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1 The Surge in Foreign Direct Investment in the 1980s

Edward M. Graham and Paul R. Krugman

From the early 1970s until the mid-80s, most measures suggested that the role of multinationals in the world economy had largely stabilized. In particular, U.S. firms in Europe were no longer growing much faster than the European economy as a whole, while many Third World countries, finding bank lending available as an alternative source of finance, tightened restrictions on investment by multinationals. Except for a gradually rising share of foreign ownership in the U.S. economy, there was little indication of a broad trend toward further globalization of firms' activities. Beginning around 1985–86, however, firms began a new wave of foreign direct investment (FDI)—that is, foreign investment aimed not simply at securing future income but also at establishing control.

The United Nations Center on Transnational Corporations (UNCTC), using International Monetary Fund data, has estimated that during the five years 1985–89, world FDI flows totaled over \$630 billion on a balance-of-payments basis. FDI on a balance-of-payments basis is a measure of changes in owners' equity in business organizations or real assets that these owners control. The \$630 billion figure cited above thus is far short of the total value of assets that came under foreign control as a result of FDI. If the ratio of owners' equity to total asset value of all FDI worldwide is equal to this ratio for FDI in the United States, then upwards of \$3,580 billion of business assets came under foreign control during the 1980s' FDI boom. During the period 1983–89, world FDI flows (expressed in U.S. dollars at current prices) grew at annual compound growth rates of 28.9 percent; world income grew at about one-fourth this rate (7.8 percent), and world trade at less than one-third (9.4 percent) (U.N. Center on Transnational Corporations 1991).

The surge in FDI after 1985 was largely a surge in investment flows among industrialized nations. The UNCTC data show that the G5 nations (France, West Germany, Japan, the United Kingdom, and the United States) were the

home (source) nations of almost 70 percent of FDI flows during this time, while nations classified by the United Nations as “developed market economies” were home to most of the remaining FDI flows. The G5 nations were also host (recipient) nations to 57 percent of these flows, and developed market nations in total were host to 81 percent. The share of FDI flows going to developing nations thus was only about 19 percent, a low share by the standards of earlier decades. Of this share, an overwhelming majority went to a small group of nations, notably Mexico, Brazil, and the Asian newly industrializing countries (NICs). (See table 1.1).

Why is the late-80s surge in direct investment important? Most immediately, FDI came to play a key role in financing international current account imbalances: in 1989, nearly half of the U.S. current account deficit was financed by inflows of direct investment rather than by more conventional short-term and portfolio investment, whereas Japan used more than two-thirds of its current account surplus for direct investment. In effect, the U.S. raised the money to pay for its imports by selling foreigners companies instead of bonds. Japan similarly used much of the revenue from its exports to acquire overseas subsidiaries instead of passive assets.

Beyond its immediate financial role, foreign direct investment implies a rising share of foreign ownership in those economies that have been its main recipients. To the extent that foreign-owned firms behave differently from those with domestic owners, this may have important long-term economic implications. Equally important, concern over how foreign firms *might* behave has inevitably become an important political issue.

Finally, the surge in direct investment is an indicator of other changes now taking place in the world economy. To the extent that we can understand this investment, it may provide valuable clues to other economic trends as well.

This paper provides some background information on and a conceptual framework for the growth of direct investment. The intention is to stimulate discussion that can be used to guide subsequent study.

The paper is in four parts. The first part reviews briefly some evidence on the growth of direct investment in the 1980s. The second part then lays out a conceptual framework for thinking about the causes and possible consequences of direct investment. The third part identifies a series of central questions regarding FDI. Finally, the last section briefly sketches some possible directions for future study.

1.1 Trends in Direct Investment

1.1.1 Measurement Issues

In principle, firms could become multinational or increase their operations abroad without any international movement of capital per se. For example, a British firm could acquire a U.S. firm with funds borrowed in the United

Table 1.1 Stocks and Flows of FDI Inward and Outward, by Region (\$ billions)

Region	Outward Stock		Rate of Growth	Inward Stock		Rate of Growth
	1980	1988		1980	1988	
United States	\$ 220	\$ 345	5.6%	\$ 83	\$ 329	17.2%
European Community (EC)	203	492	11.1	188	399	9.4
EC (excluding intra-EC)	153	332	9.7	143	239	6.4
Intra-EC	50	160	14.5	45	160	15.9
Japan	20	111	21.4	3	10	15.0
Rest of world	81	86	0.7	235	481	9.0
World total (including intra-EC)	524	1,034	8.5	509	1,219	10.9

Sources: Unpublished estimates by the United Nations Center on Transnational Corporations (UNCTC); UNCTC (1991), *World Investment Directory* (New York: United Nations); UNCTC (1991), *World Investment Report 1991* (New York: United Nations). The estimates are derived from national government sources, which use somewhat differing accounting standards. For example, Japan and several European nations do not count retained earnings by affiliates of foreign firms as FDI, whereas most other nations do. Hence, reported total inward flows do not equal reported total outward flows.

States; a Japanese firm could acquire a U.S. firm via an exchange of stock with an already existing subsidiary. In either case, there would be an increase in the share of the U.S. economy controlled by foreign firms, but no inflow of capital. Ideally, therefore, the analyst should measure the growth of multinational enterprise by looking directly at the share of each economy controlled by foreign firms rather than by looking at capital movements. Trends in globalization could then be measured from these shares.

Unfortunately, numbers on the share of economies controlled by foreign firms are spotty and lag well behind actual events. Efforts have been made to create such numbers: table 1.2 contains illustrative figures on the share of G5 economies that foreign firms control by a variety of measures. We will discuss some of the implications of these numbers below. For now, however, the important point to note is that direct information on control is both too difficult to calculate and too tardy to be useful in tracking rapid changes. In particular, the most recent available data on foreign control tend to lag from three to five years behind actual events; because other measures show a sudden increase in FDI since about 1985, this is a fatal defect.

As a result, it is necessary to rely on other measures to track recent developments. The most commonly used measure is flows of foreign direct investment, as appear in national balance-of-payments accounts.

The balance-of-payments accounts define direct investment as that part of capital flows that represents a direct financial flow from a parent company to an overseas firm that it controls. Accounting standards vary from country to country, resulting in some problems of consistency when national figures are aggregated. By International Monetary Fund (IMF) standards, however, FDI

Table 1.2 Role of Foreign-Owned Firms in G5 Economies, 1977 and 1986

G-5 Country	Percentage Share Held by Foreign-Owned Firms	
	1976	1986
United States		
Sales	5%	10%
Manufacturing employment	3	7
Assets	3	9
Japan		
Sales	2	1
Manufacturing employment	2	1
Assets	2	1
West Germany		
Sales	24	27
Manufacturing employment	18	21
Assets	N.A.	N.A.
France		
Sales	17	18
Manufacturing employment	14	13
Assets	17	17
United Kingdom		
Sales	22	20
Manufacturing employment	15	14
Assets	N.A.	14

Source: Dee Anne Julius and Stephen Thomsen (1988), Foreign-owned firms, trade, and economic integration, Tokyo Club Papers 2 (1):151-74.

Note: N.A. = not available.

consists of the sum of (1) new equity purchased or acquired by parent companies in overseas firms they are considered to control (including establishment of new subsidiaries), (2) reinvestment of earnings by controlled firms, and (3) intracompany loans from parent companies to controlled firms. The often reported *stock* of direct investment is simply not the cumulation of these flows over time.

The balance-of-payments measure of direct investment contains a number of well-known defects:

1. *Control*: The definition of a controlled firm is ambiguous. Majority control is clearly too strict a criterion, since a smaller stake may be sufficient to give effective operating control. In U.S. data, 10 percent ownership of equity by a single foreign owner is deemed to make a U.S. firm foreign; this leads to a few obvious misclassifications in the opposite direction, of which the best known is DuPont, considered foreign because of Seagram's 23 percent stake.

2. *Debt*: Only intracompany debt is counted as direct investment. Thus, if British Petroleum's U.S. subsidiary borrows directly from its U.K. parent, this

is considered a direct investment; borrowing directly on the Eurodollar market, however, is not, even if the debt is guaranteed by the parent firm. More generally, investment financed by anything other than intracompany debt or equity does not count as direct investment even if it effectively increases the share of the economy controlled by foreign firms. The assets of foreign-controlled firms in every country, even measured at book value, are thus much larger than the balance-of-payments-based measures of the stock of direct investment.

3. *Book versus market value*: While retained earnings are counted as part of direct investment, capital gains (including pure inflation) are not. In effect, direct investment is counted as historical cost. This leads to an understatement that varies substantially depending on the age of the investments; U.S. direct investment abroad is widely viewed as much more understated than foreign investment in the United States simply because it is of older vintage.¹

Because of these defects, direct investment numbers from the balance of payments are unreliable guides to either the actual extent of foreign control in any economy or the value of a country's assets abroad. Conversely, the balance-of-payments numbers have two great advantages: they are available on a reasonably comparable basis for many countries, and they usually become available within a few quarters of actual events.

The best compromise seems to be to use, where available, direct evidence on the role of foreign-controlled firms to provide a baseline, then to use balance-of-payments data as an indicator of recent developments. That is the approach followed below.

1.1.2 Trends in Direct Investment

As already noted, table 1.2 contains comparisons of share measures of foreign ownership for 1977 and 1986. Several points should be noted about these numbers. First, the numbers lag well behind events. The most recent numbers are for 1986. Since, as stated above, other evidence points to a surge in direct investment that began in 1985–86, this evidence completely misses the developments that are at the center of this paper's concern. We therefore need to use other data to infer what must have been happening more recently. Second, the numbers show no upward trend in the foreign share of either the European or the Japanese economies. The only notable change is a rise in the foreign-controlled share of the U.S. economy. The suggested conclusion is that "globalization" did not show any general upward trend before the late 1980s. We will show below that the U.S. rise may be attributed largely to a brief surge in the period 1978–81, which can be viewed as a forerunner to the later, post-1985 surge. Third, Japan has remarkably little foreign penetration. This observation will be confirmed from other data later on.

1. The U.S. Department of Commerce has recently begun to publish estimates of the stocks of U.S. inward and outward investment at current market value and current replacement cost, as well as at historical value.

Aside from the rise in foreign ownership in the United States, the data in table 1.2 provide little indication of the recent surge in foreign direct investment. Table 1.3 shows why. It provides data on flows of foreign direct investment from and to developed countries, as measured by the balance of payments. It shows that these flows were actually quite low in 1982–84; only after 1985 did the surge take place.

An even clearer picture emerges if we look at the balance-of-payments numbers in three crucial directions (table 1.4): first, the flow of direct investment into the United States; second, the flow out of Japan; third, the flow into Spain, the largest recipient of North-South direct investment within Europe. We see a brief surge in investment into the United States in 1978–81; then, a second, larger wave of investment into the United States, out of Japan, and (smaller in dollar terms) into Spain began.

Who are the foreign direct investors, and where are they investing? Table 1.5 presents a crude tabulation of the cumulative outward and inward direct investment flows from 1981 through 1988, both in dollar terms and as a share of 1988 gross national product (GNP), for a number of countries. These numbers yield five observations:

1. In dollar terms, foreign direct investment flows are dominated on both the outward and the inward side by transactions among the large, advanced nations. That is, the rise in direct investment has been primarily a North-North issue between countries at similar levels of development, rather than a North-South issue.

2. The United States has emerged as the largest destination for direct investment. This is not simply a matter of relative size; the United States has been a

Table 1.3 FDI Flows of Developed Countries, 1981–1990 (\$ billions)

	Outward	Inward
1981	\$ 46	\$ 32
1982	18	22
1983	23	23
1984	31	31
1985	50	27
1986	86	64
1987	135	108
1988	161	129
1989	201	165
1990	217	152
1981–85	168	134
1986–90	800	618

Sources: 1981–85 data: Organization for Economic Cooperation and Development (OECD) unpublished estimates; 1986–90 data: United Nations Center on Transnational Corporations (1992), *World Investment Report 1992* (New York: United Nations), 12.

Table 1.4 Key FDI Flows, 1975–1988 (\$ billions)

	Into		
	United States	Into Spain	Out of Japan
1975	\$ 2.6	\$ 1.8	\$ 0.7
1976	4.3	2.0	0.5
1977	3.7	1.6	0.6
1978	7.9	2.4	1.2
1979	11.9	2.9	1.4
1980	16.9	2.4	1.5
1981	25.2	1.7	4.9
1982	13.8	1.8	4.5
1983	12.0	1.6	3.6
1984	25.4	1.8	6.0
1985	19.0	1.9	6.5
1986	34.1	3.4	14.5
1987	42.0	4.5	19.5
1988	42.2	N.A.	34.2

Source: Unpublished estimates by the Organization for Economic Cooperation and Development.

Note: N.A. = not available.

Table 1.5 Direct Investment by Country, 1981–1988

	Outward		Inward	
	\$ Billion	% of GNP	\$ Billion	% of GNP
Canada	\$ 29.4	6.2%	\$ 3.7	0.7%
France	40.6	4.3	24.1	2.5
West Germany	47.7	3.9	8.7	0.7
Greece	0+	0+	3.5	2.5
Italy	18.8	2.3	16.1	1.9
Japan	93.7	3.3	2.6	0.1
Portugal	0+	0+	1.5	4.8
Spain	2.7	0.7	16.9	5.0
United Kingdom	120.2	14.7	53.9	6.6
United States	121.2	2.7	213.7	4.8

Source: Unpublished estimates by Organization for Economic Cooperation and Development.

substantial *net* importer of direct capital, and it ranks high even when inflows are measured as a share of GNP.

3. Japan has become a major direct investor abroad (in 1988, its direct investment exceeded that of the United Kingdom). While gross direct investment flows are still a somewhat smaller share of GNP than are those of European nations, these numbers represent a dramatic shift from Japan's earlier strong preference for short-term and portfolio investment. At the same time, Japan

remains a strikingly small host nation to inward direct investment. During the 1980s, the huge Japanese economy was the recipient of less inward investment than the tiny economy of Greece!

4. The United Kingdom apparently presents a striking picture of globalization through two-way investment flows. The country was simultaneously the largest outward direct investor and the second-largest destination; as a share of GNP, the United Kingdom's FDI ranks at the top in both categories.

5. Finally, direct investment flows to the nations of southern Europe, while minor from a global point of view, have been very significant relative to the size of those economies.

1.1.3. Direction and Composition of Direct Investment

In any attempt to interpret the aggregate trends just described, it will be important to have some sense of where the money is going. A brief look at some U.S. and Japanese data helps provide guidance.

Perhaps the most important point to make is that one should be careful about stereotyping the pattern of direct investment. Much casual discussion seems to view Japanese direct investment in the U.S. auto industry as the norm—that is, foreign direct investment is seen largely as a matter of Japanese firms with superior production skills building new manufacturing plants abroad. While this does happen, it is not the typical case. Most recent direct investment in the United States is not from Japan; most takes the form of acquisition of existing firms, not construction of new plants; and most of it is not in manufacturing.

Table 1.6 compares the sources of recent U.S. direct capital inflows and the destinations of recent Japanese outflows. While the flows from Japan to the United States are indeed large, the United States has also been a major host to FDI from Europe and Canada. At the same time, Japan has sharply increased its investment in Europe as well as in the United States.²

Information on the form of direct investment cannot be presented this simply. However, U.S. data clearly shows that greenfield plants are a quite minor part of the story. Acquisitions such as Bridgestone-Firestone or Sony-Columbia have been more prevalent than Honda-style plant openings.

Finally, direct investment is not exclusively or even primarily a manufacturing issue. For example, while manufacturing accounts for a significant share of the total inward investment into the United States and outward FDI from Japan, it is rivaled by banking and real estate. U.S. data (not shown here) reveals that while the share of the United States manufacturing sector controlled by foreign firms exceeds that for the economy as a whole, the share of banking controlled by foreign firms is much larger.

2. Although we do not show this, Europe has also become the host to significant new flows of FDI from the United States, and intra-European FDI flows have also been substantial.

Table 1.6 Percentage Distribution of FDI, 1988

Japan's Outflow		U.S. Inflow	
North America	47.5%	Canada	5.9%
Europe	19.4	Europe	53.2
United Kingdom	8.4	United Kingdom	39.0
East Asian NICs	6.9	Japan	31.9

Sources: For Japan's outflow: Ministry for International Trade and Industry. For the United States' inflow: U.S. Department of Commerce, *Survey of Current Business*, various issues.

1.1.4 Keys to Thinking about Trends

At the risk of oversimplifying, we would suggest four key facts about foreign direct investment that should guide our thinking:

1. The growth of direct investment does not look like a steady trend; instead, extended periods of slow growth are punctuated by occasional surges. Any explanation of FDI growth must explain why.
2. Direct investment flows have not simply paralleled international capital flows, either in timing or in direction. The post-1985 surge in direct investment took place at a time of stabilizing or narrowing of imbalances in current accounts; it was not simply a matter of flows from surplus to deficit countries.
3. Direct investment has mostly taken the form of acquisitions rather than of construction of new facilities.
4. Manufacturing is only a fraction, albeit a large one, of the direct investment story. The service sector is of comparable importance. Indeed, foreign-owned firms play a larger role in U.S. banking than in manufacturing.

1.2 Conceptual Issues

1.21 FDI and the Economic Theory of the Firm

Foreign direct investment is, in essence, the creation or expansion of firms that operate across national boundaries. In principle, then, the first part of economic theory that should be consulted in thinking about FDI is not the theory of international trade and capital movements but rather the theory of the firm per se. That is, the key question ought to be, why does it sometimes make sense for two factories to be under common ownership? (And why is it sometimes *not* a good idea?) If we have a clear answer to this question, it is not much of a jump to extend the answer to the case in which the two factories happen to be in different countries.

Unfortunately and somewhat surprisingly, economists have relatively little to say about why the economy is organized into firms and why the boundaries between firms are drawn where they are. For example, economists have not

been very successful at explaining why some industries are strongly vertically integrated while others are not. Why did General Motors absorb Fisher Body, while IBM has not tried to do the same for Microsoft? It turns out that this sort of question is both a deep issue and a controversial one and that existing economic analysis provides, at best, suggestive guidance.

This is too bad, because ultimately the assessment of both the prospects for and the effects of FDI depends on the economics of industrial organization. For example, Ford has reached an arrangement with Mazda (in which it owns a large stake) under which Mazda has largely taken over the design function for Ford's small cars. Will this joint dependence eventually require the merger of the two firms? If so, how will the behavior of the merged firm differ from that of the two firms from which it is created? These questions are on one side, obviously similar to issues involved in purely domestic mergers and acquisitions and, on the other, clearly unanswerable simply by looking at balance-of-payments questions.

Because the economics of the firm are so crucial to the whole issue of foreign direct investment, it is necessary to begin a conceptual discussion with a brief review of existing theory—even though this theory tends to be vague and to lack operational content. Only then can the discussion turn specifically to multinational firms and FDI.

There are two main strands in the economic theory of the firm. On one side is a set of propositions surrounding the question of the appropriate boundaries of the firm. On the other is consideration of where and how firms may expand.

Optimal Boundaries of the Firm

Market transactions have costs: the seller and buyer may have to spend time bargaining, one or the other may cheat, they may be reluctant to reveal information that would help the other, and so on. Thus, there is always some incentive to remove dealings from the marketplace and conduct them within a hierarchical organization. On the other hand, hierarchies have their own problems: rigidity and the dilution of incentives for individuals.

The standard economist's theory of the firm, originally proposed by Coase (1937) and elaborated by such modern theorists as Williamson (1975) and Hart (1989), is that firm boundaries are drawn in ways that achieve the best possible tradeoff between transaction and rigidity costs.³ Thus, by this reasoning, General Motors acquired Fisher Body because it had determined that the difficulties of doing business with an independent supplier were greater than the erosion of incentives and flexibility that would occur when Fisher was absorbed by a much larger organization; IBM has not tried to acquire Microsoft because it judges that the reverse would be the case.

When are transaction costs high enough to justify removing transactions from the market? Since transaction costs are elusive, this is a difficult question

3. Buckley and Casson (1976) pioneered the application of Coasian logic to multinational firms.

to answer. One consideration that has received emphasis, however, is that transaction costs are likely to be higher if firms must make investments that are specific to each other. Suppose that Fisher must install expensive machinery suitable only for GM cars and that GM must design cars that can only be built if Fisher delivers the agreed-on components. Then, any dispute or failure of communication between the parties will be very costly. Suppose, on the other hand, that a supplier firm's investments can be used to service any of a number of customers and that each customer can turn at any point to several suppliers. Then the costs of dispute will be low, and it will make sense to avoid creating a large, bureaucratic firm.

This logic suggests that optimal firms should group closely related activities that are strongly dependent on one another and for which effective competition does not take place at any given moment. Grain merchants do not acquire control of wheat farms; because a merchant and a farmer can always turn to other partners in the event of a dispute, the transaction costs are low. Conglomerates consisting of more or less unrelated activities do not make sense, because there are no transaction costs to save. But auto manufacturers own their stamping plants.

A clear dichotomy does not necessarily exist between market activities among firms and hierarchical organization within firms. Long-term contracts and other relationships between firms with different owners may bear little relationship to freewheeling auction markets, while marketlike incentive and control schemes exist within many firms. One economic view holds that a firm is simply a particular kind of "nexus of contracts" (see Jensen and Meckling 1976) that has proved so useful that it has become a standard form. The point of this view is that other kinds of long-term business relationships may be as durable and significant as the particular structure of firms visible at a given time. This may be an important issue in considering the impact of foreign direct investment, particularly by Japanese firms.

Finally, there is not necessarily a one-way link between technological progress and the optimal size of firms. Improvements in telecommunications and computing, to take the most obvious example, cut both ways: they make it possible for large organizations to be more flexible, reducing the disincentive to extend firm boundaries; but they also reduce transaction costs and increase the flexibility of small firms, making market arrangements more effective as well. It is an entirely open question whether firms in the year 2020 will be larger or smaller than they are today.

The Growth of Firms

While most economic analysis of firms has focused on their optimal size and activities, managers may simply be trying to make the firms they run grow. They can, of course, decide that growth is not profitable and return earnings to stockholders; or they can decide that rapid growth will be profitable even if it must be financed by large debt issues. There is overwhelming evidence, how-

ever, that corporate management is ordinarily reluctant both to part with retained earnings and to borrow; that is, they view internally generated cash flows as cheaper than funds raised on the market.

This suggests a perspective on the firm that is somewhat different from the economic analysis described above. Firm boundaries may be pushed out not so much because of efficiency gains but because the money is available.⁴

In the 1960s, the preference of firms for investment out of internally generated funds was often used as a justification for the creation of conglomerates of seemingly unrelated activities. By combining a business that yielded high earnings but offered few investment opportunities (a “cash cow”) with one that presented opportunities but low earnings (a “star”), conglomerate builders hoped to create gains. This strategy is now out of fashion: the problems with combining unrelated businesses are now apparent, and firms are enjoined to “stick to their knitting.” International expansion, however, offers firms a possible way to stick to the businesses they know while opening up new investment opportunities.

Emphasizing the role of cash in the determination of firm growth is also important in trying to explain the timing of changes in firm strategies. As we will argue below, it is difficult to make sense of the suddenness of the surge in FDI without appealing to some influence from the wealth of firms.

1.2.2 Long-Run Trends in Multinational Enterprise

Economists generally believe that there is a long-term trend toward an increasing role of multinational firms in the world economy. From the early 1970s to the mid-1980s, as seen above, there was an apparent pause in that trend—if it exists. But it is worth asking what factors might underlie a growth in cross-country ownership of firms over time.

At varying levels of generality, we might suggest four reasons for long-term growth in multinational enterprise: increasing integration of world markets, growing similarity of national markets, improved communication and control technology, and growing symmetry in the international generation of technology.

Growing Integration

Both the logic of the economic theory of the firm and experience suggest a close connection between the long-term growth of international trade and that of international direct investment. On logical grounds, if a firm is essentially a device for economizing on transactions costs, then multinational firms will normally be created to facilitate international transactions. In practice, the growth of multinational firms since World War II has accompanied a general growth in trade.

Perhaps more interestingly, the rise and decline of FDI in the pre-World War

4. Penrose (1956) emphasized the role of growth in fostering the international spread of firms.

II era paralleled the rise and decline of international trade. It is not generally realized that the trend of international trade over time has not been uniformly upward. The world economy was already highly integrated by 1914; the United Kingdom actually had a larger share of trade in national income at that time than it does today. During the interwar period, however, protectionism led to a general decline in international trade as a share of world income. Estimates by economists such as Arthur Lewis (1978) indicate that the growth of international trade from the 1940s until about 1970 simply represented a recovery to 1914 levels as a share of income and that only since then has trade risen to new heights.

The interesting point then becomes that much the same is true of foreign direct investment. Multinational enterprise played a surprisingly large role in the pre-World War I world. Many pioneering manufacturing firms quickly went multinational. In its early years, for example, Singer produced sewing machines from one plant in New Jersey and one in Scotland. At the same time that Standard Oil was integrating crude production, refining, and distribution within the United States, it was also establishing control over distribution systems and oil fields abroad. When economic nationalism fragmented the world economy in the interwar years, the importance of foreign direct investment declined. The book value of the stock of U.S. direct investment abroad was 7.3 percent of GNP in 1914. It was only 3.4 percent in 1946 and had recovered only to 6.9 percent by 1970 (see Wilkins 1970, 1989).

Since both theory and experience suggest that growth in trade should lead to growth in the role of multinationals, we would expect the continuing rise in integration of the world economy since 1970 eventually to be reflected in more multinational enterprise. In the United States, in particular, the share of imports in GNP doubled from 1970 to 1989, while the share of exports increased almost as much. One would expect this to be matched, other things equal, both by greater U.S. direct investment abroad and by greater foreign direct investment in the United States.

Again, the growth of multinational firms does not necessarily have anything to do with overall movements of capital. Consider the following example. Suppose that there is some industry (not necessarily manufacturing) that in 1975 contained five U.S. and five European firms. Further suppose that, owing either to new technological developments or to deregulation, this industry now becomes truly global, with firms able to operate and compete in all markets. This more competitive world market may be big enough to accommodate more firms than could either separate market alone, but it will probably not allow for the continued existence of ten firms; more likely it will only have room for, say, seven. Integration of the market, then, will necessarily be accompanied by a process of consolidation through mergers and acquisitions. These mergers and acquisitions will create multinational firms, and some of the associated transactions will be recorded as foreign direct investment for balance-of-payments purposes. But what is really happening is corporate restructuring, not international capital movement.

Growing Homogeneity of Markets

One factor that on casual observation seems to be a reason for growing globalization of companies is a convergence in demand patterns and other economic conditions among advanced nations. Even in 1970, the differences in wage rates, living standards, and culture among advanced nations were large enough so that a good deal of natural segmentation of markets occurred for both producer and consumer goods. For example, Europeans demanded much smaller cars and appliances, European factories slower but more flexible capital goods, than their U.S. counterparts. With the convergence since then, economies of scope from multinational operation are greater: Ford can design and market (or arrange with Mazda to develop) a world car, one sold in essentially the same form in a variety of markets. Like the increase in integration generally, convergence creates an incentive for cross-border acquisitions and mergers that reduce the number of firms in the world as a whole.

Communication Technology

This is a double-edged issue. Clearly it is easier in 1992 for a firm to coordinate the activities of a manufacturing subsidiary on another continent than it was in 1970. It is also easier, however, for the firm to coordinate activities with another firm ten thousand miles away. It is possible though not certain that technological effects have, on balance, fostered multinational operation.

Symmetry of Technology

Until the mid-1970s, the United States was in a very asymmetric position with regard to multinational enterprise: while the country had extensive investment abroad, foreign direct investment in the United States was limited. The main reason for this was probably the country's leading position in technology. Multinational firms are disproportionately concentrated in sectors with large R&D budgets and large numbers of technical personnel, presumably because transactions costs of selling and licensing technology are particularly high. It was therefore natural that the country that generated most of the world's new technology should also be the country in which most multinationals were based.

Whatever the global trend of FDI, this observation suggests that there should have been a trend toward growing foreign ownership of U.S. firms as the dominance of U.S. technology faded from 1970 to 1990. That this trend was not more apparent before 1985 should perhaps be surprising.

For some or all of these reasons—and certainly because of the growth of world integration on other dimensions—a long-term trend toward greater cross-country ownership of firms is not a surprise. What needs explaining is why, instead of a steady trend, we have seen pauses alternating with surges, especially the great surge after 1985.

1.2.3 Surges in FDI

While there may have been a long-run trend toward increasing FDI flows, the most apparent feature of the data is the existence of two huge surges in investment, one from 1978 through 1981 and the second since 1986. Whatever the long-run factors underlying the growth of FDI, any explanation of recent events must cope with this apparent tendency toward sudden surges.

Three main explanations have been proposed for these surges in FDI: fluctuations in relative cost of capital, associated in particular with exchange rate fluctuations; changes in taxation; and actual or prospective changes in tax policy.

Valuation Explanations

World financial markets have become increasingly integrated since the 1970s. In two major ways, however, this integration has fallen short of completion. First, for reasons still unclear, *equity* markets are not all that closely tied together; international diversification of stock portfolios remains limited. Second, firms continue to regard internally generated money as cheaper than external borrowing (which also remains true in domestic markets). As a result, the valuation of a given asset can differ substantially for firms based in different countries. Above, we argued that, to some extent, the growth of firms is driven not by considerations of optimal organization but by the efforts of managers to find a use for available funds. Systematic differences in valuation between countries can therefore play a role in determining the pace of foreign direct investment.

How does this help make sense of surges in FDI? Because particular shocks that differentially affect the prices that firms based in different countries are willing to pay for assets, or that affect the ability of firms in one country to buy assets abroad out of available cash, can lead to surges in FDI even if there is no deeper reason for a further extension of multinational enterprise. We look for such shocks.

The U.S. experience suggests one obvious candidate shock: the exchange rate. Both the 1978–81 and the post-1986 surges of direct investment into the United States coincided with periods of dollar weakness. While a weak dollar may make U.S. assets attractive, it should do so for both foreign and domestic firms. Thus, in principle, it need not encourage foreign direct investment. If firms are cash constrained, however, a fall in the dollar means that yen and pounds go further in buying U.S. assets; the fall thus encourages a wave of inward investment. Froot and Stein (1991) provide both a simple theoretical model that justifies a role for the exchange rate and some rough empirical work that confirms a strong correlation between dollar fluctuations and FDI into the United States. The surge in Japanese direct investment abroad since 1986 also corresponds to a record high for the yen.

Other factors may also affect direct investment via valuation effects. The

high Japanese stock market pre-1990 may have made it easier for Japanese firms to invest abroad. Also, international differences in savings rates, which are generally understood to drive overall capital flows, may have some influence on direct investment via the cost of capital. There is a crude correlation between current accounts and FDI: the United States became the world's largest destination for FDI in the same decade (though not at the same time) that it became the largest-deficit nation; after a lag, Japan's emergent current surplus was followed by large FDI. On the other hand, the peculiar position of the United Kingdom and the general presence of large two-way flows in Western Europe argue against a general emphasis on savings rates and the overall cost of capital.

Tax Changes

Scholes and Wolfson (1990) have pointed out that shifts in U.S. tax laws during the 1980s first acted to discourage foreign ownership, then removed this bias. The argument runs as follows: The accelerated depreciation introduced in 1981 was generally worth more to a U.S. based firm than to a U.S. subsidiary of a foreign firm, because most foreign governments tax repatriated income of firms, with a credit for taxes paid to foreign governments. A tax break from accelerated depreciation, which is a pure benefit to a domestically owned firm, is partially offset by the reduced future tax credit for a foreign-owned firm. So accelerated depreciation, other things being equal, discouraged foreign ownership. U.S. tax reform in 1986 removed this bias. Scholes and Wolfson point out that the timing of these changes helps explain the end of the 1978–81 FDI surge and the onset of the post-1986 surge.

If this explanation has any validity, it should have some explanatory power across industries. For a variety of reasons, effective rates of corporate taxation vary considerably across industries; the Scholes-Wolfson argument says, counterintuitively, that foreign ownership should be larger in industries with relative *high* effective tax rates. Work by Swenson (1989) confirms that this is true for the U.S. manufacturing sector.

It is probably true that taxation plays an important role in multinational enterprise more generally. Unfortunately, international corporate taxation is an extraordinarily complex subject that yields few clear answers.

Trade Policy

Obviously, at least some FDI is motivated by actual or prospective changes in trade policy. On one side, some direct investment is clearly aimed at avoiding actual trade barriers or forestalling prospective barriers. Japanese television firms set up operations in the United States in the late 1970s in response to a voluntary export restraint (VER); Japanese auto manufacturing operations in both the United States and Europe have been motivated at least to some extent by actual and prospective trade restraints. On the other side, actual or prospective improvements in access to markets have motivated direct invest-

ment; manufacturing investment in southern Europe has clearly been stimulated by the combination of EC enlargement and the Europe 1992 program.

Can changes in views about trade policy be a major explanation of the surges in FDI since 1985? It seems unlikely. The most telling counterargument is that trade policy issues apply most obviously to manufacturing, while the surge is not concentrated in manufacturing investment.

Summary

Conceptual discussion of FDI trends tends to be unsatisfying, for a good reason: the central conceptual issues in FDI are the same as those of corporate restructuring in general and are equally elusive and problematic. The discussion yields three main points.

First, direct investment should be thought of primarily as an issue in industrial organization, not in capital flow. That is, analysis should focus more on the reasons why multinational firms exist and have advantages than on the international flows of money per se.

Second, it is relatively easy to explain a long-term trend toward greater cross-border ownership of firms. It is not clear that technological change per se necessarily encourages further growth of multinational enterprise, but the growing integration of the world economy certainly does. In fact, explaining a long-term trend is, in a way, too easy, since the observed history since 1970 has been less of a steady trend than of occasional surges.

Third, then, explaining these surges is the biggest conceptual and, in turn, empirical problem. That is, observation of broad trends toward globalization is easy; it is explaining why these trends suddenly came to a head in the third quarter of 1986 that is hard.

1.3 Key Questions Regarding Foreign Direct Investment

What questions most need to be answered about foreign direct investment? We would propose three, all of which are, of course, interrelated. First, why now? Why were the late 1980s marked by so much increase in FDI? Second, what are the prospects for further FDI? Will the boom continue? Will it move in new directions (e.g., to Eastern Europe and the Third World)? Finally, what are the effects of foreign direct investment? Are there any risks that will require or, at any rate, provoke a policy response?

1.3.1 Why Now?

This question, already reviewed in the previous section, is deliberately posed as a question about recent events rather than a more general one. Explaining a long sweep of multinational expansion is easy and has probably been overdone. What we confront instead is the problem of explaining a rapid growth in a fairly short period. Was it the exchange rate movements following

the Plaza Accord? Was it the prospective formation of regional trading blocs? Tax reform? Or did ongoing gradual trends simply reach some kind of critical mass?

An unsettling possibility is that foreign direct investment may to some extent reflect irrational follow-the-leader behavior. Think of FDI for a moment as financial restructuring, not that different from domestic waves of corporate realignment. Then ask how well economists understand the wave of conglomerate formation in the 1960s or the wave of acquisitions and buyouts of the 1980s. The era of conglomerates in particular looks like a case of financial fashion, which is now condemned as misguided. Is the enthusiasm for buying U.S. firms any better grounded?

A related, equally unsettling possibility is that the wave of FDI in the late 1980s was a symptom of a worldwide epidemic of moral hazard in financial markets. It has become increasingly clear that financial deregulation after the late 1970s, while eliminating one set of distortions, led to new and perhaps worse ones. Financial institutions found themselves free to take risks with funds that were explicitly or implicitly guaranteed by their governments and, at the same time, found that they were no longer deterred from risk taking by the desire to safeguard the valuable “franchises” formerly created by barriers to entry. The best-known example of the new incentives to questionable risk taking is, of course, the U.S. thrift industry. It is arguable, however, that Japanese financial markets, led by thinly capitalized banks exposed to new competition, represent an even bigger case of moral hazard at work. In that case, much of the surge in foreign direct investment may have represented not an efficient movement toward globalization but a kind of side effect of the unraveling of the world financial system.

1.3.2 Prospects?

Our guess at the prospects for FDI is closely related to our assessment of its causes.

Two of the most influential proposed explanations of the surge in FDI since 1985 strongly suggest that some of that surge may have represented a temporary bulge and that the pace was inevitably going to slacken. If the valuation story is right, the combination of a low dollar, a high yen, and a sky-high Nikkei played a major role in generating large FDI flows into the United States and out of Japan. Even if these conditions had persisted, there would have been a natural slowing of the flow as the more obvious investment opportunities were exhausted. Given the financial developments of 1990 to date, we should have expected a sharp cutback in foreign direct investment—and indeed we have.

The tax story also suggests a limit. It basically posits a pent-up demand for ownership of U.S. firms from 1981 to 1986, held back by discriminatory tax treatment, and then a wave of investment when the tax laws were changed.

Once opportunities have been exploited, however, one would expect to see the pace slow.

On the other hand, if there are deeper trends that simply happened to come to a head in the late 1980s, the surge in FDI could resume.

Prospects for North-South and potential East-West FDI are equally problematic. Consider the following two plausible arguments:

1. Large FDI flows to southern Europe represented a one-time shift of production in anticipation of increased access to the European market and will not be repeated.

2. The growing unity of Europe and multinational operation of its firms will lead to a continuing shift of manufacturing to lower-wage areas on Europe's periphery, implying high rates of direct investment in southern and perhaps eastern Europe for a number of years.

Either of these arguments could be right; they have very different implications.

To make an assessment of prospects, it is necessary to answer the first key question about the reasons for the recent surge in FDI, then use that answer together with other information to make a forecast.

1.3.3 Effects?

The balance-of-payments implications of foreign direct investment are relatively straightforward. FDI flows have helped finance the U.S. current account deficit and recycle the Japanese surplus. They have actually posed a dilemma for Spain and Portugal, which have tried to maintain stable exchange rates while controlling inflation and have found the job difficult in the face of direct capital inflows.

Beyond the balance-of-payments effects, the longer-term question is whether and how foreign-owned firms will behave differently from domestic ones. The fear once expressed in Europe about U.S. firms and now expressed in the United States about Japanese and (to some extent) European firms is that these firms will use their operational control to the detriment of the host country. Accusations by critics such as Prestowitz (1988) and Tolchin and Tolchin (1988) are that foreign-owned firms in the U.S. will shift high-wage jobs and high value-added production to the parent company and shift sophisticated activities such as R&D abroad. The result will, so these critics assert, be to reduce the growth rate of the host economy.

Such concerns are not absurd in the light of theoretical analysis. Multinational firms are created for a reason; they are more than the sum of their parts, and their subsidiaries therefore ought to behave differently from purely domestic firms. It is not implausible that this difference in behavior might include hiving off some high-level activities to the parent firm. On the other hand, it is not certain either: the conceptual foundations of discussion about FDI are fuzzy enough to allow many hypotheses.

Available empirical evidence does not confirm the critics' fears. Studies by Graham and Krugman (1991) and by Julius (1990) basically find that foreign-owned firms behave very similarly to domestically owned firms in the same industry. They pay similar wages, engage in similar amounts of R&D, and so on. The only clear difference is a tendency to buy inputs from home suppliers, leading to a higher import propensity on the part of foreign-owned manufacturing firms. This tendency, however, appears to decline as investments become more mature.

Will this similarity in behavior continue? This question would of course be easier to answer if we knew why so much investment is now taking place and what its future prospects are.

1.4 Studying the Issue

What approach is most likely to help us answer the key questions just described? The standard answer is theoretical analysis of the basic motives for multinational enterprise, backed by econometric testing of hypotheses. There are, however, two difficulties with this standard approach.

First, the theoretical analysis of the boundaries of the firm—what the question of multinational enterprise is really about—is a deep issue, one on which economists have made only modest progress. In a fundamental way, it involves concerns about bounded rationality that are at present beyond the limits of our formal understanding. So it is unlikely that theorists will produce really convincing models of FDI anytime soon.

Second, econometric work is also likely to be difficult, in part because the theoretical base is limited. There are also practical difficulties. Aside from problems with the data, there are simply limits to how much can be accomplished via statistical inference—especially when subtle issues regarding the restructuring of firms are involved. Clearly, room exists for an alternative approach.

The immediately apparent alternative is, to *ask* them what they are doing and why, instead of trying to infer the motives and behavior of firms from poorly suited data. There are some known problems with this approach, but in conjunction with the ongoing process of more formal analysis, it could be very useful.

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Comment Kenneth A. Froot

Monty Graham and Paul Krugman have provided a useful overview of broad direct investment issues. Their most penetrating point is that temporary surges in FDI are more puzzling than the long-term trends in FDI. They consider three possible explanations for these surges: valuation effects, taxation, and trade policy. I want to comment briefly on this list and add several other explanations which I think are also important.

One plausible way that valuation effects might affect foreign investment behavior is discussed by Froot and Stein (1991). They argue that if external sources of finance are more expensive to corporations than are internal sources, negative shocks to relative domestic wealth can raise the cost of capital to domestic bidders for corporate control. This in turn leads to a decline in domestic reservation prices relative to those of foreigners. As Graham and Krugman mention, the exchange rate is merely one among many variables which

can transmit changes in relative wealth. Increases in internal liquidity (due, for example, to past profits) or increases in stock market value can also raise relative corporate financial slack and thereby lessen a corporation's reliance on expensive external financing.

Unfortunately, there is relatively little systematic testing of this hypothesis outside of that using the exchange rate. Since the FDI time-series samples are so short, exchange rates alone probably cannot provide convincing evidence that valuation stories are correct. Nevertheless, as Graham and Krugman suggest, the fall in both Japanese outward FDI and Japanese stock prices during the 1990–92 period provides additional casual evidence that wealth effects do matter.

Another possible explanation of the recent surge in worldwide FDI—one which Graham and Krugman do not consider—is the dramatic change in corporate financing techniques. In particular, during the late 1980s, the junk bond market matured and then partially collapsed. Bank lending for the purposes of acquisitions and mergers also increased significantly over this period. Is it possible that these innovations actually had a substantial influence on worldwide FDI?

To answer this question, let us look at the most conspicuous features of the recent FDI surge. First, the fraction of direct investments which took the form of a merger or acquisition increased, particularly in countries such as the United States. Second, the decline in importance of greenfield FDI in part made FDI an increasingly North-North phenomenon, as North-South flows grew considerably more slowly. Third, the fraction of the acquisition price raised externally by the foreign acquirer increased substantially over this period. These facts are all consistent with the hypothesis that there have been important innovations in the corporate capital markets which have allowed takeovers to occur more easily and to rely more heavily on external financing. Corporate control is now a traded asset as never before. Indeed, the same capital market innovation hypothesis is frequently used to explain the rise of U.S. domestic takeover activity during the late 1980s. Foreign multinational firms are likely to have similar access to these financing innovations.

The financial-innovation story is interesting in that it does not necessarily lead to a temporary surge in takeover activity—FDI may be permanently increased as a result. While there may have been some pent-up demand released when these innovations were initially popularized, junk bonds and highly leveraged financing are here to stay as corporate financing alternatives. As a result, companies will remain likely to undergo a takeover whenever management systematically underperforms or whenever other bidders have some reason to value an ongoing business more highly. The hope is that a permanently higher level of M&A activity (domestic as well as foreign) may increase the average level of efficiency across the corporate sector.

A second issue, which Graham and Krugman touch upon only briefly, is that surges may be caused by follow-the-leader behavior. It is important to empha-

size that such herding outcomes can be the result of rational decision making and that they may lead to multiple equilibria. For example, if Coca-Cola decides to pursue direct investment opportunities in the Third World, Pepsi-Cola may rationally follow. Even if the investment is a risky one, Pepsi's managers may wish to follow Coke. By following the leader, Pepsi's risks remain about the same as Coke's, which may help minimize the *relative* risk of underperformance of Pepsi's managers vis-à-vis Coke's. Managers may attempt to achieve outcomes correlated with a benchmark when their skill (and ultimate pay) is evaluated relative to that benchmark. (For a model along these lines, see Scharfstein and Stein 1990). Naturally, such correlated choices create the possibility of multiple herding equilibria.

Another reason that management may rationally herd is that firm value may be maximized through correlated strategic choices. If firms minimize costs by smoothing production over time, then strategies which involve large fluctuations in output may be dominated by strategies which offer a lower return but a more predictable level of output. Thus, a firm may follow the leader for many types of foreign investment strategies (even when the strategy offers relatively low return). However, this hypothesis also implies that there are limits to the herding: firms do not follow a leader who chooses a very "risky" strategy which has highly variable output over time.

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Discussion Summary

Karl Sauvart began by questioning whether the recent experience reflects a sustainable increase or just a surge. Recent liberalization of policy toward investment, especially in services, may explain the recent increase and, if so, this will continue. He made several other points about FDI. First, it is a cumulative process: the stock of \$1.7 trillion at book value means that just the reinvestment of earnings will generate substantial continued FDI. Second, the LDC share has declined from 30 percent to 20 percent, but this may reverse because Mexico, Argentina and India have become more open; also, some LDCs such as Taiwan and South Korea have become FDI exporters. Finally, the recent decline in the flow of FDI may be due to the fact that the inflow to the United States has declined because of the recession in the United States.

Robert Feenstra asked whether high U.S. interest rates in the early 1980s could have hurt FDI in the United States.

Robert Lipsey then cautioned about the use of balance-of-payments data on FDI. Those data may record an outflow even as the stock of FDI is increasing.

Rachel McCulloch suggested that the apparent follow-the-leader pattern may reflect rational learning from the experience of the firms that went earlier. She cautioned that the annual flow variations can be dominated by the experience of a small number of firms.

Martin Feldstein observed that national governments may adopt market access policies that cause foreign firms to invest that would not do so if they could produce elsewhere and import. This is particularly true for firms in the pharmaceutical industry, but it can extend to any industry where firms want to sell to the government. FDI may be the price of access to certain domestic markets. *Feldstein* believes that much of the two-way FDI can be explained by the fact that the firms involved are selling intermediate products and have to go where their customers are because of the nature of supplier-buyer relations. This is true whenever it is advantageous to be near the buyer to participate in ongoing design activities or to provide product on a just-in-time basis.

Edward Graham stated that 80 percent of FDI in the United States is financed locally in the United States.

Raymond Vernon added that multinationals' share of current account transactions has increased substantially and is now an overwhelming share of total U.S. exports.