI received formal assurances from Sony, and informal assurances from the Japanese Government, that it would be able to do so. TI was also forced to negotiate with and license as a group its major Japanese competitors, substantially reducing its relative bargaining power and future royalties. Because it already had a license for Fairchild's patents, NEC was able to obtain a license from TI at even more favorable rates, further reducing TI's royalty income. **In addition, TI was required to 'consult' with MITI about production levels from its Japan-based venture.**³ Market access has remained limited and TI has been unable to **achieve a market share in Japan that corresponds to its position in the rest of the world.**

¹ This discussion draws on Mark Mason, *American Multinationals And Japan* (Cambridge, MA: Harvard University Press, 1992); and *Competing Economies: America, Europe and the Pacific Rim*, (Washington, DC: U.S. Government Printing Office, October 1991), pp. 341-362.

² The granting of the patents in 1989 seems to have strengthened TI in its subsequent ongoing negotiations for patent royalty income with Japanese semiconductor manufacturers. See: Andrew Pollack, "A Chip Maker's Profit on Patents," *The New York Times*, Oct. 16, 1990, p. D1.

³ Mason, op. cit., footnote 1, p.186.

kets are extremely liquid, enabling investors to shift their holdings very rapidly in search of small increases in the risk-adjusted rate of return. Foreign participants enjoy national treatment in U.S. financial markets and face few restrictions on the import of capital or the repatriation of profits, making it relatively easy to acquire both successful and unsuccessful U.S.-based firms.

Except for certain favored defense contractors, there is relatively little government intervention to allocate credit and subsidize the cost of capital. Neither antitrust nor national security considerations have proven significant barriers to FDI.

Capital markets in Europe are less liquid than they are in the United States, making the pursuit by an investor of short-term advantage more

difficult. Governments are more willing to intervene to rescue unsuccessful competitors or to prevent the foreign acquisition of domestically based firms. The time horizons of large institutional investors are significantly longer than in the United States, leading to more patient capital.²⁶ Controlling interests are often concentrated in a small number of shareholders, making the firms very resistant to unfriendly takeovers.

| Eroding Dominance of U, S.-Based MNEs

Following World War II, U.S. firms achieved commanding advantages in scale, scope, and technology over the vast majority of their foreign competitors. Foreign opportunities, coupled with rising competitive pressures at home, led industrial firms to expand internationally.²⁷ By the late 1960s, the success of U.S. MNEs led many observers to conclude that they posed a direct threat to the independence and prosperity of their host countries.²⁸ Many governments actively sought to offset the competitive advantages of U.S.-based multinationals. They responded with policies intended to shield domestically based competitors from foreign, mainly U.S.-based, MNEs, and to force, or at least encourage, MNEs to replicate their value-added chain and transfer technology within the domestic economy. The U.S. Government provided few countervailing pressures and even encouraged U. S.-based MNEs to cooperate with host governments.

Since the early 1970s, global diffusion of technology has greatly reduced or eliminated an

important competitive advantage of many U.S. firms. In many industries, the number of and capabilities of competitors at both the supplier and original equipment manufacturer level have increased dramatically. As a result, product life cycles have become shorter, the benefits of vertical integration have been reduced, and it has become more difficult to sustain advantages in product differentiation and manufacturing technology. Increased competition has, in turn, often reduced profitability and raised investment costs. For these reasons, most large-scale firms now seek access to all major markets on a timely basis, to ensure profitability and to defray rising investment requirements.

Intensifying competition within the U.S. market—from new domestic entrants, transplants, and foreign-based exporters—has forced an increasing number of U.S. companies to pursue product and process development, sourcing options, and manufacturing strategies intended to minimize short-term costs rather than build long-term competitive positions.²⁹ This often means relying on competitors to manufacture key components or final products.

In 1966, U.S. firms dominated the Fortune 500 International list, with European firms running a distant second, and Asian firms a remote third (see box 2-C). With the exception of certain raw materials producers, relatively few of the Fortune 500 International firms depended on their international operations for a greater share of their

²⁶ *Ibid.* At least some of this difference in time horizon may be attributable to the less liquid capital markets.

²⁷ Vernon, *op. cit.*, footnote 100

²⁸ J.J. Servan-Schreiber (translated by Ronald Steel), *The American Challenge* (New York NY: Atheneum, 1968).

²⁹ For example, for a discussion of how GE came to source microwave ovens from Samsung in Korea rather than continue to manufacture them, see Ira C. Magaziner and Mark Patinkin, "Fast Heat: How Korea Won the Microwave War," *Harvard Business Review*, Jan./Feb. 1989, pp. 83-92.

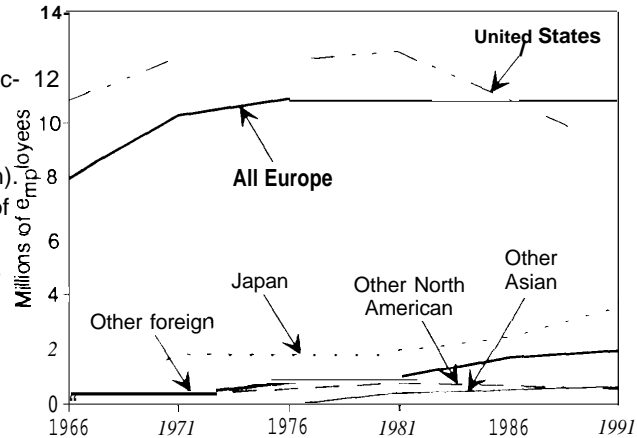
Box 2-C-The International Fortune 500: Steady Erosion of U.S. Dominance

Since 1966 **there has** been a steady erosion in the percentage of the International Fortune 500 firms based in the United States. As figure I-6 demonstrates, in 1966 the United States accounted for 61 percent (304) of these firms. In 1991, only 31 percent (157) of the 500 largest manufacturing firms were based in the United States. In comparison, firms based in Europe grew from 28 percent (139) in 1966 to 34 percent (168) in 1991. In the same period, firms based in Japan grew rapidly from 7 percent (37) in 1966 to 24 percent (119) in 1991.

Figure 1-7 shows that in 1966, U.S.-based firms in the Fortune 500 International had sales of \$299 billion, or roughly 67 percent of the \$441 billion in total sales of the International Fortune 500. Firms based in Japan accounted for less than 5 percent (\$21 billion) and firms based in Europe accounted for 25 percent (\$111 billion). **In comparison, in 1991 total sales of the International Fortune 500 were \$5,188 billion. U.S.-based firms accounted for 34 percent (\$1,785 billion). Firms based in Japan accounted for 21 percent (\$1,097 billion) and firms based in Europe accounted for 36 percent (\$1,901 billion), exceeding sales of U.S.-based MNEs.**

Overall employment of the international Fortune 500 grew from 21 million in 1966 to 26 million in 1991. Most of this growth took place in the period 1966-1971. Figure 2-C-1 shows that U.S.-based firms increased their employment by 1.5 million workers between 1966 and 1971. Between 1971 and 1991, U.S.-based firms shed 3.2 million workers. In comparison, employment for firms based in Japan has grown from 1.2 million to 3.5 million. Other Asian-based firms saw their employment grow from 0 to 581,000 during this period. Between 1966 and 1971, employment for firms based in **Europe grew from 8.1 million to 10.3 million. It has remained relatively stable** since. Firms based outside Asia, Europe, and North America saw employment grow from 271,000 to 1.9 million.

Figure 2-C-I—Employment by International Fortune 500 Firms by Region of Origin, 1966-1991



SOURCE: OTA data base compiled from annual reports, Fortune 500 International, and Standard and Poor's Register.

revenues and profits than their domestic operations.³⁰ However, in some cases non-U.S.-based MNEs, most notably those headquartered in small

but economically advanced countries, had the bulk of their sales and production outside their domestic market.

³⁰For example, one study was able to profile the international sales of 93 U.S.-controlled MNEs for 19@. Only 6 reported international sales greater than 50 percent of total sales; 36 reported international sales that were less than 20 percent of total sales. See: N.K. Bruck, and F.A. Lees, "Foreign Content of U.S. Corporate Activities," *Financial Analysis Journal*, Sept./Oct. 1966, pp. 1-6, cited in table 4-1, "One Hundred Forty U.S.-Controlled Multinational Enterprises Classified by Foreign Content of Operations, 1964," in Verne% op. cit., footnote 20, p. 122.

From the 1950s to the 1970s, U. S.-based MNEs tended to use their domestic production base to supply products for a significant proportion of their international sales. Overseas operations were created for several reasons: to serve local and regional markets; to seek low-cost factor inputs, usually raw materials or unskilled assembly labor; and to improve the competitive position in markets located in industrially advanced countries.

The typical U.S.-based MNE developed new products for and introduced products in its domestic market.³¹ Once the domestic market was saturated, additional growth would be pursued abroad. The steady diffusion of technology and the reduction of barriers to entry in many major markets have rendered this “product life cycle” strategy obsolete for an increasing range of industries.³² Today MNEs tend to introduce products globally to preempt competition from local firms and other MNEs. This shortening of the product life cycle requires that firms place greater emphasis on speed and flexibility. It has forced them to reconsider manufacturing, sourcing, and distribution strategies, and to forge new relationships with both their domestic and host governments. Strategic alliances, often with firms based overseas, have become integral in this quest for advantage (see chapter 5).

IMPLICATIONS FOR TRADE FRICTION AND PUBLIC WELFARE

MNEs are the primary mechanism through which international trade and investment are

conducted and, as a result, have become increasingly important building blocks of the international economy. They pursue advantage (market power) through the quest for economies of scale and scope. They export and import, invest and acquire, manufacture and source, develop, license and transfer technology around the globe. In the mid-1980s, the sales of MNEs represented between 25 and 30 percent of the combined gross domestic product of the market economies.³³ MNEs account for about three-quarters of the world’s commodity trade, and four-fifths of the trade in technology and managerial skills of these economies. MNEs may now account for one-third of all global manufactured exports. A similar proportion of global trade in goods and services is intrafirm trade, that is, trade among parent MNEs and their foreign subsidiaries.

In many sectors, international competition is primarily organized around large oligopolist companies that compete globally, although not necessarily equally, in trade and investment. Leading MNEs are believed, on average, to receive 30 to 40 percent of their total sales outside their home country, although the 50 largest have 54 percent of their revenues from outside their domestic base.³⁴ Overseas production by such firms often exceeds their share of international trade.

This section briefly examines how the action of MNEs can contribute to or alleviate trade friction among nations. It shows how the different types of MNEs described above can strengthen or weaken their domestic base and the host country’s

³¹ Verne% op. cit., footnote 20, pp. 65-106; Also see Louis T. Wells, Jr. ed., *The Product Life Cycle and International Trade* (Boston, MA: Division of Research, Graduate School of Business Administration, Harvard University, 1972),

³² Christopher A. Bartlett and Sumantra Ghoshal, *Managing Across Borders: The Translational Solution* (Boston, MA: Harvard Business School Press, 1991), p. 115.

³³ John H. Dunning, *Multinational Enterprises and the Global Economy* (New York, NY: Addison-Wesley Publishing Company, 1993), pp. 14, 386-387.

³⁴ John Dunning, “Dunning on Porter: Reshaping the Diamond of Competitive Advantage,” *University of Reading Discussion Papers in International Investment and Business Studies* 152, 1991; as cited in Laura D’Andrea Tyson, *Who’s Bashing Whom* (Washington, DC: Institute For International Economics, 1992), footnote 5, p. 4; and “The Non-Global Firm,” in “The Economist Survey: Multinationals,” *The Economist*, Mar. 27, 1993, p. 10,

economy, technology base, labor markets, and regulatory environment.

Many MNEs are able to seek capital and government financial assistance on a global basis. As a result they can make use of and are influenced by both global and national capital markets. This can reduce the influence of government policies in both home and host nations. Firms may shift work from one facility to another in pursuit of export financing. For example, the failure of Britain's Export Credit Guarantee Department to provide export insurance, and the willingness of the U.S. Eximbank to do so, led the British-based MNE Trafalgar House to transfer a 200-million-pound contract to its U.S. subsidiary.³⁵ The British-based MNE John Brown transferred a large contract from its U.K. operations to its French and Dutch subsidiaries for the same reason.

The efficiency of MNEs, and their ability to mobilize resources, including political support, is matched by their ability to reconfigure their operations to meet changing market conditions, seek out low-cost alternatives, and respond to government initiatives. Accordingly, their activi-

ties may place into contact and competition different national labor forces, financial institutions, product markets, and systems of public policy.³⁶ Firms may relocate high value-added activities to take advantage of more permissive regulatory regimes.³⁷

Governments unwilling to rely on the impersonal working of the market may encourage or foster the creation of economies of scale. Carefully orchestrated government policies, combined with aggressive business practices, can create a critical mass of technology, trained workers, and production economies of scale within a specific region and provide a protected sanctuary from which favored firms operate. Such conditions may create a self-reinforcing cycle that eliminates facilities located in less favored locations. *This can* lead to substantial trade friction.³⁸

The *resource-based* MNE may pose considerable dangers for its host government because of the economic and political influence it may be able to mobilize. However, if such firms' activities are confined to the exploitation of natural resources for which alternative independent sup-

³⁵ David Dodwell, "Jobs and Exports Lost Because of Credit Terms," *Financial Times*, Feb. 5, 1993, p. 6.

³⁶ For example, BMW'S decision to establish an assembly plant in the United States may have been motivated in part by the desire to improve its bargaining position vis-a-vis its (traditional workforce and supplier base. See: Barbara Harrison, "High Hopes for New Plant," *Financial Times*, Oct. 20, 1992, p. 34; John Templemen and David Woodruff, "The Beemer Spotlight Falls on Spartenburg, USA," *Business Week*, July 6, 1992, p. 38; Ferdinand Protzman, "BMW Details Plan to Build Cars in South Carolina," *The New York Times*, June 24, 1992, p. D4; Diana T. Kurylko, "BMW Poised to Build in U.S.," *Automotive News*, Mar. 30, 1992, pp. 1, 38; James R. Crate, "Special Convertible May Be 1st Model," *Automotive News*, June 29, 1992, pp. 1, 38; Lindsay Chappell, "South Carolina Is a Surprising Fit for BMW," *Automotive News*, June 29, 1992, pp. 1 and 40; Diana Kurylko, "Von Kunheim Drives BMW Beyond Continent," *Automotive News*, June 29, 1992, p. 38; Diana Kurylko, "Costs Drove Decision to Build in U.S.," *Automotive News*, June 29, 1992, p. 39; and Lindsay Chappell, "Plant Quest Began in '70s," *Automotive News*, June 29, 1992, p. 39. For an example of how MNEs and governments can work in concert to defeat attempts to organize a national electronics union in Malaysia, see Michael Vatikiotis, "Credibility Gap: Union Issue Mars Image as Third World Leader," *Far Eastern Economic Review*, July 16, 1992, p. 18.

³⁷ For example, the German chemical company Bayer is relocating much of its biotechnology R&D from Germany to the United States to take advantage of the more favorable regulatory environment.

³⁸ For example, consumer VCRs are mostly manufactured in Asia, despite Phillips, the Dutch firm, and Ampex, a U.S. firm, having pioneered much of the technology.

pliers are available, they pose relatively little risk to the major industrialized nations.³⁹

A variation of the *resource-based* MNE that has the potential to create trade friction is the MNE that exploits low-cost labor pools for manufacturing and service operations.⁴⁰ This creates direct competition in wages and benefits between workers in the industrialized countries and their less fortunate counterparts. Such activities are precluded where poor infrastructure, transportation, coordination, and communication costs exceed productivity-adjusted differences in worker compensation costs. Where they do not, and where other barriers to entry are low or nonexistent, work can be expected to migrate rapidly to the lower labor cost areas.⁴¹ This in turn can exert considerable downward pressures on wages and benefits, raising social tensions in the industrialized countries.

The *export-oriented* MNEs---coupled with domestic government policies that favor local production for export, provide a protected sanctuary, and/or actively inhibit inward FDI---have the greatest potential for provoking trade friction among the industrialized nations. This is pronounced when a national system organized in such a fashion runs large, visible trade surpluses. Such surpluses, even when fairly earned, can cause surviving competitors to seek relief from their domestic and host governments. Unless equivalent jobs are readily available, displaced

workers are likely to raise vocal protests against declining wages and benefits or the closing of their place of employment. Alternatively, large trade surpluses can induce governments to seek to establish new competitors to share in the rewards.⁴²

Regional MNEs often arise and persist as a result of barriers to entry and host government policies.⁴³ They may also **arise** when: 1) MNEs take advantage of low-cost labor to manufacture products for sale in their domestic base, displacing the traditional workforce; 2) MNEs manufacture and source substantially less in the host country than they sell, contributing visibly to a balance of trade deficit; and 3) MNEs transfer work from the established workforce to facilities located in the host country, often in response to protected foreign markets or trade balancing requirements.

Translational and global MNEs generally increase the proportion of their assets abroad as their international sales expand relative to their domestic sales. To minimize financial risk over time, firms seek to match costs and revenues, provided that doing so does not put them at a competitive disadvantage. Where government policies impose only small distortions in markets, movements toward *transnational* and *distributed* MNE forms are unlikely to worsen trade friction. On the other hand, *translational, global* and *distributed* MNEs can contribute substantially to

³⁹ In some cases, such as copper mining, advantages in transportation costs, technology, supporting infrastructure, and workforce capabilities can offset seemingly insurmountable advantages in such factors as ore quality and wage rates. See: U.S. Congress, Office of Technology Assessment, *Copper: Technology and Competitiveness, OTA-E-367* (Washington DC: U.S. Government Printing Office, September 1988). Nevertheless, the import of significant quantities of low-cost natural resource products from abroad may render uncompetitive domestic facilities leading to their closure. Trade friction may result if those threatened with displacement seek protection or compensation.

⁴⁰ Stride-Rite Corp. is an example of a firm that has moved rapidly in this direction. See: Joseph Pereira, "split personality: Social Responsibility and Need for Low Cost Clash at Stride Rite," *The Wall Street Journal*, May 28, 1993, pp. A1, A6.

⁴¹ A major constraint is the availability of skilled managers and technician in the host country.

⁴² The establishment of the AIRBUS consortium represents such an example. See chapter 8, "Government Support of the Large Commercial Aircraft Industries of Japan, Europe, and the United States," in *Competing Economies*, op. cit., footnote 13, pp. 341-362.

⁴³ Barriers to entry involving transportation costs are unlikely to provoke friction unless these costs are made artificially high. For example, transportation costs could be raised artificially by requiring that imports be shipped on favored carriers, or by delaying certification, inspection, and customs clearance.

trade fiction when government policies distort markets or where economies of scale and limited technology diffusion lead to large and visible trade imbalances.

The development of *distributed MNEs* may in part demonstrate that firms have become increasingly sophisticated at avoiding restrictions intended to force them to duplicate the complete value-added chain within each national market. In

the absence of effective international oversight, this form of organization, because it facilitates the arbitraging of national differences, may create additional downward pressure on labor markets and regulatory regimes. Greater organizational freedom may raise the importance of both production and agglomeration economies of scale, possibly leading to greater concentration of certain types of work in specific countries or regions.