Volume Title: International Capital Flows

Volume Author/Editor: Martin Feldstein, editor

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-24103-3

Volume URL: http://www.nber.org/books/feld99-2

Publication Date: January 1999

Chapter Title: The Role of Foreign Direct Investment in International Capital Flows

Chapter Author: Robert E. Lipsey, Robert C. Feenstra, Carl H. Hahn, George N. Hatsopoulos

Chapter URL: http://www.nber.org/chapters/c9801

Chapter pages in book: (p. 307 - 362)

6 The Role of Foreign Direct Investment in International Capital Flows

1. Robert E. Lipsey
2. Robert C. Feenstra
3. Carl H Hahn
4. George N. Hatsopoulos

1. Robert E. Lipsey

6.1.1 Introduction

The purpose of this essay is to provide some quantitative historical background to the question of what role direct investment plays in the broader story of international capital flows. The essay examines whether that role has changed over time, or changed for some groups of investing or receiving countries, and how that role differs among countries and types of countries.

International flows of capital perform a variety of functions in the world economy. For example, they permit levels of domestic investment in a country to exceed the country's level of saving. That has been the case for the United States for the past fifteen years and for most of the past twenty-five years. For rapidly growing economies, such as the United States and Argentina in the nineteenth century, inflows of foreign investment permit faster growth, or growth with less sacrifice of current consumption, than could otherwise take place. For countries generating large amounts of saving, international capital flows provide a means to invest where returns are higher than at home, as was the case for Great Britain in the nineteenth century and for Japan more recently.

These are long-term uses of what are, in some cases, prolonged periods of capital flow into or out of particular countries. Shorter periods of capital flow may serve some different functions, such as smoothing various types of cyclical or other economic fluctuations. For example, Edelstein (1982) has sug-

The author is indebted to Shachi Chopra-Nangia and Ewa Wojas for able research and statistical assistance.

gested that while inward capital flows to the United States during the nineteenth century were not large relative to domestic capital formation over long periods, they were much more important in shorter periods when capital formation spurted far ahead of more slowly growing saving levels, financing booms in capital formation that might otherwise have been strangled by rising interest rates. Countries heavily dependent on particular crops need capital flows to finance periods when crops fail or when crop prices fall drastically, permitting consumption, and perhaps capital formation, to be at least partially sheltered. International capital flows can also help to finance periods of war or of reparations, sometimes resulting from defeats in wars.

When these uses of international capital movements are studied, the flows of capital are usually measured net, as the difference between outflows and inflows, rather than by examining outflows and inflows separately. That is partly out of necessity, for lack of gross flow data. Most international capital flows during the nineteenth century are approximated by estimates of the net balance on current transactions, where it can be estimated, or even by the merchandise trade balance, where it cannot. One exception to this rule is that there have been many studies of flotations of foreign securities during the nineteenth century, particularly in the British capital market. Some of the components of the balance on capital account are, even now, usually observed in the form of net outflows or inflows; the simultaneous, or almost simultaneous, purchases and sales of different types of equity, of government securities, of private bonds, and of short-term debt are not observable for many countries.

Flows of direct investment capital are an exception to this netting out of outward and inward flows; for many countries, data are available separately for outward and inward flows. Outward flows are measured as the flows involving firms based in the reporting country, although these firms can, at times, repatriate their foreign investment, producing negative outward flows. Inward flows represent the activity in the country of firms based in other countries. The division reported now by the International Monetary Fund (IMF), following this practice, is between "investment abroad" and "investment in" a country.

A possible way to explain the different treatment of direct investment, aside from the problems of collecting data, is that direct and portfolio investment are related differently to the financial markets in home and host countries. In the markets for bank loans, government securities, and private company bonds and equity, many buyers and sellers are competing with each other to supply and acquire fairly standardized types of assets with fairly well defined prices in identifiable markets. Changes in flows can presumably be associated with changes in various interest rates in markets for these types of securities. It may matter little in the French and U.K. corporate bond markets whether, for example, the U.K. demand for French corporate bonds and the French demand for U.K. corporate bonds both increase equally at the expense of demands for each country's own bonds, or both decrease equally in favor of their own countries' securities, or whether there is no change in any of these demands.

Direct investment flows, on the other hand, do not enter any general financial market. They are internal to each firm, and an inflow is not simply offset by an outflow. Each flow brings something different to a country because it is attached to a specific firm. Equal direct investments from France to Germany and Germany to France do not simply cancel each other out; there has been an addition to the stock of French skills producing in Germany and an addition to German skills producing in France. Thus a comparison of net direct investment flows with aggregate net international investment misses much of the significance of direct investment.

This contrast should not be drawn too sharply. Portfolio investment may also flow in two directions at any given time. Investors in country 1 make portfolio investments in country 2 while investors in country 2 are making such investments in country 1. They may be seeking country or industry diversification in their portfolios even if their preferences and attitudes toward risk are the same. If they are not the same, investors in one country may be indulging a greater appetite for political risk or industry instability combined with higher returns.

The flow of direct investment is very much a two-way street among the top investing countries, even though direct investment is more concentrated among source countries than among recipient countries. The top ten exporters of direct investment capital accounted for over 90 percent of the world total in 1989–93 while the top ten recipients accounted for less than three-quarters of reported inflows. Nevertheless, six of the top ten exporters were also among the top ten recipients, and two of the other top recipients ranked just below the top ten as exporters (World Bank 1997). Another distinction between the exporter and importer groups was that the exporter group was a little more stable: eight out of the ten largest exporters of direct investment capital in 1969–73 were also in the group in 1989–93, while only six of the ten largest importers were still among the ten largest importers in 1989–93.

The data for the stock of outward and inward investment, which presumably reflect the cumulation of flows over many years, show similar concentrations. The top ten holders of direct investments abroad in 1995 owned 87 percent of the world total, while the top ten host countries were the location of about two-thirds of the stock. Six of the top host countries were also among the top ten holders (United Nations 1996).

6.1.2 The Definition and Measurement of Direct Investment: Control versus "Lasting Interest"

Direct investment is often discussed as if it consisted entirely of the investment associated with multinational corporations. Such a concept would match the theoretical literature on direct investment, but the data available do not follow it. Many aspects of multinational corporation activity are not included in measures of direct investment, and all past and present definitions of direct investment include transactions that do not involve multinationals.

The definition of direct investment and therefore its measurement have changed considerably over time. Definitions and measurements even now differ among countries despite the efforts of international agencies to push for uniformity.

The United States was a pioneer in surveying both outward and inward direct investment. The object of the surveys, as described in the 1937 inward investment survey, was to measure "all foreign equity interests in those American corporations or enterprises which are controlled by a person or group of persons . . . domiciled in a foreign country" (U.S. Department of Commerce 1937, 10). The term "equity interest" encompasses all holdings of common and preferred stock, advances, and intercompany accounts. No definition of "control" is provided, but control is the criterion for inclusion.

The outward survey for 1950 does provide a definition of direct investments, "the United States equity in controlled foreign business enterprises . . . as statistically defined for the purposes of this survey" (U.S. Department of Commerce 1953, 4). Four categories were covered:

1. "Foreign corporations, the voting securities of which were owned to the extent of 25 percent or more by persons or groups of affiliated persons, ordinarily resident in the United States."
2. "Foreign corporations, the voting stock of which was publicly held within the United States to an aggregate extent of 50 percent or more, but distributed among stockholders, so that no one investor, or group of affiliated investors, owned as much as 25 percent."
3. "Sole proprietorships, partnerships or real property (other than property held for the personal use of the owner) held abroad by residents of the United States."
4. "Foreign branches of United States corporations."

Three of these categories are part of current measures of direct investment, but the second one is not. An earlier definition had been even broader, including publicly owned companies with as little as 25 percent of stock in scattered U.S. holdings. The definition of control has been narrowed to mean ownership by a company, a person, or a small affiliated group. The change eliminated from the total of U.S. outward direct investment mainly Canadian companies, probably including such companies as Canadian Bell and Alcan Aluminium, that for historical reasons had large numbers of noncorporate U.S. holders.

The current definition of direct investment endorsed by the OECD (1996) and the IMF (1993) avoids the idea of control in favor of a much vaguer concept. "Foreign direct investment reflects the objective of obtaining a lasting interest by a resident entity in one country ('direct investor') in an entity resident in an economy other than that of the investor ('direct investment enterprise'). The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise" (OECD 1996, 7–8).

While this concept is a vague one, the recommended implementation is spe-

cific. "OECD recommends that a direct investment enterprise be defined as an incorporated or unincorporated enterprise in which a foreign investor owns 10 percent or more of the ordinary shares or voting power of an incorporated enterprise or the equivalent of an unincorporated enterprise. . . . An effective voice in the management, as evidenced by an ownership of at least 10 per cent, implies that the direct investor is able to influence, or participate in the management of an enterprise; it does not require absolute control by the foreign investor" (OECD 1996, 8).

The idea of control, which is behind much of the literature on multinationals, has been specifically abandoned. The fifth edition of the IMF *Balance of Payments Manual* points out that the concept of direct investment now used "is broader than the SNA concept of foreign-controlled, as distinguished from domestically controlled resident enterprises" (1993, 86). A single "direct investment enterprise" could be part of several different multinational firms, possibly from several countries. Duplication is avoided in investment flow and stock data, the main areas of concern to the OECD and the IMF, by allocating the financial aggregates to the various owners according to the extent of their ownership. However, data on the activities of multinationals, particularly those collected by home countries on, for example, the sales, employment, or output of their multinational firms or their overseas operations, could easily contain duplication if this 10 percent criterion is used.

6.1.3 Historical Background

Direct Investment before World War I

The history of multinational firms, and of the cross-border capital flows associated with them, foreign direct investment, goes back a long time. Mira Wilkins reminded us that "the origins of American multinational enterprises go back to the colonial period" and that "multinational enterprise headquartered in Europe has a longer history than American business abroad, going back to the middle ages" (1977, 577). She described "modern" American multinational corporations as dating from the 1850s and "investments over borders of modern European-headquartered manufacturing companies . . . to have accelerated in the late nineteenth and early twentieth centuries." She suggested that historical studies of international capital flows "often short-changed foreign *direct* investment."

It is striking, in view of the current interest in multinationals and foreign direct investment, that many descriptions of pre-World War I capital flows, perhaps the largest in history relative to total income or fixed investment, either did not discuss direct investment at all (Iversen 1936) or combined it with portfolio investment, as in the compilation in Palgrave (1910, vol. 2), without considering whether the determinants or effects were similar. However, Hobson did describe a half-century or more that "has witnessed an enormous rise in the

importance of the international company, in railways, mining, tramways, water, gas, electricity, banking, insurance, finance, land plantations, and other enterprises" (1914, 125). "The international company has even extended to manufacturing, but there it is still somewhat rare." In one of his early books, John Dunning described the pre–World War I situation by the statement that "in 1914, 90 percent of all international capital movements took the form of portfolio investment—i.e., the acquisition of securities . . . issued by foreign institutions, without any associated control over, or participation in their management. . . . Several American and European companies . . . already owned sizeable foreign manufacturing ventures, but these were the exceptions rather than the rule, and they rarely accounted for a major part of the enterprises' total activities" (1970, 2).

The consensus was probably well summarized by Arthur Bloomfield's appraisal that "portfolio investment was a far more important component of long-term capital movements before 1914 than direct investment" (1968, 3), although Bloomfield noted one exception, China, among host countries, and one, the United States, among investing countries. Another apparent exception among investing countries, heavily weighted by investment in China, was Japan, with almost 90 percent of its foreign investment in the form of direct investment, as indicated in a number of sources cited by Mira Wilkins (1986). Bloomfield also noted that "before 1914 . : . the concept of direct investment (in its present-day sense) was not clearly distinguished from other (noncontrolling) equity investments in private foreign enterprises" (1968, 3–4).

The idea that direct investment flows were negligible before 1914 was challenged, at least as it applied to investment in developing countries, by Peter Svedberg (1978), who claimed that it was an illusion stemming from the typical methods of estimating flows and stocks. These relied heavily on compilations of government bond purchases and holdings and on London Stock Exchange and other similar flotations. They therefore missed many direct investments that did not pass through the exchanges. Also, by assuming that none of those that were publicly floated were bought by controlling interests, the estimates classified some direct investment as portfolio investment. After reviewing the data, Svedberg estimated that some 44 to 60 percent of the $19 billion of accumulated investment in developing (or "underdeveloped") countries in 1913–14 was in the form of direct investment. Furthermore, similar ratios could be found for investment in many different areas and by many different home countries and were not peculiar to investment by the United States.

Whatever the correct picture for the world before 1914, the history of U.S. inward international capital flows in that period conforms to the traditional picture. Foreign investment in the United States was overwhelmingly portfolio investment, to the extent that just before World War I about 80 percent of the stock of long-term investment in the United States was portfolio investment (Lewis 1938, 546). Federal, state, and local governments and railways were the chief borrowers, and most of the borrowing was in the form of bonds rather than equity.

On the other side of the balance sheet, three-quarters of the U.S. outward investment stock in 1914 was in the form of direct investment (Lewis 1938, 605). Thus, even if it is true that the worldwide role of direct investment before 1914 has been understated in the historical literature, its large role in U.S. outward investment was outside the range of other capital-exporting countries' experience and far greater than in other countries' capital exports to the United States.

The divisions between domestic and foreign financing and between direct and portfolio investment can be thought of as ways of dividing up risks among different types of investors and borrowers. One could imagine that in the early history of the United States, foreign capital might have financed risky types of capital formation that domestic investors would avoid. However, the nature of the projects financed by foreign capital does not support this idea. Early foreign investment went mainly into government securities, probably thought of as relatively safe, although some of them proved riskier than was expected. Later investment went heavily into railroads. A common feature, aside from lending to the federal government during the Civil War, was that foreign portfolio investment went to large, lumpy, social overhead capital projects—railroads, canals, and later public utilities—relatively safer investments and less dependent on local knowledge than the typically much smaller, and on that account, riskier enterprises in agriculture or manufacturing, which were left mainly to local financing (Edelstein 1982, 39–41, 237–38).

Many manufacturing enterprises were set up by foreign craftsmen or entrepreneurs with special skills. Since transportation and communication were so slow that it was impossible to manage these enterprises from abroad, the investment was therefore often accompanied by the migration of children or other relatives of the foreign investors to manage the enterprise. Although these enterprises were a form of direct investment, they were different from most direct investment now in that they were not controlled by parent firms as an outgrowth of their businesses, but by individual investors. Mira Wilkins (1989) referred to these as "free standing enterprises." Over time they tended to become more independent and often eventually lost the status of direct investments when their owners migrated to the United States.

The Dominance of Direct Investment in U.S. Investment Abroad and of the United States in World Outward Direct Investment

The United States has been, since its earliest days as a foreign investor, exceptionally focused on direct investment. An estimate for 1897, when the United States was still predominantly a recipient of capital from abroad rather than a supplier, showed more than 90 percent of U.S. outward investment to be direct investment. By 1914, the share had declined to three-quarters, still far above the proportion in foreign investment in the United States or in world investment as a whole (Lewis 1938, 605).

The period of World War I saw the first major U.S. portfolio investment abroad, including large loans to foreign governments that outweighed total pri-

vate financing. By the end of 1919, direct investment had been reduced to a little over half of U.S. private investment abroad but to less than a quarter of total foreign investment including intergovernment loans (Lewis 1938, 447). The 1920s were characterized by rapid growth in both direct and portfolio private investment abroad but were unlike the earlier periods in that portfolio investment became the predominant avenue for U.S. investment, tripling in value while direct investment only doubled, and accounting for over 60 percent of the growth in private U.S. investment abroad. By 1929, the value of U.S. private portfolio investment exceeded that of direct investment for the first time (Lewis 1938, 450, 605).

The Great Depression reversed the change in the composition of the U.S. private foreign investment portfolio that had taken place in the 1920s. Half of the foreign loans extended in the late 1920s went into default (Mintz 1951, 6). U.S. holdings of securities, even valued at par, were reduced by almost 30 percent (almost 50 percent with defaulted bonds at market value), and short-term credits were cut almost in half (Lewis 1938, 454). By 1940, direct investment was back to 60 percent of U.S. private outward investment. It was a little more than that in 1950 and remained between 60 percent and two-thirds through 1970 (U.S. Bureau of the Census 1975, series U26–U39).

U.S. government loans to foreign countries had expanded further during World War II and by 1950 were almost twice the total of all private investment stocks. Thus the restored dominance of direct investment in 1950 applied only to private investment. After 1950, U.S. government loans did not increase greatly, and by 1970, more than 70 percent of U.S. international assets were private and almost half were direct investment.

The United States not only had much or most of its international investment in the form of direct investment but also accounted for a large part of the world's stock of direct investment. In 1960, almost half of all the outward direct investment was owned by investors based in the United States. No other country came close; the next ranking holder of direct investment was the United Kingdom at 18 percent, followed by the Netherlands at 10 percent and France at 6 percent (United Nations 1988, table 1.2). The large role of direct investment in U.S. foreign investment was associated with a large role for the United States in the world's direct investment universe.

6.1.4 The Importance of Foreign Direct Investment in Total International Investment Flows

The first question we attempt to answer here is about the size of direct investment flows relative to other forms of international investment. For almost all countries, a three-way division is published by the IMF, separating international investment flows into direct investment, portfolio investment, and other investment.

The definition of direct investment has been discussed above. Portfolio in-

vestment includes equity securities, debt securities in the form of bonds, money market instruments, and financial derivatives, such as options, all excluding any of these included in direct investment or reserve assets. The distinction between long and short term formerly made has been abandoned on the ground that original maturity is now of relatively little importance. The final category of "other investment" includes trade credit, loans, financial leases, currency, and deposits, mostly short-term assets.

The categories do not match those of the pre-1980 data we use, and some of the following tables therefore show an overlap for 1980–84. The data for years before 1980 are on a similar basis to later ones for direct investment, reported as "investment by," mainly outflows from the reporting country, and "investment in," mainly inflows to the reporting country. That is the case for most flows, but there can be reverse flows on both sides. A country's firms can repatriate accumulated earnings from their foreign affiliates or sell foreign operations to foreign buyers, resulting in a negative outflow (a positive entry in the balance of payments), and foreign firms in a host country can repatriate earnings or sell operations, producing a negative inflow of capital (a negative entry in the balance of payments).

For categories other than direct investment, the flows before 1980 are reported on a net basis, not distinguishing between changes in assets and changes in liabilities. There is thus no natural world total for those categories because every transaction should enter as both an asset change and a liability change, and the total should therefore be zero. For these categories we approximate gross flows very roughly by aggregating the net flows of those countries that report net outflows in that category in each year. That is, we aggregate all the negative balance-of-payments entries in each year under the headings of "portfolio investment, net," and "other investment, net." The alternative of aggregating positive entries should give the same result if the data were complete, but of course they are not. Judging by the 1980–84 overlap, the 1969–79 estimates for portfolio investment outflow are understated by almost 30 percent and those for other investment by almost half.

The amounts of the three major types of investment flows, by these imperfect measures, are shown in appendix table 6A.1. All types of international capital flows increased enormously. Since these are nominal values, they reflect the rise in world nominal income, which was, in 1990–94, about five and a half times as high as in 1970–74. All the forms of international capital flow grew faster than world nominal income. If we take the overlap in 1980–84 as an indicator of the underestimate of gross flows during 1970–79, we would conclude that the flow of direct investment grew the most and that other investment hardly grew faster than income (table 6.1). Since 1980, where we do have estimates of gross flows, portfolio investment has grown somewhat faster than direct investment, and other investment hardly grew until 1995, when it jumped ahead of the other two.

The long-term trend, if there is one, seems to have been an increase in the

share of direct investment in total investment flows from 1980 through 1994, and possibly since 1970 (table 6.2). After 1994, the trend was apparently reversed, with a burst of portfolio and other investment, but the direct investment share remained well above that of the early 1970s.

All these statements have an important cloud over them. That is the persistent world current account deficit that has remained stubbornly close to $100 billion a year, instead of zero, as it should be. That deficit, which is really a discrepancy item, is so large that it implies that the correct figures for some of these entries could be very far different from those we are relying on to study and follow investment flows. The latest indicator of how far some of these numbers are from the facts they are supposed to represent is the results of the recently completed survey of U.S. portfolio investment abroad, which found that the market value of U.S.-owned foreign securities at the end of 1994 was $910 billion instead of the previously estimated $556 billion, an addition of 64 percent.

Table 6.1 **Growth in Three Forms of Capital Outflow**

Investment Type	Ratio
1990–94/1970–74	
Direct	61.7
Portfolio	49.6
Other	5.9
1990–94/1980–84	
Direct	5.24
Portfolio	5.97
Other	1.08

Source: Appendix table 6A.1, with 1970–74 estimated from 1980–84 overlap.

Table 6.2 **Share of Direct Investment in Total Capital Outflow**

Period	Share (%)
1970–74	5.8
1975–79	18.0
1980–84[a]	11.6
1985–89[a]	20.7
1990–94[a]	25.4
1990–94[b]	26.2
1994[b]	31.3
1995[b]	24.8
1996[b]	20.4

Source: Appendix table 6A.1, with 1970–74 and 1975–79 estimated from 1980–84 overlap.

[a]Excluding Hong Kong and Taiwan.

[b]Excluding Hong Kong but including Taiwan.

6.1.5 The Geography of International Investment Flows

Origins and Destinations of Direct Investment

Outward direct investment originates mainly in the highest income countries, as can be seen from appendix table 6A.2. The United States was the chief source of direct investment in 1970–74, larger than all the other regions shown here put together. Europe caught up in the second period and then far surpassed the United States. Japan caught up in 1985–89, and even exported more direct investment capital than the United States during those years, although it is a considerably smaller economy, with GDP less than three-quarters of that of the United States in nominal terms and less than 40 percent in real terms. After 1990, Japan faded as a direct investor and the United States resumed its position as the largest single supplier of direct investment.

The most rapid growth in outward direct investment was in the two developing areas, developing Asia and Latin America, especially the former. By 1990–94, according to the IMF data, the outflow from the developing Asian countries had reached over 85 percent of the Japanese level. However, these data grossly understate the contribution of developing Asian countries and its growth in recent years by omitting Hong Kong, even though they include Taiwan, decorously concealed under the title "Asia not specified." The addition of Hong Kong doubles the figure for the outflow from Southeast Asia in 1990–94. Hong Kong was a larger supplier of direct investment funds than Japan in 1994, 1995, and 1996 (United Nations 1997, annex table 13.2), and its addition to the developing Asia total brings that region to an important position as a direct investor. The timing of the growth in Hong Kong's outward investment is similar to that in China's inward investment, confirming the impression that much of the investment was going to China. Although there is no reported surge in Hong Kong inward investment, it is hard not to suspect that some part of the outward investment originated outside Hong Kong.

The flows to the main regional destinations for FDI are described in appendix table 6A.3. The two outstanding shifts in the destinations of FDI flows over the quarter-century were toward Asian countries, both China and Southeast Asia, and toward the United States. The flow to the United States reached a peak in the 1980s, when it was larger than the combined flows to all European destinations combined. After that, the flow to the United States receded somewhat, and in the next period the major growth was in the flow to Europe. Direct investment in developing Asia continued to grow rapidly and that in Latin America revived. In 1990–94, Europe resumed its earlier position as the main destination of direct investment. Most of the increase over the previous period was matched by similar growth in European outflows, an indication that a large part of the growth was in intra-European investment.

There is more direct evidence on the nature of European FDI. If Europe were treated as a single unit, its importance as a source and destination for FDI

would be greatly reduced. Among the European countries that publish inward FDI position data, all except the United Kingdom had received 60 percent or more of their FDI stock from other European countries. And among those that published outward FDI positions, all except the United Kingdom had sent half or more of their FDI to other locations within Europe (OECD 1998).

Inflows to the United States have been volatile in the 1990s, first dropping to low levels in 1991 and 1992 and then rebounding strongly. Inflows to Japan, always small, turned negative in 1989 and, after a brief flurry in the early 1990s, stayed below $1 billion per year in 1993–96. Inflows to China, already far above earlier amounts, took off after 1991, reaching over $42 billion, almost ten times the 1991 level, in 1996 (United Nations 1997). There has been some suspicion that part of direct investment in China originates in China itself, routed through Hong Kong for various reasons including favorable treatment accorded to foreign-owned enterprises in China. If that is the case, such "round trip" investment does not appear to be substantially financed by reported Chinese direct investment in Hong Kong, which is quite small relative to inward direct investment in China.

The major elements of the net flows of international capital in these regions since 1969 are summarized in appendix tables 6A.4, 6A.5, and 6A.6. Negative numbers represent net outflows of capital and positive ones, net inflows.

Europe and Japan were consistent net suppliers of direct investment to the rest of the world and Latin America was a consistent absorber of such capital, as was developing Asia, especially in the last period (appendix table 6A.4). In 1993–95, China far surpassed Latin America as a net importer of direct investment (United Nations 1997, annex tables B.1 and B.2). One odd case here is the United States, which shifted from being the world's major net supplier of direct investment during the 1970s to being a large net recipient throughout the 1980s before returning to its traditional role. The shift is sometimes attributed to the devaluation of the dollar that started in 1985, and it is true that the inflow was at its largest in 1987–89, but the United States switched to being a net importer of direct investment capital much earlier, in 1981, and was a net importer through the period when the dollar was at its highest. Something more than exchange rates must have been at work. The other switch was in Southeast Asia, which, after absorbing direct investment on balance from 1969 to 1992, became a net supplier, mainly on account of Hong Kong, after that.

The net flow of portfolio capital does not show the same consistency of direction as the direct investment flow, and some of the fluctuations are very large (appendix table 6A.5). Japan has been a pretty consistent capital exporter in this category since the 1970s, while the other regions have mostly been importers. For the United States, portfolio inflows were particularly large in 1985–89, just when direct investment inflows were also at a peak. In this period, the high inflow to the United States almost exactly matched the outflow from Japan. The fact that the peak period in the United States was the same as for direct investment suggests that whatever led to the large inflows was not

Table 6.3 **Reported Net Inflows of Portfolio Capital, 1980–96 (millions of U.S. dollars)**

Country/Region	Inflow
United States	650,180
Japan	−506,320
Europe	276,200
Developing Asia	86,128
Latin America	273,771
Total	1,286,279

Source: See appendix tables 6A.2 and 6A.3.

peculiar to direct investment. In Latin America, also, the jump in direct investment inflows in the 1990s was accompanied by a large rise in portfolio capital inflows. For the whole period since 1980, the regions listed reported imports of portfolio capital reaching over $1.25 trillion, while the only net exporter in the list, Japan, reported less than half that amount in exports (table 6.3).

In the case of other capital flows, only one region, Europe, was consistent over time with respect to the direction of the flows, with inflows in every period (appendix table 6A.6). Every other region had periods of both inflows and outflows, sometimes with abrupt shifts from one to the other. The United States was a net supplier of funds through 1979–83 and then became a net recipient. Latin America was almost always a supplier of funds, and the other countries showed no consistent role.

The Regional Distribution of Total Net International Investment Flows

The combination of the various types of net capital flows is the total net international flow of capital. Japan has been a consistent supplier of capital on the international market throughout the whole period since 1980, while the United States has been a major net recipient of international capital flows, especially in the most recent years (appendix table 6A.7). Southeast Asia and Latin America have been pretty continuous recipients and were relatively large ones except when the United States began to absorb foreign capital on a large scale in 1983. Europe has mostly absorbed capital on net balance except in the 1985–89 period.

6.1.6 Differences in Behavior among Types of International Financial Flows

Volatility

As was mentioned in the discussion of historical aspects of international investment above, different types of financial flows can perform quite different functions for both investing and receiving countries. One difference among the

types of flows that affects their functions, especially for the recipients, is in their volatility, a subject that has received increased attention since the Asian crisis began. We can compare flows of different types by asking how often net flows to or from a country change sign. That is, how often do inflows turn into outflows and outflows turn into inflows.

For direct investment, among the fifty-two countries for which we have long runs of data, and data for each type of capital flow, the average number of reversals was 2.50, indicating an average run in a single direction of over four years (table 6.4). The next most stable type was portfolio investment, with 3.60 reversals on average, an average run in one direction of over three years. Other capital flows reversed signs 4.2 times on average. Thus the general impression of the stability of direct investment, relative to the other types, is confirmed.

These comparisons take account of the direction of flows but not the size, which can vary sharply without any change of direction. We compare the types of flow with respect to their standard deviations in table 6.5.

Table 6.4 **Frequency of Sign Changes in Capital Flows, 1980–95**

Investment Type	No. of Sign Changes	Average Frequency of Sign Changes	Average Duration of Run
Net direct	130	2.50	4.29
Net porfolio	187	3.60	3.26
Net other	217	4.17	2.90

Source: IMF (1998).

Note: Number of countries is 52.

Table 6.5 **Ratios of Standard Deviations to Means for Various Types of International Capital Flows, 1969–93**

Country/Region	Net FDI	Other Long Term, Including Portfolio	Portfolio	Short Term
United States	1.302	1.469	1.188	1.297
Japan	1.307	1.371	1.473	1.636
Southeast Asia				
Unweighted average[a]	1.373	1.857	1.658	1.561
Aggregate[b]	1.455	2.265	1.835	1.179
Europe				
Unweighted average[a]	1.311	1.524	1.625	1.708
Aggregate[b]	1.008	1.911	2.102	1.823
Latin America				
Unweighted average[a]	1.072	1.792	2.228	1.478
Aggregate[b]	0.819	1.781	2.278	1.484

[a]Unweighted average of standard deviations for individual countries.

[b]Standard deviation of aggregate net flows to or from region.

In the case of the United States, both portfolio and short-term capital flows fluctuated less relative to the average flows than did net direct investment. The United States was unusual in this respect, however. For Japan and for the three regions, the average for individual country volatility, as measured by the ratios of standard deviations to means, was lowest for net direct investment. The volatility of the aggregates in two of the three regions confirmed the relative stability of direct investment. There is a particularly wide gap in Latin America between the volatility of net portfolio investment and the relative stability of net direct investment.

Relations among Capital Flows

If flows of direct investment respond to current economic conditions in each country, one might expect to find alternating periods of larger outflows than inflows and larger inflows than outflows and, therefore, a negative relationship between gross outflows and gross inflows. As table 6.6 indicates, for a selection of major exporters and recipients of FDI flows, that is not the case. By and large, where there is a significant relationship, it is a positive one; direct investment inflows to a country tend to be large when outflows from the country are large.

To some extent, this relationship may reflect trends, or simply the effects of growth, which we may partially remove by taking international flows relative to GDP. The trend influence is confirmed by the fact that fewer equations are significant, correlations are lower, and one significant negative relationship appears, for Brazil; but the overall result is still that outflows and inflows are positively related, where there is any significant relationship at all.

We can also ask how gross or net FDI outflows are related to flows of capital in other forms. The results for the thirteen countries used in the test are presented in table 6.7.

The strongest relationship is that between outward direct investment and outward flows of short-term capital. Large outflows of direct investment are accompanied by outflows of short-term capital as well. There is also a much weaker positive association with net flows of portfolio capital. Net outflows of direct investment are negatively correlated with net flows of all other long-term capital and also with that part of it that is portfolio capital. Little of the variability in one flow is explained by the other, but there is at least some suggestion here of substitution among types of long-term capital flows, especially between direct and portfolio capital flows.

The Importance of Retained Earnings in Direct Investment

One feature of flows of direct investment that distinguishes it from other forms of investment is that it can be, and often is, financed from the retained earnings of affiliates. The IMF and the OECD recommend that direct investment flows include "the direct investor's share of the company's reinvested earnings" (OECD 1996, 16). Unfortunately for our ability to make compari-

Table 6.6 **Summary of Equations Relating FDI by a Country to FDI in a Country, 1969–94**

	FDI By = f(FDI In)		FDI By/GDP = f(FDI In/GDP)	
	Coefficient of FDI In	Adjusted R^2	Coefficient of FDI In/GDP	Adjusted R^2
United States	.45	.16*	−.05	−.04
	(2.40)		(.18)	
United Kingdom	1.01	.66**	.73	.32**
	(7.02)		(3.53)	
Japan	4.13	.01	−3.68	.03
	(1.09)		(1.33)	
Germany	2.26	.60**	.51	.05
	(6.26)		(1.48)	
France	1.49	.85**	1.62	.71**
	(12.02)		(7.70)	
Netherlands	1.47	.83**	1.04	.47**
	(11.27)		(4.68)	
Sweden	1.11	.28**	1.20	.18*
	(3.26)		(2.51)	
Canada	.49	.36**	.06	−.04
	(3.81)		(.38)	
Brazil	−.01	−.04	−.06	.12
	(.14)		(2.06)	
Singapore	.14	.57**	.09	.07
	(5.40)		(1.59)	
All	.76	.38**	.09	.03**
	(12.55)		(3.03)	

Note: Numbers in parentheses are t-statistics.

*Prob $F < 0.05$.

**Prob $F < 0.01$.

Table 6.7 **Simple Regressions Relating FDI Flows to Flows of Other Types of Capital in Thirteen Countries**

	Coefficient of FDI	Adjusted R^2
Outward FDI × Short-term capital	.230**	.148
Outward FDI × Long-term capital excluding FDI	−.016	−.003
Outward FDI × Portfolio capital	.080*	.014
Net FDI × Short-term capital	.059*	.012
Net FDI × Long-term capital excluding FDI	−.097**	.039
Net FDI × Portfolio capital	−.121**	.059

*Significant at 5 percent level.

**Significant at 1 percent level.

sons across countries, many important capital exporters do not include reinvested earnings in their capital flow data. Among the OECD countries, Belgium, Canada, France, Italy, Japan, and Norway are in this group.

The United States is one country that has kept records of retained earnings of its firms' foreign affiliates over many years, although there have been some changes in their treatment in the balance of payments. The distribution, by type, of U.S. direct investment outflows in recent years is described in table 6.8.

Although there are large fluctuations in the proportions, reinvested earnings are clearly the predominant form of financing of U.S. outward direct investment. They account for more than half of investment over the whole period, in each subperiod, and in ten out of the fourteen individual years. The only year in which they were not larger than each of the other forms of investment was the severe recession year, 1982.

One reason for the importance of reinvested earnings in U.S. outward direct investment is that U.S. firms' foreign operations are relatively mature, having started earlier than most of those from other countries. However, the large role of reinvested earnings is an old one for the United States. During the late 1930s and through World War II they were virtually the only source of additions to direct investment, and even when the pace of investment picked up after the war, retained earnings still provided over 40 percent of the growth.

In the twenty-five years from 1950 through 1975, reinvested earnings accounted for more than half of the growth in the stock of U.S. outward direct investment, 60 percent in manufacturing and trade, and somewhat lower proportions in petroleum and in other industries including finance (table 6.9).

Some more recent data, for countries that keep such records, are summarized in table 6.10, for both home countries and host countries, 1989–95. The large contribution of retained earnings to growth in direct investment, a characteristic of U.S. outward direct investment for so long, is not a universal characteristic of direct investment, as can be seen in the large negative retained earn-

Table 6.8 Distribution by Type of U.S. Outflows of Direct Investment

Period	Equity Capital Outflows	Retained Earnings	Intercompany Debt Outflows
1982–86	26.7	84.9	−11.6
1987–91	23.6	64.6	11.8
1992–95	34.2	50.7	15.0
1992	37.6	41.8	20.6
1993	33.0	40.4	26.6
1994	24.8	62.4	12.8
1995	39.0	56.3	4.7

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *U.S. Direct Investment Abroad: Balance of Payments and Direct Investment Position* (Washington, D.C., n.d.), diskette.

Note: Intracompany transactions with the Netherlands Antilles have been removed.

Table 6.9 **Cumulated Reinvested Earnings and Changes in U.S. Outward Direct Investment Stock: Total and Selected Industry Groups, 1950–75 (billions of U.S. dollars)**

	Change in Direct Investment Stock	Investment Stock 1975/1950	Cumulated Reinvested Earnings	Share of Reinvested Earnings
All industries	112	10.5	60	54
Petroleum	23	7.7	10	43
Manufacturing	52	14.6	31	60
Trade	12	16.4	7.5	62
Other, including finance	19	16.0	7	37

Source: U.S. Department of Commerce (1982).

ings on inward direct investment in the United States. The importance of retained earnings appears to be related to the age of the investments, the United States, the United Kingdom, Sweden, and Switzerland being direct investors of long standing. Much of U.S. inward investment, on the other hand, is a product of the late 1980s, and therefore very new during the period covered. Similarly, Germany is a relatively late entrant as a major direct investor, partly because much of its investment was confiscated after losses in two world wars.

Other factors may also play a role. During the period of exchange controls, many enterprises were not permitted to repatriate their profits, particularly from developing countries. There are also differences and changes in systems of taxation of overseas earnings that affect where profits are made, where they are accumulated, and if and when they are repatriated.

6.1.7 Summary

Direct investment, as a flow of capital, is only partly related to the activities of multinational firms. Most of what these firms do, and most of their impact, is unconnected with current capital flows, and parts of the capital flows are unconnected with multinational firms. Over time, the definition of direct investment has shifted from an emphasis on control across national boundaries to a vaguer notion of "lasting interest" and "significant" influence on management, and in the balance-of-payments data the enterprise is divided up statistically among owners of shares of 10 percent or more.

The history of cross-border ownership of enterprises is a long one, and its importance as a part of international capital flows before World War I a matter of some controversy. However, it is clear that direct investment was more important in total U.S. investment abroad than in total foreign investment by other countries and far more important than in foreign investment in the United States. As a result of this specialization in direct investment, the United States

Table 6.10 **Outflows and Inflows of Direct Investment: Total and Reinvested Earnings for Selected Countries, 1989–95 (millions of U.S. dollars)**

	Total Direct Investment Assets (Outward FDI)	Reinvested Earnings	Share of Reinvested Earnings (%)	Total Direct Investment Liabilities (Inward FDI)	Reinvested Earnings	Share of Reinvested Earnings (%)
United States	368,988	184,508	50.0	308,242	−47,582	−15.4
Germany	149,700	10,849	7.2	28,005	−6,687	−23.9
Netherlands[a]	86,549	9,159	10.6	48,025	8,225	17.1
Sweden	51,406	12,742	24.8	34,359	4,327	12.6
Switzerland	57,885	15,729	27.2	19,818	7,805	39.4
United Kingdom	184,230	108,908	59.1	153,375	32,047	20.9

Source: IMF (1996).

[a]1989–94.

was the dominant holder of direct investment assets in the decade or two after World War II.

It is hard to assess the relative importance of direct investment as a method of financing international investment flows because of the offsetting of one set of flows by another. In the gross flow data, direct investment has accounted for a little under a quarter of flows since 1989 and appears to have grown in importance since the 1970s.

The United States was by far the major source of direct investment outflows in the early 1970s, but Europe soon caught up and Japan almost did before fading out in the 1990s. Hong Kong became a major investor in the 1990s, investing heavily in China. The United States shifted from being the world's largest net supplier of direct investment to being a large absorber of such investment from other countries, especially in 1985–89, and then reverted to its earlier net supplier role. Latin America and Southeast Asia have been continuous net recipients of direct investment.

Portfolio capital has been supplied to the world steadily by Japan. The United States, at times, particularly in 1985–89, has absorbed much of this capital, on net balance, and Southeast Asia and Latin America have also been major borrowers.

Total international capital flows, of which the United States supplied a large proportion through 1983, have since then become a source of capital for the United States, as they have been for China and Southeast Asia in almost every period. Europe also has been a net absorber of capital in most periods, and Japan the only consistent supplier.

In recent years, capital flows among the developed countries, particularly the United States and Europe, have been dominated by portfolio capital. Direct investment has played the largest role in net outflows from Japan and especially in the inflows to Southeast Asia, China, and Latin America.

The different forms of international investment flows not only vary in importance among regions but have different characteristics in other ways. Direct investment flows have been the least volatile among the different types in most countries, the chief exception being the United States, which has flipped back and forth from being the dominant net supplier to dominant net recipient and back to dominant net supplier. For other countries, and particularly for developing countries, direct investment has been the most dependable source of foreign investment.

One reason for the relative stability of direct investment flows may be the importance within them of retained earnings. These do fluctuate, of course, with profits, but they rarely shift sharply into the negative once firms are well established. Retained earnings appear to be most important in outward U.S. and U.K. investment. There are some large negative retained earnings in recent years for foreign direct investment in the United States, relatively new and perhaps purchased at the peak of real estate markets, but the general relationship seems to be that older holdings of direct investment grow a good deal from retained earnings.

Appendix

Table 6A.1 **World Investment Flows (millions of U.S. dollars; five-year averages)**

Period	Direct Investment	Portfolio Investment	Other Investment	Total
		Old IMF Data, 1970–84		
1970–74	3,564	5,081	26,608	
1975–79	36,669	14,493	76,336	
1980–84	44,751	42,247	145,149	
		Current IMF Data, 1980–96		
1980–84	44,514[a]	59,316[a]	279,690[a]	383,520
1985–89	140,069[a]	188,670[a]	346,895[a]	675,634
1990–94	219,969[a]	352,784[a]	294,752[a]	867,505
1990–94	233,409	353,927[b]	303,104[b]	890,440
1994	276,443	330,662[b]	276,721[b]	883,826
1995	349,501	372,438[b]	684,525[b]	1,406,464
1996	348,992	587,069[b]	778,432[b]	1,714,493

Sources: IMF (1998), World Bank (1995, 1997), and United Nations (1996, 1997, 1998).

[a]Excluding Hong Kong and Taiwan.

[b]Excluding Hong Kong but including Taiwan.

Table 6A.2 **Sources of Direct Investment Outflows (millions of U.S. dollars; five-year averages)**

Period	United States	Japan	Europe	Developing Asia	Latin America
			Old IMF Data, 1970–84		
1970–74	8,670	1,042	6,968	23	31
1975–79	15,876	2,133	16,000	109	194
1980–84	10,117	4,280	24,889	240	358
			Current IMF Data, 1980–96		
1980–84	9,592	4,280	24,958	163[a]	262
1985–89	22,890	24,590	75,591	6,168[b]	411
1990–94	50,240	26,286	121,846	22,696[c]	1,625
1994	69,264	18,089	131,789	36,302[c]	2,936
1995	86,738	22,508	177,416	42,180[c]	2,797
1996	87,812	23,442	172,053	48,024[c]	3,770

Sources: IMF (1998), World Bank (1995, 1997), and United Nations (1996, 1997, 1998).

[a]Excluding Hong Kong and Taiwan.

[b]Excluding Hong Kong but including annual average outward direct investment by Taiwan over the period 1984–89.

[c]Including both Hong Kong and Taiwan.

Table 6A.3 **Destinations of Direct Investment Inflows (millions of U.S. dollars; five-year averages)**

Period	United States	Japan	Europe	Developing Asia	Latin America
		Old IMF Data, 1970–84			
1970–74	2,070	126	7,181	708	1,308
1975–79	6,092	123	11,474	1,423	3,270
1980–84	17,965	262	15,202	3,641	5,214
		Current IMF Data, 1980–96			
1980–84	17,965	262	15,536	4,716[a]	6,308
1985–89	47,773	101	46,226	11,512[b]	6,505
1990–94	36,507	1,371	91,489	36,182[b]	15,287
1994	45,678	912	84,642	59,753[b]	27,495
1995	67,527	39	138,030	68,385[b]	28,838
1996	76,955	200	120,109	77,995[b]	40,056

Sources: IMF (1998), World Bank (1995, 1997), and United Nations (1996, 1997, 1998).

[a]Including annual average figures for outward direct investment by Hong Kong and Taiwan over the period 1980–85.

[b]Including both Hong Kong and Taiwan.

Table 6A.4 **Net Inflows of Direct Investment (millions of U.S. dollars; five-year averages)**

Period	United States	Japan	Europe	Developing Asia	Latin America
		Old IMF Data, 1970–84			
1970–74	−6,600	−916	213	685	1,277
1975–79	−9,784	−2,010	−4,526	1,314	3,076
1980–84	7,847	−4,018	−9,688	3,401	4,855
		Current IMF Data, 1980–96			
1980–84	8,373	−4,018	−9,422	4,553[a]	6,045
1985–89	24,883	−24,489	−29,365	5,344[b]	6,094
1990–94	−13,733	−24,915	−30,357	13,486[c]	13,662
1994	−23,586	−17,177	−47,147	23,451[c]	24,559
1995	−19,211	−22,468	−39,386	26,204[c]	26,041
1996	−10,857	−23,242	−51,945	29,970[c]	36,286

Sources: Tables 6A.2 and 6A.3.

Note: Net flows are inflows minus outflows.

[a]Excluding Hong Kong and Taiwan.

[b]Including Taiwan and excluding outward investment from Hong Kong, but including inward investment.

[c]Including Hong Kong and Taiwan.

Table 6A.5 **Net Flows of Portfolio Capital (millions of U.S. dollars; five-year averages)**

Period	United States	Japan	Europe	Developing Asia[a]	Latin America
		Old IMF Data, 1970–84			
1970–74	5,494	−292	−691	54	−18
1975–79	8,140	392	3,014	254	790
1980–84	12,449	−1,784	−4,521	576	1,568
		Current IMF Data, 1980–96			
1980–84	12,449	−1,908	−12,981	810	1,661
1985–89	70,229	−69,458	23,802	1,749	−118
1990–94	14,380	−14,354	39,192	8,231	40,225
1994	79,091	−27,219	−66,265	13,408	65,989
1995	137,401	−36,575	51,246	14,593	4,827
1996	274,879	−41,145	−25,111	17,585	60,104

Sources: IMF (1998) and World Bank (1995, 1997).
Note: Net flows are inflows minus outflows.
[a]Including Taiwan.

Table 6A.6 **Net Flows of Other Investment (millions of U.S. dollars)**

Period	United States	Japan	Europe	Developing Asia[a]	Latin America
		Current IMF Data, 1980–96			
1980–84[b]	−14,399	−5,428	42,073	20,639	22,477
1985–89[b]	29,093	36,522	1,468	9,769	2,895
1990–94[b]	85,088	−37,926	34,187	11,156	−9,412
1994	75,967	−40,714	89,957	9,973	−43,513
1995	35,579	−4,936	7,841	26,475	28,023
1996	−75,558	36,288	53,420	46,640	−22,922

Sources: IMF (1998) and World Bank (1995, 1997).
Note: Net flows are outflows less inflows.
[a]Including Taiwan.
[b]Annual averages.

Table 6A.7 **Total Average Annual Net International Capital Flows (millions of U.S. dollars)**

Period	United States	Japan	Europe	Developing Asia[a]	Latin America
1980–84	6,423	−11,354	19,670	26,002	30,183
1985–89	124,205	−57,425	−4,094	16,863	8,871
1990–94	85,735	−77,195	43,022	32,873	44,474
1994	131,472	−85,110	−23,455	46,832	47,036
1995	153,769	−63,980	19,701	67,272	58,891
1996	188,464	−28,098	−23,636	94,195	73,469

Sources: IMF (1998) and World Bank (1995, 1997).
Note: Net flows are outflows less inflows.
[a]Including Hong Kong.

References

Bloomfield, Arthur I. 1968. *Patterns of fluctuations in international investment before 1914.* Princeton Studies in International Finance, no. 21. Princeton, N.J.: Princeton University, International Finance Section.

Dunning, John. 1970. *Studies in international investment.* London: Allen and Unwin.

Edelstein, Michael. 1982. *Overseas investment in the age of high imperialism: The United Kingdom, 1850–1914.* New York: Columbia University Press.

Hobson, C. K. 1914. *The export of capital.* London: Constable.

IMF (International Monetary Fund). 1993. *Balance of payments manual,* 5th ed. Washington, D.C.: International Monetary Fund.

———. 1996. *Balance of payments statistics yearbook.* Washington, D.C.: International Monetary Fund.

———. 1998. *Balance of payments statistics yearbook.* Washington, D.C.: International Monetary Fund. Diskette.

Iversen, Carl. 1936. *Aspects of the theory of international capital movements.* Copenhagen: Levin and Munksgaard; London: Humphrey Milford and Oxford University Press.

Lewis, Cleona. 1938. *America's stake in international investments.* Washington, D.C.: Brookings Institution.

Mintz, Ilse. 1951. *Deterioration in the quality of foreign bonds issued in the United States, 1920–1930.* New York: National Bureau of Economic Research.

OECD (Organization for Economic Cooperation and Development). 1996. *OECD benchmark definition of foreign direct investment,* 3d ed. Paris: Organization for Economic Cooperation and Development.

———. 1998. *International direct investment statistics yearbook.* Paris: Organization for Economic Cooperation and Development.

Palgrave, Robert Harry Inglis, ed. 1910. *Dictionary of political economy.* London: Macmillan.

Svedberg, Peter. 1978. The portfolio-direct composition of private foreign investment in 1914 revisited. *Economic Journal* 88, no. 352 (December): 763–77.

United Nations. 1988. *Transnational corporations in world development: Trends and prospects.* New York: United Nations, Centre on Transnational Corporations.

———. 1995. *World investment report, 1995.* New York and Geneva: United Nations.

———. 1996. *World investment report, 1996.* New York and Geneva: United Nations.

———. 1997. *World investment report, 1997.* New York and Geneva: United Nations.

———. 1998. *World investment report, 1998.* New York and Geneva: United Nations.

U.S. Bureau of the Census. 1975. *Historical statistics of the United States, colonial times to 1970.* Washington, D.C.: Government Printing Office.

U.S. Department of Commerce. 1937. *Foreign investments in the United States.* Washington, D.C.: Bureau of Foreign and Domestic Commerce.

———. 1953. *Direct private foreign investments of the United States, census of 1950.* Washington, D.C.: Office of Business Economics.

———. 1982. *Selected data on U.S. direct investment abroad, 1950–76.* Washington, D.C.: Bureau of Economic Analysis.

Wilkins, Mira. 1977. Modern European economic history and the multinationals. *Journal of European Economic History* 6, no. 3 (winter): 575–95.

———. 1986. Japanese multinational enterprise before 1914. *Business History Review* 60 (summer).

———. 1989. *The history of foreign investment in the United States to 1914.* Cambridge, Mass.: Harvard University Press.

World Bank. 1995. *World data.* World Bank indicators on CD-ROM. Washington, D.C.: World Bank.

———. 1997. *World development indicators on CD-ROM.* Washington, D.C.: World Bank.

2. *Robert C. Feenstra*

Facts and Fallacies about Foreign Direct Investment

6.2.1 Introduction

Foreign direct investment combines aspects of both international trade in goods and international financial flows and is a phenomena more complex than either of these. As its name suggests, it first involves ownership of the assets of a firm: foreign direct investment (FDI) is often defined as the acquisition of 10 percent or more of the assets of a foreign enterprise. Second, it involves the choice of a host country for these assets. The choice of where to invest will depend on cost conditions and the extent to which investment gives preferential access to the local market, and both of these considerations depend on trade restrictions and other policies in the host country. In this respect, the decision of firms to invest abroad will be a counterpart to the international trade policies of the countries involved.

Third, FDI involves the choice of which activities to keep internal to a firm, and which to contract on the market: only the activities *internal* to a firm will be included in FDI, while other activities can be pursued by arm's-length transactions between unrelated firms. For example, a firm investing in a country might bring with it some knowledge that cannot be effectively leased or sold on the market. Instead, it will set up a plant for local production and also export, so as to profit from the knowledge it has; in this case FDI leads to a transfer of intangible assets (knowledge) from the parent to the foreign subsidiary. This argument can work equally well in reverse, whereby the acquisition of a foreign firm can bring with it some knowledge of value to the purchaser that could not be obtained by simply buying the products of that foreign firm. I will argue that increased inflows of FDI to the United States during the past decade have been motivated in part by the acquisition of knowledge.

These three features of FDI—ownership, location, and internalization—make up the so-called OLI framework for understanding FDI. This framework stresses the multifaceted nature of any decision to acquire a foreign firm. Because of the complexity of this decision, one should not expect any simple model to account for the trends in foreign investment as it occurs around the globe. Nevertheless, one might still expect the broad facts to be well under-

The author thanks Josef Merrill for excellent research assistance, and William Zeile of the Bureau of Economic Analysis for help with obtaining and interpreting the foreign investment data.

stood. In this paper I will argue that this is not the case, and on the contrary, there is a good deal of confusion about even the most elementary aspects of FDI, such as who is investing where, how much, and why. Some of this confusion is due to contradictory data, but in other cases, it represents genuine conceptual misunderstandings about FDI.

To present the arguments in the starkest manner, I will organize the discussion around four fallacies about FDI. This presentation runs the risk of having the reader reject the fallacies as simpleminded, and not believable in the first place. But I hope each reader will find some degree of plausibility in these fallacies, and indeed, each of them contains an element of truth. It is when they are taken as factual statements intended to hold quite generally that they become incorrect.

I begin the paper with a summary of the major trends in foreign investment over the 1980–95 period. Following that I present the various fallacies, dealing with the magnitude of foreign investment in Japan and the impact of FDI on the U.S.-Japan trade balance; the extent to which multinational corporations control U.S. trade; the impact of exchange rate movements on foreign investment flows; and, finally, the impact of FDI on the welfare of the host country. I conclude the paper with further analysis of recent trends in foreign investment, and their implications for the competition faced by U.S. firms in international markets. Taken together with what I learn from overturning the various fallacies, this analysis can serve as a guide to understanding movements in FDI today.

6.2.2 Trends in Foreign Direct Investment

Theories of FDI often emphasize the links between developed and developing countries. For example, the celebrated "product cycle" model of Vernon (1966) described how new products are created in the developed countries, where production first occurs, and then as the production process is standardized production will shift to lower wage developing countries. This shift in production need not occur within a multinational firm, but often it does, as Vernon rightly emphasized. While this is an insightful description of the dynamic process of product development and trade, it ignores the fact that the *majority* of foreign investment flows have been between developed countries. Thus about three-quarters of the world stock of direct investment is currently located in developed countries, with only one-quarter in developing countries. In table 6.11 I show the allocation of inward and outward FDI stocks between the developed and developing countries over the years 1980–95. These data are obtained from United Nations sources, which are the best available on a worldwide basis but still have some deficiencies that I will describe later.

Looking first at the inward stock in the upper half of table 6.11, the proportion of FDI located in developing countries fluctuated between 19 and 26 percent over 1980–95. Investment surged into the developed countries in the sec-

Table 6.11 FDI Stock, 1980–95 (billions of U.S. dollars)

	1980	1985	1990	1995
Total inward stock	481.9	734.9	1,716.9	2,657.9
Developed economies	373.6	538.0	1,373.3	1,932.7
Developed share (% of total)	77.5	73.2	80.1	73.9
U.S. inward stock	83.1	184.6	394.9	564.6
U.S. share of developed stock (%)	22.2	34.3	28.8	29.2
Developing economies	108.3	196.8	341.7	693.3
Developing share (% of total)	22.5	26.8	19.9	26.1
Chinese inward stock	0.0	3.4	14.1	129.0
Chinese share of developing stock (%)	0.0	1.7	4.1	18.6
Total outward stock	513.7	685.6	1,684.1	2,730.2
Developed economies	507.5	664.2	1,614.6	2,514.3
Developed share (% of total)	98.8	96.9	95.9	92.1
U.S. outward stock	220.2	251.0	435.2	705.6
U.S. share of developed stock (%)	43.4	37.8	27.0	28.1
Developing economies	6.2	21.2	69.4	214.5
Developing share (% of total)	1.2	3.1	4.1	7.9
Chinese outward stock	0.0	0.1	2.5	17.3
Chinese share of developing stock (%)	0.0	0.6	3.6	8.1

Source: United Nations, *World Investment Report* (New York, 239–48, 1996), annex tables 3 and 4.

ond half of the 1980s, during which time the stock of investment in developed countries nearly tripled from $538 billion to $1,373 billion. The magnitude of direct investment in the United States doubled between 1980 and 1985, and again between 1985 and 1990. Since 1990, the stock of investment located in the developing countries has grown more rapidly, which is in large part due to increased FDI in China. This country accounts for 18.6 percent of the inward stock of developing countries in 1995, up from 4.1 percent just five years earlier. The vast majority of FDI entering developed and developing countries alike comes from the developed countries, as detailed in the lower half of table 6.11.[1]

In comparison with these stock figures, about one-third or more of the inward *flow* of FDI in recent years has been going to developing countries, especially China. For example, in 1995 the United States was the largest recipient of FDI, with an inflow of $60.2 billion, but China was the second largest recipient with an inflow of $37.5 billion. Table 6.12 provides detailed information on the inward and outward flows of FDI for developed and developing countries. The surge in FDI flows during the second half of the 1980s both came from and was directed toward the developed countries: this flow reached $172 billion in 1989. This was followed by a fall in direct investment magnitudes

1. Note that the total world stock of inward FDI in 1995—$2.66 trillion—is less than the total stock of outward FDI—$2.73 trillion. This discrepancy is due to different accounting practices among countries in recording the value of FDI, as I shall discuss below.

Table 6.12 **FDI Flow, 1983–95 (billions of U.S. dollars)**

	1983–88[a]	1989	1990	1991	1992	1993	1994	1995
Total inflows	91.6	200.6	203.8	157.8	168.1	207.9	225.7	314.9
Developed economies	71.8	171.7	169.8	114.0	114.0	129.3	132.8	203.2
Developed share (% of total)	78.4	85.7	83.4	73.8	70.0	64.8	61.4	68.4
U.S. inflows	34.4	67.7	47.9	22.0	17.6	41.1	49.8	60.2
U.S. share of developed inflows (%)	47.9	39.4	28.2	19.3	15.4	31.8	37.5	29.7
Developing economies	19.8	28.6	33.7	41.3	50.4	73.1	87.0	99.7
Developing share (% of total)	21.6	14.3	16.6	26.2	30.0	35.2	38.6	31.6
Chinese inflows	1.8	3.4	3.5	4.4	11.2	27.5	33.8	37.5
Chinese share of developing inflows (%)	9.2	11.8	10.3	10.6	22.2	37.6	38.8	37.6
Total outflows	93.7	217.9	240.3	210.8	203.1	225.5	230.0	317.9
Developed economies	88.3	202.3	222.5	201.9	181.4	192.4	190.9	270.6
Developed share (% of total)	94.2	92.8	92.6	95.8	89.4	85.4	83.2	85.2
U.S. outflows	14.2	25.7	27.2	33.5	39.0	69.0	45.6	95.5
U.S. share of developed outflows (%)	16.1	12.7	12.2	16.6	21.5	35.9	23.9	35.3
Developing economies	5.4	15.6	17.8	8.9	21.6	33.0	38.6	47.0
Developing share (% of total)	5.8	7.2	7.4	4.2	10.6	14.6	16.8	14.8
Chinese outflows	0.5	0.8	0.8	0.9	4.0	4.4	2.0	3.5
Chinese share of developing outflows (%)	8.5	5.0	4.7	10.3	18.5	13.3	5.2	7.4

Source: United Nations, *World Investment Report* (New York, 1995, 1996), annex tables 1 and 2.

[a]Annual average.

from 1990 to 1991, with a recovery that was slow at first but has increased recently to reach $203 billion in 1995. The inflow of investment to China grew most dramatically from $4.4 billion in 1991 to $37.5 billion in 1995.

In addition to China, the inflows of FDI to the developing world are concentrated in a rather small number of countries. In table 6.13 I show the top ten recipient developing countries for both FDI stock and flow, for 1995. China has nearly 5 percent of the world stock of FDI in 1995, which is about twice as much as the next highest country, Mexico. At the same time, it is receiving nearly 12 percent of the world's flow of FDI, which is about five times as much as that entering Mexico. The other developing countries with substantial

Table 6.13 FDI in Top Ten Developing Countries, 1995

	Total (billion US$)	Share of World Total (%)	Share of Developing Total (%)
	FDI Inward Stock		
All developing economies	693.3	26.1	100
China	129.0	4.9	18.6
Mexico	61.3	2.3	8.8
Singapore	55.5	2.1	8.0
Indonesia	50.8	1.9	7.3
Brazil	49.5	1.9	7.1
Malaysia	38.5	1.5	5.6
Bermuda	28.4	1.1	4.1
Argentina	26.8	1.0	3.9
Saudi Arabia	26.5	1.0	3.8
Hong Kong	21.8	0.8	3.1
All others	205.3	7.7	29.6
Total for top 10		26.08	70.4
	FDI Inflow		
All developing economies	99.7	31.7	100
China	37.5	11.9	37.6
Mexico	7.0	2.2	7.0
Malaysia	5.8	1.8	5.8
Singapore	5.3	1.7	5.3
Brazil	4.9	1.5	4.9
Indonesia	4.5	1.4	4.5
Argentina	3.9	1.2	3.9
Hungary	3.5	1.1	3.5
Chile	3.0	1.0	3.0
Bermuda	2.9	0.9	2.9
All others	21.4	6.8	21.5
Total for top 10		31.6	78.2
Total excluding China		19.7	62.4

Source: United Nations, *World Investment Report* (New York, 1996), annex tables 1 and 3.

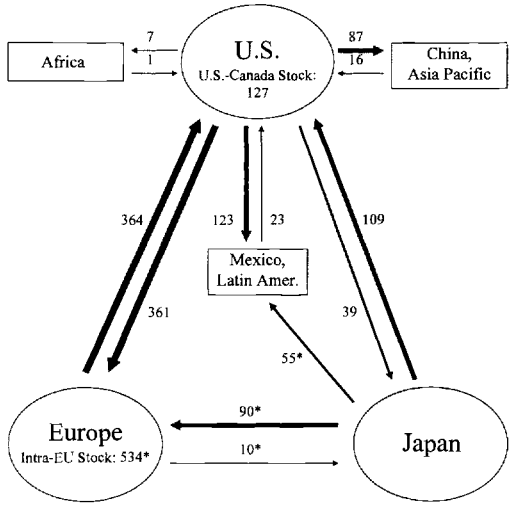

Fig. 6.1 Principal FDI bilateral stocks, 1995 (billions of U.S. dollars)
Source: U.S. Department of Commerce, Bureau of Economic Analysis, STAT-USA database.
*Estimated by author. Intra-EU stock is for 1994.

inward stocks and flows include Malaysia, Singapore, Brazil, Indonesia, and Argentina. Taken together, the top ten recipient countries account for 70 percent of the inward stock and nearly 80 percent of the inflow.

The principal bilateral stocks and flows of FDI in 1995 are represented in figures 6.1 and 6.2. I focus on the "Triad" countries: the United States, Europe, and Japan. Bilateral FDI between these regions accounts for fully one-third of the world stock (which is $2.7 trillion) or of the world flow (about $315 billion) in 1995. It is apparent that stocks and flows between the United States and Europe continue to dominate the world allocation of direct investment, in addition to intra-European FDI. Following these in magnitude are outward investment from Japan to the United States and Europe and outward investment from the United States to China, Mexico, and Latin America.[2] The large magnitude of FDI in the United States, and its steady increase during the 1980–90 period, should be seen as not that surprising in view of the tendency for FDI to concentrate in the industrial regions of the world. The exceptions are the recent flows of FDI to China and, to a lesser extent, Mexico and other areas of Latin America and Asia.

2. Direct investment from Japan to China and investment from Europe to Africa are not shown due to inadequate statistics.

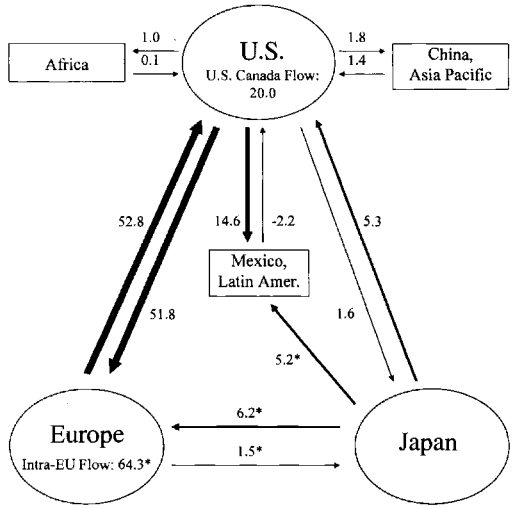

Fig. 6.2 Principal FDI bilateral flows, 1995 (billions of U.S. dollars)
Source: U.S. Department of Commerce, Bureau of Economic Analysis, STAT-USA database.
*Estimated by author. Intra-EU stock is for 1994.

6.2.3 Fallacies about Foreign Direct Investment

Fallacy 1: Foreign direct investment in Japan is less than 1 percent of assets, sales, or employment.

An often-cited figure is that foreign investment accounts for less than *1 percent* of the value of assets in Japan, or of the share of sales or employment. This figure has appeared in widely read studies of foreign investment (Graham and Krugman 1989, 25; 1993, 16; Lawrence 1993, 85), within a popular textbook (Krugman and Obstfeld 1994, 162), and even in the *Economic Report of the President* (1994, 216). The source of this figure is a study by Julius and Thomsen (1988), who reported data for 1986. The extremely low apparent share of FDI in Japan contrasts with the United States, where the share of FDI in assets, sales, or employment reported by Julius and Thomsen is 7 to 10 percent, and with European countries (France, Germany, and the United Kingdom), where it ranges from 13 to 27 percent.

The 1 percent figure for Japan used by Julius and Thomsen is consistent with that country's own statistics reported by the Ministry of International Trade and Industry (MITI). However, Weinstein (1997) examined these statistics in detail and found that they substantially understate the actual level of inward FDI. He cited several reasons for the understatement. Only about one-half of the firms surveyed actually respond, and only firms with 33 percent or more foreign

ownership are even included in the survey: this percentage is far higher than the 10 percent criterion for foreign ownership used by the United States and other countries. Weinstein rejected the MITI data on foreign investment and instead constructed his own estimates using a published sample of foreign firms operating in Japan. Based on this sample, he estimated that the share of sales accounted for by these foreign firms is about 5.6 to 5.7 percent of total sales, or over *five times higher* than the numbers reported by Julius and Thomsen (Weinstein 1997, 86).[3] This figure can still be considered low in comparison with other industrial countries, but then again, it is quite comparable to the share of sales or employment in the United States accounted for by foreign firms.[4]

Unfortunately, the understatement built into the MITI numbers for foreign investment extends to other Japanese sources, particularly those of the Ministry of Finance (MOF) and the Bank of Japan, the latter of which are used for balance-of-payments purposes. Neither of these agencies collects information from smaller foreign firms, so there is some understatement for that reason. A more serious problem, however, stems from that fact that *reinvested earnings* are not included as a source of foreign investment. Thus, if an American firm in Japan funds additional investments from earnings, it would not be recorded as FDI. It should be noted that the exclusion of reinvested earnings from FDI, especially from data collected for balance-of-payments purposes, is a common problem in various countries (though not for the United States). This is one of the reasons for the discrepancy between the worldwide inward and outward FDI figures in table 6.11. The reason this problem arises is that balance-of-payments data only include transactions between domestic and foreign residents and therefore exclude investment due to reinvested earnings because there is no foreign exchange transaction. This type of financial activity could in principle be captured by surveys of firms, such as that conducted by MITI, but as we have seen this survey does not extend to all foreign firms in Japan.

To further illustrate the problems with the FDI reported by Japanese sources, in table 6.14 I focus on bilateral U.S.-Japan direct investment and contrast the Japanese MOF numbers with those reported by the U.S. Bureau of Economic Analysis (BEA). The BEA data are based on a mandatory survey of U.S. foreign affiliates, and they *include* investment from their earnings (Mataloni

3. Weinstein (1997, 85) also suggested that the stock of foreign assets in Japan as reported by MITI ($26 billion in 1992) should be at least four times higher (at least $100 billion).

4. In 1995, the share of total U.S. private industry employment accounted for by U.S. affiliates of foreign companies was 4.9 percent, the same as in 1994 (Fahim-Nader and Zeile 1997). The gross product originating in U.S. affiliates was $327 billion in 1995, which compares to U.S. GDP of $7,254 billion, giving a 4.5 percent share of value added. Eaton and Tamura (1994) argued that foreign investment in Japan is within the range of what one would expect from a "gravity" equation, given that country's size and distance from others.

The government of Japan is currently engaged in various activities to promote inward foreign investment, including the establishment of Foreign Access Zones, the provision of low-interest loans by the Japan Development Bank, and various tax incentives such as the extension of a carryover period for initial losses on investment (see JETRO 1995a, 1995b).

Table 6.14 **FDI Stock and Flow between the United States and Japan (billions of U.S. dollars)**

	Reported by Japan	Reported by the United States
U.S. stock in Japan		
1993	12.17	31.10
1994	13.77	36.68
Japanese stock in the United States		
1993	177.10	100.27
1994	194.43	104.53
U.S. flow to Japan		
1993	0.93	1.63
1994	1.60	2.52
Japanese flow to the United States		
1993	14.73	1.06
1994	17.33	7.65

Sources: Japanese figures from Japan MOF as quoted on U.S. Department of Commerce, STAT-USA database, NTDB search queue. U.S. figures from U.S. Department of Commerce, Bureau of Economic Analysis, *U.S. Direct Investment Abroad,* http://www.bea.doc.gov/bea/usdia-d.htm, and *Foreign Direct Investment in the United States,* http://www.bea.doc.gov/bea/fdius-d.htm.

1995).[5] The first column of table 6.14 reports the stock or flow of FDI between the United States and Japan in 1993 and 1994, taken from MOF data, while the second column reports the comparable figure taken from BEA statistics. It can be seen that the Japanese MOF data substantially understate the BEA data on the inward FDI stock or flow from the United States, while they overstate the BEA data on the outward FDI stock or flow.[6] I have argued that the understatement is due to the omission of reinvested earnings from the Japanese statistics on inward FDI, and the overstatement on outward FDI appears to be due to the fact that the Japanese figures do not take into account depreciation or losses on investment.

To put the Japan-U.S. investment flows into perspective, in table 6.15 I report the bilateral FDI stocks and flows between the United States and a number of other countries. The Japanese inflows into the United States, such as the purchase of Rockefeller Center and Pebble Beach in Monterey, California, gained widespread attention in the popular press. However, the United Kingdom and the Netherlands have historically been even larger investors in the United States. By 1993, the Japanese stock of investment in the United States

5. Benchmark surveys conducted by the BEA every five years cover virtually the entire universe of U.S. multinationals. The annual and quarterly surveys are not as extensive in their coverage, but data for smaller firms not surveyed are estimated by extrapolating from the last benchmark survey. By including foreign investment due to reinvested earnings, the BEA is following the latest recommendations of the International Monetary Fund and the OECD (Mataloni 1995, 39–40).

6. It turns out that discrepancies of roughly the same magnitude can be observed in United Nations data on bilateral FDI flows between Japan and the United States, which is not surprising since these data are based on the Japanese MOF and U.S. BEA sources.

Table 6.15 **FDI Inward Stocks and Flow for the United States by Source Country (billions of U.S. dollars)**

	1993		1994		1995	
	Amount	% of Total	Amount	% of Total	Amount	% of Total
			FDI Inward Stock			
Total	466.7		502.4		560.1	
Japan	100.3	21	104.5	21	108.6	19
Canada	40.5	9	42.1	8	46	8
Netherlands	71.9	15	68.2	14	67.7	12
United Kingdom	103.3	22	111.1	22	132.3	24
Germany	35.1	8	40.3	8	47.9	9
France	30.7	7	34.1	7	38.2	7
			FDI Inflow[a]			
Total	43.5		49.9		60.9	
Japan	1.1	2	7.7	15	5.3	9
Canada	3.8	9	4.0	8	4.5	7
France	6.8	16	4.0	8	3.7	6
Germany	7.7	18	6.6	13	8.2	13
Netherlands	3.0	7	−2.3	−5	−0.2	0
United Kingdom	13.2	30	11.1	22	22.1	36

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, as quoted on STAT-USA database, www.bea.doc.gov/bea/fdius-d.htm#fdius-1.

[a]Negative values indicate a depreciation of investment values.

had surpassed that of the Netherlands and nearly caught up with that of the United Kingdom. But there has been a reduced inflow from Japan since that time, reflected in part by capital losses on investment.[7] The United Kingdom remains the largest single investing country in the United States, followed by Japan and then the Netherlands.

Fallacy 2: Multinational firms account for the majority of U.S. imports and exports.

Graham stated that "intrafirm trade by MNCs accounted for almost 50 percent of US exports and well over 50 percent of US imports of merchandise in 1991" (1996, 14). Numbers of this magnitude appear to confuse two types of trade by multinational corporations (MNCs): the trade that occurs between a parent and an affiliate—"intrafirm" trade—and the trade that occurs between a multinational and all other companies it buys from and sells to. The second type is just an example of arm's-length transactions between unrelated firms, and there does not seem to be any reason to treat it as special. The first type

7. E.g., Rockefeller Center was sold back to General Electric by Japanese investors at a very large capital loss, and similar losses were taken on U.S. investments purchased during the "bubble" economy in Japan.

includes only those products that are transferred internationally within a MNC. Since this movement of goods leads to issues of transfer pricing, which affects the tax liability of the corporation and tax revenues of the countries involved, there is good reason to focus attention on these trade flows.

The magnitude of trade by U.S. multinationals and foreign affiliates in the United States is shown in table 6.16. About one-third of exports and 43 percent of imports consist of intra-MNC trade, handled between a U.S. or foreign MNC and its affiliates. On the export side, twice as much is transacted within U.S. MNCs as by foreign MNCs. On the import side, intrafirm trade through foreign MNCs is somewhat more than through U.S. MNCs ($134 billion compared to $93 billion), but the majority of those imports by foreign MNCs are within wholesale and retail trade. A good example of this is imports of finished automobiles, where Japanese affiliates such as Toyota Motor Sales in Los Angeles handle the distribution of products into the United States.

Tyson (1991) added another twist on the issue of intrafirm trade by contrasting the patterns of American and Japanese firms. A substantial portion of imports to Japan are handled by Japanese MNCs, especially the large trading companies called *soga shosha.* For example, it is estimated that in 1990 the *soga shosha* handled more than two-thirds of Japanese imports and one-half of Japanese exports (World Bank 1994, 111). Tyson argued that this contrasts very strongly with the United States, where rather than having our own firms manage import and export trade, such trade is instead managed by *foreign* firms: "Foreign direct investment in wholesale and retail trade in the U.S. is so substantial, in fact, that by 1986 foreign affiliates accounted for 75 percent of total U.S. imports and nearly 70 percent of U.S. exports. So while Japanese firms

Table 6.16 **U.S. Imports and Exports through Multinational Corporations, 1992 (billions of U.S. dollars)**

Total U.S. merchandise exports	448.2	Total U.S. merchandise imports	532.7
Exports through U.S. MNC		Imports through U.S. MNC	
U.S. parent to foreign affiliates	104.7	Foreign affiliates to U.S. parent	92.6
U.S. parent to other foreign firms	140.8	Other foreign firms to U.S. parent	107.2
Other U.S. to foreign affiliates	15.6	Foreign affiliates to other U.S.	16.6
Exports through foreign MNC		Imports through foreign MNC	
U.S. affiliate to foreign parent	48.8	Foreign parent to U.S. affiliate	137.8
Manufacturing	11.6	Manufacturing	37.3
Wholesale trade	34.6	Wholesale trade	89.2
Motor vehicles and equipment	5.2	Motor vehicles and equipment	28.7
U.S. affiliate to other foreign firms	55.2	Other foreign firms to U.S. affiliate	46.7
Total intra-MNC exports	153.5	Total intra-MNC imports	230.4
Intra-MNC exports (% of total)	34.2	Intra-MNC imports (% of total)	43.3

Sources: Mataloni (1995, 48, table 7); U.S. Department of Commerce, Bureau of Economic Analysis, *Foreign Direct Investment in the United States: 1992 Benchmark Survey, Final Results* (Washington, D.C., 1995), tables H-25, H-27, H-31, and H-33.

control Japanese trade with the rest of the world, foreign firms dominate America's trade" (1991, 45).

As has been shown, a significant portion of Japanese exports to the United States are indeed handled by their MNCs, with investments in the wholesaling and retailing sector. But the magnitude of these flows are not nearly as high as suggested by Tyson. For example, in table 6.16 the magnitude of exports by U.S. affiliates of foreign corporations is $48.8 billion, which amounts to 10 percent of total U.S. merchandise exports. Of this amount, $29.6 billion, or 7 percent of total exports, is shipped to foreign parents in Japan. Similarly, the magnitude of imports by U.S. affiliates from their foreign parents is $137.8 billion, amounting to one-quarter of total U.S. merchandise imports. Of this amount, $71.2 billion, or 13 percent of total imports, is shipped by parent corporations in Japan.

Fallacy 3: Exchange rate changes do not affect the flow of foreign direct investment.

Of all our misconceptions, this is the one held with greatest vigor by economists, at least until recently. The reason exchange rates are presumed not to matter is that FDI is treated like the acquisition of a financial asset. The decision of a Japanese firm to purchase an American Treasury bill, for example, will depend on the expected rate of return on the Treasury bill. The need to first convert its yen currency to dollars, and later convert the dollar returns back to yen, would be handled in the spot and forward markets for foreign exchange at the time of purchase. Thus there is no risk involved in this currency transaction, and the exchange rates involved will effectively cancel out of the decision: all that matters is the expected return on the Treasury bill as compared to alternative investments for the firm, as well as the covariances between the returns on these various assets.

This theoretical independence from the exchange rate of FDI decisions seems to be contradicted by recent evidence for the United States, as illustrated in tables 6.17 and 6.18. Table 6.17 shows outlays by Japan and five other top investing countries for *acquisitions of existing plants* in the United States, while table 6.18 shows outlays for *new establishments.*[8] These tables show a very marked increase in acquisitions following the depreciation of the dollar in 1985, with a much smaller increase in Japanese outlays for establishments, and no variation at all in purchases of establishments by the other countries. The boom in acquisition lasted for about six years, slowing around 1991 but recovering since then for the United Kingdom and Canada. These numbers suggest that FDI for acquisitions is especially sensitive to the exchange rate.

To reconcile the theory with this evidence, several reasons why exchange rates *will* affect the foreign investment decision have recently been proposed.

8. These figures only use data on new investments and do not include the acquisition of additional equity in an existing U.S. affiliate by the foreign parent, or plant expansion (Quijano 1990, 31). Therefore, the data are less than total FDI inflows, such as shown for Japan in table 6.14.

Table 6.17 **Foreign Acquisitions in the United States by Source Country, 1980–96 (millions of U.S. dollars)**

Year	Japan	Canada	France	Germany	Netherlands	United Kingdom
1980	521	1,743	516	1,186	783	2,793
1981	469	5,100	801	800	408	5,309
1982	137	914	359	315	139	2,002
1983	199	718	167	378	360	1,448
1984	1,352	2,185	145	476	460	2,964
1985	463	2,494	593	2,142	579	6,023
1986	1,250	6,091	2,403	1,167	4,406	7,699
1987	3,340	1,169	1,949	4,318	204	14,648
1988	12,232	11,162	3,691	1,849	2,067	22,237
1989	11,204	4,196	3,295	2,216	3,351	21,241
1990	15,875	1,675	10,771	2,003	2,189	12,200
1991	3,413	1,191	4,706	1,828	1,543	1,808
1992	1,643	954	373	1,398	1,113	1,621
1993	1,359	3,234	1,143	2,347	1,345	7,841
1994	1,018	2,983	1,253	2,701	1,083	16,855
1995	1,893	6,037	358	13,657	624	9,428

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Foreign Direct Investment in the United States: U.S. Business Enterprises Acquired or Established by Foreign Direct Investors 1980–91 and 1992–95* (Washington, D.C., n.d.), tables 2, 5E, 6.1, 6.2, 6C, and 6D, diskette.

Table 6.18 **New Foreign Establishments in the United States by Source Country, 1980–96 (millions of U.S. dollars)**

Year	Japan	Canada	France	Germany	Netherlands	United Kingdom
1980	75	213	83	238	867	273
1981	147	984	104	349	163	869
1982	450	282	124	285	191	1,126
1983	193	354	128	206	132	918
1984	454	402	186	210	102	751
1985	689	420	161	127	192	708
1986	4,166	412	88	184	295	872
1987	3,666	107	96	347	188	494
1988	3,956	198	508	241	147	321
1989	6,206	206	174	219	279	1,806
1990	4,584	201	114	159	177	898
1991	1,944	2,263	271	95	118	361
1992	1,277	397	33	566	219	634
1993	706	563	106	793	730	397
1994	1,696	1,145	151	627	454	406
1995	1,865	444	859	498	261	249

Source: See note to table 6.17.

The first is due to Froot and Stein (1991) and depends on the idea that firms have less than perfect access to capital markets for loans. Since an appreciation of their exchange rates make the firms wealthier in terms of their purchasing power abroad, this will increase their ability to buy foreign firms. In particular, the appreciation of foreign currencies against the dollar after 1985 meant that foreign firms were better able to purchase U.S. plants or establish new plants here. Note that this argument applies equally well to acquisitions or new establishments, so that it does not explain why the largest increase in FDI in the United States after 1985 was of the former type.

A second reason why exchange rates matter has been advanced recently by Blonigen (1997) and helps to explain the particular surge in acquisitions in the United States. This argument builds on the OLI framework described at the beginning of the paper. The ownership implied by FDI allows a parent company to transfer knowledge to the subsidiary, but it equally well allows the parent to receive knowledge from the subsidiary. This knowledge can take the form of a product or process development, for example. Suppose that either of these can be usefully applied by the parent corporation in its own home market, leading to a stream of profits in that market. This will mean that the company purchases a firm in one currency (say, dollars) and receives a stream of profits in its own currency (say, yen) due to the investment. Given that revenues and costs are in different currencies, it is *certainly* the case that the exchange rate will affect the decision whether to acquire the U.S. plant, and an appreciation of the yen would make it more likely that the Japanese firm will make the investment. Blonigen (1997) has shown that this argument helps to explain the increase in FDI in U.S. manufacturing industries, especially those with high R&D.

Fallacy 4: If foreign direct investment occurs in response to trade restrictions, then it harms the host country.

The import substitution regimes that used to exist in Latin America and elsewhere led to inflows of foreign investment to "jump" the tariff barriers, and to counteract this, the countries imposed various restrictions on FDI. These restrictions have some, albeit limited, theoretical justification. Inward FDI *does* harm the host country when (1) trade restrictions in the host country take the form of tariffs, (2) foreign investment does not lead to any wage increase, or technology transfer, in the host country, and (3) foreign investment reduces but does not eliminate imports of the good (Brecher and Diaz-Alejandro 1977). Under these assumptions, the tariff will artificially raise the rate of return in the protected industry, and this return is earned by the foreign firms located there. Unless these artificially high profits are taxed by the host country, their withdrawal will be harmful to that economy.

Recently, however, a number of developing countries have recognized the potential benefits of FDI and loosened restrictions on these activities. For example, Mexico greatly liberalized the rules governing foreign investment dur-

ing the 1980s, and these actions were taken even before discussion of the North America Free Trade Agreement (NAFTA). Together with the change in the policies of some developing countries, there has also been a growing awareness among economists that losses from FDI are the exception rather than the rule. One reason for this is that FDI generally does lead to wage increases in host economies, as well as providing benefits through technology transfer.[9] Another reason is that trade restriction in the host country often take the form of quotas or "voluntary" export restraints, rather than tariffs. In this case, even the limited theoretical case showing losses due to FDI no longer holds, because the inflow of foreign investment effectively reduces the need for imports, so the quota is no longer binding. A good example of this is the voluntary export restraint on U.S. auto imports from Japan during the 1980s. This import restriction led to a large inflow of foreign investment from Japan, which had the effect of lowering prices in the United States, thereby offsetting the initial cost of the trade restriction. In a world of rapid capital mobility, direct investment can offset the distortions created by trade restrictions and also offset their welfare costs.

6.2.4 Analysis of the Trends

It is easier to throw stones than dodge them, and this paper has taken advantage of that. Even among the most widely read popular writers in economics, there are some misconceptions about the magnitudes or implications of FDI. In the process of explaining these, I have tried to outline the trends in FDI as it occurs around the globe. In this section, I will provide further explanations and analyses of these trends.

Protection

Since the early 1980s there has been a very substantial increase in FDI in the United States. The reasons for this increase, and its implications, are still being debated. Among other factors, the inflow of FDI has been influenced by the threat of protection in various industries. This threat was triggered in part by the tight monetary policy, U.S. recession, and strong dollar of the early 1980s. Bhagwati, Dinopoulos, and Wong (1992) have coined the term "quid pro quo foreign investment" to describe the inflow of foreign investment in response to protectionist threats. As they state: "There is certainly some plausible, more-than-anecdotal evidence that the acceleration in Japanese FDI in the United States in the early 1980's was due to a mix of 'political' reasons: some partly in anticipation of the imposition of protection, and others partly to defuse its threat." They report a survey by MITI of Japanese firms undertaking

9. Lipsey (1994) showed that foreign-owned establishments in the United States pay higher wages, on average, than domestically owned establishments. Aitken, Hanson, and Harrison (1994) and Aitken, Harrison, and Lipsey (1995) documented the positive impact of investment inflows on wages for various developing countries.

foreign investment between 1980 and 1986, where it was found that many were motivated by "avoiding trade friction."

The threat of protection reflects the ongoing tendency for the United States to move away from a position of supporting undivided free trade, as it did in the postwar years as the hegemonic leader of the multilateral system, to a more activist position in using its trade policies to influence the behavior of its trading partners. The inflows of foreign investment resulting from such threats of protection should not be viewed as anything new, at least from the perspective of other countries: a substantial amount of U.S. investment entered Europe during the 1960s and 1970s, in response to the moral suasion of those governments. So while these flows have reversed direction in recent years, the reasons for the movement of capital has remained the same.

An empirical investigation of quid pro quo foreign investment was undertaken by Blonigen and Feenstra (1997). They examined the impact of Japanese FDI on the outcome of antidumping investigations in the United States and found that inflows of FDI tend to reduce the likelihood of antidumping duties being imposed. The same has been shown to hold for the application of antidumping duties in Europe (Barrel and Pain 1999). Goodman, Spar, and Yoffie (1996) described how the industry coalitions in the United States in automobiles, semiconductors, steel, and typewriters were affected by the entry of foreign firms; in most cases the eventual outcome was a reduction in the demand for protection. In sum, there is good empirical evidence that inflows of FDI have an impact on the demand for and the application of tariffs, and in most cases the impact is to reduce the use of tariffs. This means that FDI inflows can have a positive impact, over and above the benefits from increased wages and technology transfer.

Exchange Rates

In addition to the threat of protection, I have argued that the depreciation of the dollar has played a significant role in increasing the flow of FDI. I have relied on a new argument for the importance of exchange rates: that a foreign company purchasing a U.S. firm will be able to use the knowledge from this firm in its own home market, so that it purchases the firm in dollars but earns a return in its own currency. It is then certainly the case that the exchange rate will enter into the calculation of whether to purchase a U.S. firm or not (but not in the decision of whether to establish a new firm). I believe this argument is especially important in industries with high R&D expenditures and can explain the influx of foreign firms into Silicon Valley.

To complete this argument, however, it is necessary to ask why the U.S. plant in question did not enter the foreign market itself, either by exporting there or establishing a subsidiary of its own. This question is easily answered: the foreign market may have restrictions on imports and on inward foreign investment. In the presence of these restrictions, the foreign company will have

preferential access to its own market and will be able to earn higher profits there from acquiring the U.S. firm than could the American firm itself. Indeed, there is evidence that foreign companies do pay a premium for U.S. firms when they are acquired (Swenson 1993), suggesting that some aspect of this acquisition is of greater value to the foreign firm.

This rationale for FDI therefore depends fundamentally on market imperfections, giving foreign firms preferential access to home markets and therefore increasing the value of intangible assets (such as knowledge of process or product innovations) they acquire from U.S. firms. It is essentially the reverse of the traditional argument for FDI, whereby a domestic firm would move its proprietary knowledge abroad. The idea that FDI in the United States is for the purpose of acquiring American knowledge may lead to the question of whether the companies involved are receiving the full value of that knowledge in their sale. While there is no reason to think that the markets are undervaluing these firms, it may be the case that *state subsidies* to FDI make these firms attractive targets for foreign takeover. A broad array of state-level subsidies are available to foreign investors, especially those investing in new establishments. It is quite possible that states compete against each other in an effort to attract foreign investment, ending up in a "prisoner's dilemma" whereby the subsidies offered are too high from a national point of view, but each state maintains these subsidies so that it does not lose out to others. For this reason, Reich (1991) proposed that an Office of the U.S. Investment Representative—analogous to the U.S. Trade Representative—should govern the use of state incentives to attract foreign investment.

Investment in Mexico and China

At the same time as capital from Europe and Asia is entering the United States, there has been a substantial outflow of FDI to Mexico and China. This outflow is explained by the more conventional reasons of access to low-priced labor and (for China) to large domestic markets. The flow from the United States to Mexico may have already stabilized following the establishment of NAFTA. But the flow of investment to China can be expected to continue for some time to come, though it will depend on the development of infrastructure and stable policies in that country. Japan and the newly industrialized countries of Asia have large and growing investments in China. Europe, by contrast, has relatively little FDI there.

There is an important difference in the rationale for FDI in China when it comes from elsewhere in Asia, rather than from the United States. Investment from Japan, Taiwan, Korea, and Hong Kong is largely for the "outward processing" of goods, whereby inputs are provided by those countries and certain stages of assembly and processing are done in China. The availability of low-priced Chinese labor reduces the overall cost of the final goods. Some of these products are quite sophisticated, such as computers or their components, and

compete with American-made products on world markets. The use of China as an outward-processing region for goods developed elsewhere in Asia therefore increases the competition facing some American products on world markets.

How are American corporations responding to this challenge on international markets? It appears that their investment in China is not of the same type as that done by other Asian countries. Rather, large American firms investing in China are attracted in large part by the huge domestic market in that country. These companies see the population of 1.2 billion, with low but rising personal incomes, as a potential source of future sales. Companies such as Boeing, General Motors, and Motorola see their investments in China as part of a global strategy, designed to secure sales in China over the long term, but not necessarily resulting in short-term reduction of production costs.

This characterization suggests that the competitive challenge created by the outward processing of goods in China, originating in Japan, Taiwan, and Korea, will *not* be met by similar investment in China by American corporations. Rather, U.S. firms have the opportunity to meet this challenge by the outsourcing of production activities to Mexico, under NAFTA and the offshore assembly provisions of the U.S. tariff code. These provisions allow U.S. firms to export intermediate inputs, have them processed in Mexico or elsewhere, and then reimport the final products while only paying duty on the value added by the overseas activity. As tariff reductions continue to take effect under NAFTA, the incentives for outsourcing to the so-called *maquiladora* plants in Mexico will increase even more. These plants should be viewed as the counterpart to the outward processing done in China for other countries in Asia. In both cases, the outsourcing of assembly activities allows the parent firms to lower their costs of production and increase their ability to compete on world markets. The outsourcing by U.S. multinationals, especially to Mexico, and the outsourcing by multinationals from elsewhere in Asia, especially to China, creates two regionally based production networks that take advantage of the low-priced labor on each continent. The competition between these regional production networks is perhaps the most important outcome of foreign investment in the developing world and will continue to have fundamental effects on the pattern of trade and investment in the next century.

References

Aitken, Brian, Gordon H. Hanson, and Ann E. Harrison. 1994. Spillovers, foreign investment, and export behavior. NBER Working Paper no. 4967. Cambridge, Mass.: National Bureau of Economic Research, December.

Aitken, Brian, Ann Harrison, and Robert E. Lipsey. 1995. Wages and foreign ownership: A comparative study of Mexico, Venezuela and the United States. NBER Working Paper no. 5102. Cambridge, Mass.: National Bureau of Economic Research, May.

Baldwin, Robert E., and Fukunari Kimura. 1998. Measuring U.S. international goods

and services transactions. In *Geography and ownership as bases for economic accounting*, ed. Robert E. Baldwin, Robert E. Lipsey, and J. David Richardson, 9–48. Chicago: University of Chicago Press.

Barrel, Ray, and Nigel Pain. 1999. Trade restraints and Japanese direct investment flows. *European Economic Review* 43 (1): 29–46.

Bhagwati, Jagdish N., Elias Dinopoulos, and Kar-Yui Wong. 1992. Quid pro quo foreign investment. *American Economic Review* 82 (2): 186–90.

Blonigen, Bruce. 1997. Firm-specific assets and the link between exchange rates and foreign direct investment. *American Economic Review* 87 (3): 447–65.

Blonigen, Bruce, and Robert C. Feenstra. 1997. Protectionist threats and foreign direct investment. In *The effects of U.S. trade protection and promotion policies*, ed. Robert C. Feenstra, 55–80. Chicago: University of Chicago Press.

Brecher, Richard, and Carlos Diaz-Alejandro. 1977. Tariffs, foreign capital, and immiserizing growth. *Journal of International Economics* 7:317–22.

Eaton, Jonathan, and Akiko Tamura. 1994. Bilateralism and regionalism in Japanese and U.S. trade and foreign direct investment patterns. *Journal of the Japanese and International Economies* 8 (4): 478–510.

Economic report of the president. 1994. Washington, D.C.: Government Printing Office.

Fahim-Nader, Mahnaz, and William J. Zeile. 1997. Foreign direct investment in the United States. *Survey of Current Business* 77 (6): 42–69.

Froot, Kenneth, and Jeremy Stein. 1991. Exchange rates and foreign direct investment: An imperfect capital markets approach. *Quarterly Journal of Economics* 106 (November): 190–207.

Goodman, John B., Debora Spar, and David B. Yoffie. 1996. Foreign direct investment and the demand for protection in the United States. *International Organization* 50 (autumn): 565–91.

Graham, Edward M. 1996. *Global corporations and national governments.* Washington, D.C.: Institute for International Economics.

Graham, Edward M., and Paul R. Krugman. 1989. *Foreign direct investment.* Washington, D.C.: Institute for International Economics.

———. 1993. The surge in foreign direct investment in the 1980s. In *Foreign direct investment,* ed. Kenneth A. Froot, 13–33. Chicago: University of Chicago Press.

JETRO (Japan External Trade Organization). 1995a. Measures for promoting foreign investment in Japan. San Francisco: JETRO Information Service Department.

———. 1995b. Tax incentives and loan guarantees for foreign affiliates. San Francisco: JETRO Information Service Department.

Julius, DeAnne, and S. Thomsen. 1988. Foreign owned firms, trade and economic integration. In *Tokyo Club Papers*, vol. 2. London: Royal Institute of Economic Affairs.

Kimura, Fukunari, and Robert E. Baldwin. 1998. Application of a nationality-adjusted net sales and value-added framework: The case of Japan. In *Geography and ownership as bases for economic accounting*, ed. Robert E. Baldwin, Robert E. Lipsey, and J. David Richardson, 49–82. Chicago: University of Chicago Press.

Krugman, Paul R., and Maurice Obstfeld. 1994. *International economics: Theory and policy,* 3d ed. New York: Harper-Collins.

Lawrence, Robert Z. 1993. Japan's low levels of inward acquisitions: The role of inhibitions in acquisitions. In *Foreign direct investment*, ed. Kenneth A. Froot, 85–107. Chicago: University of Chicago Press.

Lipsey, Robert E. 1994. Foreign owned firms and U.S. wages. NBER Working Paper no. 4927. Cambridge, Mass.: National Bureau of Economic Research.

Lipsey, Robert E., Magnus Blomström, and Eric D. Ramstetter. 1998. Internationalized production in world output. In *Geography and ownership as bases for economic accounting*, ed. Robert E. Baldwin, Robert E. Lipsey, and J. David Richardson, 83–138. Chicago: University of Chicago Press.

Mataloni, Raymond J., Jr. 1995. A guide to BEA statistics on U.S. multinational companies. *Survey of Current Business* 75 (3): 38–55.
Quijano, Alicia M. 1990. A guide to BEA statistics on foreign direct investment in the United States. *Survey of Current Business* 70 (2): 29–37.
Reich, Robert B. 1991. Who is them? *Harvard Business Review* 69 (2): 77–88.
Rodrik, Dani. 1997. *Has globalization gone too far?* Washington, D.C.: Institute for International Economics.
Swenson, Deborah. 1993. Foreign mergers and acquisitions in the United States. In *Foreign direct investment,* ed. Kenneth A. Froot, 255–84. Chicago: University of Chicago Press.
Tyson, Laura D'Andrea. 1991. They are not us: Why American ownership still matters. *American Prospect,* no. 4 (winter): 37–49.
Vernon, Raymond. 1966. International investment and international trade in the product cycle. *Quarterly Journal of Economics* 80 (May): 190–207.
Weinstein, David. 1997. Foreign direct investment and *keiretsu:* Rethinking U.S. and Japanese policy. In *The effects of U.S. trade protection and promotion policies,* ed. Robert C. Feenstra, 81–116. Chicago: University of Chicago Press.
World Bank. 1994. *China: Foreign trade reform.* Washington, D.C.: World Bank.

3. Carl H Hahn

The changing role of foreign investment: Let me say first, "change" means for us Europeans something quite dramatic. At this time it means the end of privileges for Europeans that have lasted for more than 600 years, through the control of transport and capital, through superior firepower and know-how, through superior education, and so on. Today, access to know-how is universal. All that is needed is a high level of education, social consensus, and participation in the free market. More than 90 percent of the world has joined this club. We have a level playing field, more than some of us in Europe like.

To be a global company you must maintain one quality yardstick worldwide. Our VW cars are made in Germany, Mexico, China, or wherever. You segment not only your manufacturing processes. You segment your engineering and development processes as well. When you buy a Golf today, the transaxle might come from Argentina, the engine and the rear axle from Mexico. The vehicle might have been assembled, if it has four-wheel drive, in Bratislava, Slovak Republic, forty miles from Vienna, Austria. Component globalization requires an enormous degree of discipline, but it also reaps enormous benefits, taking advantage of regional cost differentials and permitting a high degree of specialization and division of labor. On the side, developing countries also benefit. They can attract world-class factories for global and not only local or regional demand, which optimizes the return on capital, one of the classical handicaps of investment in developing countries otherwise.

More and more the most modern factories we operate are enjoyed by workers in developing countries. Take our truck factory in Brazil, which is the latest

one, and has all sorts of work processes that the German trade unions would not accept. Consequently, we employ only 300 people for an annual production of 30,000 trucks. Our 300 people do practically nothing but control quality and coordinate the vendors operating within our plant.

Let me try to tell you the core of what I think I can contribute from my point of view. Volkswagen is a relatively young manufacturer. As a matter of fact, we are the youngest automobile manufacturer in Europe besides our "stepbrother" Porsche. The VW Company and one of our products, the Beetle, still in production in Mexico, are both about half the age of our industry. As a rule, European automobile manufacturers are not even European in their philosophy or manufacturing structure, but rather national—far from global. Typically, the two U.S. manufacturers in Europe are European as well as, of course, global. The Volkswagen group, number four in the world and number one in Europe, South America, and China, is both European and global. According to the *World Investment Report 1997*, among the top 100 transnational corporations (TNCs) Volkswagen ranks sixth by foreign assets, close behind General Motors. Heading the list are Shell, Ford, General Electric, and Exxon. If we go not by assets but by an index made up of sales, employment, and assets abroad, Volkswagen is number one among automobile manufacturers, followed by Nissan, Mercedes, Toyota, Ford, and General Motors. This is just a rough idea how global we have become over the past thirty years.

How, you ask, has VW, the late starter, come to be so far ahead in so many races? In a nutshell, we have never enjoyed protection in our domestic market from the time the Royal Electrical and Mechanical Engineering Corps of the British Army started up the civilian life of our company in 1945. (We are certainly their most successful venture ever.) Moreover, after the war we lacked purchasing power at home, so we had to go abroad step by step as an exporter and as an investor in protected markets of interest. It is this latter role that I shall try to sketch, selecting three distinct examples: Brazil, the Czech Republic, and the People's Republic of China. I'm sorry not to select Mexico, but I am short of time.

Brazil

My first example is Brazil, the classic case for us. It turned out to be a very good experience, and I think for Brazil as well. The market potential at the time, the early 1950s, was small, and the minimum national competitive start-up volume and national investment accordingly. The local content volume required was almost prohibitively (uneconomically) high. At the time, the objective of governments in similar situations all over the Third World was expressed by the buzz phrase "Industrialization at any cost." There were few alternatives to industrialization, but these countries had to pay a certain (high) price as latecomers. In terms of automotive industrialization, I don't know of a single country that would have (could have) started without protectionism in

the later, more developed period of the automobile. We were guaranteed closed borders and found an oligopolistic market with sleeping competitors, at that time, but certainly not anymore. Under these conditions, the price for the entrance ticket was not too high when you had the right vehicle, and it was affordable for us, starting with a first-year production of 20 Beetles in 1953. What we did not realize at the time was the outstanding potential of our Beetle, its extraordinary strength in the marketplace due to the numerous advantages of its longevity in every sense (no model change). Our reward was a 50 percent market share and the self-financing potential. Within a short time, we overtook all our competitors, who had mostly arrived after World War I. A local content close to 100 percent meant that our supply chain followed us from Europe to Brazil, even steel manufacturers.

Consequently, during most of the 1950s, as well as 1960s, the Brazilian economy lived through a period of rapid industrialization and growth. Industrial and product structures were simple. This was a time when you could repair your own carburetor. Consequently, the closed shop did not entail too many handicaps for the national economy at the time; on the contrary, I do not see any alternative.

For many external and mostly internal political reasons, almost twenty years of a mixture of stagnation and inflation would follow. Price controls never worked, but they were lovingly, repeatedly applied. To ease a growing external indebtedness, costly export subsidies, some as complex barter transactions—100,000 cars to Iraq for oil—were introduced, showing only short-term results at best. Enjoying high liquidity, as a manufacturer, as an industrialist, was a matter of survival in those days of instability. The economic policy of price controls induced capital to go in wrong directions. "Gray markets" developed and finally "exported" more and more capital abroad.

The successful merger of Ford and VW in Brazil and Argentina, as a defensive measure, was a creative answer to the political and economic situation of the countries in question. We established a safeguard, reducing the high risk of unpredictable government policies, which could expropriate your assets in weeks—for instance, by simply delaying permission for price increases by the respective authorities. It was easy to control the manufacturer, but not the entire value chain to the final consumer.

By our merger we had reached 50 percent market share and could attain our strategic objective of being the most cost-competitive manufacturer, in order to be "the last manufacturer to die." We accomplished this mostly by common platforms. Volkswagen models got Ford platforms, Ford got Volkswagen platforms. We closed consequently surplus factories, particularly in Argentina, where the market had shrunk to a fraction of its former size, increased working capital, and created liquidity—important competitive advantages during the final days of a regulated economy in a world governed more and more by market forces.

Reaching these objectives allowed us to exist without fresh money from the parents and to be profitable again. This all was viable, however, only up to the

day of the introduction of a market economy Harvard-style in the 1990s. By then the industrial world had changed radically in complexity, in technology, and in sophistication. The Brazilian economy was unprepared for this new world; its industry was less competitive internationally than ever—a textbook case. Already by 1994, however, a $20 billion investment program in new plants and products over five years was the Brazilian automotive industry's response to sound economic policies. A new chapter of intense competition and rapid growth began instantly, partly also in response to the opening of the market to car imports. Enormous forces were set loose. The consumer was the great winner.

One of our most successful products in Brazil at the time, and still today, was a Volkswagen Bus type of multipurpose vehicle, which had a 1949 platform. Three new factories, meanwhile, two for Volkswagen, one for Audi, have already been put onstream. What a change, what a contrast.

Brazil has become the largest recipient of foreign capital in Latin America, with nearly $10 billion in 1996, up from $2 billion in 1992. These figures are indirect proof of the automotive industry's key role as a central driver in an economy. Brazil and Argentina will soon be able to enter the worldwide division of labor, one of the key elements for becoming competitive on a global scale.

However, a period of overcapacity can be expected for some time in Brazil and Argentina, intensified by new players and all-new model lines. Consequently, Brazil will become a highly competitive marketplace, with falling prices. Certainly, Brazil will become a big player in the league of the world automobile industry, searching, also for reason of overcapacity, for export markets, assisted by the global structure of the multinationals.

To summarize, in Brazil and most of South America the future has finally arrived. The year 2000 will see a new Brazil, forging as the largest economy of South America the integration of Mercosur—not an overnight process. I am also encouraged by the fact that the month before last we had for the first time no inflation in Brazil, at least for one month.

Czech Republic

My second example is investing in a former socialist economy, almost forty years later. Skoda or Tatra were known to us at Volkswagen for many good reasons. We had even volunteered to pay a royalty for the Volkswagen Beetle to Tatra. (The designer of the Beetle had come indirectly from Tatra.) We kept in touch with the Czech automobile industry during the Comecon days and were ready to go when the Iron Curtain came down. Thank God only two or three competitors followed at the time. Many were busy in Russia, tempted by Gorbachev. For a Western automobile manufacturer, however, there was in my mind no alternative to Skoda. Whoever owned Skoda would not only enjoy preferential access to the Czech Republic's market, inheriting a sales network in addition to the market share, but also to central and eastern Europe as well.

After buying a controlling interest in Skoda, we encountered managers much closer to the West, and products and factories head and shoulders above what we had found in the extremely run-down East German Trabi factories. The East Germans had had to operate under extremely adverse conditions and were never permitted to dialogue with us, being hermetically separated from the Western world, in contrast to their Czech neighbors.

In East Germany, near Zwickau, Saxony, we found, however, an extremely modern assembly plant built and finished one year before the Iron Curtain came down. On the day this factory "opened" it was mothballed. Within six months, the first VW left the assembly line. In Bratislava, Slovak Republic, forty miles from Vienna, Austria, we also "found" an automobile factory ten years old, with immediate access to the Danube, to rail, to superhighway; never used, mothballed. One hundred and fifty thousand VW passenger cars will be assembled in Bratislava in 1998, besides transmissions.

No question, this was a market- and cost-motivated investment by Volkswagen advantaged by the closeness to our factories in both western and now also eastern Germany and the markets of central Europe in general. The Czech people we had found at Skoda were determined to prove to the Germans how good they were. Vaclav Klaus showed shrewdness in introducing market-oriented reforms, as Jiří Weigl has described (chap. 2.3), and uniquely, quite a few politicians in the Czech Republic had prepared for the end of communism, even at universities in the United States and Great Britain.

Of course our investment entailed know-how imports in all fields, tangible and intangible assets, the opening of all our marketing channels worldwide, integration into our global division of labor, and the provision of benchmarks for every industrial activity or function—all this happened overnight, free of charge. In particular, access to our marketing channels, which took enormous capital and many, many years to create, made it a win-win situation.

In parallel, we educated the vendor industries of the Czech Republic and surrounding countries to Western standards, gave them chances to export, to integrate into our global sourcing process, and supplied the engineering and research know-how they needed to catch up. Their universities received grants from the Volkswagen Foundation and research projects from our engineering departments. We helped them to establish contacts with the universities where we operate.

Our expectations in eastern Europe have been fulfilled (except the quality and effectiveness of reforms in the former Soviet Union, which we had consequently to exclude from our FDI plans at the time, notwithstanding tempting offers by the governments). Our experiences as an investor in Poland, Slovakia, and Hungary have been equally good. In Slovakia and Hungary, the element of vertical integration allowed by component production in these locations played an additional important role in our investment strategy to improve our European cost structure, a process assisted by introducing common platforms for new designs and volume expansion, with a positive employment balance.

In 1996, the Czech Republic, Hungary, and Poland accounted for 68 percent of total inflows of FDI to central and eastern Europe, mostly privatization related, from TNCs not only from western Europe and the United States but also from Asia. In particular, the Republic of Korea moved into first place by foreign assets, among the top fifty TNCs based in developing economies. Summing up, it was possible to enter central Europe successfully through FDI during the reforms toward a free market economy. Setbacks and political changes, particularly in Poland and Hungary, did not discourage us. In some cases "communist" and socialist governments of a completely new type took over. They continued market-oriented economic reforms, trying to avoid the mistakes of their predecessor governments, which had disappointed the electorate in some of the reform countries.

In our case, we also obtained a new brand of strategic importance with international potential and historic value, a brand with a century of automotive tradition, quality people, marketing channels in central Europe, market share, virgin markets for the remainder of our automobile divisions, high-quality workmanship, manufacturing capacities, new vendors, and specialists very much at home in eastern Europe. This permitted us to create our fourth automobile division on a solid base.

In the first half of 1997, according to J. D. Power, a U.S. research firm probably known to you, Skoda was the number one European car in the United Kingdom in customer satisfaction. Today, you can produce quality virtually everywhere provided you conquer the hearts of your workers, train and motivate them, and give them the prerequisites for quality work through your design policies and engineering and by integrating them in all processes, benefiting from their experience and intellectual potential, as you do with your vendors.

China

My third point is about the People's Republic of China. We started negotiating with the Chinese government in the early 1980s. The communist leaders convinced us with the early and dramatic success of their clearly market-oriented reform policies. They practiced what they preached. I also took confidence indirectly but most importantly from the fact that almost every Chinese leader had not only more than one child but many studying in the United States—in my mind an insurance policy for the future political direction of the country and a strategic advantage for the United States of far-reaching importance.

We got to know each other well through frequent visits to Beijing and Shanghai. Zhu Rongji was the mayor of Shanghai in those days. The Chinese leaders on official or informal visits to Germany almost never left out Wolfsburg, our headquarters. This permitted us to underline our policies with hard facts. Eventually, we even traveled together to Mexico and Brazil, in order to demonstrate our policies in developing countries, showing our ability to adapt

to local circumstances and to be a good corporate citizen. At the same time we pursued the careful contract negotiations that would establish the very detailed legal framework necessary because Western civil and commercial legislation is lacking in China. One of the shareholders in our 50/50 joint venture was the Bank of China, so we felt quite sure of the availability of foreign exchange, which we needed in the beginning.

In contrast to the tempting offers of the Russian perestroika leadership a short while before, we did not start with an initial capacity of hundreds of thousands, ending with one million units per annum within a short time, but with a trial assembly in the first year of 500, followed by 2,000 in the second year, doubling this number each year until we rapidly reached 250,000, always maintaining a market share of better than 50 percent.

Soon, a second joint venture would follow, not in Shanghai but in Changchun, province of Jiling, the former Manchuria, with the First Automobile Works (FAW), the birthplace of the Chinese auto industry in 1953. FAW was a stepping stone for many leading personalities of this country. Volume increases will gradually permit us to update our product program, which was kept simple initially to permit a successful learning curve. Soon volume will permit us to amortize new products in line with the international cycle of model change. This in turn will permit us to use this area as a base for exports to the Asia Pacific region with products made in China.

Let me summarize a few points, which I think, helped us greatly. Shanghai was able to reach a local content of 90 percent. Thanks also to the military industry, Norinco helped us to increase our local content rapidly, and to reach quality levels in line with our standards. We exported engines to Europe within three years. Of course this process was accompanied by vendor industries from Europe and the United States, representing an enormous inflow of capital and know-how. Changchun was supplied with CKD packs for Golf production from South Africa. The manufacturing equipment came from Westmoreland, Pennsylvania. CKD packs for the VW Santana, Shanghai, came from Brazil.

All this was proof that our global network was functioning in practice. We also benefit from a certain degree of component commonality between Shanghai and Changchun, with resulting savings in investment, higher volume, and lower cost. Audi became the government vehicle, replacing the Red Flag. A team of Chinese VW engineers and their Brazilian counterparts, connected via satellite, did most of the development work for a major facelift for the Santana, a vehicle that is produced in both countries.

We emphasized not only that we were prepared to give know-how in engineering and development but that we insist, in all countries where we operate, on mobilizing human intellectual talent and potential. We include the local workforce in our worldwide network of development and engineering activities. A German type of apprentice school in Shanghai with more than 200 pupils educates first-class craftsman from day one, and at any time there are at least 100 Chinese training in Wolfsburg, whether in bookkeeping, engineering,

or manufacturing. Changchun was the first production site of our latest environmentally friendly five-valve engine. Nobody anywhere in the world produces a five-valve engine but our group, when I exclude Ferrari. Consequently, China is about to become one of the most advanced industrialized countries—and not only in skyscraper production—thanks to FDI. Furthermore, Chinese universities do research work for us and receive grants from the Volkswagen Foundation. Volkswagen has created an R&D center in China, besides doing development work in existing factories. During most of our time in China, the Shanghai factory was the "Joint Venture of the Year" and had a return on sales better than 10 percent according to official publications.

Early birds have a better chance to finance their investments partially by self-financing. The opposite is true for a latecomer. The price of entry increases constantly. No wonder China has been the largest developing country recipient of FDI since 1992, averaging $35 billion annually. China is attractive to all of us not only because of its size but because its economic growth potential, which will probably make it the world's number one economy by the early 2000s on the basis of their political stability and policies. Intelligence and hard work, not only low wages, make it an ideal platform for serving Asia Pacific markets, enjoying a healthy current accounts surplus situation. China is number one in dollar reserves already, even without including Hong Kong, which I feel complements Zhu Rongji's economic policies, considering the rate of GDP growth year after year and the low inflation rate.

No wonder Volkswagen continues to expand in China, taking advantage of the "socialist market economy" transition policy, under a communist government that has avoided the mistakes and tragedies we had to observe in the former Soviet Union. Naturally, there are risks, but I do not know of any entrepreneurial activity—or any kind of progress, for that matter—without risk, and I don't think that China tops the list of risky countries.

The entry of three billion people from Asia into the world economy with high potential qualifications; the gradual entry, slower than expected, of India; and hopefully one day the entry of Russia—together with what we observe in Latin America, these elements give us a chance no generation before us even dreamt of. As a consequence, globalization will take on new dimensions rapidly. Let us hope that politics will be able to master the new complexities and global risks, permitting us to harvest the fruits of FDI and its built-in know-how transfer.

Some final remarks on FDI in Europe: I can promise you there is almost no place in Europe where the investor will not be lured by subsidies. It's a sheer fight for investors via subsidies. A most unhealthy development, as you can imagine, more weakening than strengthening. There are all sorts of advantages you will be offered to come to central Europe as an investor as well. Not only do TNCs compete with each other, but all countries compete for investment from TNCs.

4. George N. Hatsopoulos

Of all economic issues of interest to noneconomists, I have found none that evokes more of a love-hate reaction than foreign direct investment. Most recognize the benefits it provides to a country, such as added financial capital as well as intangible capital in the form of technology or market presence. Many, however, worry about a real or perceived transfer of control and returns from domestic to foreign owners. In view of the vast changes that have happened in the world, I would like to raise the possibility that FDI, as it is currently measured, may become disconnected from its traditionally assigned attributes. I have no aggregate data to support such a hypothesis, only anecdotal information pertaining to Thermo Electron, the company I run.

Thermo Electron's FDI consists mostly of acquisitions of foreign-owned corporations. Only a small part of it, less than 5 percent, is invested to expand existing operations abroad. The motivation of the latter group of investments is not economic. Physical production, technology generation, and general management are done much more efficiently in U.S. locations. Labor laws that prevail in all other countries are the main cause of that disparity. Nevertheless, we need to invest small amounts in locations abroad to keep up the morale of our people there and maintain their ability to serve local customers.

Our acquisition program is substantial: in the past five years, we have acquired over eighty corporations at a cost of over $2 billion. So far this year, we have made twelve acquisitions at a total cost approaching $1 billion.

The first quarter of this year, we spent $0.5 billion to acquire a U.K. corporation called Life Sciences. In the flow-of-funds tabulation, this transaction will appear as FDI in the United Kingdom, implying that Americans increased their ownership of a manufacturing operation in the United Kingdom valued at $0.5 billion (out of $19 billion total outflow from the United States). The reality, however, is different for two reasons: first, two-thirds of Life Sciences plants are located in the United States, and second, one-third of the owners of Thermo Electron are not Americans. (These facts translate into FDI of only $0.11 billion.)

The situation just described is obviously exceptional. Nevertheless, it is less of an exception than it would have been twenty years ago, and current trends indicate that it will be even less of an exception twenty years from now. We have already witnessed a dramatic increase in the mobility of capital, goods, and services, as well as technology and know-how. We also see increased mobility of owners of capital. Is Mr. Murdoch really an Australian? To my knowledge, he invests mostly outside Australia where he also spends most of his time and money. These observations make me wonder whether the attributes historically assigned to FDI will continue to be valid for long.

Discussion Summary

Robert Feenstra commented that Hahn's description of Volkswagen's global sourcing procedures represent a substantial challenge to existing economic models. He went on to note that recent Canadian statistics suggest that 90 percent of Canadian trade is in intermediate inputs, further challenging the existing methods employed by trade theorists. Feenstra asked whether the technology transfer associated with foreign direct investment works in reverse, with host countries providing innovations that are transported through multinationals back to the home countries.

Carl Hahn replied that these global sourcing procedures have been fostered by technological advances in design processes, miniaturization, and a dramatic reduction in transport costs. For example, the cost of shipping a car from Europe to the United States is equivalent to the cost of transporting a car across the United States. As a consequence, some products, such as the new Beetle, will be assembled only in one place, Mexico, and transported to various destinations around the world. Furthermore, Hahn noted that the internal competition created under a global sourcing procedure is an enormous source of innovation and progress for Volkswagen. Regarding reverse technology transfers, Hahn saw great scope for such transfers. The only obstacle is the arrogance of acquiring companies, particularly U.S. companies, in assuming that local firms do not have important ideas to contribute.

George Hatsopoulos noted that reverse technology transfer is less likely to involve raw technology and more likely to be local market knowledge. Furthermore, this exchange of market knowledge and managerial expertise constitutes a major aspect of the value added of foreign direct investment for Thermo Electron.

Robert Lipsey noted that the cases provided by Volkswagen and Thermo Electron illustrate broader trends in foreign direct investment. American expansion in foreign direct investment came largely in the 1970s, and American firms have pulled back subsequently. In contrast, German and Japanese firms have become much more aggressive in the 1980s and 1990s. Lipsey also noted that the complexities illustrated by Thermo Electron's recent acquisition of Life Sciences are difficult for statisticians to capture in aggregate data. American data are unique in capturing these complexities as questionnaires inquire about ultimate ownership.

Hahn replied that U.S. firms are as aggressive as they have ever been. However, U.S. firms are now more likely to use their foreign affiliates, as in the case of GM-Opel, to make further investments. Similarly, *Hatsopoulos* suggested that Thermo Electron is expanding as aggressively and quickly as ever. Furthermore, he perceived the opportunities abroad to be greater than ever before.

James Hines asked whether Thermo Electron's financing strategy of seeking

non-U.S. investors is related to its acquisition and expansion patterns throughout the world.

Hatsopoulos replied that these financing and investment plans are distinct because capital raised in Europe is raised in dollars and not used directly to finance European acquisitions. As such, the mix of equity capital is a function of the attributes of the capital providers rather than any particular expansion plans.

Nicholas Stern related the recent experience of the European Bank for Reconstruction and Development to the discussion. First, Stern observed that the apparent motivation for multinational investors in eastern Europe has shifted from market share concerns to a more cost-driven agenda. Second, he stressed the difference between the actual details of legal systems and the broader commitment to development that governments can convey to investors. In this vein, he wondered whether this commitment can provide a more convincing signal to investors than actual legal systems. Finally, Stern noted that 30 percent of investment in the eastern parts of the transition economies was provided by Germans while 30 percent of investment in the western parts was provided by American investors. He asked whether these trends are a function of different risk appetites or sectoral specialization and whether they related to the experience of Volkswagen and Thermo Electron.

Hahn denied the distinction between market share and cost motivations suggesting that the motivation is always the opportunity provided by a new market. Accessing these new markets quickly is the ultimate objective in order not to be left behind. He suggested that costs largely even out once up-front costs have been amortized. Hahn also noted that total costs rather than labor costs are of ultimate importance and wage differentials appear to be falling. Regarding the relative importance of legal systems and the commitment to development, Hahn explained that contracts with developing countries will often include the actual details of the German Civil Codes in order to protect Volkswagen's interests. He also noted that incentives for multinationals include a variety of policies from infrastructure provision to generous accounting treatment to facilitate investment and, finally, a variety of tax incentives. Finally, regarding the preference of Germans for the eastern parts of the transition economies, Hahn suggested that knowledge of these areas and historic relations account for these preferences. Current negotiations in Russia for Volkswagen are being conducted by Czechs because they are more familiar with Russian practices. Additionally, the historic weakness of Europeans in natural resource extraction may account for the late entry into Russia relative to U.S. firms.

Hatsopoulos concurred with Hahn on the question of labor cost motivations, saying that this had never been a motivation for a Thermo Electron investment. He further noted that productivity was of ultimate importance and that U.S. productivity, for Thermo Electron's product lines, is currently unmatched. In

fact, he indicated a preference for keeping production within the United States and simply using affiliates for their local market knowledge.

René Stulz turned the discussion to the future of foreign direct investment. He proposed that foreign direct investment may become less important as portfolio flows increase. As transaction costs come down, such flows provide considerable diversification benefits to investors without some of the associated inefficiencies, including agency costs, of foreign direct investment. Accordingly, he suggested that portfolio flows may increasingly substitute for direct investment flows.

Stanley Fischer noted that Hahn's description of multiple sourcing reminded him of a description provided by Michael Blumenthal at one of the first practitioner-academic meetings he attended in the mid-1980s. At the time, Blumenthal stated that a Burroughs computer purchased in the United States had components manufactured in forty-two countries. Hahn's description of Volkswagen sourcing mirrored this very global process.

Arminio Fraga asked how currency volatility is handled by multinationals such as Volkswagen and Thermo Electron.

Hahn noted that he was expecting substantial improvement in currency stability with the advance of the euro and was optimistic about the stability provided by the dual dominance of the dollar and the euro. Hedging is not designed for asset positions but only trade flows for short periods, and this is not universal. More generally, Hahn expressed a preference for seeking balance in streams of merchandise as Volkswagen does with countries such as Spain, where there are sizable flows. Finally, Hahn noted that taking large foreign exchange positions and freezing exposure at certain levels is always risky. In this vein, he noted that the ability of U.S. firms to invoice in dollars represents a significant advantage given the built-in hedging opportunities afforded by such a strategy.

Hatsopoulos agreed that Thermo Electron does not try to predict exchange rate levels and aims instead to match costs and revenues to the greatest degree possible. In this vein, the use of debt financing in recent foreign acquisitions has facilitated matching to reduce exposure.

This Page Intentionally Left Blank