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## The Opening of Midwest Manufacturing to Foreign Companies: The Influx of Foreign Direct Investment

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# The Opening of Seventh District Manufacturing to Foreign Companies: the Influx of Foreign Direct Investment

By Alenka S. Giese*

## Introduction

The 1980s have heralded in dramatic changes in the Seventh District's manufacturing sector (the Seventh District comprises Illinois, Indiana, Iowa, Michigan, and Wisconsin). One of the many dimensions of the restructuring of District manufacturing is the increasingly prominent role played by foreign direct investment (FDI). Although FDI has received less attention than other aspects of the transformation of District manufacturing, its analysis is warranted given its exceptional growth, its role in the globalization of the District's manufacturing sector, and the controversy it has stirred. In a nutshell, FDI in the U.S. overall and in the District specifically has increased dramatically over the past decade. Foreign competition in the District has evolved from being primarily in the form of imports to being in the form of FDI (e.g., acquisitions, joint ventures, and new plants). Since 1978, both employment and total real sales of U.S. affiliates of foreign investors have more than doubled. Although Western European countries and Canada are still the dominant sources of FDI, the trend in FDI reveals a wave of Japanese investment.

This paper focuses on FDI in manufacturing in the Seventh District. Its objective is to analyze the nature and extent of FDI in District manufacturing and the implications of its strong growth. The paper is divided into eight sections. The first section provides a definition of FDI and describes the three measures used to quantify it. The second section examines the forms of FDI in manufacturing and discusses their advantages and disadvantages. The third section covers the major source countries of FDI and their preferred forms of FDI. The fourth section highlights the factors that motivate FDI and have fueled its extraordinary growth in the 1980s. Sections five and six review the growth and geographic dispersion trends of FDI. The seventh section provides an overview of the polemical nature of FDI and outlines the views of FDI advocates and opponents. The

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purpose of this section is not to settle the dispute over the costs and benefits of FDI, but rather it is to present contrasting arguments along with their assumptions and conjectures. In order to place FDI in an industry context and examine more closely its complex nature, the last section undertakes a case study of FDI in the auto and autoparts industries.

## I. What is foreign direct investment?

Before undertaking an analysis of FDI, it is useful to clarify its definition. The definition of FDI used by the Bureau of Economic Analysis (BEA) and the International Trade Administration (ITA) is direct or indirect foreign ownership of 10 percent or more of the voting securities of a corporation or equivalent interest in an unincorporated business. While ten percent foreign ownership is sufficient to call the U.S. corporation a U.S. affiliate, most U.S. affiliates have a much higher percent of foreign ownership.[1] Because FDI involves voting securities, it should not be confused with foreign portfolio investment in bank deposits, non-voting securities, and U.S. Treasury issues.

This study focuses on three measures of FDI in manufacturing: employment at U.S. affiliates, gross book value of property, plant, and equipment of U.S. affiliates, and number of FDI transactions (unless otherwise noted, data cover manufacturing only).[2] The reason for the choice of these measures is that they provide complementary data on FDI that can be used to calculate regional levels, shares, and growth rates. FDI employment and gross book value (GBV) can be used as a proxy for the "stock" of FDI, that is, the cumulative value of FDI. In addition, FDI employment data are a good proxy to measure growth in FDI activity. Gross book value data cannot be used to measure growth because they are in historical dollars (i.e., assets are valued at acquisition cost), and there are no GBV deflators available to convert them to constant dollars. Nevertheless, GBV data are useful to measure regional shares of FDI and probably provide more accurate share measures than employment data which could underestimate the level of FDI activity in capital-intensive industries and industries in which capital is being substituted for labor. The number of FDI transactions is a good proxy for annual FDI and is the only source that provides regional FDI data by form of FDI and by industry, at the three and four-digit SIC (Standard Industrial Classification) code level.[3]

## II. The nature of FDI in manufacturing

Foreign direct investment in manufacturing takes on four basic forms: acquisition/merger, new plant, joint venture, and plant expansion.[4] The most common form of FDI is the acquisition/merger.[5] An



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acquisition/merger offers several advantages over the other forms of FDI. Firstly, it provides the foreign buyer with an on-going business that already has a foothold in the U.S. market and thus allows the buyer to avoid potentially high start-up costs, which include building or acquiring a plant, interviewing and staffing, and establishing networks upstream to suppliers and downstream to distributors. Secondly, an acquisition/merger often provides established and extensive marketing and distribution channels. This advantage may be paramount because it facilitates one of the most difficult tasks of a foreign company's attempt to capture U.S. market share. The establishment of an adequate distribution system often entails high costs and much trial and error because of the cultural and logistical differences between our distribution and transportation systems and those of other countries.[6] A third advantage of an acquisition/merger is that it allows the foreign firm to have autonomy over managing the company. Through an acquisition (as opposed to a joint venture) the foreign firm has relatively greater leeway in any changes it wishes to undertake.

The second form of FDI, establishing a new plant, may be optimal in some instances even though it entails start-up costs and possibly higher risks. The decision of whether to establish a company as opposed to acquiring one is often dependent upon market opportunities which differ across industries. For the nonelectrical and electrical machinery and auto industries, there appears to be room for new entrants, that is, new plants (LTCB of Japan 1987). In contrast, in the primary metals industries, the markets offer smaller opportunities to a new entrant, and thus FDI is usually in the form of an acquisition. Outside of market opportunities, FDI in the form of a new plant could be the best choice if the foreign company has extensive experience selling and producing in the U.S., wants to maintain proprietary rights over its technology, or cannot find a suitable company to form a joint venture with or to buy.

Many foreign firms view the third form of FDI, the joint venture, as the preferable means for entry into the U.S. market. There are several reasons behind their preference. Firstly, if the foreign company has little experience in producing and marketing in the U.S., major barriers must be overcome to successfully enter the U.S. market alone through a new plant. Secondly, if the company's industry entails taking high risks (e.g., production of high tech products with relatively short product life cycles), the company may want to share the risk with a U.S. company. Thirdly, if the foreign company's business involves high capital requirements and it does not have sufficient funds or the ability to raise such funds, it can spread out the capital costs by undertaking a cost-sharing joint venture with a U.S. firm.

The most common form of FDI in both the nation and the District is the acquisition/merger. In 1986, acquisition/mergers accounted for 42 percent



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of the FDI transactions in the District. New plants ranked second with 26 percent. The rise in prominence of FDI in the form of new plants is striking. Since 1978, the share held by new plants has jumped from only 6 percent to 26 percent. Although joint ventures rank a far third with 10 percent of total FDI transactions, their presence has grown also since 1978 when they accounted for only 6 percent. Within the District, the dominant form of FDI in 1986 differed in only one state, Indiana, where new plants outnumbered acquisitions over two to one.

In order to better understand the nature of FDI, it is useful to overview the industries that have attracted a significant amount of FDI. An interesting aspect of FDI in the U.S. is that it often flows into the same industries that U.S. FDI has traditionally favored abroad. Exemplary of this phenomenon is the extraordinary expansion of Japanese FDI in the auto industry. Who would have expected that Japan would build cars in the U.S. and export them back to Japan? For example, Honda plans to export one-third of its production of 350,000 vehicles from its new plant in Marysville, Ohio (*Automotive News* 9/21/87).

Table 1 ranks two-digit SIC code industries by their share of FDI in the U.S. and the District. The table reveals that FDI is not distributed equally across industries but rather displays certain preferences. The dominance of the chemical, electrical and electronic machinery, and nonelectrical machinery industries suggests that much FDI flows into technology-intensive industries.[7] Following the tech-intensive industries are the resource-intensive industries such as food and kindred products and paper and allied products. Third in attracting FDI are the capital-intensive industries such as primary and fabricated metals. The reason for their lower ranking is probably that these industries are hobbled by overcapacity in the U.S. (e.g. steel) and thus offer little market expansion opportunity. All the labor-intensive industries accounted for less than 4 percent of the FDI transactions. The relatively weak flow of FDI into labor-intensive industries is explainable by the combination of relatively high cost of labor in the U.S. and the reluctance of foreign investors to deal with organized labor.

## III. Major source countries of manufacturing FDI

Western European countries and Canada have traditionally been the dominant source countries of FDI. Their status, however, has been eroded by the dramatic rise in Japanese FDI. Since 1978, expansion in Japanese FDI has been occurring at an above average pace. In 1978, the top five source countries in terms of national FDI transactions were in rank order: Canada, United Kingdom, West Germany, Japan, and France. The ranking of these countries in the District was slightly different with Canada's



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## Table 1

### FDI by industry in the U.S. and the Seventh District
### FDI Transactions: 1986

| Industries (in the U.S.) | United States Number | United States Share of Total (percent) | Industries (in the District) | Seventh District Number | Seventh District Share of Total (percent) |
|---|---|---|---|---|---|
| Electrical and Electronic Machinery | 75 | 16.6 | Chemicals | 15 | 22.7 |
| Chemicals | 69 | 15.3 | Electrical and Electronic Machinery | 11 | 16.7 |
| Nonelectrical Machinery | 66 | 14.6 | Nonelectrical Machinery | 9 | 13.6 |
| Food and Kindred Products | 39 | 8.6 | Transportation Equipment | 7 | 10.6 |
| Paper and Allied Products | 38 | 8.4 | Fabricated Metals | 5 | 7.6 |
| Primary Metals | 29 | 6.4 | Primary Metals | 4 | 6.1 |
| Instruments and Related Products | 24 | 5.3 | Food and Kindred Products | 3 | 4.5 |
| Transportation Equipment | 24 | 5.3 | Paper and Allied Products | 3 | 4.5 |
| Fabricated Metals | 19 | 4.2 | Rubber and Miscellaneous Plastic Products | 3 | 4.5 |

SOURCE: International Trade Administration (U.S. Department of Commerce) *Foreign Direct Investments in the U.S.: 1986 Transactions* September 1987.



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## Table 2

### FDI by source country in the Seventh District: 1978 and 1986

| Country[1] | FDI Transactions in Manufacturing | | | | Total FDI Employment and GBV[2] | | | |
|---|---|---|---|---|---|---|---|---|
| | Number | | Share of Total | | Share of Employment | | Share of Gross Book Value | |
| | 1978 | 1986 | 1978 | 1986 | 1978 | 1986 | 1978 | 1986 |
| | | | (percent) | | (percent) | | (percent) | |
| Canada | 6 | 11 | 10 | 11 | 21 | 22 | 31 | 24 |
| France | 1 | 2 | 2 | 2 | 10 | 9 | 8 | 7 |
| Japan | 5 | 37 | 8 | 37 | 5 | 9 | 3 | 15 |
| United Kingdom | 11 | 13 | 18 | 12 | 21 | 21 | 13 | 12 |
| West Germany | 23 | 6 | 38 | 5 | 14 | 13 | 20 | 10 |

[1] Another country that ranks in the top five in terms of "stock" of FDI is the Netherlands with 12 percent of the gross book value of U.S. affiliates in the nation. The Netherlands is excluded here because there were no transactions with it in 1986.

[2] Total U.S. Affiliates (i.e., all sectors) data used because no separate data on manufacturing are available.

SOURCE: Bureau of Economic Analysis (U.S. Department of Commerce), *Foreign Direct Investment in the U.S.: Operations of U.S. Affiliates, 1977-1980,* 1985 and ---, *1986,* 1988; and International Trade Administration (U.S. Department of Commerce) *Foreign Direct Investment in the U.S.: Completed Transactions, 1974-1983,* June 1985 and ---, *1986,* September 1987.



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and West Germany's position switched (Table 2). By 1986, Japan's position had risen to number one in both the U.S. and the District.

Despite Japan's recent investment spurt in the U.S., it has yet to build a "stock" of FDI comparable to that of Canada or the United Kingdom. Among the top five source countries, Japan still holds the smallest share of FDI employment across all sectors (no separate data for 1978 on manufacturing available). Nevertheless, a rise in Japan's status in the District is visible. Between 1978 and 1986, the share of total FDI employment held by Western European countries began to fall off (approximately 1 percentage point) whereas Japan's share grew from 5 to 9 percent while that of Canada rose from 21 to 22 percent (Table 2). In terms of FDI gross book value, Japan's rising presence and West Germany's declining presence are more pronounced. Between 1978 and 1986, Japan's share of total FDI gross book value increased five-fold, placing it as the second largest source country.

It is interesting to note that the preferred form of FDI differs notably across source countries. Western European countries and Canada favor acquisition/mergers heavily over joint ventures and new plants. In 1986, over 50 percent of Canada's and the United Kingdom's FDI transactions across all sectors was concentrated in acquisition/mergers (no separate data on manufacturing available). In contrast, Japan has a more equal balance of FDI in acquisition/mergers (23 percent of total FDI transactions) and new plants (20 percent) and has a greater propensity to form joint ventures (11 percent) than the Canadians or Europeans.

Although there are no clear-cut reasons for these differing tendencies across source countries, there are some hypotheses. One hypothesis is that Japan has a greater propensity to undertake joint ventures because of the relatively greater distance between itself and the U.S.—both in geographical and cultural terms. In contrast, Canada and Western European countries with relatively more experience in and similarities with the U.S. are better adapted to undertake acquisitions and new plants. Although the part of the hypothesis regarding European and Canadian FDI is substantiated by FDI data on acquisitions, the part regarding Japanese investment, however, does not hold.

## IV. Factors that motivate FDI in manufacturing

What are the factors that have propelled the surge in FDI in manufacturing? How do they differ from those that act as an incentive to export? Although trade barriers and exchange rate movements are the factors most often cited, the answer to the first question is more complex because there



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are a host of other factors that have been shown to influence FDI. The factors affecting the FDI decision can be categorized under three broad headings: economic and strategic factors, transactional factors and intangible assets, and political factors.

At the top of the hierarchy of the motivators of FDI are economic factors such as the minimization of cost of production and materials and the expansion of foreign market share. These factors are often coupled with saturated domestic markets and surpluses of savings and dollars (due to trade surpluses with the U.S.) Trade barriers (e.g. tariffs, restrictive import quotas, and domestic content legislation), which could be placed under either the economic or political rubric, are included with the economic factors because they play a prominent role in the price competitiveness and market share of foreign goods.

In order to explain the economic factors that motivate FDI in the U.S., traditional international economic theory has to be expanded. The reason is that the economic factors that drive FDI in the U.S. extend beyond those included in traditional theories such as Heckscher-Ohlin's (which focuses on comparative-cost advantages and factor endowments) and Vernon's product cycle theory (which emphasizes the role of phases of production, innovation, scale economies, and imperfect knowledge).[8]

Before expanding beyond these theories, it is necessary to describe how they partially explain the factors behind FDI. The basic foundation of the Heckscher-Ohlin theory is the concept of comparative-cost differences across nations. Although this model was constructed to predict trade flows, it can be used to partially explain the behavior of FDI. The Heckscher-Ohlin theory states that a country's comparative advantages in production vis-a-vis those of other countries is a function of its endowment of three factors of production: labor, capital, and natural resources. In terms of explaining FDI flows, the theory predicts that FDI will go to countries whose factor endowments allow the source country to minimize its labor, capital, and/or input costs and maximize its return on capital. At the firm level, FDI becomes lucrative when a firm can transfer its comparative advantage(s) in production activities to another country and thus is able to successfully compete against domestic firms.

The Heckscher-Ohlin theory does not, however, adequately explain FDI flows because it focuses on only three factors and makes assumptions that are unrealistic in the context of FDI such as perfect markets, free trade, and knowledge as a free universal good. Some of the important factors that Heckscher-Ohlin does not take into consideration include trade barriers, differences in economies of scale, and differences in technological know-how.



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In order to supplement the Heckscher-Ohlin theory and better explain the impetus behind FDI in the U.S., additional factors (aside from labor, capital, and natural resources) must be included. Other factors that should be examined include trade barriers, exchange rates, and market expansion opportunities in both the source country and the recipient country (i.e., the U.S.). These additional factors can be incorporated into a broader theory on FDI by drawing from Vernon's product cycle theory. The product cycle theory holds that FDI as opposed to exports becomes optimal when the marginal production cost of exporting to the U.S. plus transportation costs exceeds the average production cost of producing in the U.S. (Vernon 1966). Vernon does not limit the factors that enter into the cost equations and includes differing economies of scale. In addition, he considers non-economic factors such as patent protection and communication between the firm and its customers and suppliers. He does not, however, directly include political factors.

Among the additional factors that Vernon takes into consideration are those that threaten a company's position in a foreign market. He states that "any threat...is a powerful galvanizing force to action; in fact, if I interpret the empirical work correctly, threat in general is a more reliable stimulus to action than opportunity is likely to be" (Vernon 1966, p. 200). His theory on threats provides an explanation as to why trade barriers are a key factor in a foreign firm's decision to produce in the U.S. as opposed to export to the U.S. Trade barriers are a clearcut example of a threat to a foreign firm's share of the U.S. market.

Regarding the connection between trade barriers and FDI, Richard Caves cites over a half a dozen studies that have found a close positive relationship between the raising of trade barriers and the change in FDI across all sectors (Caves 1981). A case in point is the influx of Japanese FDI into the U.S. auto industry that coincides with the looming threat of increased protectionism. A study by the Industrial Bank of Japan (IBJ) found that the primary motive in the move to the U.S. by Japanese original equipment manufacturers (OEMs) was the expectation of continued and stiffer restrictions on Japanese auto exports to the U.S. Another example of how the threat of protectionism spurs FDI is seen in the recent acceleration of U.S. FDI in Europe which is primarily attributable to fears that a "Fortress Europe" will emerge in 1992.

In addition to tariffs and restrictive import quotas, the threat of protectionism comes in the form of domestic content legislation.[9] Unlike tariffs which are implemented in reaction to a strong inflow of imports, domestic content legislation is usually proposed in reaction to an influx of FDI. The primary objective of the legislation is to expand the economic



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benefits of FDI by requiring foreigners operating in the U.S. to buy their inputs from domestic firms as opposed to favoring firms in their own country. This goal may be circumvented, however, because foreign firms may choose to procure their materials from another U.S. affiliate. For example, many of the Japanese OEMs in the U.S. have encouraged strongly (some critics say coerced) their Japanese autoparts suppliers to locate in the U.S. It has been estimated that 90 to 95 percent of the local content of Japanese U.S.-built autos is supplied by Japanese U.S. plants (Iannone 1988).

Another economic factor related to foreign trade that has a similar effect as tariffs do on the price competitiveness of foreign goods is the dollar exchange rate. A significant depreciation in the dollar against the currency of its trading partners has two effects, both of which make FDI more attractive than exporting. Firstly, the price competitiveness of exports to the U.S. is adversely affected. Secondly, the cost to foreigners of acquiring or establishing companies in the U.S. falls. Although the negative relationship between the dollar exchange rate and FDI is theoretically clear, empirically it turns out to be significantly weaker than the positive relationship between trade barriers and FDI. For example, the depreciation of the dollar was not cited as a significant factor in several surveys of the Japanese FDI decision (LTCB of Japan 1987).

There are a couple of reasons why fluctuations in the value of the dollar are not as influential in the FDI decision as trade barriers are. Firstly, the decision to invest in the U.S. takes time to plan and implement, particularly if a new plant is being built. Thus, FDI cannot be undertaken simply as a short-term reaction to a declining dollar. A foreign firm may, however, have an FDI plan already prepared and may wait for an anticipated decline in the dollar to carry it out. Secondly, there often is large uncertainty surrounding the duration of a fall in the dollar exchange rate. The dollar may reappreciate just as a foreign firm begins producing in the U.S., which could make the firm's products less price competitive than imports of substitutes. Thirdly, the benefits of producing in the U.S. may be diminished if the dollar profits are repatriated when the value of the dollar is relatively low.

Although comparative advantages in production and trade barriers are often important factors in the final decision to produce in the U.S., market factors and surpluses in savings and dollars often play an important role too. Market factors include limited domestic market expansion and shortage of domestic investment opportunities. Shrinking domestic market opportunities have been important motivators in Japanese and European FDI in the U.S. In addition, over the past decade, savings in Japan and West Germany have surpassed domestic investment needs and thus have flowed



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abroad, primarily to the U.S. whose savings/investment situation is the converse and whose market, being one of the largest and richest in the world, offers relatively strong growth opportunities. Another factor that has facilitated FDI has been surplus dollars resulting from positive trade balances with the U.S. For example, Japan, in particular, has a large stock of dollars that it can draw upon to finance its FDI.

An industry example of how domestic market saturation and surplus dollars promote FDI is provided by the Japanese auto industry. Since their early development, Japanese OEMs recognized the limited domestic market opportunities in Japan and have consequently focused on expanding their share of lucrative foreign auto markets. The IBJ study (mentioned above) found that the second most important factor in Japanese FDI in the U.S. auto industry is that the U.S. market is the largest in the world with about 10 million cars sold per year.

In contrast to the first category of FDI motivators which focuses on tangible assets and production activities, the second category deals with comparative advantages in intangible assets and nonproduction activities. The paper draws upon the transactional approach theory to explain why the optimization of the benefits of intangible assets is achieved through FDI as opposed to exporting or licensing. Intangible assets include technology, skilled labor, and extensive transportation and communication systems and nonproduction activities include R&D, advertising, and marketing. The U.S. market is particularly attractive to FDI motivated by qualitative factors because it offers the resources necessary to optimize the use of intangible assets.

FDI whose purpose is to maximize the use of intangible assets differs from FDI spurred by economic and political concerns in that it tends to be driven more by long-term goals than by short-term financial performance. The objectives of this type of FDI emphasize developing and expanding a firm's internal strength rather than overcoming external problems such as trade barriers and exchange rates that are unfavorable to exporting.

The transactional approach theory outlined by Caves explains why a foreign firm would prefer to optimize the benefits of its intangible assets abroad by retaining exclusive rights over them and exploiting them internally through FDI (Caves 1982). According to the theory, firms choose to establish their own multinational plants because the other options to optimize their intangible assets are often impossible to undertake due to market imperfections and transaction impediments.[10] Moreover, even when these other options are feasible, they may diminish the benefits to the foreign firm of having an edge in a particular nonproduction activity, particularly if the activity is R&D or technology related.



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Although Caves provides a sound argument in favor of maximizing comparative advantages in intangible assets through FDI in the form of a new plant or acquisition, it may not be economically or technically possible to undertake these types of FDI. If not, an alternative way for a foreign firm to use its intangible assets in the U.S. is to form a joint venture and share its intangible assets with a U.S. company. Exemplary of this type of venture is GM-Fanuc's cooperative effort to produce robotics. Their goal is to benefit from the synergies and complementarities between their R&D, marketing, and technological resources (to name only a few).

The third category of factors in the FDI decision are political. Among the primary political factors that attract FDI are a stable government and laissez-faire attitude. In terms of these two factors, the U.S. has historically been a safe haven for FDI. Foreign investors do not have to worry about their U.S. assets being expropriated by the government or their U.S. profits and capital being burdened with repatriation restrictions. In addition, foreign-owned companies benefit from the American free enterprise doctrine. Over the past decade, the U.S. has appeared even more attractive to FDI than developing countries because the political situation of many of these latter countries has become more tenuous while their economic situation has become more depressed, mainly due to a growing and yet unresolved external debt problem and soaring inflation. In contrast, domestic demand in the U.S., fueled in part by an expansionary fiscal policy, has been growing at a faster pace than GNP while inflation has been held in check.

A secondary political factor that influences FDI is state efforts to attract it. As mentioned above, FDI has been attracting a lot of attention from state and local politicians who see it as a means of creating jobs in and supplying capital to their community. Although local efforts to attract FDI may have little bearing on the level of FDI flowing into the U.S., they appear to have some influence over its final location and thus merit attention (Kahley 1986; LTCB of Japan). A survey by the U.S. Government Accounting Office on state government policy toward FDI revealed that 35 states strongly encourage FDI overall and have budgeted state funds to attract it (all 50 states were surveyed; USGAO 1980). At the same time 45 states were strongly promoting FDI in the form of new manufacturing facilities and joint ventures. Their efforts range from investment missions to industrial incentives (e.g., subsidization of job training programs, bond financing, and tax incentives). In order to establish closer ties with foreign investors, 33 states have established offices overseas. Illustrative of these efforts within the District is the effort of the State of Illinois to attract the Chrysler/Mitsubishi joint venture.



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Now that the three categories of influential factors in the FDI decision have been outlined, it is interesting to note how their influence varies across industries. Economic factors seem to dominate FDI flowing into durable goods industries while transactional factors appear to have the most influence in FDI targeted at nondurable goods industries.

In many of the durable goods industries, rising trade barriers appear to have triggered FDI. For example, in the steel industry, strong protectionist sentiment that began in the 1950s has spurred the Japanese to buy out or to buy into U.S. steelmakers (e.g., National Steel). Other examples include color TV's, semiconductors, and autos. In these industries, foreign companies have set up operations in the U.S. either through acquisitions or new plants in order to hurdle trade barriers and mitigate trade friction.

For the nondurable goods industries and a minority of durable goods industries, there is a relatively greater tendency for FDI to be motivated by transactional factors. The enhancement of technological strengths either through access to high skilled labor or synergistic joint ventures (e.g., knowledge acquisition) is often the objective of FDI in the chemicals and instruments industries, though trade barrier considerations also play a role. Comparative advantages in intangible assets such as advertising and R&D play a role in FDI in the chemicals industry as well as the food industry (Goedde 1978).

## V. The surge in FDI in manufacturing—1978-1986

Over the past decade, FDI in manufacturing has been attracting increasingly more attention on the part of economic developers and researchers because of its extraordinary growth. This growth has been contributing to the globalization of the U.S. economy and its mainstay industries. Examination of the 1978-1986 growth of the three selected measures of FDI reveals that FDI has soared, both at the national level and in the District.[11] Between 1978 and 1986, national FDI employment nearly doubled from 798,100 to 1,391,100 (Table 3). Similarly, total assets, sales, and GBV of U.S. affiliates showed strong growth. Total sales of U.S. affiliates more than doubled from $87.4 to $192.7 billion (1982 dollars), while GBV jumped from $29.4 to $113.0 billion (historical dollars). National FDI transactions grew from 270 to 452, or 67 percent.

As a result of the surge in FDI, the U.S. role in FDI has evolved from being primarily the largest source to being both the largest source and the largest recipient. The growing importance of the U.S. as recipient is reflected in total asset data. Between 1977 and 1985, the ratio of the value of total



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## Table 3

## Growth in Manufacturing FDI in the U.S. and Seventh District: 1978-1986

| | FDI Employment | | | FDI Transactions | | |
|---|---|---|---|---|---|---|
| | 1978 | 1986 | 1978-1986 Growth | 1978 | 1986 | 1978-1986 Growth |
| | (thousands) | | (percent) | | | (percent) |
| UNITED STATES[1] | 798.1 | 1,391.1 | 74 | 270 | 452 | 67 |
| SEVENTH DISTRICT | 138.5 | 204.0 | 47 | 34 | 69 | 103 |
| Illinois | 44.6 | 69.7 | 56 | 10 | 29 | 190 |
| Indiana | 28.8 | 37.0 | 28 | 2 | 11 | 450 |
| Iowa | 8.1 | 10.9 | 35 | 1 | 3 | 200 |
| Michigan | 33.0 | 53.0 | 61 | 11 | 20 | 82 |
| Wisconsin | 21.4 | 33.4 | 56 | 10 | 5 | -50 |

[1]United States = 50 states and the District of Columbia.

SOURCE: Bureau of Economic Analysis (U.S. Department of Commerce), *Foreign Direct Investment in the U.S.: Operations of U.S. Affiliates, 1977-1980,* 1985 and ---,*1986,* 1988; and International Trade Administration (U.S. Department of Commerce) *Foreign Direct Investment in the U.S.: Completed Transactions, 1974-1983,* June 1985 and ---, *1986,* September 1987.



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assets of U.S. affiliates to the value of total assets of American-owned foreign affiliates rose substantially from .16 to .56 (BEA data).

Similar to the U.S., the District has experienced strong growth in FDI, though its strength varies depending on which measure is used (Table 3). Between 1978 and 1986, FDI transactions in the District more than doubled from 34 to 69, a 103 percent increase which surpassed the national average growth of 67 percent. Exceptional FDI growth in the District is not, however, visible in the growth of FDI employment. Over the same period, FDI employment growth in the District fell notably below national growth. In the District, employment grew 47 percent compared to the national growth of 74 percent. Reasons for the District's lagging FDI employment growth are presented in a broader geographical context in Section VI. The contrasting pictures of growth presented by these two measures demonstrates the importance of examining several measures of FDI and interpreting each one vis-a-vis the others.

The growth in Japanese FDI has been even more astounding than FDI growth across all countries. Between 1978 and 1986, Japanese FDI transactions across all sectors increased over 500 percent in the nation and over 600 percent in the District (no separate data for FDI in manufacturing by country available for 1978). A similar surge in Japan's presence is seen in the growth in employment of Japanese-owned U.S. affiliates. Between 1978 and 1986, Japanese FDI employment grew 141 percent in the nation and 200 percent in the District.

Within the District, varying growth trends are visible with a couple of states having relatively greater FDI magnetism (Table 3). In terms of FDI employment, Michigan showed the strongest 1978-1986 growth (61 percent compared to the District average of 47 percent). Also above the District norm in second and third place were Illinois and Wisconsin. Weak FDI employment growth was experienced by Indiana and Iowa. That Iowa's growth is below average is easily explained by its industry mix which is dominated by agriculture and has a relatively low concentration of manufacturing industries. This low manufacturing concentration has translated into a relatively low propensity to attract FDI.

A slightly different picture of FDI growth across District states emerges when transactions are examined. Although Indiana ranked last in terms of FDI employment growth, it ranked first in terms of transactions. The reason is that there was strong influx of Japanese investment in 1986 (eight of the eleven transactions) that had not occurred in 1978. Iowa showed strong growth because of the relatively small number of transactions during the base year. Illinois came in third, showing an above average growth of 190 percent while Michigan ranked fourth with below average growth.



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Illinois' edge was due to the greater amount of FDI it attracted from the United Kingdom and Canada. Wisconsin's decline is attributable to the lack of Japanese investment in the state and declining European investment.

## VI. The geographical dispersion of manufacturing FDI

With the boom of FDI in the U.S., several questions have arisen regarding FDI in the Seventh District: has the District been fully benefitting vis-a-vis other regions from the strong influx of FDI? Has its historical comparative advantage in manufacturing been an attractor or detractor of FDI? Of particular interest is whether the recent decline in the District's manufacturing sector overall has had negative repercussions on FDI in District manufacturing. If so, this could explain why the District's share of FDI employment has been falling off. In order to determine the share of FDI garnered by the District, this section examines the regional dispersion of FDI and the shifts in its location since 1978.

Regardless of which measure of FDI in manufacturing is used, the East Coast is shown to have historically attracted the most FDI. In terms of FDI employment, the South Atlantic region holds the largest share (20.6 percent of the national total) followed by the Mid-Atlantic region (19.1 percent) and the East North Central region (19.0 percent) (Table 4). The first two regions, South and Mid-Atlantic, hold a disproportionate share of national FDI employment compared to their share of national manufacturing employment of 16.2 percent (compared to 20.6 percent) and of 15.8 percent (compared to 19.1), respectively. In addition, these two regions have the highest share of FDI employment to total manufacturing employment (9.3 and 8.9 percent, respectively). The Pacific region, though closest to the economically expanding Pacific Basin, has not yet attracted an exceptional amount of FDI. It ranks fifth in terms of share of national FDI employment and eighth in terms of FDI's share of total manufacturing employment. The dominance by the East Coast is probably due to its relatively close proximity to Europe which has historically been the strongest investor in the U.S.

The geographical distribution of 1986 FDI gross book value diverges slightly from that of FDI employment. The South Atlantic region ranks first again with 18.9 percent of the national total. A switch in the second rank occurs with the West South Central region replacing the Mid-Atlantic region. The West South Central region holds 18.7 percent of the total, followed by the East North Central (15.0 percent) and Mid-Atlantic (14.2 percent) regions. The probable reason for the shift in rank is that FDI in the West South Central region is concentrated in the chemical industry which tends to be more capital-intensive versus labor-intensive.



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## Table 4

## Regional FDI Employment in Manufacturing: 1986

| Region[1] | Number of Employees | Region's Share of U.S. FDI Manufacturing Employment | Region's Share of U.S. Manufacturing Employment | FDI Share of Region's Manufacturing Employment |
|---|---|---|---|---|
| | (thousands) | (percent) | | |
| New England | 85.5 | 6.1 | 7.4 | 6.0 |
| Mid-Atlantic | 265.2 | 19.1 | 15.8 | 8.9 |
| South Atlantic | 286.2 | 20.6 | 16.2 | 9.3 |
| East North Central | 263.9 | 19.0 | 21.8 | 6.4 |
| SEVENTH DISTRICT | 204.0 | 14.7 | 17.1 | 6.3 |
| East South Central | 101.9 | 7.3 | 7.0 | 7.7 |
| West North Central | 66.3 | 4.8 | 6.8 | 5.1 |
| West South Central | 111.3 | 8.0 | 7.9 | 7.4 |
| Mountain | 48.6 | 3.5 | 3.2 | 8.1 |
| Pacific | 152.5 | 11.0 | 13.7 | 5.9 |
| California | 127.3 | 9.1 | 10.9 | 6.2 |

[1]Census regions are used: New England = CT, ME, MA, NH, RI, and VT; Mid-Atlantic = NJ, NY, and PA; South Atlantic = DE, DC, FL, GA, MD, NC, SC, VA, and WV; East North Central = IL, IN, MI, OH, and WI; East South Central = AL, KY, MS, and TN; West North Central = IA, KS, MN, MO, NE, ND, and SD; West South Central = AR, LA, OK, and TX; Mountain = AZ, CO, ID, MT, NV, NM, UT, and WY; Pacific = AK, CA, HI, OR, and WA.

NOTE: Percent figures sum to greater than 100% because the District states are included in the East and West North Central regions.

SOURCE: Bureau of Economic Analysis (U.S. Department of Commerce), *Foreign Direct Investment in the U.S.: Operations of U.S. Affiliates, 1986,* 1988.



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As evidenced by East North Central's (ENC) stock of FDI, FDI has flowed beyond the East Coast into the manufacturing heartland. The District, however, has not attracted a significant amount of FDI compared to the ENC region. The probable reason is that its boundaries include Iowa which has a relatively small manufacturing sector and exclude Ohio which has a dominant manufacturing sector. Thus, it is not surprising that the District's share of national FDI employment falls several percentage points below ENC's. This share comparison, however, belies the size of FDI in the District. When FDI employment's share of total regional manufacturing employment is examined, its share in the District is only a tenth of a percentage point below ENC's (6.3 percent compared to 6.4 percent).

Within the District, the leading recipients of FDI have been Illinois and Michigan which is not surprising given the relatively large size of their manufacturing sectors and the strong growth exhibited in their FDI stock in Table 3. FDI manufacturing employment in Illinois accounts for 5 percent of the national total, slightly higher than its share of national manufacturing employment of 4.9 percent (Table 5). Illinois' locational appeal to FDI is more pronounced when the number of transactions is examined. In 1986, Illinois was the location of 29 transactions which ranked it third among the 50 states (behind California and New York). Illinois' attractiveness to FDI will probably be fortified by the presence of the Chrysler/Mitsubishi plant in Bloomington-Normal. Michigan's share of FDI manufacturing employment, 3.8 percent, is less than would be expected given its share of national manufacturing employment of 5.3 percent. Michigan has, however, attracted a substantial number of FDI transactions, 20, which ranked it sixth, behind the top three states mentioned above and Texas and North Carolina. The ranking of FDI employment in Indiana, Wisconsin, and Iowa corresponds roughly to their share of national manufacturing employment. As mentioned above, Iowa has a small manufacturing sector, accounting for only .8 percent of national FDI employment in manufacturing and 1.1 percent of national manufacturing employment.

Although a snapshot of the geographical dispersion of manufacturing FDI provides an understanding of the present status of FDI, it does not offer any information on the geographical dynamics of FDI or conjectures on FDI's future locations. An examination of the shift in regional shares of FDI reveals that the South has been gaining a larger share of the FDI pie while the North has been losing ground. Evidence of this shift is visible in the change in regional shares of FDI transactions, employment, and gross book value.

In terms of number of transactions, over the past decade FDI has become more geographically dispersed, spreading beyond the coastal states towards



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## Table 5

## Three Measurements of Manufacturing FDI in the Seventh District: 1986

| | FDI Employment | | FDI Gross Book Value | | FDI Transactions | |
|---|---|---|---|---|---|---|
| | Number | Share of United States | Value | Share of United States | Number | Share of United States |
| | (thousands) | (percent) | (million historical$) | (percent) | | (percent) |
| SEVENTH DISTRICT | 204.0 | 14.7 | 13,108 | 11.8 | 69 | 15.3 |
| Illinois | 69.7 | 5.0 | 4,848 | 4.4 | 29 | 6.4 |
| Indiana | 37.0 | 2.7 | 2,046 | 1.8 | 12 | 2.6 |
| Iowa | 10.9 | .8 | 826 | .7 | 3 | .7 |
| Michigan | 53.0 | 3.8 | 3,630 | 3.3 | 20 | 4.4 |
| Wisconsin | 33.4 | 2.4 | 1,758 | 1.6 | 5 | 1.1 |

SOURCE: Bureau of Economic Analysis (U.S. Department of Commerce), *Foreign Direct Investment in the U.S.: Operations of U.S. Affiliates, 1986,* 1988; and International Trade Administration (U.S. Department of Commerce) *Foreign Direct Investments in the U.S.: 1986 Transactions,* September 1987.



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the heartland, including the District. Evidence of the District's FDI locational appeal is seen in the District's rising share of total FDI transactions. In 1978, the District's share was 12.6 percent while that in California alone was 13.7 percent. By 1986, the District's share was up to 15.3 percent, above California's share of 14.8 percent.

Changes in the regional distribution of manufacturing FDI employment reveals a different picture (Table 6). The share of FDI employment held by older manufacturing regions such as New England, Mid-Atlantic, East North Central, and the District has been declining whereas the share held by southern regions such as East and West South Central has been rising. Between 1978 and 1986, the District's share of FDI employment shrunk from 17.4 percent in 1978 to 14.7 percent in 1986. Similarly, Mid-Atlantic's share fell from 21.4 percent to 19.1 percent over the same period. In contrast, South Atlantic's share jumped to first place from 17.5 to 20.6 percent.

There are several possible reasons for the different trends in FDI reflected by transactions and employment. Firstly, the northern manufacturing belt, especially the District, has been beleaguered by a declining manufacturing sector. Between 1978 and 1986, District manufacturing employment dropped a dramatic 19.4 percent whereas South Atlantic's manufacturing employment expanded 2.9 percent. The precipitous decline in the District's manufacturing sector has undoubtedly had negative repercussions on the flow of FDI into the District. As highlighted in Section V, growth in FDI employment in the District has been lagging national growth. This lag explains why its share of FDI employment has been shrinking. Secondly, South Atlantic's strength in FDI employment could be explained by the high probability that FDI in the relatively more labor-intensive industries is going to southern regions, which offer lower labor costs and less unionization than northern regions. Conversely, the North may be attracting relatively more FDI transactions in the capital and tech-intensive industries. Evidence of the District's tendency to attract FDI into these kind of industries is the above average number of 1986 transactions in two tech-intensive industries, chemicals and electrical and electronic machinery.

When gross book value data are examined, their pattern reveals similar shifts in regional shares, but there are some caveats in interpreting them (Table 6). The main problem is that they are in historical dollars. Thus, they tend to underestimate the share of FDI held by regions with a relatively older capital stock and tend to overestimate the share held by regions with relatively younger capital stock and strong influxes of FDI. For example, for the District, a relatively older manufacturing region, the share of GBV in both 1978 and 1986 is several percentage points below its share of FDI employment (same case for the Mid-Atlantic and New England regions). In contrast, the share of GBV of the West South Central region, a



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## Table 6

## Shifts in Regional Shares of Manufacturing FDI: 1978-1986

| Regions[1] (ranked by employment share) | 1978 Share of U.S. FDI Employment | 1978 Share of U.S. FDI Gross Book Value | Regions (rank by employment share) | 1986 Share of U.S. FDI Employment | 1986 Share of U.S. FDI Gross Book Value |
|---|---|---|---|---|---|
| | (---------percent---------) | | | (---------percent---------) | |
| Mid-Atlantic | 21.4 | 17.1 | South Atlantic | 20.6 | 18.9 |
| East North Central | 20.9 | 15.3 | Mid-Atlantic | 19.1 | 14.2 |
| South Atlantic | 17.5 | 22.2 | East North Central | 19.0 | 15.0 |
| SEVENTH DISTRICT | 17.4 | 12.2 | SEVENTH DISTRICT | 14.7 | 11.8 |
| Pacific | 12.4 | 9.8 | Pacific | 11.0 | 10.3 |
| West South Central | 6.8 | 12.4 | West South Central | 8.0 | 18.7 |
| New England | 6.7 | 4.6 | East South Central | 7.3 | 6.6 |
| East South Central | 6.3 | 10.0 | New England | 6.1 | 4.1 |
| West North Central | 5.5 | 5.6 | West North Central | 4.8 | 4.7 |
| Mountain | 2.4 | 2.0 | Mountain | 3.5 | 2.4 |

[1]See Table 4 for definition of regions.

NOTE: Percent figures sum to greater than 100% because the District states are included in the East and West North Central regions.

SOURCE: Bureau of Economic Analysis (U.S. Department of Commerce), *Foreign Direct Investment in the U.S.: Operations of U.S. Affiliates, 1977-80,* 1985 and ---, *1986,* 1988.



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younger manufacturing region is substantially larger than its share of FDI employment. Despite the problems with GBV data, shifts in the regional shares of GBV mirror the decline of FDI in northern regions that was visible in the shifts in regional shares of FDI employment. There is one divergence, however. GBV data show that South Atlantic's share has declined as well. Unfortunately, because of data limitations, the reason for this cannot be discerned.

## VII. An overview of the pros and cons swirling around FDI

The surge in FDI has been met with contrasting reactions from people within the business community, academia, and public sector. Embraced by most state and local public figures, particularly economic developers, FDI is known as reverse investment and is touted as a source of capital and jobs to rejuvenate a sagging manufacturing sector. Decried by others, FDI is viewed as the gradual selling of America and loss of control over our mainstay industries. Much of the divisiveness has been regarding FDI's employment repercussions. For example, most state governments are steadfast in their belief that FDI creates jobs and promotes economic growth. In contrast, certain special interest groups such as the UAW and various trade organizations have warned that FDI will lead to net job losses.

In order to sift through the myriad of opinions about the effects of FDI on the U.S. economy, competitiveness, and employment, they are divided along the straightforward lines of pro and con. The discussion tries to be impartial and presents evidence both supporting and/or disproving each argument. A conclusion either way is not offered because it would be based on too many uncertainties and conjectures.

The proponents of FDI argue that it can help boost our economy, the competitiveness of U.S. industries, and thereby create jobs and increase welfare. As a *New York Times* headline reads: "Japan's Money Helps Build America" (*NYT* 6/5/88). In answer to the question of how does FDI build America, there are five broad responses: FDI increases national wealth, offers competitive advantages, transfers technological know-how, stimulates investment, and generates jobs. According to FDI advocates, FDI not only builds America but also represents a long-term commitment to do business in the U.S. because the majority of foreigners are acquiring real assets that are less liquid than non-voting security ownership.

The first response to how FDI builds America (i.e., increases national wealth) is based on free trade theory. It argues that just as free trade is beneficial to all countries involved and increases national welfare, so is



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"free FDI." The chain of events is as follows: FDI promotes greater competition because it increases the number of new entrants in an industry. Faced with more vigorous competition and in search of a competitive edge, industry participants implement cost-reducing, efficiency and quality improving methods. Those who hesitate usually do not survive the ensuing industry shakeout. The implementation of new methods usually translates into lower prices and increased quality and service. The ultimate beneficiary is the consumer. Along a related vein is the viewpoint that in order to excel in global competititon, the U.S. must open its doors to foreign production on its own soil.

The view that FDI is only a source of competition is lopsided. FDI can also be source of cooperation in the form of joint ventures. It is the benefits of joint ventures that is the focus of the second pro-FDI response. In their article "Cooperate to Compete Globally," Perlmutter and Heenan tout the advantages of cooperative efforts across borders (Perlmutter and Heenan 1986). The general advantages of a joint venture include risk diversification, capital requirement reductions, established marketing and sales networks and thus relatively low start-up costs. Those industries that benefit the most from sharing capital requirements tend to be those in R&D and tech-intensive industries such as pharmaceuticals and high tech equipment. Perlmutter and Heenan cite several examples such as the alliance between General Electric and SNECMA (a French state-owned company) to produce a low pollution high-performance aircraft engine whose high R&D costs would have prevented either company from producing the engine on their own. An example of marketing and sales synergies is the union between AT&T and Olivetti (an Italian firm). Through this union, AT&T gains access to the European market and Olivetti gets a foothold in the U.S. market.

Another pro-argument that is derived from the "cooperate to compete" view focuses on the technological transfer benefits that arise from FDI either through joint ventures or spill-over and spin-offs. As explained in Section IV, one of the motives to invest in the U.S. is to optimize the use of an intangible asset such as technological know-how. One avenue of technology transfer is a joint venture between a U.S. firm and a foreign firm in which one or both of the firms possess a technological edge in their industry. Examples of such a marriage are the GM-Toyota (NUMMI) and the Chrysler-Mitsubishi (Diamond-Star) joint ventures. Both GM and Chrysler hope to learn the sophisticated production technologies of Japanese OEMs. The use of Japanese technology has also facilitated the technological catch-up of U.S. firms that have fallen behind in the tech race. For example, Westinghouse who missed the technological leap from vacuum tubes to semiconductors has been able to shake off the moth balls from its plant in upstate New York thanks to a joint venture with Toshiba.



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Toshiba will transfer crucial technological know-how to Westinghouse engineers that will allow them to develop tech-advanced color television tubes.

A fourth benefit of FDI offered by its proponents is that it stimulates investment which often has a multiplier effect. This argument is, obviously, stronger for FDI in the form of new plant and plant expansion than it is for FDI in the form of an acquisition. For example, when a Japanese OEM builds a plant in the U.S., its FDI represents an infusion of new capital whose benefits accrue in part to sectors outside of manufacturing such as construction and services. Similarly, when a foreign firm forms a cost-sharing joint venture, the foreign firm often provides crucial capital. Acquisitions are also a source of capital, though the multiplier effect is probably weaker.

The impact of FDI in the form of an acquisition has been studied extensively by Jane Sneddon Little (Little 1981 and 1982). Her findings suggest that in the long-run, FDI has a positive impact on the U.S. firms acquired. Among her important findings are the following. Foreign buyers do not focus solely on acquiring healthy strong growth companies, that is, companies that do not have dire capital needs. In fact, the 78 publicly-owned firms in her survey acquired by foreigners tended to be less profitable than the average firm in their industry and thus may have been facing difficulties raising capital. Another finding is that there were regional variations in the acquired firms profitability which suggest that acquisitions in the beleaguered northern manufacturing belt (e.g., the District) had relatively stronger potential in generating financial benefits. She noted an apparent acceleration in sales and asset growth of the acquired firm which could be attributable to the foreigners' contribution of capital, technology, and/or management skills. Little concludes that "foreign acquisitions of U.S. companies confer some benefits on the U.S. economy," and that "foreign ownership...appears to strengthen the competitive position of the acquired firm and allow them to expand their market share" (Little 1981 p.17 and 1982 p.53, respectively). A specific example of the financial benefits that result from foreign acquisition is the Renault-AMC deal. When Renault acquired nearly half of AMC in 1979, it gave AMC desperately needed capital that allowed it to maintain production and to modernize in the early 1980s (the deal did not endure, however, with Renault selling AMC to Chrysler).

A fifth reason given to promote FDI, one popular among economic developers, is that it generates jobs. This argument has been challenged by people who believe that the opposite is or will be the case. The contrasting views stem from different assumptions about the factors included in the net employment change calculations. FDI proponents claim that there is a net employment gain because products produced by foreign firms on U.S. soil



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primarily replace imports. This replacement translates into a shift in jobs from the foreign country to the U.S. FDI opponents counter that replacement, if it occurs at all, is only partial and that the foreign firms' products compete directly with domestic firms' products and thus there is no net job gain. Some argue that there is even a net job loss because foreign firms tend to substitute more capital for labor than domestic firms and have relatively higher productivity rates.

Few studies have been undertaken to gauge the employment impact of FDI. The probable reasons for this are that there are little data available and that insufficient time has passed to determine the impact of the influx of FDI. Nevertheless, for certain industries in which the employment impact has raised exceptional concern, studies have been attempted. For example, the impact of FDI on employment in the autoparts industry has been examined by the U.S. International Trade Commission (USITC 1987). Based on evidence that Japanese autopart producers in the U.S. primarily supply the Japanese OEMs in the U.S., the ITC concluded that presently there has been a net gain in autoparts employment. There is, however, uncertainty about the future job impact. If the Japanese producers expand their market to include the U.S. Big Three (i.e., General Motors, Chrysler, and Ford) and the aftermarket, U.S. autoparts producers will feel the pinch and may have to cut production and consequently reduce their labor force.

The employment impact of FDI in the auto industry has been estimated by the U.S. GAO for the years 1987 and 1990 under various scenarios. The scenarios are based on different displacement ratios (i.e., the percentage of sales by U.S. automakers that is displaced by Japanese auto production in the U.S.). Because there is great uncertainty surrounding what the actual displacement ratio is or will be, the argument that there is a positive or negative net employment impact is futile. Only time and an ex-post analysis will tell which way the impact falls. The U.S. GAO findings in terms of employment changes under three displacement scenarios are as follows:

**Net employment change due to Japanese auto production in the U.S.**

| | Displacement ratios | | |
|---|---|---|---|
| Year | 85% | 60% | 0% |
| 1987 | -39,000 | - | 33,000 |
| 1990 | -45,000 | 0 | 112,000 |

Note: Zero displacement means that only imports are displaced.



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Although there are many convincing arguments in favor of FDI, there are several sound arguments against it and many articles critizing it. Reich and Mankin titled their article on the topic: "Joint Ventures with Japan Give Away our Future" (Reich and Mankin 1986). *The Economist* described the long term effect of Japanese FDI in the auto industry as "creeping colonisation" (March 2, 1985). The con arguments can be divided into two categories. Firstly, there are the con opinions highlighting what are perceived to be FDI's near-term adverse effects. These include overcapacity and unfair competition. Secondly, there are the negative views that cover FDI's long-term repercussions. These comprise the loss of economic and technological control and the prediction that FDI will cause a transformation of U.S. manufacturers into hollow corporations or, in other words, a corporation that is less a manufacturer and more an assembler and/or a marketing organization. Because the argument of employment loss has already been detailed above under the pro section, it will not be duplicated here.

One of the immediate concerns regarding FDI is that it will exacerbate domestic overcapacity problems. Stagnant or declining demand and surging foreign competition have resulted in overcapacity problems in many of our mature industries such as steel and autos. As a result, these industries have had to retrench and reduce capacity. FDI investment in these industries, assuming that it results in a competitive enterprise, will lead to further retrenchment on the part of U.S. producers.

The concern over additions to domestic capacity due to FDI is most pronounced in the auto and autoparts industries. The WEFA Group/Ward's Automotive Research has estimated that excess auto supply based on current production capacity will grow from 1,269,000 in 1988 to 1,515,000 by 1992 (includes Big Three, Japanese production in the U.S., and imports). Because the demand for autos is predicted to grow relatively slowly, any increases in domestic capacity due to FDI will probably lead to capacity reductions on the part of U.S. producers. U.S. autoparts producers face a similar situation. Although Japanese autoparts firms have located in the U.S. to supply Japanese automakers operating in the U.S., it is likely that they will try to gain market share in the aftermarket (i.e., replacement sales) and acquire contracts with the Big Three. Their incentive to pursue these markets is very strong because they need to increase their production runs in order to benefit from economies of scale and reduce their costs to competitive levels. If they succeed, they will be cutting into the market share held by U.S. companies.

The second concern is that of unfair competition. U.S. producers have complained that they face an unlevel playing field vis-a-vis foreign competitors on U.S. soil because of direct or indirect subsidies funneled to for-



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eign producers (primarily Japanese). These advantages include tie-ins with other foreign producers in the U.S. and state and local government incentives to attract foreign producers. One domestic industry that has been outspoken on this topic is the autoparts industry. U.S. autoparts producers claim with convincing evidence that Japanese autoparts suppliers enjoy high barriers to entry to supplying Japanese OEMs. The relationship between supplier and OEM in Japan appears to much tighter and more long-term than the relationship between U.S. suppliers and the Big Three. For example, a few Japanese suppliers were directly encouraged by a Japanese OEM to establish operations in the U.S., and several have organizational and/or financial ties with Japanese OEMs. In addition, those that do not have direct ties still have an edge over U.S. suppliers because they are more familiar with the demands of Japanese OEMs and more capable to meet their quality specifications.[12]

Another argument regarding an unlevel playing field is that foreign companies are given unfair advantages through state and local government incentives. Incentives include reduced taxes, low interest loans, assistance in site acquisition, and infrastructure improvements (e.g., roads and utilities). Charges of biases in favor of Japanese producers over U.S. producers have been leveled against these types of state incentives. The incentive packages that have drawn the most attention and criticism have been those used to attract Japanese OEMs. Two examples include: Kentucky's $125 million support package to Toyota (15 percent of Toyota's planned investment) and Michigan's $52 million support package to Mazda (12 percent of Mazda's planned investment) (USITC 1987). Several Japanese autoparts suppliers have also been courted by local economic development organizations near the auto plants.

In addition to the bias charge, the overall benefits of such incentives have been challenged. There is some validity in the arguments that state incentives are a zero-sum game in terms of national economic growth and a negative-sum game for U.S. producers. In regards to the negative-sum game, for example, when incentives are given to foreign producers in industries facing overcapacity, it is likely that U.S. producers will be forced to cutback capacity. In regards to the zero-sum game, when states are vying for the same FDI project, one state's gain is another's loss.

In terms of the long-term repercussions of FDI, concerns have been raised over the potential loss of economic control and technological edge. The loss of economic control argument is based on the conjecture that FDI will expand infinitely and dominate certain industries. The chemical industry, in which FDI accounts for around a third of total employment, is often highlighted as a case in point. The loss of technological edge is predicated on the belief that U.S. companies will fall technologically behind their for-



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eign competitors as the U.S. firms are bought out by their competitors or form joint ventures with them. The culmination of FDI's adverse effects is claimed to be the hollow U.S. corporation that is more a marketing organization and assembler than a producer or value-added generator.

The loss of economic control argument does not have a strong foundation because of three major flaws. Firstly, it does not take into consideration that FDI is often in the form of a joint venture with a U.S. company who shares production and managerial responsibility. Secondly, it does not recognize that U.S. companies have been undertaking their own FDI and thus have been expanding their production and marketing base in a similar fashion. Thirdly, it assumes that FDI is not regulated. To the contrary, FDI has been under surveillance in industries tied to national security (e.g., defense, nuclear and hydroelectric power, semiconductors, and broadcasting). A case in point is the blockage of Fujitsu's (of Japan) attempt to acquire an 80 percent share of Fairchild Semiconductor Corp. Fujitsu's announcement of its intentions stirred up such controversy and negative responses from the Secretaries of Commerce and Defense that Fujitsu decided to withdraw its offer. The controversy revolved around the deal's potentially adverse impacts on national security and stemmed from the perception that the Pentagon was becoming uncomfortably dependent upon foreign suppliers. The irony of this case is that Fairchild was at that time owned by a French company, Schlumberger.

A stronger argument against FDI is that it has the potential to lead to a gradual loss of our technological edge. Reich and Mankin in their article against joint ventures with Japan present their case of technological degeneration (Reich and Mankin 1986). They argue that the implicit strategy of the Japanese that are investing in the U.S. is to keep the frontend activities (e.g., R&D and prototype development) and high value-adding activities in Japan, leaving the more routinized activities to their U.S. plants (e.g., assembly operations). In order to substantiate their view, they cite three deals between U.S. and Japanese OEMs: GM-Toyota, Chrysler-Mitsubishi, and Ford-Mazda. They state that in each case, the Big Three delegated most of the responsibility of the plant design and engineering tasks to the Japanese.

Articles in *Automotive News* have reflected a similar view. The concern of the U.S. auto and autoparts industries is that the Japanese OEMs will probably have a cost advantage due to the fact that they import a greater percent of their inputs. The negative impact of this on U.S. producers and their technological edge is twofold. Firstly, if there is significant displacement of U.S. auto sales by Japanese auto sales, U.S. autoparts producers could be faced with a shrinking market and could be closed out of the high-tech niche of the market in which the Japanese have a competitive



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advantage. Secondly, in order to maintain their cost and quality competitiveness vis-a-vis the Japanese OEMs, the Big Three may be forced to purchase more parts from Japanese suppliers and thereby contribute to the erosion of the U.S. autoparts producers' market share and their ability to invest in cutting-edge technology.

In addition to the U.S. producers' being relegated to the less tech-intensive activities, Reich and Mankin see another threat. They contend that the flow of technological learning will be from the U.S. to Japan. They focus on the skills gained by Japanese workers in the areas of applications engineering, fabrication, and complex manufacturing. They do not prove definitively, however, that the learning is only unilateral. They omit the fact that U.S. workers can gain similar skills when they work for a joint venture. As demonstrated by the exceptional quality improvements at GM-Toyota's NUMMI plant, U.S. workers can gain invaluable quality control experiences and learn how to boost productivity from the Japanese.

Another argument against FDI in the form of a joint venture is that the U.S. company is less a full participant in the value-adding activities of manufacturing and more a marketing arm for the venture. This argument provides the underpinnings of the fear that U.S. manufacturers are vulnerable to becoming hollow corporations. Reich and Mankin state that most of the high-tech joint ventures that they examined involved the Japanese company as producer and the U.S. company as marketer and distributor (70 percent of the 33 companies). They studied the machine tools and semiconductors industries in which this phenomenon was prevalent. With regards to the machine tools industry, they found that more than 75 percent of all machining centers sold in the U.S. were made in Japan, though many of them were sold with U.S. brand plates. Although they do not provide any statistics for Japan's presence in the U.S. semiconductor industry, they predict that the Japanese edge in state-of-the-art chip production and relatively low production costs, particularly that of Hitachi, will trigger sales and distribution agreements between U.S. and Japanese producers. A study by the Commerce Department substantiates in part the findings of Reich and Mankin. The report states that Japanese are pursuing joint ventures with U.S. companies in order to gain quick market access and distribution channels (*Automotive News* 5/25/87).

After reviewing the pro and con arguments surrounding FDI, it is hard to determine which way the scale tips. There are too many uncertainties, as pointed out in the discussion regarding the adverse effects of FDI on employment. Many of the viewpoints are only conjectures and predictions. Thus, only time will tell whether or not they are valid.



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# VIII. A case study of FDI in the auto and autoparts industries

The choice of the auto and autoparts industries for a case study of FDI was based on several factors. Firstly, FDI in the auto and autoparts industries has been attracting a lot of attention, including both positive and negative reactions from the media and government organizations (particularly state governments that are scrambling to attract auto plants). Thus, there are ample data on auto and autoparts FDI. Secondly, auto and autoparts FDI have been growing at above average rates. For example, in the District, the number of transactions in the transportation equipment industry (over 80 percent was in the auto industry) jumped from two in 1978 to seven in 1986, a 350 percent rise compared to the average increase across all industries of 136 percent. Thirdly, FDI in the auto and autoparts industries provides an excellent example of the complexities of FDI and of the globalization of U.S. industries.

Because there are differences in the composition and magnitude of FDI in the auto and autoparts industries, they are discussed separately. One striking difference between FDI in the two industries is that it is composed of different source countries. In auto FDI, the Japanese are the sole players whereas in autoparts FDI, the Europeans and Canadians have a foothold as well.[13] Another difference is found in the reasons that underlie the foreign firms' move to the U.S. The Japanese OEMs began production in the U.S. in order to hurdle existing and potential trade barriers whereas the Japanese autoparts producers followed suit in order to best meet the needs of the Japanese OEMs. In other words, their move was precipitated by the move of their primary customers. In contrast, the move to the U.S. by Canadian and West German autoparts producers was independent of any direct ties with U.S. located customers. In a sense, they started from scratch while the Japanese producers already had some guaranteed market share in the U.S. FDI in the auto industry will be discussed first.

Seven of the nine Japanese OEMs have established new plants and/or formed joint ventures in the U.S. (Table 7; Suzucki and Daihatsu Motor Co. have not). Japanese presence on U.S. soil is a phenomenon of the 1980s with the pioneer being Honda who built a plant in Ohio in 1982. Over the past few years, other Japanese OEMs have been fast to follow Honda's initiative. In terms of the location of the Japanese OEMs' transplants, they have tended to favor locations in the District or neighboring states, that is, in or nearby the U.S. auto industry hub. The only location outside of this area is the NUMMI plant in Fremont, California.

The preferred type of entry has been sole entry, accounting for four of the Japanese entries into U.S. production. The joint venture, however, has



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**Table 7**

**FDI by Japanese Automakers[1]**

| Company | Type of Entry | Location | Date Open | Annual Capacity (full) | No. of Employees (estimates) | Unionized | Local Content[2] (percent) |
|---|---|---|---|---|---|---|---|
| Honda of America Mfg., Inc. | Sole entry | Marysville, OH (an additional plant planned) | 1982 | 360,000 (an additional 150,000 projected by 1991) | 4,200 | No | 60 (75 projected) |
| Nissan Motor Mfg., Corp. USA | Sole entry | Smyrna, TN | 1983 | 240,000 | 3,250 | No | 50-60 |
| New United Motor Mfg., Inc. (NUMMI) | Joint venture Toyota-50% GM-50% | Fremont, CA | 1984 | 250,000 | 2,500 | Yes | 50 |
| Mazda Motor Mfg. Corp. USA | Sole entry | Flat Rock, MI | 1987 | 240,000 | 3,500 | Yes | 50 (75 projected) |
| Diamond-Star Motors Corp. | Joint Venture Chrysler-50% Mitsubishi-50% | Bloomington-Normal, IL | 1988 | 240,000 | 2,900 | No | 60 |
| Toyota Motor Mfg. USA Inc. | Sole entry | Georgetown, KY | 1988 | 200,000 | 3,000 | Yes | 65 (75 projected) |
| Subaru-Isuzu Automotive, Inc. | Joint venture Fuji-51% Isuzu-49% | Lafayette, IN | 1989 | 120,000 | 1,700 | undecided | 55 |
| TOTAL U.S.A. | | | | 1,650,000 | 21,050 | | |

[1]There are no other foreign automakers (including trucks) operating assembly plants in the U.S. Volkswagen of America, Inc. closed its U.S. plant in 1988.

[2]It has been estimated that 90-95 percent of the local content of Japanese U.S.-built autos is supplied by Japanese U.S. plants (Iannone 1988).

SOURCE: *The Motor Industry of Japan,* Japan Automobile Manufacturers Assoc., Inc. 1987; *Automotive Industries,* June 1987; *Automotive News* articles on Japanese plants in the U.S. 1986-1988.



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been nearly as popular, accounting for the three remaining entries. Two of the joint ventures follow the expected pattern: a Japanese OEM forms a venture with a U.S. OEM. There is, however, one aberration: a joint venture between two Japanese OEMs (Fuji and Isuzu). The sole entries and the Japan-Japan joint venture suggest that a majority of the Japanese OEMs have become confident enough with their knowledge of the U.S. auto market and have the needed capital to establish U.S. operations on their own. In regards to their reaction to unions—which do not exist in the Japanese auto industry—half of them have accepted union representation and half have not. Nissan was adamently against it. Local content will be discussed along with the autoparts industry.

The Japanese OEMs' motives to move to the U.S. fit right into the framework outlined in Section IV. The Industrial Bank of Japan's (IBJ) study of Japanese auto industry participation in the U.S. market found four main motives. The first two are economic and the second two are strategic. Firstly, the Japanese OEMs feel that the threat of protectionism is rising. They expect that the voluntary export restrictions (VER) will be maintained. Secondly, there is the potential of relatively high profits from production in the U.S. Contributing to the high profitability are relatively lower corporate taxes (at all three government levels) and the strong demand for Japanese cars. Thirdly, the Japanese OEMs view the U.S. market as the most lucrative in terms of expansion. Because car production in Japan is expected to plateau or decline, it is only through further expansion into foreign markets that they will be able to increase production. Fourthly, they want to strengthen their sales network through a more reliable supply of cars. That the IBJ did not mention the appreciation of the yen as a factor supports the point mentioned above that changes in exchange rates are usually not a decisive factor in FDI.

It is interesting to examine the reactions of the Big Three to the Japanese invasion of their turf. GM, Ford, and Chrysler have not been sitting idly by as the Japanese OEMs make greater inroads into the U.S. market. Their initial reaction, in the late 1970s, was to lobby for more rigorous import restrictions. They appear to have been playing for time in order to boost their competitiveness through an overhaul of their operations and model designs (Chrysler epitomizes the transformation). As they revamped their organization, they began attempts to recoup their U.S. market share by offering better quality and service, plus smaller models.

Although the Big Three have primarily undertaken an offensive/defensive strategy, they have also recognized the benefits of "if you can't beat them, join them." All three have security interests in a Japanese OEM (Table 8). GM leads the pack in terms of ownership with 41.6 percent of Isuzu, followed by Ford with 25 percent of Mazda and Chrysler with 24 percent of



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Mitsubishi. In addition, they have formed joint ventures with their Japanese counterparts. GM has successfully teamed-up with Toyota and established NUMMI. Chrysler is nearing the finishing touches of its joint venture with Mitsubishi. Although Ford has yet to consumate a joint venture, it is discussing just such a deal with Nissan. In addition to joining leagues directly, GM and Chrysler have also been importing cars from Japan. Nineteen percent of GM's captive imports come from Japan while 36 percent of Chrysler's originate from there.

As the Japanese OEM's have set up shop in the U.S., Japanese autoparts suppliers have followed suit. Over the past decade, they have become the dominant source of FDI in the autoparts industry, numbering 126 and accounting for nearly 40 percent of all foreign autoparts firms in the U.S. (Table 9). Their strong presence is only a recent phenomenon compared to that of European and Canadian firms. Prior to the influx of Japanese autoparts firms, West German firms had made the deepest inroads into the U.S. market (67 firms).

The location of these firms tends to be concentrated in or near the District. Proximity to customer tends to be especially important to the Japanese autoparts suppliers, though some distance is necessary in order to not bid up labor rates. The importance of proximity is due to the "just-in-time" (JIT) inventory demands of the Japanese OEMs. JIT translates into delivering the exact volume and quality needed when needed.

Similar to the Japanese OEMs, the Japanese autoparts firms have opted for sole entry with most being wholly-owned by Japanese. Joint ventures, however, have not been shunned because they provide some important benefits. Most of the autoparts joint ventures were motivated by the need to improve technological and manufacturing capabilities and attain higher production levels in order to benefit from economies of scale. For example, many of the joint ventures have involved cooperative agreements covering robotics, machine vision, and artificial intelligence. In addition, because most Japanese autoparts suppliers have weak links to the Big Three, a joint venture with a U.S. firm offers access to the Big Three as well as the aftermarket.

As mentioned above, the move by Japanese autoparts producers to the U.S. was in large part triggered by the move of Japanese OEMs. There are several economic factors that were catalysts in the Japanese OEM's move and the subsequent move of their suppliers. The IBJ study highlights three primary factors. Firstly, there has been a fear of declining domestic sales. The expected decline in auto production in Japan translates into sales decline for Japanese-based autoparts producers. Secondly, it is predicted that the OEMs will produce more parts in-house. Thirdly, there is the percep-



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## Table 8

### U.S. Big Three Automakers and their Ties to Japanese Automakers: 1988

| Company | Ties with Japanese Automakers |
|---|---|
| General Motors Corp. | — owns 41.6% of Isuzu. |
| | — imports Isuzu car sold as Chevrolet Spectrum (90,000 autos imported in 1985). |
| | — expected to be a supplier of major components for the Subaru-Isuzu plant. |
| | — joint venture with Toyota (NUMMI). |
| | — owns 5.3% of Suzuki and imports a Suzuki car sold as Chevrolet Sprint. |
| | — joint venture with Suzuki in Ingersoll, Ontario. |
| | — total imported autos and trucks in 1987 from Japan = 140,000 (19% of total captive imports). |
| Ford Motors Corp. | — owns 25% of Mazda. |
| | — Mazda plant in Flat Rock produces Ford Probe (60% of production). |
| | — Mazda supplies Ford's foreign affiliates. |
| | — discussing a joint venture with Nissan to produce a new auto in North America. |
| | — no autos or trucks imported from Japan. |
| Chrysler Motors Corp. | — owns 24% of Mitsubishi. |
| | — joint venture with Mitsubishi (Diamond-Star). |
| | — imports cars and trucks from Mitsubishi sold as Plymouths and Dodges. |
| | — Mitsubishi supplies engines for various Chrysler models. |
| | — total imported autos and trucks in 1987 from Japan = 235,000 (36% of total captive imports). |

SOURCE: John Holusha, "Mixing Cultures on the Assembly Line," *New York Times*. June 5, 1988; U.S. International Trade Commission, *U.S. Global Competitiveness: The U.S. Automotive Parts Industry,* December 1987; and *Automotive News* articles on automakers in the U.S. 1986-1988.



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## Table 9

### Foreign Autoparts Manufacturers in the U.S.: 1988

| Country | No. of firms | No. of employees (estimates) |
|---|---|---|
| TOTAL | 324 | 100,000 |
| Japan | 126[1] | n.a. |
| West Germany | 67 | 22,000 |
| Canada | 17 | 3,000[2] |
| France | 13 | 12,000 |
| United Kingdom | 7 | 2,200 |

[1]Owned or partly owned by Japanese companies projected to 1990.

[2]Canadian plants tend to be relatively small.

SOURCE: Motor and Equipment Manufacturers Assoc.; *Automotive Parts International,* Feb. 12, 1988 and March 25, 1988.



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tion of "first come first serve." The Japanese autoparts producers fear that if they do not follow their OEM customers to the U.S., they will be excluded from supplying not only the Japanese OEMs but also the Big Three and the burgeoning Japanese aftermarket market in the U.S. The latter two markets have yet to be fully tapped by the Japanese and offer important market expansion opportunities.

Another threat that has motivated the Japanese autoparts suppliers to move to the U.S. is more restrictive domestic content legislation. The U.S. GAO estimates that in 1985 Japanese OEMs in the U.S. had 54.5 percent domestic content while U.S. automakers had 93.5 percent (USGAO 1988). They predicted that by 1990, domestic content will be 67.5 and 89.0 percent, respectively. To reduce the disparity between the Japanese and U.S. rates, certain special interest groups such as the UAW have been lobbying for domestic content legislation which would require upwards to 75 percent domestic content.

Similar to the Japanese OEMs, the Japanese autoparts producers' decision to move was not based upon a stronger yen, even though this has lessened the financing required to move. The yen has, however, played a role in increasing the domestic content of Japanese autos made in the U.S. As the value of the yen vis-a-vis the dollar increases, Japanese OEMs in the U.S. are increasing their purchases of parts and materials from U.S. based firms, though these firms are predominately Japanese-owned.

Unlike the Japanese OEMs, the Japanese autoparts producers were not attracted to the U.S. by strong profit potential. To the contrary, profitability has been low (IBJ 1986). The Japanese autoparts producers face a difficult situation. On the one hand, they have yet to reach production levels high enough to benefit from economies of scale. On the other hand, they have to price their parts to compete with imports produced in greater volume in order to gain orders from the Japanese OEMs. According to IBJ, they are struggling to beat the price of imports and have been only gradually benefiting from the appreciation of the yen. In order to improve their price competitiveness, several have been forming joint ventures with U.S. autoparts producers which allow them to hurdle high start-up costs and benefit from economies of scale.

In sum, the overview of FDI in the auto and autoparts industries has revealed several interesting features of FDI. Firstly, much of the FDI in the auto industry was precipitated by concern over increasing protectionist sentiment in the U.S. In a sense, there is irony in the chain of events that triggered the inflow of FDI. In trying to protect certain U.S. industries from foreign competition by building trade barriers, the U.S. Federal Government has indirectly and probably unintentionally brought the for-



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eign competitors to U.S. soil. The initial move by the Japanese OEMs triggered a second wave of moves by Japanese autoparts producers. This second wave may accelerate if stronger domestic content legislation is enacted. The Big Three, realizing that they cannot stem the tide of FDI, have joined forces with the Japanese either through part-ownership of a Japanese OEM or a joint venture. These types of cross-cultural interactions have raised some thought-provoking questions regarding the costs and benefits of FDI to U.S. manufacturers overall.

## Conclusion

This analysis of FDI was motivated primarily by FDI's expanding presence in the Seventh District and the growing attention that it has been drawing. A diverse array of organizations and individuals such as economic developers and domestic producers have become interested in FDI and have formed contrasting opinions regarding its costs and benefits. Part of the limelight has resulted from the controversies that FDI has stirred up regarding its impact on the U.S. economy, domestic employment, and producers. In trying to determine the implications and repercussions of FDI on District manufacturing, this paper has covered its many dimensions from its various forms and its accelerating growth to its geographic distribution and industry preferences.

In addition, the paper showed how the growing presence of FDI in the District has been transforming the competitive landscape. As the threat of protectionism looms larger, foreign firms have been altering their U.S. expansion strategies and have hurdled the threat through FDI. As a result, domestic producers are confronted with not only foreign competition in its traditional form of imports but also face to face competition with foreign firms producing on U.S. soil. In addition to reacting to existing or potential trade barriers, foreign firms have moved to the U.S. in order to optimize the use of their tangible assets (e.g. production expertise) and their intangible assets (e.g. R&D).

In order to examine more closely the nature of FDI and the attendant reaction of U.S. producers, the auto and autoparts industries were highlighted. The case study revealed that the Big Three have pursued a blend of strategies to retain their competitiveness vis-a-vis their Japanese counterparts. They initially took a defensive stance and then progressed to an offense approach mixed with a "join 'em" strategy. The reaction of the Big Three may have important implications for other domestic producers who face direct foreign competition. Domestic producers must adapt to the presence of FDI because it shows no signs of fading.



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The restructuring of District manufacturing will most likely continue to be influenced by the presence of foreign firms. Their presence is a double-edged sword in terms of economic impact. On the upside, their presence can contribute to boosting the competitiveness of domestic producers through, for example, technological transfer or synergistic joint ventures. On the downside, their U.S. production may lead to overcapacity problems in certain industries and thus trigger retrenchment on the part of domestic producers. Economic developers who promote FDI must take into consideration its potentially dichotomous economic impact. Because it is impossible to currently predict with any accuracy the net cost/benefit of FDI, the best that can be done to understand its implications and impacts is to examine what motivates it, which industries and geographical areas attract a disproportionate amount of it, and how domestic producers are reacting to it.



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# Footnotes

[1] See Ned G. Howenstine, "U.S. Affiliates of Foreign Companies: Operations in 1986," *Survey of Current Business*, May 1988, pp. 59-75.

[2] In choosing a means to measure the status and dynamics of FDI in the U.S. and the District, this study examined over six datasets on FDI available from various U.S. Federal Government sources. BEA statistics on FDI at the state level include total assets and gross book value of property, plant and equipment of U.S. affiliates and employment at U.S. affiliates. At the national level, BEA collects data on investment outlays also. ITA collects data on FDI transactions and when possible, their value. ITA has also compiled a list of Japanese autoparts manufacturing facilities in the U.S. The U.S. International Trade Commission (USITC) has collected similar data on FDI in the U.S. autoparts industry.

In addition to government compiled data, FDI data are collected by private organizations such as the Japan Economic Institute which collects data on Japanese investments in U.S. production facilities (similar to the ITA data) and Automotive Parts International which focuses on FDI in the autoparts industry.

[3] Total value of FDI transactions is probably a better measure of the magnitude of FDI than number of transactions, but it cannot be used because there is only partial data available.

[4] Real estate acquisitions related to manufacturing are not included in this study because separate data are not available. Data on real estate are aggregated across all sectors and placed under the real estate sector.

[5] Acquisition is a generic term that covers several types of stock and asset purchases. A merger is the most common type of acquisition and involves the transferral of the selling company's assets and liabilities to the buying company and the end of the selling company's existence as a separate entity. Payment is made to the firm because actual property rather than shareholders' interest in property is being exchanged. A second type is acquisition of stock (e.g., tender offer) which differs from the merger in that it entails purchasing the seller's stock (vs. assets and liabilities) and involves a transfer from shareholders (vs. firm) to buyer. The third type of acquisition is the acquisition of specific assets (and sometimes liabilities) for which the payment is made to the firm and not to the shareholders.

[6] The fact that foreign companies are in part seeking marketing and distribution networks when they acquire a U.S. company or form a joint venture has raised concern that U.S. companies are being used as marketing arms as opposed to production arms (discussed in Section VII).

[7] Manufacturing industries can be classified under four different headings:

1. Tech-intensive: chemicals, nonelectrical, electronic and electrical machinery, transportation equipment, and controlling instruments.

2. Capital-intensive: textiles, printing and publishing, rubber, primary metals, and fabricated metals.

3. Labor-intensive: apparel, furniture, leather products, and miscellanea.



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4. Resource-intensive: food, lumber, paper products, petrolium refining, and stone, clay, and glass products.

[8] For a detailed description of the Heckscher-Ohlin theory see Baldwin 1971 and for Vernon's theory see Vernon 1966.

[9] Domestic content, as defined by the U.S. General Accounting Office (USGAO), is the value of parts and materials purchased from U.S. sources (both American and foreign-owned) plus the value of domestic labor, overhead, and markups.

[10] Caves states that "intangible assets are subject to a daunting list of infirmities for being put to efficient use by conventional markets: 1. they are, at least to some degree, public goods... 2. Transactions in intangibles suffer from impactedness combined with opportunism [i.e., pricing is difficult because it is in the best interest of the seller not to reveal all the details about the intangible asset and it is in the best interest of the buyer to be wary of exaggerated claims about the intangible asset by the seller]... 3. An element amplifying the problem of impactedness is uncertainty revolving around whether or not the buyer will be able to successfully use the seller's intangible asset." (Caves 1981 pp. 4-5).

[11] To analyze the growth in FDI in manufacturing, this paper uses the years 1978 and 1986 as end points. The choice was based on several factors. Firstly, relatively little FDI occurred prior to the late 1970's, especially in the District. Thus, using a beginning year of 1972, for example, would have resulted in extremely large growth rates that would have been biased towards regions which had relatively little FDI in the 1970's. Secondly, the paper's focus is on the striking evolution of manufacturing FDI that has occurred over the past decade, a period when the District's manufacturing sector was hobbled by a double-dip recession. Thirdly, the dollar exchange rate was following the same trend in both 1978 and 1986. During both years, the trade-weighted dollar was declining, nearing a trough point (Federal Reserve Board's trade-weighted dollar used). Thus, the dollar exchange rate should have had the same influence on FDI in both years and should not have resulted in any distortions in the growth rate of FDI.

[12] A qualification regarding the unlevel playing field argument of the U.S. autoparts producers is necessary. Japanese OEMs claim that they do not prefer Japanese suppliers because of nationalistic reasons but because Japanese suppliers are better capable at meeting their quality and price demands than U.S. suppliers are.

[13] There are no other foreign automakers (or truck manufacturers) operating assembly plants in the U.S. Volkswagen of America, Inc. closed its U.S. plant in 1988.



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