

A Borderless World and Nationless Firms? 1

OVER THE PAST fifty years the world economy has been shaped in large part by two mutually reinforcing developments. Technological innovations in communications and transportation have shrunk the distances that once separated the world's nations, and government policies have removed the barriers to trade and investment that segmented the world economy. Fueled by these developments, globalization has become the mantra of this era and the multinational enterprise (MNE) its priest.

In the 1950s U.S. firms stood almost alone at the global technological frontier. As obstacles to investment abroad declined and economies in the rest of the world recovered from the effects of World War II, American firms began discovering that their know-how and capital could be profitably deployed abroad. By the late 1970s U.S. multinationals had become a major factor in the global economy, accounting for almost 10 percent of the world's gross domestic product (GDP).¹ This foreign expansion of U.S. firms stabilized by the 1980s.²

As the prowess of firms headquartered in other nations grew, they, too, multinationalized and established and expanded their presence in the United States. This inward foreign direct investment into the United States shot up sharply during the latter half of the 1980s, ushering in a new era of economic interdependence.³ Since then multinationals have played an increasing role in the economy in general, and in international trade in particular. In 1994, for example, more than 35 percent of U.S. exports and almost 43 percent of U.S. imports represented the intrafirm transactions of U.S.- and foreign-headquartered multinational enterprises.⁴

Two Key Questions

Although such facts about “globalization” and “multinationalization” are clear, the significance of these interrelated developments remains controversial and raises some fundamental questions. Two such questions are the focus of this discussion. First, to what degree has the world economy become integrated? In other words, do borders still matter? And, second, how does the presence of multinational enterprises affect international economic behavior? That is to say, do multinationals matter?

Do Borders Still Matter?

The first question revolves around the appropriate paradigm to apply to today’s global economy. Should the traditional paradigm of a world economy divided into nation-states with national economies be replaced by a new paradigm of a borderless world?⁵ In a world with separate national economies, the international responses of trade flows, capital, and the international diffusion of technology tend to be sluggish because of numerous obstacles. Some of these are created by policy barriers at borders (such as tar-

iffs and quotas), which restrict trade, and barriers behind borders (such as regulations, national standards, competition policies, and government procurement), which may retard international competition. A second group arises from divergences in local culture, customs, tastes, language, and legal systems, all of which facilitate the segmentation of international markets. A third source is nature and geography, which raise the costs of transportation, communication, and information supply. Fourth are the collusive strategies of firms that are able to employ restrictive business practices, to inhibit competition from outsiders. Fifth are the advantages that accrue to local firms as first entrants, such as economies of scale, superior knowledge due to local learning by doing, and the development of specific consumer and national loyalties. To be sure, some of these constraints are present within purely domestic markets, but the existence of national boundaries makes their effects more powerful.

These obstacles give rise to national economies with distinctive consumers, producers, products, and competitive conditions. For one thing, international competition remains imperfect. Even where products are relatively similar, international price differences may persist because arbitrage is costly and difficult. Since international responses to shifts in relative costs are small and sluggish, governments enjoy considerable policy autonomy. Within a fairly broad range, they can implement domestic policies without adverse consequences, even when those policies reduce a region's international cost competitiveness. For the most part, domestic market conditions determine wages and profits. Firms—even those with foreign operations and affiliations—remain firmly embedded in their local economies. Their principal competitors are other domestic firms, and their pricing, marketing, and production behaviors are distinctively national in character. In such a world, firms and their national governments tend to think their interests are closely aligned.

But what would happen if the barriers separating national economies should disappear and capital and technology should become extremely mobile? Would these distinctive national attributes be eroded, and would national economies become close locational substitutes? In a world of this kind, small differences in policies and other measures that shift costs could have large effects on location and sourcing. “The law of one price” would prevail because (when measured in a common currency) the prices of internationally traded goods would be brought into line through arbitrage. This would also be a world of “factor price equalization” because international product prices would exert a strong influence on profits and wages in nations that produce similar products with similar technologies. More generally, the autonomy of national policy would be limited by international conditions.

In the absence of border barriers, competition would be global. Corporations would rapidly shift to locations that offered lower costs. Indeed, global competition would compel them to do so, because victory would go to the firms with the lowest costs, whereas firms mired in high-cost locations would eventually be driven out of business. In principle, then, knowing the extent to which the world economy remains nationally segmented or has become borderless is a crucial issue with important implications for both government and firm-level policy and behavior. The degree of policy autonomy, the conditions of competition in the markets for goods, and other factors could be radically different.

Do Multinationals Matter?

As just noted, obstacles to international trade and investment can greatly influence economic behavior and outcomes. The next question to ask is what happens to economic behavior and patterns of outcomes when multinational firms take over a good deal of the international activity? How will trade, in particular, respond to

changes in international costs and other conditions when multinationals are performing all the transactions? International economists often ignore multinational enterprises in their theoretical and empirical models. One case in point is the international adjustment process. Suppose a country is running a trade deficit that cannot be voluntarily financed because residents wish to import more from the rest of the world than they earn through exports. Two major adjustment processes will bring their spending into line: one operates via changes in the relative prices of domestic and international products, either directly or through changes in the exchange rate; the other is driven by changes in aggregate spending at home and abroad, which are in turn induced by changes in incomes and interest rates.

How would these adjustment processes be affected if multinational firms were significant participants in international commerce? Some speculate that multinationals would inhibit the adjustment process, because allocations within such firms would be less responsive to relative costs and prices than allocation within markets, and also because their allocation systems, behaving like typical hierarchies, would be less sensitive to costs than market systems, where prices are continuously available. Others believe that multinationals make little difference to the adjustment process. We think that multinational firms would be more responsive, in view of their global reach and surveillance capabilities.

Despite the possible implications of their activities, multinational companies have been by and large ignored in the economic models devised to explore the relationships between trade flows and relative prices and incomes. At the same time, a considerable literature has grown up around the question of how multinational firms behave. One view propounded there is that firms headquartered in particular nations display particular behavioral characteristics. The overseas affiliates of Japanese firms, for instance, are said to show considerable loyalty to suppliers from Japan and a great

reluctance to source in foreign countries.⁶ As for American exporters, they are considered myopic and likely to be swayed more by conditions in the United States than in the foreign markets in their export pricing policies. Such views clearly conflict with the traditional assumption of economics that firms from all nations are motivated to maximize profits and therefore should behave in a similar fashion when confronted with the same circumstances.⁷

The inescapable fact is that multinationals are becoming more significant participants in international trade and production, and hence their impact on economic behavior should be of concern to all those attempting to provide guidelines for public policy. If, on the one hand, the adjustment process is becoming less responsive as a result of the activity of multinationals, the size of the relative price changes required to achieve any given amount of adjustment may have to be correspondingly larger. But such action could cause real exchange rate changes to become volatile.⁸ At the same time, it could mitigate some of the dislocation that any given price changes might cause. On the other hand, if the process is becoming increasingly sensitive to cost differentials, so that not only the flow of goods but entire plants tend to shift in response to cost differences, then the adjustment process might be facilitated, although the dislocation caused by policies and other variables that tend to affect relative costs would become increasingly greater.

From various analyses of multinational behavior, it appears that firms with operations in several countries are both willing and able to switch the location of their production in response to changes in cost differentials. As a consequence, the impact of the multinationals is the cause of growing concern even beyond the adjustment process. Some fear that “runaway plants” in the United States and “delocalization” in France will cause a serious loss of jobs. Others complain that shifting production abroad will weaken labor’s bargaining power. Some also wonder whether the nation-state will be able to tax capital. If multinational location decisions are extremely

responsive to cost differences, any attempt to increase corporate taxes will be met with outflows of capital, and it will become extremely difficult to redistribute from capital to labor. Furthermore, efforts at social regulation that are redistributive in character will discourage international investment and ultimately be paid for by immobile factors: labor and farmers.

Another possibility is that once they enter a domestic economy, multinationals may actually become increasingly embedded in it. In that case, there would probably be no large responses to small price changes. If anything, firms may shift sluggishly, once they have sunk substantial resources into domestic production facilities. Paradoxically, under these circumstances the rise of multinationals may help restore the autonomy of domestic policy and reduce some of the effects of globalization. In short, the implications of multinationals' behavior for both adjustment and globalization can no longer be ignored.

How to Approach Multinationals

The questions posed here are best explored by examining the responses of multinationals to the unprecedented shifts in the U.S. dollar that started during the late 1970s and continued through the 1980s. The exercise may be broken down into several steps. As chapter 2 discusses, the first is to determine how multinationals price their products and thus whether borders still matter. If borders no longer matter, prices should experience similar changes in all markets. By contrast, if border effects remain significant, firms will be able to "price to market," that is, to set prices in response to unique domestic conditions. The next step, outlined in chapter 3, is to look at the cost shifts resulting from exchange rate changes and assess the extent to which multinationals' sourcing and production decisions are sensitive to these cost changes and whether firms

headquartered in different nations respond differently. The last step, discussed in chapter 4, is to compare the responses of multinational trade with that of arm's-length trade.

The findings presented in these chapters are primarily the result of an econometric analysis, although the discussion also draws on some surveys and case studies. This approach was taken in part to ensure that changes with important but not fully visible implications for the international economy are not overlooked. Such changes may occur in a variety of circumstances. Suppose that components imported from the United States represent a small share of the overall value of sales by U.S. multinationals in Europe, say, 10 percent, while 90 percent of their value added comes from a local source. If the share sourced locally were to drop slightly, from 90 to 89 percent, the change might not appear significant for the firm, but from the viewpoint of the United States, this could represent an increase in export sales of 10 percent, which could be highly significant. Qualitative surveys that ask executives if they are highly responsive to the exchange rate might give a completely different impression.

Another point to mention at the outset is that this study is based almost entirely on data from the United States and on the behavior of U.S. and foreign firms there. These are the most comprehensive and readily available data, but the conclusions drawn from them would obviously be more convincing if validated with other sets of data and samples.

Note, too, that for convenience we have drawn a rather sharp distinction between intra- and extrafirm trade, and between the behavior of firms and the behavior of markets. We are well aware, however, of the variety of intermediate relationships between and among buyers and sellers that help economize on transaction costs and mitigate market failures and what we have termed discontinuities. In an international context these include licensing, joint

ventures, alliances, and franchising. All are likely to increase as globalization continues.

The Findings

Our first finding is that U.S. multinationals price to market: U.S.-owned firms abroad subject their American-based costs to a markup that reflects local demand conditions. Traditional macroeconomic studies based on conventional export price equations come to a quite different conclusion, which is that U.S. exporters, unlike exporters from other major economies, fully pass through changes in their U.S. costs into their export prices. We believe that such studies have mistakenly relied on export price data, which to a great extent reflect the price at which U.S. multinational firms transfer goods to their foreign subsidiaries, rather than the price that multinationals charge to their final customers. In ignoring the role of multinationals, the price elasticity estimates obtained using aggregate trade volumes and prices conflate three different response channels: sales of (extrafirm) exports, responding to changes in export prices; multinational (foreign affiliate) sourcing decisions, responding to changes in U.S. costs; and the U.S. component of multinational final sales, responding to changes in overall volumes of sales induced by changes in costs.

U.S. multinationals respond to changes in international relative costs in both their pricing and their sourcing decisions. Where exports are concerned, however, any shifts in volume following such cost changes reflect internal sourcing decisions rather than shifts in total sales volumes. In other words, the decision hinges on the substitutability of inputs from the United States and other countries, rather than the substitutability of the products of U.S. foreign affiliates with those of their foreign competitors.

Since the internal sourcing elasticity is similar in magnitude (that is, about $1\frac{1}{2}$) to the final demand elasticity obtained for exports, it turns out that the specification used by conventional modelers actually performs reasonably well in prediction. But if this response were different, ignoring these distinctive channels could be a costly forecasting mistake. Moreover, by interpreting the pricing behavior as a complete pass-through into final prices, researchers could erroneously conclude, first, that U.S. managers are basically different, or that nationality matters; and, second, that U.S. firms are unable to price to market either because these markets are so open that market segmentation is impossible or because U.S. firms have no pricing power.

Since price data are not available for the final sales of U.S. multinationals, we use the novel approach of inferring pricing behavior from price-cost margins. Our conclusion that U.S. firms do price to market suggests that globalization has actually not eliminated the ability of firms to price-discriminate. This suggests that they retain residual pricing power and that markets are sufficiently segmented to prevent arbitrage.

If treated with caution, the price-cost margins that we generate can also be used to measure the degree of competition faced by U.S. multinationals. In theory, these margins would be expected to decline over time in an increasingly competitive world economy. In fact, these margins declined substantially between the 1960s and 1970s—when firms from other developed countries converged to U.S. technological levels and in response U.S. firms reduced the pricing premiums they once enjoyed—but since then the process does not appear to have continued. This suggests that the international maturation of U.S. multinationals was already fairly advanced by the mid-1970s.

The fact that firms from many countries do price to market implies that exchange rate changes are not always fully passed

through into the prices paid by consumers. This serves to reduce some of the demand-side responses in the adjustment process, but it also means that exchange rates lead to shifts in profitability, which in turn eventually lead to adjustment on the supply side, but over longer periods of time.

Our second finding, as explained in chapter 3, is that the international sourcing decisions of U.S. multinationals do reflect international relative costs. But they are also related to a nation's underlying technological capabilities and to the length of time that multinationals have been present in the domestic economy. Indeed, multinationals are far more local than one might suspect. At least in developed countries, the source of about 90 percent of the value of their final sales usually resides in the local economy. This is true both for the foreign affiliates of U.S. firms in developed countries and for the U.S. affiliates of firms headquartered outside the United States. In developing countries the share that local sources contribute to final value is much smaller, although the longer that multinationals stay in the country, the higher this percentage is likely to be. This supports the notion that multinationals are not distinct enclaves. Although they might transfer know-how and certain key inputs internationally, over time they become deeply embedded in the local economy. Even in the case of Japanese multinationals in the United States, which used to source a high share of value added from Japan, this practice ceased in the 1990s. The earlier high Japanese share therefore probably reflected the recent vintage of the investment and the strong dollar rather than its national origins.

The degree to which multinationals add value locally is also a function of the capabilities of the country in which they operate. The more advanced the country, the higher the share of value added locally. Cheap labor is therefore not the preponderant determinant of investment by these firms, although there may be some

labor-intensive industries and firms for which this is the case. In other words, the less developed the country, the higher the share of value added produced in the United States.

Our third finding is that the responses of intrafirm trade to exchange rate changes are both more rapid and larger than those of extrafirm trade. This result suggests that search, deliberation, and other transaction costs play a crucial role in the international adjustment process, and that multinational firms enjoy particular advantages there. The different lag structures for income and price effects indicate a qualitative difference between actions that are replicative and those that require search, deliberation, and adjustment. When demand increases, the firm must simply increase the scale of its behavior. Its major concern is sufficient capacity. To be sure, such adjustment could take time if capacity has to be built, but there will be little uncertainty associated with how to expand. When demand falls, the response is even more straightforward. It may be painful to reduce production, but there are no serious questions about how it should be done. By contrast, when prices change, the firm may have to change its behavior: it may have to search to find new suppliers; appraise which of several suppliers is most suitable; determine whether suppliers will be reliable and compatible with the rest of its operations; and change product designs and production to make use of the new supplies. All of these decisions will take time, and because of the risks and uncertainty associated with them, adjustment is likely to be gradual and to take place in stages. New suppliers might be given some trial orders and evaluated until sufficient experience is built up. It should therefore come as no surprise that the adjustment to price changes will take longer than adjustment to income changes.

As just mentioned, multinational firms appear to have certain advantages when the adjustments are on the international plane. Their extensive relationships, in particular, facilitate search and deliberation and reduce adjustment risks. Accordingly, they might

be expected to adjust more rapidly, particularly in response to price changes. By contrast, progressive and gradual switching is more typical of arm's-length responses.

Implications of the Findings

What do our results suggest about the nature of the global economy, the future of intrafirm trade, and the role of government policy?

A Borderless World?

Clearly, national borders still matter: they continue to engender and coincide with important *discontinuities* stemming from government policy, geography, and societal differences. In addition, we would emphasize the role of information discontinuities, which create search and deliberation problems for trading and manufacturing firms. Search problems—the difficulties in identifying suitable exchange partners—are likely to play a key role in the lagged responses to exchange rate changes. Both search and deliberation problems may account in large part for the small price elasticities in trade, and, more broadly, for the “home bias” observed in international trade and finance. The information discontinuity view of national borders also helps explain why firms can price to market and why trade responses to income changes are faster (and larger) than responses to relative price changes.

Contrary to the impression created by frenzied movements in world currency markets and short-term capital flows, a large part of the global economy is actually characterized by visible stickiness and considerable lags in adjustment.⁹ This accords with the mounting empirical evidence in international trade and finance, which

indicates that national borders continue to matter far more than more naïve models might imply.¹⁰ Even when exchange rate changes cause large and “permanent” shifts in relative prices, the geographic distribution of economic activity shifts slowly and hesitatingly.¹¹ Established buyer-supplier relationships appear sticky, and switching takes place with considerable lags. This does not mean, however, that at the margin both extra- and intrafirm trade and sourcing are unresponsive to shifts in income or in relative costs.

If anything, our results suggest that the two contrasting paradigms of national economies and a borderless world are incomplete and capture only part of a more complex and subtle story. The ability to exploit global markets by sourcing inputs and capital from the lowest cost locations is certainly an important part of the competitive picture. But it is only part of the story. Other competitive advantages accrue from locating close to key suppliers and from proximity to the market. These latter benefits are not easily abandoned, even in the face of substantial changes in costs.¹²

Our results also suggest that foreign direct investment (FDI) helps multinational firms bridge cross-border discontinuities. After controlling for firm size, industry, and partner country, we find that U.S. multinationals are able to respond faster and more vigorously to common exchange rate changes than most domestic U.S. firms in the same industry. Although formal border barriers, currencies, customs regulations, and the like represent obstacles for both intra- and extrafirm trade, eliminating them does not fully remove the greater transaction costs arising from differences in language, culture and behavior, or legal systems. And although the costs of gathering information about product availability and price can be reduced by revolutionary innovations such as the Internet, gaps in information concerning quality, reliability, compatibility, and trust still bedevil the deliberation process. These are all areas in which multinationals with foreign facilities are likely to have an advan-

tage. Even the routine operation of those facilities generates a set of business relationships, a continually replenished stock of information about actual prices, and detailed knowledge about the existence, location, and precise needs and capabilities of buyers and suppliers in that region. Hence the multinational enterprise is conferred with privileged access to valuable information and connections in multiple currency areas.¹³ Indeed, we can reject the view that multinationals are an impediment to trade and that intrafirm international trade is stickier than arm's-length trade, or that they are footloose entities.

The Future

A striking feature of the postwar period is that trade has grown more rapidly than incomes. Although this trend must subside when all output is traded, it is likely to continue for the foreseeable future. Also, the erosion of discontinuities inherent in globalization is likely to continue. All the same, locations and geography will not cease to matter. After all, it is unlikely that information discontinuities (particularly those relevant to deliberation) will be completely eliminated. In addition, as market competition intensifies, specialization will become increasingly necessary. Indeed in many product areas, instead of the homogenization predicted by numerous observers of globalization, differentiation is likely to result. Even without borders, local economies could develop distinctive advantages that would provide their policymakers with some autonomy.

Put succinctly, there is good reason to believe that the "home bias" will be less marked over the next decades, but it will not disappear in our macro patterns. Distance will still continue to play a disproportionately larger role in international exchange than that suggested by the associated costs of transportation and telecommunication.

Market versus Intrafirm Trade

As border barriers and discontinuities continue to shrink, both intra- and extrafirm international trade will increase, but it is unclear which of these will grow faster. Non-U.S. multinationals expanded their economic activity considerably between 1985 and 1995, and their international, intrafirm shipments will in all likelihood become even more important in world trade. But the U.S. experience—especially the lack of change in intrafirm trade as a share of total U.S. trade between 1985 and 1994 (see table 1-1)—suggests that this growth may plateau.

Although multinationalization has expanded intrafirm international trade, another powerful trend, “marketization,” has been helping to reduce it. More and more large firms are downsizing, performing only their core activities in-house and all other activities outside the firm. This development is being abetted in part by heightened competition, which may reduce the edge firms have in certain activities and force them to go outside to regain it. Technological innovations also induce outsourcing, particularly through reduced search costs. With the Internet, for example, buyers and sellers can find one another far more easily and cheaply than ever before. This allows smaller and more distant suppliers to find customers that were too expensive to locate in the past. And buyers are more likely to find products that are matched to their needs.

Globalization has also brought increased variety. As Adam Smith taught, the larger the market, the greater the potential for specialization. An expanding market provides a wider array of differentiated products, which are more likely to meet the needs of producers, who will therefore prefer external purchases. A market that offers greater choice and reliability also increases the advantage of sourcing flexibility, particularly for components that are more or less standardized.

Table 1-1. Intrafirm Shares in U.S. Manufacturing Exports Accounted for by U.S. and Foreign Multinational Enterprises, 1966-94^a

	Year				
	1966	1977	1985	1989 ^b	1994 ^c
Percent unless stated otherwise					
<i>Exports</i>					
<i>U.S. manufacturing exports</i>					
Total value in millions of current dollars	22,088	91,946	164,381	272,260	435,991
Total	100.0	100.0	100.0	100.0	100.0
Shipped by U.S. parents in manufacturing	62.0	73.4	72.1	62.8	56.2
To their majority-owned foreign affiliates	24.2	28.0	32.3	29.0	26.5
Shipped by U.S. parents in wholesale trade	6.4	10.9	12.1	5.8	5.5
To their majority-owned foreign affiliates	0.9	0.7	0.5	0.6	0.8
Shipped by U.S. manufacturing affiliates of foreign parents	n.a.	3.9	7.8	11.7	11.1
To their parents and affiliates	n.a.	1.5	2.2	4.9	5.4
Shipped by U.S. wholesale trade affiliates of foreign parents	n.a.	3.1	4.0	6.8	7.1
To their parents and affiliates	n.a.	1.9	2.3	4.6	4.9
Shipped by other U.S. entities	n.a.	8.7	4.0	12.8	20.1
Total intrafirm share in U.S. manufacturing exports excluding petroleum and coal products	25.1	32.1	37.3	39.1	37.6

Source: Authors' estimates based on data from U.S. Department of Commerce, *Statistical Abstract of the United States, 1971, 1995; Trade and Employment, various issues*; U.S. Department of Commerce, Bureau of Economic Analysis, *U.S. Direct Investment Abroad* (henceforth *USDIA*), various issues; *Foreign Direct Investment in the U.S.*, various issues.

a. Excluding petroleum and coal products.

b. U.S. exports by U.S. parents in 1989 and 1994 have been adjusted down to avoid double-counting of exports made by U.S. affiliates of foreign parents.

n.a. Not available.

Another critical factor in today's markets is the reduced cost of pricing. Current information technology makes it cheaper to attach prices to commodities and contingencies. Whereas the need to reduce risk through diversification once drove firms to form conglomerates, today a dazzling range of markets for securities and derivatives makes it possible to reduce risk through markets rather than through firms. Although the large corporate groups operating in many countries indicate the advantages of internal intra-group allocation of capital when financial markets are underdeveloped, more and more small firms are raising capital externally. To be sure, the pressures for more precise pricing come from increased competition (owing to changes in policy such as deregulation and the reduction in trade barriers), but the role played by technology in facilitating these changes should not be underestimated.

An equally important force is the pace of change in technologically dynamic areas. In slow-moving industries, firms can innovate internally, but if they need to produce complex products containing a wide range of ever-changing components, there is a clear advantage to outsourcing components and services in which the firm is not a leader. Smaller firms with narrowly focused R&D efforts may then step in to fill this role.

The new information technology is also making manufacturing systems more flexible. A major driving force in the industrial revolution was the achievement of scale economies through the production of standardized products in large plants. Information technology on the plant floor not only increases product variety but permits smaller firms to produce at efficient levels, thereby making, in many settings, plant or product scale less important.

Yet another benefit of technology is that it reduces the need for proximity. Instantaneous and inexpensive communication and transportation make it more possible to take advantage of alternative sourcing possibilities, both domestically and internationally. Suppose that labor in a particular area is too expensive to undertake

data processing there. With modern technology, the work can easily be done in distant locations, either in a firm's own plants or in foreign plants.

In sum, with greater policy liberalization, capability convergence among firms in different nations, and advances and specialization in technology, two developments are taking place: (1) firms are becoming increasingly multinational, and in the process stimulating a growth in intrafirm trade; (2) the (international) market is becoming more attractive, and the role of extrafirm trade is growing as well. In the case of the United States, these trends appear to have increased at relatively similar speeds over the past two decades. It is hard to predict whether this relationship will change in the future.

Policy

In much of the world, the current trade policy agenda rests on the assumption that border and nonborder policies continue to inhibit international integration. Therefore its aim is to reach new international agreements that reconcile different national policies so that the benefits of international integration can be more fully realized. This is the reason for the push for new rules for standards, foreign investment, and competition policy in multilateral forums such as the World Trade Organization (WTO) and the Organization for Economic Cooperation and Development (OECD) and in regional settings such as the European Union and Asia-Pacific Economic Cooperation (APEC). If markets are already highly integrated, however, then the potential benefits of additional integration may not be large. Since these agreements are often surrounded by controversy, it may not be worthwhile to expend the political capital that may be required to achieve them. Indeed, according to some observers, "globalization may have gone too far," and it may

be necessary to take steps to restore a greater degree of national autonomy.¹⁴

This study provides support for continued efforts to enhance the contestability of international markets through international agreements on investment and competition policies. The evidence that multinational firms can price to market suggests that international competition remains less than perfect and that international markets continue to be segmented.

Policies that would liberalize international investment will also find support here. Although the case for free trade has been widely accepted, the case for free direct foreign investment is still being debated.¹⁵ Some who favor import liberalization continue to advocate restrictions or conditions on foreign direct investment. In the view put forward here, such conditions could reduce the benefits from international integration. When an innovation occurs, there will be gains to producers who can realize profits and to consumers who can obtain products that are superior to or cheaper than those they can obtain elsewhere. The conventional method for exploiting these opportunities, when producers and consumers are located in different countries, is the arm's-length transaction that occurs through trade in the international marketplace. In many circumstances, however, the market may not be the most efficient mechanism for such transactions. Markets work well when contracts can be written cheaply, products specified precisely, and prices easily provided. These properties will lead firms to deal at arm's length. But when these attributes are absent, markets are less effective.

Even if know-how is best developed in a particular market, it may still be best exploited close to the ultimate buyer, or at a location in which production costs are cheaper. Although licensing such know-how is certainly an option, for various familiar reasons it will at times be impractical or too costly to do so. In such cases, efficiency is best served by international transfers within the firm. Countries that deny themselves access to foreign investment reduce

not only the returns to such innovations abroad, but also their own opportunities to benefit from such innovations. They will lose the textured flows of information and knowledge that can be channeled within firms. Either they will never gain access to such innovations, or they will do so at a higher cost.

Concern about the behavior of multinationals has led some observers to advocate control of foreign direct investment.¹⁶ These firms, they fear, will remain enclaves and fail to transfer their key technologies to the local economy. Or they will tend to be footloose and less loyal than local firms in response to unfavorable developments. They may even stifle the international adjustment process. Our findings suggest these concerns may be misplaced: if countries offer attractive conditions for production, most multinationals will respond with increased domestic value added. Multinationals have strong reasons to retain a local presence, and their ability to respond to and evade local taxes and other redistributive measures will be limited. To reiterate, over time they will become increasingly embedded in the local economy. Furthermore, their behavior appears to be driven more by rational profit-maximizing goals than by nationalistic considerations.

A considerable body of econometric evidence indicates that price elasticities in international trade are low, between 1 and 2. This implies that fairly large changes in relative international prices may be required to effect large transfers of savings internationally. Whether it is more efficacious to effect international transfers of savings through changes in the nominal exchange rate or in domestic prices remains a controversial issue that is beyond the scope of this study.¹⁷ For our purposes, it suffices to say that multinationals do not impede the process. Other things being equal, their responses appear more sensitive to cost changes than those of market transactions between unrelated parties.