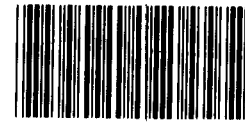


March 1992

# FOREIGN DIRECT INVESTMENT

## Assessment of Commerce's Annual Report and Data Improvement Efforts



146238

---

---



**United States  
General Accounting Office  
Washington, D.C. 20548**

---

**National Security and  
International Affairs Division**

B-247622

March 18, 1992

The Honorable John D. Dingell  
Chairman, Committee on Energy and Commerce  
House of Representatives

The Honorable Dante B. Fascell  
Chairman, Committee on Foreign Affairs  
House of Representatives

The Honorable Ernest F. Hollings  
Chairman, Committee on Commerce, Science, and  
Transportation  
United States Senate

The Honorable Dan Rostenkowski  
Chairman, Committee on Ways and Means  
House of Representatives

The Honorable Paul S. Sarbanes  
Chairman, Joint Economic Committee  
Congress of the United States

As the Foreign Direct Investment and International Financial Data Improvements Act of 1990 (P.L. 101-533) requires, we analyzed the Secretary of Commerce's annual report on foreign direct investment and recommended changes for the next report. We also reviewed government efforts to improve the quality of foreign direct investment data, including the status and process for reconciliation of data exchanged among various federal agencies.

This report was prepared under the direction of Allan I. Mendelowitz, Director, International Trade and Finance Issues, who may be reached at (202) 275-4812. Other major contributors to this report are listed in appendix III.

Frank C. Conahan  
Assistant Comptroller General

---

# Executive Summary

---

## Purpose

To assist public debate on foreign investment issues by improving existing government information, Congress enacted the Foreign Direct Investment and International Financial Data Improvements Act of 1990 (P.L. 101-533). This act requires the Secretary of Commerce to prepare an annual report addressing the history, scope, trends, market concentrations, and effects on the U.S. economy of foreign direct investment. Commerce issued the first such report on September 20, 1991. The act also allows statistical data to be shared among federal agencies in order to improve analysis of the effects of foreign direct investment on the U.S. economy.

The act directs GAO to (1) analyze Commerce's annual report on foreign direct investment and make recommendations for changes in the report due the following year and (2) review government efforts to improve the quality of foreign direct investment data, including the status and process for reconciliation of data exchanged among certain federal agencies.

---

## Background

Foreign direct investment is one component of overall foreign investment and is defined as foreign investment representing 10 percent or more of a firm's equity. Other components of foreign investment include investments in bonds and Treasury securities.

As foreign direct investment in the United States has increased over the past decade, so have concerns regarding the effects of that investment on the U.S. economy. Questions have arisen particularly concerning foreign investment in critical high-technology industries that affect the economic as well as the national security interests of the United States.

The Commerce report examines, among other issues, factors driving foreign direct investment and patterns and trends in foreign investment in the United States. It also explores foreign direct investment in the U.S. electronics, automotive, banking, steel, and chemicals industries.

Commerce's Bureau of Economic Analysis tracks foreign ownership based on data reported by consolidated business enterprises (often including many establishments), while Commerce's Bureau of the Census collects information on business establishments (such as individual factories) but does not highlight foreign ownership. By linking the Bureau of Economic Analysis' list of foreign investors with the Census data, foreign investment information at the establishment level can be extracted from Census data.

---

## Results in Brief

The Commerce report does not clearly discuss the costs and benefits derived from foreign direct investment and those derived from all foreign investment. The report provides descriptive information on the growth and characteristics of foreign direct investment in specific industry sectors. However, for several of these industry sectors, the report does not address publicly raised concerns about the effects on the U.S. economy of recent increases in foreign direct investment. In addition, the report relies heavily on 1988 Bureau of Economic Analysis data, although the act requires Commerce to use more current private sector data. These data are available to supplement the Bureau's data and to address some of these public policy concerns. Finally, the Commerce report does not include all of the data items specified by the act.

The data exchange between the Bureau of Economic Analysis and the Bureau of the Census, which was not operational when Commerce wrote its first report, will provide some additional data on the operations of foreign affiliated firms. It will not, however, provide information to satisfy all of the data items specified in the act, and it will not provide other important information needed to examine the effects of foreign direct investment on the U.S. economy. In addition, there are inherent limitations in the Bureau of Economic Analysis data that the data link will not correct.

---

## Principal Findings

---

### Commerce Report Weak on Analysis of Foreign Direct Investment

The Commerce report's focus shifts between discussions of total foreign investment and discussions of foreign direct investment without adequate explanation. This shift particularly detracts from the clarity of the report's discussion of the benefits gained from foreign direct investment.

The Commerce report also provides an incomplete analysis of the costs and benefits of foreign direct investment. The report emphasizes the benefits derived from foreign investment inflows, thus tending to minimize the need to reduce budget deficits—which, as the report acknowledges, have been a major factor behind foreign investment inflows.

For three of the five industry sectors discussed in the report—electronics, automotive, and banking—certain public policy concerns about foreign direct investment are not addressed or fully explored.

- The electronics chapter does not address important questions about the effects on the competitiveness of U.S. electronics firms that occur when foreign firms acquire (1) U.S. companies that strengthen the supplier networks of the foreign firms and (2) U.S. firms that hold state-of-the-art technologies.
- The automotive chapter does not directly analyze the debate surrounding (1) the extent to which foreign investment has served as a magnet for imported parts and components and (2) the question of whether foreign-owned firms tend to be low value-added operations or whether state-of-the-art technologies are being transferred to the United States.
- The banking chapter describes the increased presence of foreign-owned banks, but it does not address basic concerns about the threshold at which foreign-controlled banks could make lending decisions that could adversely affect the growth and development of U.S. industry.

In the chapters on the electronics and automotive sectors, Commerce makes extensive use of preliminary 1988 Bureau of Economic Analysis data, rather than using more current data from existing studies prepared by other offices within Commerce, other government agencies, or by private sector industry groups.

Finally, Commerce's report does not compare foreign-controlled business enterprises with other U.S. enterprises with respect to some of the data items specified by the 1990 act. Some of these items, such as value added and productivity, cannot be determined using the Bureau of Economic Analysis' data. Commerce does not provide information on other data items, such as investment incentives provided by state and local governments. According to Commerce officials, information on this subject would have required a separate detailed study. In addition, the report does not include the required analysis of the number and market share of foreign-owned businesses engaged in the production of critical technologies named by the Department of Defense. Rather, it briefly discusses only 3 of the 21 technologies cited in the Department of Defense's critical technologies list.

---

**Data Link Will Provide  
Limited Additional  
Information**

The data link between the Bureau of Economic Analysis and the Bureau of the Census will provide some additional information on the operations of foreign affiliated firms in the United States. Because it will give such information on an establishment basis, the data link will allow the operations of foreign affiliated firms to be evaluated on the basis of more than just their primary industry activities. For example, this information

will allow an analysis distinguishing between the manufacturing and wholesaling operations of foreign affiliated firms engaged in both types of activities.

In their first "link-up," the Bureaus of Economic Analysis and the Census will provide information on four items: number of employees, amount of employee compensation, volume of shipments or sales, and number of foreign-owned establishments at the state level. These figures will be shown by state and specific industry using 1987 data. These agencies will also be looking into publishing data on several other data items that were specified in the act, including value added, market share, and capital expenditures.

The data link has certain limitations because some types of data are collected at the enterprise level, not the establishment level. For example, it will not

- provide information on some of the other data items cited in the act, such as profitability and import and export data;
- provide other important information needed to examine the effects of foreign direct investment on the U.S. economy, such as the flow of technology transfer, foreign targeting of critical industries, or vertical integration practices; and
- solve certain problems in the government's data, such as timeliness of the data and classification and disclosure matters.

---

## Recommendations

To provide a more complete discussion of foreign direct investment in the United States, GAO recommends that the Secretary of Commerce ensure that all subsequent annual reports on foreign direct investment (1) provide an analysis that clearly distinguishes between costs and benefits derived from foreign direct investment and those derived from all foreign investment in the United States; (2) make greater use of available government studies and private sector data; and (3) provide more focused analyses of publicly debated questions regarding the effects of foreign direct investment on the U.S. economy.

---

## Agency Comments and GAO's Evaluation

In commenting on a draft of this report, the Department of Commerce expressed concern about GAO recommendations and set forth its views on what should be reasonable expectations for its future reports. GAO evaluated Commerce's specific concerns and made some modifications in the report. However, GAO's evaluation also revealed that some of Commerce's comments misconstrued aspects of GAO's draft report. Commerce's comments are provided in their entirety in appendix II, along with GAO's point-by-point response. GAO also received comments from program officials at the Labor Department's Bureau of Labor Statistics and incorporated their suggestions as appropriate.





---

# Contents

---

<b>Executive Summary</b>		2
<b>Chapter 1</b>		10
<b>Introduction</b>	Commerce's Annual Report	10
	The Data Exchange	11
	Objectives, Scope, and Methodology	12
<b>Chapter 2</b>		14
<b>Commerce Report</b>	Unclear Economic Analysis of FDI	14
<b>Lacks Thorough</b>	Limited Analysis of FDI Effects	16
<b>Analysis of FDI Effects</b>	Minimal Use of Government and Private Sector Studies	19
	Data Items Specified in the Act but Not Included in the Report	26
	Conclusions	28
	Recommendations	28
	Agency Comments and Our Evaluation	28
<b>Chapter 3</b>		29
<b>Improving Government</b>	Linking BEA and Census Data	29
<b>Information on FDI</b>	Status of Data Link	30
	Information That the Data Link Will Provide	31
	Availability of Other Data Items Cited in the Act	32
	Inherent Problems in BEA Data That Link Will Not Correct	32
	Coordination Among Agencies Collecting FDI Data	35
	Conclusions	36
<b>Appendixes</b>		
	Appendix I: Information That Data Link Can and Cannot Provide	38
	Appendix II: Comments From the Department of Commerce	43
	Appendix III: Major Contributors to This Report	66

---

---

**Abbreviations**

BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics
DOD	Department of Defense
EIN	employer identification number
FAF	foreign affiliated firm
FDI	foreign direct investment
GAO	General Accounting Office
JEI	Japan Economic Institute
R&D	research and development
SIC	Standard Industrial Classification

# Introduction

---

To assist public debate on foreign investment issues by improving government information, Congress enacted the Foreign Direct Investment and International Financial Data Improvements Act of 1990 (P.L. 101-533). The act requires the Secretary of Commerce to prepare an annual report on foreign direct investment in the United States. It directs us to analyze the Commerce report and review administration activities relating to foreign direct investment data. The act also authorizes us to obtain access to certain confidential Bureau of Economic Analysis (BEA) data.

In addition, the act permits the Commerce Department's Bureau of Economic Analysis and its Bureau of the Census to exchange certain confidential statistical data in order to achieve greater detail in the government's data on foreign direct investment (FDI) in the United States.<sup>1</sup> In addition, the act permits BEA to share its confidential data on foreign direct investment with the Labor Department's Bureau of Labor Statistics (BLS).

---

## Commerce's Annual Report

The act requires the Secretary of Commerce to report annually to Congress on the role and significance of foreign direct investment in the United States. It directs Commerce to address the history, scope, trends, market concentrations, and effects on the U.S. economy of such investment. The act notes the numerous sources of data to be considered in preparing the report, and it specifies the types of data to be included in the report. The act states that Commerce's analysis shall, to the extent of available data,

compare business enterprises controlled by foreign persons with other business enterprises in the United States with respect to employment, market share, value added, productivity, research and development, exports, imports, profitability, taxes paid, and investment incentives and services provided by State and local governments.

It also states that the analysis be done by significant industry sectors and geographical regions. In addition, the act calls for the Commerce report to include an analysis of the number and market share of foreign-owned businesses that are engaged substantially in the production of critical technologies named by the Department of Defense.

---

<sup>1</sup>Foreign direct investment is defined as the ownership or control by one person of 10 percent or more of a firm's equity, the point at which the foreign investor is considered capable of influencing company management. Foreign investments of less than 10 percent are classified as "portfolio investments" in stocks, bonds, and Treasury securities.

Commerce issued its first required annual report on September 20, 1991. The report includes several chapters providing background on foreign investment, the U.S. macroeconomic setting, and the overall economic patterns and trends. It also has separate chapters on foreign investment in five industry sectors: electronics, automotive, banking, steel, and chemicals.

---

## The Data Exchange

The data exchange allows the BEA's confidential list of foreign investors to be used to extract greater detail on foreign investment from existing Census data.

BEA has three sets of foreign investment data, the most detailed of which is known as "Operations of U.S. Affiliates of Foreign Companies."<sup>2</sup> These data are collected from a consolidated firm—an "enterprise"—and are reported under the industry category of the firm's primary business. This listing means, for example, that a foreign investment in a U.S. firm whose primary business is chemicals but that has substantial petroleum operations would be categorized entirely as a chemicals investment. The Census data, on the other hand, are collected on an "establishment basis"—i.e., from individual commercial plants—and are thus more likely to correctly describe specific industry sectors.

The Census data, however, do not identify foreign ownership. The value of the data exchange authorized by the act is that it permits the BEA's list of foreign investors to be linked with the Census data so that information of interest in the Census data can be extracted and characterized as associated with a foreign investment.

Throughout this report, BEA data on foreign affiliated firms (FAF) will be referred to as "enterprise" data, and Census data will be referred to as "establishment" data.

At the time Commerce was preparing the report, the BEA-Census data exchange authorized by the act had not yet been completed, and so the data enhancements to be achieved through the exchange are not reflected in the 1991 Commerce report.

---

<sup>2</sup>For a more detailed description of the BEA's three sets of data, see Foreign Investment: Concerns in the Banking, Petroleum, Chemicals, and Biotechnology Sectors (GAO/NSIAD-90-129, May 30, 1990).

---

## Objectives, Scope, and Methodology

The Foreign Direct Investment and International Financial Data Improvements Act of 1990 directs us to analyze Commerce's annual report on foreign direct investment and review government efforts to improve the quality of foreign direct investment data. Specifically, it directs us to prepare a report

- (1) analyzing the report of the Secretary of Commerce;
- (2) making recommendations for changes in the analysis done in the Commerce report;
- (3) making recommendations for improving the collection by respective federal agencies of data on foreign direct investment in the United States, including use of private sector data, and improving survey questionnaires to obtain useful and consistent information that avoids unnecessary redundancy among federal agencies;
- (4) reviewing the status and processes for reconciliation of data exchanged as required by the act and making recommendations for improving and augmenting international financial data;
- (5) making recommendations for possible additional policy coordination within the executive branch affecting foreign direct investment in the United States; and
- (6) making recommendations for improving the coverage, industry classification, and consistency among federal agencies of their respective surveys.

As the act requires, we analyzed the Commerce report based upon the requirements, discussed it with numerous government and industry experts, and examined relevant documents. We studied the processes for achieving the BEA-Census data exchange through discussions with BEA, Census, and BLS staff working on the project. Because the data exchange process was still being developed as of December 1991, we were not able to test its accomplishments. We also looked at the data collection efforts of various federal agencies, including their use of survey questionnaires. We updated our prior work on information about the extent to which different agencies coordinate their policy with respect to their data collection efforts.

Because the data exchange had not yet been developed and no information in the Commerce report was based on it, we did not examine confidential BEA data for the purposes of preparing this report.

We did not attempt to verify or critique every statement in the Commerce report. Rather, we focused on some areas of high public interest.

We obtained comments on a draft of this report from the Department of Commerce. They are discussed in chapter 2 and presented in their entirety in appendix II along with our point-by-point response. We also received informal comments from program officials at the Labor Department's Bureau of Labor Statistics and incorporated their suggestions as appropriate.

We performed our review from September 1991 to December 1991 in accordance with generally accepted government auditing standards.

# Commerce Report Lacks Thorough Analysis of FDI Effects

The Commerce report provides extensive information regarding the history, growth, and characteristics of FDI in the economy overall and in specific industry sectors. However, it does not clearly discuss the costs and benefits derived from foreign direct investment and those derived from foreign investment overall. It is also generally weak in responding to the act's direction that it analyze the effects of FDI in certain industry sectors and make use of current government studies and private sector data in its analysis. Also, Commerce provides information on only 3 of the Department of Defense's (DOD) list of 21 critical technologies. In addition, Commerce is unable to provide data on other data items specified in the act.

As the first of Commerce's required annual reports on foreign direct investment, the 1991 report was produced in a relatively short time frame. For its future reports, Commerce should be able to clarify its economic analysis and improve the industry sector analyses by using more extensive data from the private sector.

## Unclear Economic Analysis of FDI

The Commerce report mixes comments about foreign direct investment in the United States on the one hand and total foreign investment on the other hand. The latter includes "portfolio" investments in stocks, bonds, and Treasury securities, as well as FDI. At times the report's focus shifts between a discussion of total foreign investment and a discussion of FDI without adequate explanation. This shift particularly affects the report's discussion of the benefits gained from foreign direct investment. For example, a clear distinction is not drawn between the benefits and costs derived from total foreign investment inflows and those derived specifically from FDI.

The benefit of total foreign investment is that it helps fill the gap between domestic savings and the total of investment and government deficits and permits a higher level of either government budget deficits or U.S. capital formation than would be possible in its absence. However, there is no discussion of possible costs relating to the economy's dependence on foreign capital. These costs might include possible limitations on the U.S. government's freedom in deciding monetary and foreign policies, resulting from the need to obtain and hold high levels of foreign financing. Furthermore, to the extent that foreign funds were used to finance large government deficits rather than a larger capital stock for the country, the United States will not have the additional productive base to pay foreign investors interest and dividends without a contraction in the U.S. standard



of living. Although the Commerce report mentions that the federal budget deficit contributed to the U.S. savings decline, the report's emphasis on the attractiveness of investing in the United States and on the benefits derived from foreign investment inflows might create the impression that it is unnecessary to reduce budget deficits. Budget deficit reductions, however, can raise national savings and reduce the need to rely on foreign investment in the United States. Such reductions, thus, can improve U.S. living standards by lowering future payments to the rest of the world.

Although there is general agreement that macroeconomic developments influence total foreign investment, the causes of FDI are less well established. A long-dominant view in the economics profession holds that macroeconomic factors have little relation to foreign direct investment. For example, according to this traditional view, a depreciation of the U.S. dollar would not affect the volume of FDI in the United States. If a German had an advantage using deutsche marks to buy particular U.S. assets, an American with access to global capital markets could borrow deutsche marks and acquire the same advantage. In other words, how the acquisition is financed makes no difference, since both the American and the German have access to the same international capital market.

Nonetheless, much recent evidence suggests that this argument is flawed. Macroeconomic factors, such as exchange rates, have influenced FDI, both in the 1980s and in earlier periods.<sup>1</sup> Moreover, theoretical explanations for these relationships have also begun to emerge. One recent theory emphasizes differences in access to information about an asset's payoffs that make it costly or impossible for bidders to finance the acquisition of an asset solely with external funds. The more net wealth an acquirer can bring to the investment, the lower will be his total cost of capital. To the extent that foreign bidders hold more of their wealth in nondollar assets, a depreciation of the dollar increases foreigners' relative wealth and thus lowers their relative cost of capital, allowing them to bid more aggressively for assets.<sup>2</sup> Among several other explanations for FDI's dependence on macroeconomic factors is the hypothesis that total foreign investment is correlated with exchange rates, and international investors keep FDI's

---

<sup>1</sup>Richard E. Caves, "Exchange-Rate Movements and Foreign Direct Investment in the United States," Harvard Institute of Economic Research (Cambridge, MA: May 1988), and Edward J. Ray, "The Determinants of Foreign Direct Investment in the United States: 1975-1985," Ohio State University (Columbus: 1988).

<sup>2</sup>Kenneth A. Froot and Jeremy C. Stein, "Exchange Rates and Foreign Direct Investment: An Imperfect Capital Markets Approach," *Quarterly Journal of Economics*, Vol. CVI (Nov. 1991), pp. 1191-1217.

share of the total about the same. Exchange rate movements that affect total foreign investment therefore would also have an indirect effect on FDI. The macroeconomic section of Commerce's future FDI reports could benefit from a discussion of some of these recent theoretical and empirical developments.

The effects of FDI on U.S. employment are also not clearly analyzed. The Commerce report alternately refers to jobs "created," "supported," or "provided" by FDI. For example, in its chapter on the electronics industry, Commerce states that foreign-owned firms have provided jobs for 14.5 percent of the 1.7-million employees of all electronics companies in the United States in 1988. It does not mention that the majority of FDI in the electronics sector has taken place through acquisitions of existing U.S. firms, rather than through construction of new business facilities, which can be job creating. Elsewhere in the report, however, Commerce notes that such acquisitions have been the dominant form of foreign direct investment, accounting for 86 percent of foreign direct investment outlays in 1989.

In the automotive chapter, Commerce includes data that show only gross job creation. It does not analyze employment on a net basis reflecting the extent to which such foreign investment may be displacing other U.S. production. To discuss the employment effects of FDI, in most cases it is necessary to construct and explain a methodology for calculating what all the repercussions of the investment may be for the U.S. economy.

---

## Limited Analysis of FDI Effects

For three of the five industry sectors discussed in the report—electronics, automotive, and banking—certain public policy concerns about the effects on the U.S. economy of increased levels of foreign investment are not discussed or adequately addressed in the report. For the other two sectors—steel and chemicals—fewer concerns have been publicly raised, and the effects of FDI have not been the subject of controversy.

---

## Electronics

The electronics sector is a key high-technology sector, underpinning many other critical industries including several that affect national security. Although the Commerce report describes the rapid expansion of foreign firms' participation in this sector of the U.S. economy during the 1980s, it does not directly discuss some of the more important issues that have been raised about the effects of FDI in this industry.

For example, the report does not address significant questions concerning the effects on the competitiveness of U.S. electronics firms when foreign firms acquire U.S. companies that strengthen the supplier networks of the foreign firms, a practice known as “vertical integration.” It also does not address questions concerning the effects on the competitiveness of U.S. firms when foreign companies buy U.S. firms that hold state-of-the-art technologies.

In addition, although the report cites as a “hotly debated issue” the question of whether foreign firms have assisted U.S. technology development or have transferred U.S. technology abroad, it does not include information needed to understand technology flows.

---

## **Automotive**

The automotive sector, broadly defined to include parts and components, is central to the U.S. manufacturing base, accounting for a significant portion of U.S. employment in manufacturing. Commerce’s analysis of the effects of FDI in the U.S. automotive sector does not fully explore several commonly raised questions relating to FDI effects on imports, U.S. parts suppliers, and technology transfer. For example, it does not directly analyze the debate surrounding

- the extent to which foreign investment has served as a magnet for imported parts and components;
- the question of whether the displacement of U.S. parts suppliers is temporary, as U.S. firms learn to compete for “transplant” business,<sup>3</sup> or whether the vertical integration of foreign-owned supplier networks tends to preclude competition by U.S.-owned firms; and
- the question of whether foreign-owned firms tend to engage only in final assembly operations or whether skilled manufacturing and engineering technologies are being transferred to the United States.

---

## **Banking**

Banking is a sector critical to the functioning of a country’s economy, due to the banks’ central role in channeling payment flows to sustain economic growth and in transmitting government monetary policy.

The Commerce report describes the increased presence of foreign-owned banks, particularly Japanese banks, in the U.S. banking industry. It shows the growth in foreign-owned banks’ market shares with respect to both

---

<sup>3</sup>“Transplant” business involves foreign-owned firms’ assembly plants in the United States.

assets controlled and to commercial loans made. It indicates that the foreign share of U.S. business lending amounted to 30.6 percent in 1990. It also notes the heavy geographic concentration of foreign-controlled assets and commercial lending in New York and California. In these states in 1990, U.S. offices of foreign banks accounted for over 50 percent of business lending.

The report, however, does not analyze, or even mention, certain questions that have been raised in public debate about the effects of such increased foreign activity. A key question concerns the threshold at which foreign-controlled banks can make basic lending decisions that would affect the growth and development of U.S. industry. In particular, some observers wonder whether, during periods of credit restraint, foreign-owned banks in the United States would have a proclivity to serve borrowers of their own nationality before serving other U.S. borrowers. Observers have also noted that many foreign banks have extensive relationships, beyond the basic borrower-lender relationship, with manufacturing and advanced technology companies in their home country and have wondered if and how those relationships would affect lending practices.

Questions relating to the high concentration of foreign banking activities are not directly discussed. The report notes only that there were 727 foreign banking offices in the United States representing 294 foreign banking "families" from 60 countries, compared with a total of 12,338 commercial banks in the United States. It does not mention that Federal Reserve Board data show that in 1990 the top 25 foreign banks held 66 percent of all foreign-owned banking assets in the United States. Sixteen of these 25 were Japanese owned, controlling 50 percent of all foreign banking assets in the United States and 10.5 percent of all U.S. banking assets.

The enormous worldwide asset strength of many Japanese and other foreign banks is not mentioned as a factor behind such concentration or as a possible concern in itself. Of the 10 largest banks in the world in 1991, for example, 7 were Japanese and 3 were French. The largest U.S. bank, Citicorp, ranked 18th, and the only other U.S. bank in the top 50 in the world, BankAmerica Corp., ranked 43rd.

Other questions regarding the effects on the U.S. economy of increased levels of foreign banking investments relate to the financial soundness of foreign-owned banks and the possible competitive advantages foreign

banks may have over domestic banks. Neither of these questions is addressed in the report.

---

---

## Minimal Use of Government and Private Sector Studies

The Commerce report relies heavily on official BEA statistics, with preliminary 1988 data the most recent available. It makes minimal use of existing studies prepared by other offices within Commerce or by the private sector to enhance or explain BEA data or to address concerns about FDI's effects. The use of this information could have provided a more complete and balanced discussion of the effects of FDI on the U.S. economy.

---

## Electronics

Commerce does not include information from various government and private sector sources that could have enhanced its discussion of issues related to the electronics industry, including discussions of vertical integration practices, targeting of firms that hold state-of-the-art technologies, and technology transfer.

---

## Vertical integration

Many industry analysts believe that vertical integration may improve a company's competitiveness by assuring a supply of inputs and by establishing close linkages between suppliers and customers. Although the Commerce report notes that "firms from some countries have dominated foreign direct investment in the electronics sector, and have focused their investments in specific segments of the industry...", it includes very little substantive information on vertical integration practices by foreign firms or the effects these practices may have on the U.S. economy.

Commerce's report states that detailed private data on this issue are not readily available on a consistent and comprehensive company-by-company basis. While private data may not be voluminous, there are enough available data and information to provide a more comprehensive discussion of these issues than that included in the Commerce study. For example, numerous private industry analyst groups, as well as offices within Commerce, collect and analyze data on foreign acquisitions in the electronics industry, including what kinds of investments were made and in what specific industry subsectors these occurred. These data can be used to examine whether foreign firms are buying U.S. companies that produce not only end-use products, but also the components and parts for these products.

For example, although Commerce uses data compiled by the Japan Economic Institute (JEI) in its discussion of industry specialization by country,<sup>4</sup> Commerce could have used these data to document acquisitions and investments by one company in several linking industries. For example, JEI data show that Mitsubishi, one of the largest Japanese vertically integrated companies, invested in or acquired several U.S. electronics-related companies. These companies include firms in the computer and audio equipment industries, as well as U.S. companies that produce components for computers, such as integrated circuits. In addition, Mitsubishi acquired equipment suppliers that are involved in producing the circuits, such as wafer fabrication equipment and semiconductor test equipment.

Several offices within Commerce have used JEI data to address the issue of vertical integration. In one study, analysts examined the data compiled by JEI and concluded that "Japan's direct investment in the U.S. manufacturing sector for electronics and technology is dominated by large vertically integrated corporations....Vertical integration extends to all levels of production from semiconductors, electronic components, and production equipment to final products."<sup>5</sup> Another Commerce report, also using JEI data, notes that Japanese investment in 1990 in semiconductors, semiconductor manufacturing equipment, and computer peripherals indicates growth in the "supplier network of Japanese-affiliated companies in the U.S. electronics sector."<sup>6</sup>

Commerce's Office of Trade and Investment Analysis also publishes an annual report identifying U.S. firms acquired by foreign firms that year.

---

<sup>4</sup>This directory contains the most comprehensive information on Japan's investment in U.S. manufacturing at the establishment level. For every manufacturing facility, it lists the location, the Japanese owner and ownership share, new or acquired plant, product description, employment, year of investment, and the Standard Industrial Classification (SIC) code. The directory's information is based on a benchmark survey conducted by JEI in 1986 and updated through 1989.

<sup>5</sup>Phyllis A. Genter and Donald H. Dalton, Japanese Direct Investment in U.S. Manufacturing, U.S. Department of Commerce, International Trade Administration and Economics and Statistics Administration (Washington, D.C.: 1990), p. 15.

<sup>6</sup>\_\_\_\_\_, Japanese Direct Investment in U.S. Electronics: Implications for U.S. Technology Development, U.S. Department of Commerce, Prepared for the Fifth Annual Meeting, Association of Japanese Business Studies, Jan. 3-4, 1992, Denver, Colorado (Washington, D.C.: 1992), p. 7.

The report is a compilation of material from public sources, transaction participants, and miscellaneous contacts.<sup>7</sup> These data could also be used to document vertical integration efforts by foreign firms. The June 1991 report includes the number of identified completed transactions by source country (1985-1989), investment by industry group and country of foreign parent, and mode of investment by source country. This report includes a broader range of investment transactions than the BEA data in such areas as plant expansions, equity increases, and certain types of real estate investment.

---

### Targeting U.S. firms to obtain critical technologies

The Commerce report on FDI does not address the issue of whether foreign companies have focused on acquiring U.S. firms that have developed state-of-the-art technologies and what the competitive effects of this situation might be. Other reports by Commerce analysts have addressed this issue. For example, Commerce analysts used JEI data and concluded that in 1990 Japanese investors focused on acquiring small, start-up U.S. electronics companies that have an advantage in generating “innovations.”<sup>8</sup> In another report Commerce analysts note that the “high level of concentration that characterizes Japanese direct investment in U.S. manufacturing heightens U.S. concerns about the effect of such direct investment on economic security. These concerns include fear of losing control over important portions of the U.S. industrial base and the transfer to Japan of strategic technologies.”<sup>9</sup> Other offices within Commerce that compile their own data bases on foreign acquisitions of U.S. firms include Commerce’s Office of Industrial Resource Administration and industry offices within the International Trade Administration. Data from these offices are available to explore the extent to which foreign firms are targeting U.S. companies that hold critical technologies.

In addition, a report commissioned by the Department of Defense includes data on foreign investors who bought U.S. firms that hold critical technologies. It notes that although foreigners control only 12 percent of manufacturing assets, the investments are concentrated in a few industries

---

<sup>7</sup>Foreign Direct Investment in the United States: 1989 Transactions, U.S. Department of Commerce, International Trade Administration, Office of Trade and Investment Analysis, (Washington, D.C.).

<sup>8</sup>Japanese Direct Investment in U.S. Electronics: Implications for U.S. Technology Development.

<sup>9</sup>Japanese Direct Investment in U.S. Manufacturing, p. 20.

and include acquisitions of U.S. firms that have critical leading-edge technology.<sup>10</sup>

Finally, data on foreign acquisitions of U.S. companies in critical industry sectors have been compiled and analyzed by public policy and industry analyst groups. For example, a study by the Economic Strategy Institute in Washington, D.C., notes that "while foreign concerns have made investments in nearly every type of business, certain industries have witnessed unusually heavy levels of such investment. Currently, 98 percent of the electronic packaging business, 80 percent of production of the [inner components] of 'U.S. made' computers, 75 percent of the robotics market, 50 percent of the consumer electronics market... are held by foreign-owned companies."<sup>11</sup> Other private sector sources available for addressing these concerns include data bases compiled by Ulmer Brothers Research Institute and the American Electronics Association.

---

## Technology transfer

Although most industry analysts agree that it is difficult to answer the question of how much technology has been transferred from foreign parents to their U.S. affiliates and vice versa, royalties and license fees are often examined as two indicators of technology transfer. For example, a report issued in 1991 by Commerce's Japan Technology Program and the Office of Business Analysis, Economics and Statistics Administration, concludes that the United States is a major exporter of technology to other nations as measured by royalties and license fees.<sup>12</sup>

Although BEA publishes information on royalties and licensing fees, Commerce officials told us they did not examine these data for their FDI report because of the short time frame in which they were working.

A report published by Commerce's National Institute for Standards and Technology estimates that between 1985 and 1990, Japanese firms made direct investments in approximately 300 small, high-technology firms. The

---

<sup>10</sup>Foreign Ownership and Control of U.S. Industry, Report of the Defense Science Board Task Force, DOD (Washington, D.C.: 1990).

<sup>11</sup>Linda Spencer, Foreign Investment in the United States: Unencumbered Access, Economic Strategy Institute, (Washington, D.C.: 1991), p. 8.

<sup>12</sup>The report cautions, however, that royalties and license fees tend to overstate the technology flows because they include other royalties for trademarks; copyrights for books, records, and tapes; broadcasting fees; and franchise fees.



report notes that "small firms of this type represent a major source of innovative technology for the Japanese...." Other offices within Commerce, such as the Office of Technology Policy, have ongoing research projects related to technology development that might have been drawn upon for this section of the annual report.

---

## Automotive

As with the electronics industry, Commerce does not include in its discussion of the automotive industry relevant information from other government and private sector sources that would have contributed to a more comprehensive discussion of automotive imports, vertical integration practices, and extent of technology transfers.

---

## Imports

Commerce's report on FDI provides data on automotive industry imports of vehicles and parts only in terms of relative market share, without noting the dollar values of these imports or their overall impact on the trade deficit. The aggregate dollar value of these transactions indicates the relative importance of automotive imports in the U.S. economy. For example, in 1990, imports of autos and auto parts from Japan totaled \$32.6 billion, an amount equal to three-quarters of our trade deficit with Japan. Of this amount, \$11.4 billion consisted of auto parts, up from \$4.6 billion in 1985.

An important factor driving this increase has been the foreign-owned firms' assembly plants, often referred to as "transplants." To explore the import effects of these transplants, the differing conclusions reached in different studies of this subject need to be explained. For example, the Japan Automobile Manufacturers Association, Inc., noted that transplant firms are procuring more parts domestically, increasing their purchases of U.S.-produced parts and materials from \$1.7 billion in fiscal year 1985 to \$9.1 billion in fiscal year 1990.<sup>13</sup> However, a 1990 Auto Parts Advisory Committee report to the Secretary of Commerce, while acknowledging increased U.S. sourcing of components, found that the increase would not offset the rise in auto part imports caused by increasing transplant market share.<sup>14</sup> Questions that Customs raised in the summer 1991 as part of its investigation of one transplant's import practices and local content

---

<sup>13</sup>"7 Billion Dollar Overestimate Casts Doubt on Validity of Auto Parts Trade Forecast," Press Release, Japan Automobile Manufacturers Association, Inc., Aug. 7, 1991.

<sup>14</sup>Overview of U.S. Automotive Parts Trade With Japan, U.S. Department of Commerce Auto Parts Advisory Committee (Washington, D.C.: 1990).

---

calculations highlight the need for more detailed analysis of the issue of domestic content.

---

## Vertical Integration

In the automotive industry, much of the foreign-owned firms' growth has consisted of vertical integration by the transplant auto producers of the foreign firms' affiliated supplier networks. Some critics of foreign direct investment argue that these networks effectively limit the ability of U.S. firms to compete with foreign affiliated suppliers.

Commerce's report on FDI does not include private sector data or specific analysis on this important issue, although several studies have been published. For example, the University of Michigan used publicly available information to estimate the sourcing pattern of an established transplant auto manufacturer. The results indicate that nearly 81 percent of the component value of each vehicle produced came from either imports or transplant suppliers, with less than 20 percent coming from the traditional U.S. auto parts industry.

Other studies address this issue from the perspective of the transplants' differing management practices, such as just-in-time production and total quality management approaches. These studies cite the slow response on the part of some U.S. suppliers in adjusting to these management practices as one important factor behind U.S. suppliers' lack of competitiveness for the transplants' business.<sup>15</sup>

---

## Technology transfer

Among the most frequent criticisms raised regarding FDI activity is the nature of the tasks performed by foreign affiliates in the United States, compared to the tasks performed in the home country. Some critics of foreign investment raise the issue of whether these firms are "screwdriver" assembly plants, with most or all high value-added work retained in the foreign parent.

One approach to analyzing this question is to examine research and development (R&D) statistics, since R&D is a high value-added activity, employing primarily highly skilled professional workers. Commerce uses BEA data to show that R&D spending by foreign affiliated firms dropped by

---

<sup>15</sup>Foreign Investment: Growing Japanese Presence in the U.S. Auto Industry (GAO/NSIAD-88-111, Mar. 7, 1988); Japanese-Affiliated Automakers: Management Practices Related to Purchasing Parts (GAO/T-NSIAD-92-5, Nov. 14, 1991).

almost 50 percent between 1980 and 1988. This amount would constitute well under 1 percent of total R&D expenditures by the auto industry, at a time when FAF market share was approaching 8 percent.

The Commerce report on FDI offers no explanation of this dramatic drop in expenditures. Further information on this subject could have been obtained from industry experts or from some of the foreign-owned firms that have been reported to be investing substantially in R&D activities. For example, estimates of expenditures based on 1991 staffing levels at FAF technical centers suggest the BEA data might be understated.

The Commerce report on FDI briefly mentions the positive effect of technology transfer from foreign affiliates to U.S. firms. However, inclusion of data demonstrating productivity gains in foreign affiliated firms and the Big Three automakers, or case studies discussing these gains, would have documented the positive effects of technology transfer.

---

## **Banking**

Detailed data on foreign ownership in the U.S. banking sector, including data on specific transactions, are publicly available as a result of extensive reporting requirements for this regulated industry.<sup>16</sup> Federal Reserve Board data are more detailed than BEA banking data, which are collected only for BEA benchmark surveys (the most recent was 1987).

The Commerce Department relies on the Federal Reserve Board data for its banking chapter, but, as noted previously, it does not mention publicly raised questions about the effects of high levels of foreign investment. Analyses of these questions would involve, for example, examinations of bank lending portfolios and surveys of federal and state bank supervisors to monitor lending history to different U.S. industry sectors, as well as financial soundness.

Commerce did note that Japanese banks continued to lend to U.S.-owned businesses during the tight credit environment of the past several years, but it did not attempt analysis comparing their lending to Japanese-owned firms in the United States with lending to U.S.-owned firms.

---

<sup>16</sup>Foreign acquisitions of, or investment in, U.S. banks must be approved by the Federal Reserve Board under the Change in Control Act and the Bank Holding Company Act, according to the same standards that would apply to investments by U.S.-owned institutions.

We recognize that few of these types of banking studies have been done and that Commerce staff did not have time to perform the detailed original research needed to address questions about effects. Nevertheless, we note that these types of studies can be performed using the existing extensive data collected on individual bank activities.

---

### **Data Items Specified in the Act but Not Included in the Report**

Commerce's report on FDI does not compare foreign-controlled business enterprises with other U.S. enterprises with respect to some of the data items specified by the act of 1990. It does not include data comparing FAFS with U.S.-owned firms on value added, profitability, productivity, or taxes paid. It also does not include a discussion of investment incentives provided by state and local governments, and it discusses only 3 of the 21 critical technologies designated by DOD.

Profitability is difficult to determine given available data. BEA collects some data on profitability at the enterprise level, but since data at this level include dissimilar lines of business, the information does not lend itself to comparison. In addition, BEA is hindered by a lack of similar data on U.S.-owned firms. Attempting to gather these data on an establishment basis is not feasible, since establishment-level transactions are generally conducted at an internal transfer price that does not reflect external pricing realities.

Productivity and value added cannot be determined using data from the BEA questionnaire. However, Census does gather data that would allow analysis of these areas once the data link between BEA and Census is complete.

Income tax data, at the 3-digit Standard Industrial Classification level,<sup>17</sup> were included in the 1987 benchmark survey, but Commerce did not choose to address tax issues in the report.

According to Commerce officials, data on incentives by state and local governments were not provided due to the complexity of gathering this information. A Commerce official noted that an analysis of incentives would require surveying each state and that a survey of this kind was

---

<sup>17</sup>The Standard Industrial Classification is the statistical classification standard underlying all establishment-based federal economic statistics classified by industry. The classification covers the entire field of economic activities and defines industries in accordance with the composition and structure of the economy.

beyond the scope of Commerce's report. Commerce also noted that, although BEA does collect these kinds of data for new investments, it does not publish them because of concerns about reliability.

---

## Critical Technologies

The Commerce report on FDI includes a discussion of 3 of the 21 technologies cited by DOD's critical technologies list. These technologies are semiconductor manufacturing equipment, robotics, and biotechnology. The two we reviewed—semiconductor manufacturing equipment and robotics—received only fragmentary treatment in the report.

Commerce officials stated that they did not believe they could get information about any other electronic products related to DOD's technologies list because these products involved technologies and not "concrete products." Although the task of identifying specific products within these technologies and matching them to SIC codes is time consuming, case studies involving foreign investment in products relating to some of these technologies are useful.

The electronics chapter addresses only the semiconductor materials and equipment subsector and includes little substantive information on this industry subsector. For example, Commerce cites several products within this subsector but does not discuss foreign investment in these product industries. In addition, Commerce notes that Japanese-owned affiliates account for 90 percent of FDI in the semiconductor materials industries. Commerce's only attempt to discuss the significance of this foreign investment for the U.S. semiconductor industry is inclusion of a quote from a national semiconductor advisory committee.

Various industry analyst groups—within the government, including Commerce, and the private sector—collect information on a range of high-tech industries, including semiconductor materials. They publish information on U.S., Japanese, and European world market share of the semiconductor materials industry. These studies can complement BEA and Census data by providing information on which companies dominate the worldwide materials market.

The automotive chapter includes an analysis of the robotics industry, for which the automotive industry constitutes the single largest market. The section does not, however, mention machine tools or numerically

controlled tools, technologies that are used extensively in the automotive industry and that have defense applications.

---

---

## **Conclusions**

Although Commerce's report on FDI provides descriptive information on the history, growth, and characteristics of FDI in the United States, it does not provide a clear discussion of costs and benefits resulting from FDI inflows as distinct from all foreign investment in the United States. The report is also weak in analyzing the effects of FDI in certain industry sectors. It does not include in its analysis relevant publicly available data from government and the private sector.

---

---

## **Recommendations**

To provide a more complete discussion of foreign direct investment in the United States, we recommend that the Secretary of Commerce ensure that all subsequent annual reports on FDI (1) provide an analysis that clearly distinguishes between costs and benefits derived from FDI in the United States and those derived from all foreign investment in the United States, (2) make greater use of available government studies and private source data, and (3) provide more focused analyses of publicly debated questions regarding the effects of foreign direct investment on the U.S. economy.

---

---

## **Agency Comments and Our Evaluation**

In commenting on a draft of this report, the Department of Commerce expressed concern about our recommendations and set forth its views on what should be reasonable expectations for its future reports. We evaluated Commerce's specific concerns and made some modifications in our report. However, our evaluation also revealed that some of Commerce's comments misconstrued aspects of our draft report. Commerce's comments are provided in their entirety in appendix II along with our point-by-point response.

---

# Improving Government Information on FDI

The BEA/Census data exchange, or "link," was established to improve the quality of government foreign direct investment data. Although it will provide some additional data on the operations of foreign affiliated firms, it will not provide certain other important information needed to examine the effects of FDI on the U.S. economy. In addition, there are inherent limitations in the BEA data, such as its timeliness, that the link will not correct.

In addition to BEA and Census, various other federal agencies collect some FDI information in the course of carrying out their individual missions. Little or no further policy coordination is required among these agencies in order to conduct their work.

## Linking BEA and Census Data

The BEA and Census link is accomplished by linking BEA's employer identification numbers (EIN), taken from BEA's 1987 benchmark survey, with Census EINS contained in its Standard Statistical Establishment List file. Census' file contains basic information on establishments operating in the United States, their EIN numbers, the number of employees in the establishment, and the amount of employee compensation. In the future, BEA and Census plan to access data items from Census' 5-year economic survey and its annual survey of manufacturers.

Because establishments are less likely than enterprises to diversify into multiple lines of economic activity, establishment data are preferred to enterprise data for purposes of specific industry analysis. In most cases, establishments are focused on a single line of business. Enterprises, on the other hand, may be comprised of multiple establishments, all engaged in different lines of business.

Data collected on an enterprise basis are classified according to the single largest line of business in which the firm operates. For a diversified firm, this item may constitute less than 50 percent of total sales and cause statistics for the largest line of business to be overstated, while values for other business activities would be understated. Because of the more detailed nature of establishment-level data, the data link will allow foreign investment data to be attributed to the actual industry in which the investment is made.

---

## Status of Data Link

By July 1991, BEA had completed the administrative actions required to access Census data and had provided Census with the data tape of its 1987 benchmark survey. At that time, Census had linked the two data sets. This "mechanical link" showed that 80 percent of BEA enterprises had one or more EINS that linked to a Census EIN.<sup>1</sup> BEA's 8,900 enterprises linked to 130,000 separate Census establishments. These enterprises were the larger ones, accounting for 95 percent of the employment reported in BEA's 1987 benchmark survey.

Since July, Census and BEA have focused on contacting the 20 percent of companies that did not link to Census EINS and verifying the 80 percent of EINS that did link to Census EINS. This process has entailed contacting BEA enterprises that did not link in order to obtain their EINS, addresses, or other identification information; using information on corporate ownership structure from the Census Bureau's computer system; and comparing state-by-state distributions and levels of employment of BEA's enterprises versus the mechanically linked Census Bureau establishments.

As a result of this verification process, the final tally of Census establishments that link to BEA enterprises may be significantly less than the 130,000 that initially linked. This is because the mechanical link pulled in data for all the establishments of a given linked U.S. company, including establishments that were not foreign owned. The verification process weeds out the data on the non-foreign-owned establishments.

BEA plans to publish results of the data link for 1987 data in June 1992, with 1988 and 1989 data expected in 1993. Commerce's next annual report on FDI, which is expected to be published in late 1992, will only incorporate 1987 linked data.

---

## Resources Devoted to the Data Link Project

According to BEA officials, BEA's budget for collecting and disseminating information on FDI in the United States in fiscal year 1991 was \$2 million. (BEA's total budget for fiscal year 1991 was \$30.5 million.) The officials also stated that in response to congressional authorization of the BEA/Census data link, BEA was allocated an additional \$2 million for fiscal years 1991 and 1992. According to BEA officials, approximately

---

<sup>1</sup>Census collects information on all establishments in the United States, including U.S.- and foreign-owned establishments. BEA collects information only on foreign-owned enterprises. One foreign-owned enterprise may have several establishments. Therefore, several Census establishments and their EINS may link to one BEA enterprise.



\$1.2 million was dedicated to establishing the data link itself. The other money was used to improve compliance with the reporting requirements of BEA's international surveys, strengthen BEA's ability to analyze the data collected, and improve BEA's capability to process its surveys more quickly and efficiently. BEA hired several new employees to work directly on the data link project and to assure business compliance with BEA surveys.

## Information That the Data Link Will Provide

The first BEA/Census "link-up" will generate information on four items: number of employees, amount of employee compensation, volume of shipments or sales, and number of foreign-owned establishments at the state level and by country of ultimate owner. These items will be shown by state and specific industry using 1987 benchmark survey data and will be at the 4-digit SIC level.

In addition, the link will allow the operations and performance of FAFs in a given industry to be analyzed without including the secondary industry activities of those firms. For example, the wholesale operations of an FAF in the auto industry would be analyzed separately from the firm's manufacturing operations. Without the data link, distinguishing between manufacturing and wholesaling is difficult for those affiliates engaged in both types of activities.

Not all data, however, will be published at the state level because some of the data will probably be suppressed. This suppression will occur if there are so few companies in a given industry that reporting would likely violate their privacy by identifying them.

The link between BEA and BLS will allow BLS to derive data on foreign-owned establishments by both industry and geographic region. The lowest level at which industry data are available is the 4-digit SIC level. Most data are available at the state level, although some are available at the county level. BLS data will include the number of reporting units, monthly employment, and total quarterly wages.

Although BLS used 1987 BEA data to conduct its initial link, BLS will not publish 1987 data. Instead, in the summer of 1992, it will publish 1989 and 1990 FDI employment and wage data by industry, geographic region, and country of ownership. Because of confidentiality requirements, however, not all of the data available will be published. In 1993, BLS is planning to publish occupational structure of FAFs compared to that of all firms in the United States.

---

## Availability of Other Data Items Cited in the Act

BEA and Census have agreed to look into the feasibility of publishing data on several other items that were not included in the first report on foreign direct investment. These items include value added, market share, productivity, capital expenditures, and employer's cost for worker fringe benefits.

The BEA/Census data link, however, will not provide any additional data on several other items that Congress cited in the act, including profitability, taxes paid, research and development, and export and import data. Appendix I discusses what the data link can and cannot provide for all of the above data items.

The data link cannot be expected to provide other important information needed to examine the effects of FDI on the U.S. economy. For example, it will not provide any data on the flow of technology transfer, foreign targeting of critical industries, or vertical integration practices. As noted in chapter 2, information on these issues is available through private sector data sources and through in-depth analysis conducted by industry analysts within the Commerce Department and other government agencies.

---

## Inherent Problems in BEA Data That Link Will Not Correct

There are other inherent problems in BEA data that the data link will not correct. These problems include the time expended between data gathering and data publication, the way in which economic activity by industry is classified, and the need to suppress some data in order to maintain business confidentiality.

---

## Timeliness

BEA data are often criticized for being published several years after the year covered by BEA surveys. For example, preliminary data gathered from the BEA's annual survey are published 2 years after the year covered by the survey, with final results published the next year.

According to BEA officials, a lack of timely reporting by U.S. companies, particularly the larger companies, is the single most important factor inhibiting faster analysis of FDI data. BEA officials noted that foreign direct investment data are often dominated by large companies and that attempts to estimate company data not collected are difficult because the data change from year to year. A BEA official noted that in the aggregate, preliminary data are not significantly different from final data. However, preliminary data may be substantially different in certain disaggregated industries if large companies do not file their information on time.

According to a BEA official, however, the time companies take to respond has improved due to changes in BEA efforts to collect data. In 1990, BEA instituted a specific schedule for sending out "reminder" letters to delinquent companies and telephoning the companies. A BEA official stated that these procedures have significantly improved the accuracy of its preliminary data.

BEA officials explained that companies are required to submit BEA annual surveys 5 months after the year surveyed. For example, the due date for the BEA's annual survey requesting 1989 data was May 31, 1990.

For companies that do not complete the survey on time, BEA sends a follow-up letter 6 to 7 weeks after the May deadline, reminding the companies of their legal obligation to complete the survey. A second "legal" letter, signed by Commerce's Chief Counsel for its Economics and Statistics Administration, is sent in September to those companies that have not yet responded that have \$100 million or more of assets or sales. Other nonrespondents are sent a second general follow-up letter by BEA, also in September. According to BEA, if the company has not responded by October of that year, BEA begins calling the company. In November, all the companies that are still delinquent are reported to Commerce's Chief Counsel of the Economics and Statistics Administration. The Chief Counsel then contacts the company by phone. The procedures for contacting companies that were delinquent the year before are similar to those previously mentioned except that they are slightly accelerated: A legal letter is sent in August instead of September, and companies are referred to the Chief Counsel's office for contact by telephone in October instead of November.

In addition to late reporting, companies often return incomplete surveys or give inaccurate data, requiring BEA to spend time contacting the company to get corrected data. BEA also runs computerized checks that test for the internal consistency of the data on a given form, for consistency of data reported on the current form with reports received from the same company for earlier periods, and for consistency with reports filed by the company in other BEA surveys. BEA officials stated that their computers run literally thousands of checks on the benchmark and annual surveys.

To date, no fine has been levied against a company that has failed to file or has filed a late or inadequate report. BEA officials noted that they are usually successful in obtaining the needed data through written inquiries and telephone follow-up calls. However, these officials stated that these

efforts cost them a lot of time and resources. Although BEA can refer delinquent companies to the Justice Department for further action, as of late 1991, no companies had been referred.

---

## Classification and Disclosure Problems

Federal statistical agencies classify economic activity using the SIC system. This classification system is a hierarchical framework that allows similar firms to be grouped together for analytical purposes at varying levels of detail. For example, the entire economy is divided into 10 broad categories, like manufacturing, agriculture, and services. To provide more detail, these categories may be further divided, thus describing more specific industries. The most detailed data generally available are at the 4-digit SIC level.

BEA data are published using the International Surveys Industry system, which is based upon SIC classifications. The classification levels equate to 2- or 3-digit SIC groups, depending on the specific industrial sector. While this level of detail allows analysis of broad sectors within the economy, it is of limited value in the analysis of certain industries having varied subsectors. To achieve this level of detail, data must be published at a more disaggregated level, such as the SIC 4-digit level of detail. Once the data link is complete, Census will be able to provide BEA with data at this level. These data will improve opportunities for analysis of industries with a sufficient number of foreign affiliates to permit the publishing of aggregated data.

However, BEA will be limited in its ability to publish data from which the identity of the foreign investor can be learned, due to the need to preserve confidentiality. Since the ability to derive this confidential information depends both upon the number of investments in an industry and the amount of investment, data on industries in which a few large investors hold significant control may be suppressed. For example, semiconductor manufacturing equipment is classified as "special industrial machinery, not elsewhere classified," and is grouped together with industrial sewing machines, pottery-making machines, tannery equipment, and over 60 other unrelated industries. However, even if the SIC system was changed to allow data on semiconductor equipment to be published separately, because there are too few investors confidentiality rules would prohibit publishing the data.

---

## Coordination Among Agencies Collecting FDI Data

Numerous government agencies collect FDI-related information in the course of their routine activities,<sup>2</sup> but these are not considered statistical reporting agencies. Some of this information is considered business confidential, is used for regulatory purposes, and is not routinely available for sharing with other federal agencies. In some cases, the information is not organized to allow systematic analysis from an FDI perspective. For example, the Justice Department and the Federal Trade Commission have knowledge of foreign acquisitions of U.S. firms when they consider the antitrust implications of particular acquisitions, but they do not share this information with other agencies or keep a data base specifically on foreign acquisitions.

The Departments of Energy and Agriculture do publish annual statistical information on foreign investment in the energy and agricultural sectors, respectively. The Department of Energy, in accordance with the Department of Energy Organization Act, prepares an annual report on FDI in the energy sector. This report is based on BEA data and publicly available information; DOE does not send out questionnaires for the purpose of preparing this report.

The Department of Agriculture, in accordance with the Agricultural Foreign Investment Disclosure Act of 1978, also reports annually on the extent of foreign ownership of productive agricultural land in the United States. These statistics are based on required filings by foreign investors of agricultural land purchases. They are very detailed, showing foreign investments at the U.S. county level and by type of agricultural production. Agriculture Department officers at the county level (the Agricultural Stabilization and Conservation Service) are responsible for keeping abreast of foreign purchases and reminding buyers of the reporting requirement. Unlike the BEA data, individual foreign investor filings of agricultural land purchases are publicly available.

The Bureau of Labor Statistics is a statistical reporting agency. It collects its information from state employment security agencies, as well as by sending out survey questionnaires, as Census and BEA do.

Although there is some duplication in the BEA and Census questionnaires, this duplication—for example, of employment statistics—has been useful to Census and BEA in their efforts to verify the accuracy of their data link.

---

<sup>2</sup>For a description of these agencies' data, see Foreign Investment: Federal Data Collection on Foreign Investment in the United States (GAO/NSIAD-90-25BR, Oct. 3, 1989).

Moreover, policy coordination among relevant federal statistical agencies (BEA, Census, and BLS) regarding FDI data has begun to occur as a result of the data link project.

---

## **Conclusions**

The data link between BEA, Census, and BLS will improve government data on foreign direct investment by providing some additional information at the establishment level. However, it will not help generate information on some data items specified in the 1990 act and will not provide other data, such as information on R&D spending by FAFs, necessary for a comprehensive analysis of the effects of FDI on the U.S. economy. In addition, the link will not overcome some inherent limitations with the data.



---

# Information That Data Link Can and Cannot Provide

---

The initial results of the Bureau of Economic Analysis (BEA)/Census data link will provide 1987 data on employment, employee compensation, volume of shipments or sales, and number of foreign-owned establishments by specific industries at the state level and by country of ultimate owner. In addition, the link between BEA and the Bureau of Labor Statistics (BLS) will allow BLS to produce establishment employment and wage data by industry and geographic area, as well as by country of ultimate owner. In addition, BLS will provide information on employee occupational structure by industry.

According to BEA and Census officials, their agencies are planning to use the data link in the future to provide information on other data items cited in the legislation, such as value added and market share of foreign affiliated firms (FAF). The data link will not provide information on some other data items, such as research and development (R&D).

---

## Information That Data Link Can Provide in the Future

In addition to publishing information on the four data items previously cited, BEA and Census officials told us that they had agreed to look into the feasibility of publishing data on value added, market share, productivity, capital expenditures, and employer's cost for worker fringe benefits. These data items are collected by Census for manufacturing establishments only.

---

## Value Added

As noted in chapter 2, BEA publishes value added (BEA uses estimates of gross product as a measurement of value added) at the 1-, 2-, and 3-digit Standard Industrial Classification (SIC) levels. According to BEA officials, they are exploring the feasibility of providing comparison data for FAF and U.S. industry manufacturing establishments through the BEA/Census data link. BEA hopes that information on value added, and a comparison between FAFs and U.S. manufacturing industries, can be included in Commerce's 1993 foreign direct investment (FDI) report.

---

## Market Share

Although the SIC system does not classify establishments below the 4-digit level, Census currently classifies manufactured products into 5-digit product classes and 7-digit products, in a manner consistent with the SIC system. This classification might allow market share analysis for some narrowly defined product categories. However, to avoid releasing proprietary data, much of these data could be published only at the 5-digit level. Even at this level, data on some product classes are likely to be suppressed.



Despite this limitation, the link would provide useful data on many products. The use of product-level data for manufacturing establishments can provide a basis for a far more accurate assessment of market share than is now available. However, less detailed product data are available for establishments outside of manufacturing and minerals, making an analysis of market share for a particular product in other industries impossible.

---

### **Productivity**

The Census Bureau currently collects data on worker hours in several industries, including manufacturing. It does not collect hours worked in retail or wholesale trade, service industries, and transportation. The feasibility of linking data on hours worked for 1988 and 1989 can be explored. A measure of nominal productivity may be derived by dividing value added by employee hours worked. However, productivity analysis over time requires real rather than nominal measurements. Dollar measures of productivity are not meaningful unless they are deflated to remove the effects of changes in price. Neither BEA nor Census currently collects price data, although such data are routinely made available to them by BLS and other agencies. It would be necessary to supplement the link data with the appropriate price index data from these other sources to provide an accurate picture of productivity growth. However, it should be noted that for any given year, FAF productivity could be fairly compared to the productivity for all U.S. establishments without adjusting for price-level changes.

---

### **Capital Expenditures**

In its 1987 economic census, the Census Bureau collected data on capital spending by company in retail and wholesale trade, services, and by establishment in manufacturing, minerals, and construction. For manufacturing, Census collected separate estimates on expenditures for new buildings and other structures (excluding land), machinery and equipment, and total expenditures for used buildings and machinery combined. BEA can access this information through the data link since it is collected by Census on its survey.

---

### **Employer Cost of Worker Fringe Benefits**

The 1987 economic census also collected data on employer cost of worker fringe benefits by company in retail trade, wholesale trade, and services, and by establishment in manufacturing, minerals, and construction. Fringe benefits include both those employer costs that are legally required, such as social security, and those that are voluntarily funded.

---

---

**Data Not Provided by  
the Link That Is Cited  
in Legislation**

The data link will not provide any additional data on several of the data items that Congress cites in the Foreign Direct Investment and International Financial Data Improvements Act of 1990. For several of these items, this omission occurs because Census does not collect information on these items at the establishment level. Data on profitability, taxes paid, and R&D expenditures apply mainly to enterprises and not establishments.

---

**Profitability**

The data link will not provide any additional information on profitability. Although Census' Quarterly Financial Reports Survey collects data on profitability, they are not collected at the establishment level.

---

**Taxes/State Incentives**

Since Census surveys do not collect information on taxes paid by establishments or on incentives given by state and local governments to promote investment in their states, the data link will not provide any additional data on these data items. (BEA currently publishes annual data on taxes at an enterprise level.)

---

**Research and Development**

Since most R&D is provided at the enterprise level, the BEA/Census data link will not provide any additional information on research and development.

However, it is not necessary that R&D data for FAFs be collected at the establishment level since most R&D is performed at the enterprise level. BEA's benchmark and annual surveys include a general question on R&D expenditures but do not ask for any information on the type of R&D performed. Another government source of detailed R&D data is the Survey of Industrial Research and Development. Census administers this survey for the National Science Foundation every year. The survey collects information on an enterprise basis. It includes, among other items, total R&D expenditures, employment of scientists and engineers, applied R&D expenditures by product field, and the amount of R&D performed outside the company and performed abroad.

Census' survey for the National Science Foundation, however, does not identify foreign ownership of the reporting enterprise. After the BEA/Census link is complete, the Census Bureau and BEA are considering conducting a feasibility study that would link the foreign ownership indicator from the BEA/Census data link to enterprises in the Survey of

Industrial Research and Development. If the second link is successful, R&D data can be analyzed by foreign and domestic ownership.

It should be noted, however, that Census' survey for the National Science Foundation only collects information on 33 different product groups that correspond to 2- and 3-digit SIC codes. This level of aggregation will not permit analysis of firm R&D for many final products.

---

## **Export and Import Data**

In benchmark years, BEA collects export and import data in 12 broad product categories. The economic census surveys do not gather information about the types of products imported. For manufacturing establishments only, the surveys ask for the value of inputs that are purchased or transferred from foreign sources. Therefore, no specific sourcing pattern can be analyzed.

The 1987 economic survey collected information on the value of products exported by manufacturing establishments. It also covered exports of services by establishments in several service industries. Establishments classified in retail trade, wholesale trade, transportation, minerals, and construction were not required to report exports. One potential problem with the data reported by manufacturing establishments is that the establishments may not always know whether their products are subsequently exported by wholesale or retail trade establishments. Therefore, the reported data may understate the amount of their product that is exported.

Because Census' economic census surveys do not ask questions about a company's imports and exports of specific products, the data link will not provide any more product information on imports and exports of FAFs. However, Census' Foreign Trade Data Division obtains export and import data collected by Customs. This division is separate from the division that collects the economic survey information and that is performing the data link with BEA. Customs collects from most importers and exporters shipment documents on each individual import or export transaction that cite what products the companies are importing or exporting. According to the Census Bureau, Customs has recently begun to require exporters to identify the employer identification number of the original product manufacturer, thus allowing the exported goods to be tied to a particular company. However, certain merchandise exports are exempt from filing shipment documents with Customs, including most shipments to Canada. Nevertheless, the Census Bureau and BEA are considering a feasibility study

---

**Appendix I  
Information That Data Link Can and Cannot  
Provide**

---

linking data from the Foreign Trade Data Division with the data resulting from the link project.

# Comments From the Department of Commerce

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



UNITED STATES DEPARTMENT OF COMMERCE  
Chief Financial Officer  
Assistant Secretary for Administration  
Washington, D.C. 20230

18 FEB 1992

Mr. Frank C. Conanhan  
Assistant Comptroller General  
U.S. General Accounting Office  
Washington, D.C. 20548

Dear Mr. Conanhan:

Thank you for your letter requesting comments on the draft report entitled, "Foreign Direct Investment: Assessment of Commerce's Annual Report and Data Improvement Efforts."

We have reviewed the enclosed comments of the Acting Under Secretary for Economic Affairs and believe they are responsive to the matters discussed in the report.

Sincerely,

A handwritten signature in dark ink, appearing to read "Preston Moore". The signature is written over a circular stamp or mark.

Preston Moore

Enclosure

Appendix II  
Comments From the Department of  
Commerce



UNITED STATES DEPARTMENT OF COMMERCE  
The Under Secretary for Economic Affairs  
Economics and Statistics Administration  
Washington, D.C. 20230

FEB 5 1992

Mr. Frank C. Conahan  
Assistant Comptroller General  
General Accounting Office  
Washington, D.C. 20548

Dear Mr. Conahan:

Enclosed are the Department of Commerce's comments you requested on the draft GAO report to Congress, "Foreign Direct Investment: Assessment of Commerce's Annual Report and Data Improvement Efforts." They consist of several general comments, followed by comments addressed to specific points in the main body of the GAO report in the order they appear. The specific comments follow the organization of the GAO report in order to minimize misunderstanding or confusion.

These comments are provided with the recognition that GAO is required by the act to review not only this first Department report, but also each of the succeeding ones submitted to Congress by the Department under the act. Thus, it is important to clarify now what are reasonable expectations for the scope, perspective, and depth of analysis in future reports.

The Department comments are not intended to be an exhaustive point-by-point response to the GAO review. However, they are intended to show that the Department is very concerned about GAO's general criticisms and suggestions, in particular: (1) those that would tend to fan unwarranted public concerns about foreign direct investment in the United States; and (2) that the Department should use anecdotal information and additional statistical data, much of which are unreliable or unrepresentative. The comments also point out the considerable number of incorrect statements made in the draft GAO report about the contents of the Department's report.

Sincerely,

A handwritten signature in cursive script that reads "Mark W. Plant".

Mark W. Plant  
Acting Under Secretary for Economic Affairs

Enclosures

The Administrator



DEPARTMENT OF COMMERCE COMMENTS ON--

Draft GAO Report "Foreign Direct Investment: Assessment of  
Commerce's Annual Report and Data Improvement Efforts"

The following are the U.S. Department of Commerce's comments requested by the U.S. General Accounting Office (GAO), under "the Foreign Direct Investment and International Financial Data Improvements Act of 1990," on the GAO draft report "Foreign Direct Investment: Assessment of Commerce's Annual Report and Data Improvement Efforts." The GAO draft was received by the Department for comment on January 24, 1992.

GENERAL COMMENTS

The GAO report indicates its staff's considerable effort to be thorough in producing its review and suggestions, and particularly in pointing out potential areas that might merit additional investigation, analysis, and reporting. Indeed, the GAO report reflects extensive work to identify specific government and public sources of additional or alternative information and points of view (such as comments by the Economic Strategy Institute on concentration ratios affecting strategic products). While the Department's report is quite lengthy, so too is the detailed GAO report.

The Department's general comments are discussed under five headings: (1) feasibility of responding to GAO criticisms in future reports; (2) the scope and coverage of the first Commerce Department report; (3) the need for a balanced discussion of issues relating to FDI; (4) uses of data sources other than the data from the Bureau of Economic Analysis (BEA); and (5) errors of omission versus differences of opinion regarding findings. Specific comments follow general comments.

1. Feasibility of Responding to GAO Criticisms

In criticizing the Department for not covering a number of issues and the depth of analysis in its first report, the GAO report should distinguish between that which this first report has failed to cover, but which can be included in the next or future reports, and that which it has excluded because it is beyond the scope of the legislation and/or the availability of reliable data. For example, GAO correctly states that certain data, such as data on profitability, taxes paid, and research and development expenditures, will not be available from the link project, but in the body of its report, does not explain why. It is only in the appendix that the reader learns that these data will not be available from the link project because the current link project is designed to obtain Census establishment-level data for BEA foreign-owned enterprise data, and data such as

See comment 1.

profitability, taxes, and R&D spending, are collected only at the firm or enterprise, not establishment, level.

See comment 2.

### 2. Scope and Coverage of the First of a Series of Commerce Reports

The GAO fails to mention that this report is the first in a series of annual Commerce reports, and criticizes the Department in a large number of instances for not branching out to cover additional issues. While the first report can be expected to lay down some basic concepts, as this report does, Congress needs to know that additional, important issues will be considered in the next and future reports. GAO comments would be more helpful if they focused their suggestions for improvements in a series of future reports. It should also be pointed out that the first report was produced under a very tight time constraint imposed by Congress, which affected in some measure the breadth of coverage of this first report, in spite of intensive effort by staffs in various Commerce Department agencies.

See comment 3.

### 3. Need for a Balanced Discussion of Issues Relating to FDI

The GAO view that the Commerce report should discuss publicly debated FDI issues and points of view raises serious questions about the differences between official government reports and academic and private research. On the one hand, it is clearly within the mandate of academic and private researchers to test and discuss various hypotheses about FDI causes and effects and argue for their respective points of view. A government report, on the other hand, must emphasize factual information, and lay the foundations for further exploratory research. While Congress indicated that the Department should consider information collected by other sources, it is doubtful that its intention was for Commerce to discuss and weigh all points of view, irrespective of merit, to raise "straw man" arguments, or to publicize perspectives of private policy groups, especially those using untested methodologies and unreliable databases.

Now on p. 16.

Moreover, the GAO report suggests that if a topic is not controversial, it does not warrant much attention. It notes that "For the two other sectors -- steel and chemicals -- fewer concerns have been publicly raised, and the effects of FDI have not been the subject of controversy," (page 23, par. 2) and thus, it does not consider the chapters covering these industries in its review. The implication of this statement and the omission of any discussion of these chapters is that Commerce should not make any attempts to provide an objective, or at least impartial, assessment, and rather, should focus only on controversial investments. Although the GAO posture is one possible view, we believe that a more useful stance is for Commerce to provide a balanced look at all FDI in the United States. Thus, we will include analyses of industries where FDI has been important in terms of value of investments or share of total direct investment, and has clearly made large contributions to U.S. economic growth and employment, regardless of whether or not the investments are controversial.



See comment 4.

4. Appropriateness of Using Other Data Sources

The GAO report also criticizes the Department for not using data sources other than BEA. This is puzzling, since the GAO report in numerous instances specifically cites the Department's use of sources other than BEA. The body of the Department's report cites extensive use of other sources, including the International Trade Administration, the Technology Administration, the National Telecommunications Information Administration, and the Bureau of Export Administration in Commerce; the International Trade Commission, the Labor Department, the Defense Department, the U.S. Congress, the General Accounting Office, the National Science Foundation, the Federal Reserve Board, Statistical Abstract of the United States, Economic Report of the President, International Monetary Fund, Organization for Economic Cooperation and Development, the Motor Vehicle Manufacturers Association, Electronics Industry Association, American Iron and Steel Institute, Japan Economic Institute, Auto Parts International, Chemical Engineering News, Dun's Industrial Guide, Rubber and Plastics, Corptech Directory, and Wards Automotive Reports; and over 60 other information sources are cited in footnotes.

See comment 5.

5. Errors of Omission Versus Differences of Opinion Regarding Findings

Another major point is the number of factual errors in GAO's assessment of what is or is not included in Commerce's report. The GAO report, in many instances, states that the Commerce report omits issues, concepts, data, and/or references when, in fact, discussions of these topics have been included. The Commerce report covers most of the points which GAO claims are omitted, and the difference appears to be a matter of emphasis. Many examples of this problem are given in our SPECIFIC COMMENTS, below.

SPECIFIC COMMENTS

The following Department comments address specific GAO statements. They follow the organization of the GAO report in order to minimize confusion. The headings are those used in the GAO report.

EXECUTIVE SUMMARY

BACKGROUND

- (1) "Foreign direct investment is...defined as foreign investment representing 10 percent or more of a firm's equity." (page 1, par. 3, and page 11, footnote).

This is not completely accurate, because the 10 percent test only applies to ownership by a single foreign parent.

PRINCIPAL FINDINGS

Commerce Report Weak On Analysis of Foreign Direct Investment

The bases for this summary finding are dealt with in detail as appropriate in our comments on GAO chapters 1-3. However, it is sufficient here to indicate that within the scope of this already large first Commerce report, this "finding" is inappropriate. Most of the items found wanting are discussed by the Department. In particular--

- (2) "The Commerce report does not provide a comprehensive discussion of macroeconomic factors affecting foreign investment inflows..." (page 4, par. 1).

The Department provides full coverage of this issue, and has a whole chapter on this topic -- Chapter 3, "Macroeconomic Setting for Foreign Direct Investment" (pages 13-19).

- (3) "The Commerce report also provides an incomplete analysis of the effects of foreign direct investment on U.S. employment." GAO supports this point by stating that foreign affiliated firms have provided jobs for thousands of American workers without acknowledging that almost "90 percent of investment has taken place through acquisitions..." (page 4, par. 2).

The GAO fails to specify what is missing from the Department's analysis. First, the Department does discuss employment by affiliates and the role of acquisitions in the aggregate in Chapter 5 and separately under each of the industry chapters.

Now on p. 2.

See comment 6.

See comment 7.

See comment 8.

Moreover, GAO misses the key point in the Commerce report, that employment by foreign affiliates has increased over the years, and that foreign investors are not stripping or hollowing out their U.S. acquisitions. Indeed, in many instances, these acquisitions had been in poor financial condition and without the infusion of foreign funds, these firms may have had to reduce employment or even close their doors.

Second, GAO's unqualified statement is misleading because it could be interpreted to mean that Commerce could have readily provided a comprehensive analysis on this point. Unfortunately, such is not the case. The fact is that comprehensive data required to deal with that point (effects on jobs of acquisitions versus new plants) are not readily available. Moreover, data alone cannot answer the question of what would have happened to employment in the absence of the investment. Thus, a determination of whether employment in a plant acquired by a foreign firm would have continued at the same level if the plant had remained U.S.-owned, and whether the production of the foreign-owned plant displaced production of other U.S. plants is difficult to make, and in some cases, virtually impossible.

Lastly, the Department does note that "Foreign investment creates jobs in the short term, but its lasting impact on the economy is through new investment and productivity growth." With this in mind, the Department presented a macroeconomic analysis of the impact of net foreign investment inflows in its subsection "Benefits of Foreign Investment" (pages 16-19).

- (4) "For three of the five industry sectors discussed in the report--electronics, automotive, and banking--certain public policy concerns about foreign direct investment are not addressed or fully explored." (page 4, par. 3)

This lead-in to a "principal finding" on page 4 is misleading. GAO only identifies five such concerns on page 5. Moreover, as we indicate below under appropriate industry headings, the Department does address four of the cited "concerns" asserted to be missing. With regard to the fifth concern, that dealing with FDI in banking, the GAO statement is unclear. Specifically, what does "threshold" mean? More importantly, the GAO should point out to the Congress that the five GAO concerns listed are five among many possible public concerns about foreign direct investment, and that the Department discusses many more than the four clearly identified by GAO.

- (5) "In the Commerce report's chapters on the electronics and automotive sectors, Commerce makes extensive use of preliminary 1988 Bureau of Economic Analysis data rather than using more current data from existing studies prepared by other offices within Commerce, other government agencies, or by private sector industry groups." (page 5, par. 4).

Now on pp. 3 and 4.

See comment 9.

Now on p. 4.

See comment 4.

A review of these two chapters clearly shows that the Department did use other data sources, where available and dependable, to answer key questions. The two chapters on autos and electronics focus on 1988 BEA data because, for most of the key issues addressed in these two chapters, BEA data are the most recently collected and reliable source. GAO does not identify any other additional reliable sources that the Department could have used to answer such key questions.

In fact, BEA has examined a number of these private sector databases and has found numerous problems with each. For example, the Japan Economic Institute (JEI) data on employment by Japanese-owned U.S. companies are inaccurate because they often include total employment of the U.S. company rather than just that of its manufacturing plants. More importantly, data on Japanese-owned firms do not speak for all foreign-owned firms. The JEI data are collected at one point in time, not on the basis of an annual survey, and thus do not reflect current data and ownership status. Many of the other sources have similar major defects.

Data Link Will Provide Limited Additional Information

Now on p. 4.

- (6) "... the data link will allow the operations and performance of foreign affiliated firms in a given industry to be evaluated only on the primary industry activities of the firm." (page 6, par. 2).

See comment 7.

The Commerce report clearly shows that the establishment basis will allow identification of the activities of each plant or establishment of foreign-owned firms, in addition to the primary activity of the consolidated enterprise.

Now on p. 5.

- (7) "The data link has certain limitations. It will not provide information on some of the other data items cited in the act" (page 7, par. 2).

Profitability, taxes, and R&D expenditures will not be covered by the establishment-level data link, because these items are appropriately collected only at the enterprise level and cannot be collected at the establishment level, and not because the data link is limited or defective. GAO needs to explain the good reasons for this being so, and to correct the impression that the data link project is faulty.

For export and import data, GAO notes only in the appendix that future data links may attempt linking enterprise level data even though the current link project at the establishment level cannot accomplish this linkage.

Many of the issues suggested for further analysis by GAO require information that can be obtained only from case studies of individual companies and not from

survey data or from data envisioned by the data link. If the types of case studies implied by those GAO criticisms were undertaken, considerably more resources than were available for this first Commerce report would be required.

CHAPTER 1: INTRODUCTION

- (8) "The act also authorizes us [GAO] to obtain access to certain confidential BEA data." (Page 11, par. 1)

The act authorizes GAO to obtain access to certain confidential BEA data for purposes of: a) assessing the accuracy of the conclusions and quality of analysis contained in the Commerce annual report; b) the adequacy of the questionnaires, collection processes, and statistical methods used to produce the data, and of the processes and procedures used in the BEA-Census and BEA-BLS link projects; and c) adequacy of the coverage, industry classification, and consistency of the data.

- (9) "At the time Commerce was preparing the report, the BEA-Census data exchange authorized by the act had not yet been completed, and so the data enhancements to be achieved through the exchange are not reflected in the 1991 Commerce report." (page 14, par 4, and similarly page 16, par. 2).

The data link work is proceeding according to the schedule set by BEA and Census. Although the timetable for this link project is far shorter than any set for previous similar data matching projects, the project is on schedule. In the future, more enhancements will clearly be possible.

Now on p. 10.

See comment 11.

Now on p. 11.

See comment 12.

**CHAPTER 2: COMMERCE REPORT LACKS THOROUGH ANALYSIS OF FDI EFFECTS**

**UNCLEAR MACROECONOMIC ANALYSIS**

See comment 7.

Now on p. 14.

- (10) The GAO report makes a number of statements we believe to be incorrect:
- Commerce "gives little attention to the fact that the savings shortfall was in large part due to the extremely large budget deficits of the 1980s" (page 18, par. 2).

Commerce points out the importance of the federal budget deficit increase (page 14, par. 2, and page 15, par. 1).

- "... data do not support Commerce's proposition that it was private investment that created the need for foreign investment" (page 18, par. 2).

Commerce did not say that gross private domestic investment (GPDI) caused the need for foreign investment, to the exclusion of other factors. Commerce points out that "a major factor encouraging the rapid growth in the inflow of foreign capital...was the saving-investment imbalance...", and points out that "The divergence in the saving and investment rates produced a large absolute gap ... in 1987 peaking at \$155 billion...and as a share of GNP..." (page 13, par. 2). The text then specifically cites as the four key domestic factors: rising gross private domestic investment, inadequate domestic saving, rising government dissaving (increasing federal budget deficits), and the fall in private saving and its consequent impact on interest rates which, in turn, attracted foreign investment (page 14, pars. 1 and 2).

- "... it is the expert consensus that the large budget deficits of the 1980s created the need for foreign investment inflows, some of which came in the form of FDI" (page 18, par. 2).

Firstly, most major authorities point out that, on the domestic side, it is the interaction of at least the four factors specified above that directly contributed to the rise in net investment capital inflows.

Secondly, the direct linking of FDI to budget deficits is inconsistent with GAO's subsequent position that "the Commerce report ignores the difficulties that exist in establishing a theoretical basis for a macroeconomic role in FDI." (page 19, par. 1).

See comment 7.

- (11) "...the Commerce report ignores the difficulties that exist in establishing a theoretical basis for a macroeconomic role in FDI. The report simply asserts that

macroeconomic factors determine the overall level of direct and portfolio investment by foreigners." (page 19, par. 1)

Commerce extensively treats the macroeconomic role in foreign direct investment (Chapter 3, pages 13-19). Furthermore, the Commerce report points out that no generally accepted formal FDI model is available. Commerce lays out in considerable detail the classic textbook analysis of the impact of the saving-investment imbalance on U.S. capital flows. This discussion provides a clearly adequate framework for analysis. Moreover, it is not the role of a government report to referee other academic debates.

See comment 7.

- (12) "The report...neglects to mention that there may be similar transfers of skills and technology in the opposite direction; the foreign firm may serve as a 'listening post' in the host country." (page 22, par. 1).

The Commerce report specifically states this possibility on page 46, par. 3.

#### LIMITED ANALYSIS OF FDI'S EFFECTS

##### Electronics

Now on pp. 16 and 17.

- (13) "... does not address...'vertical integration,' and when they buy U.S. firms that hold state-of-the-art technologies." (pages 23, par. 3 - 24, par. 1).

The Commerce report specifically addresses those issues on page 48, par. 5, and page 88, pars. 1-6.

See comment 13.

Now on p. 17.

- (14) The report "does not include information needed to understand technology flows" (page 24, par. 2).

See comment 14.

Economists and technology policy analysts have been wrestling for over 25 years trying to understand what encourages technology flows, how technology is transferred, how to measure technology flows, etc. This vast literature and accompanying debates are beyond both the mandate and the scope of the Commerce FDI report.

##### Automotive Industry

Now on p. 17.

- (15) The report "does not directly analyze the debate surrounding" (page 24, par. 3) --

-- "the extent to which foreign investment has served as a magnet for imported parts and components;"

10

See comment 15.

The Commerce report discusses auto transplants acting as a magnet for imported parts (page 53, par.4, and subsection on merchandise trade on page 59).

- "... the question of whether the displacement of U.S. parts suppliers is temporary, as U.S. firms learn to compete for transplant business, or whether the vertical integration of foreign-owned supplier networks tend to preclude competition by U.S.-owned firms; and..."

The Commerce report discusses vertical integration of auto industry transplants on page 56, pars. 8 and 9.

- "... whether foreign-owned firms tend to engage in final assembly operations or whether skilled manufacturing and engineering technologies are being transferred to the United States."

This is discussed by the Commerce report on page 56, par. 10.

#### Banking

Now on p. 18.

- (16) "A key question concerns the threshold at which foreign-controlled banks can make basic lending decisions that would affect the growth and development of U.S. industry." (page 26, par. 1).

See comment 16.

The Commerce report states that "The concentration in individual U.S. states of foreign bank offices..., and the large share of assets devoted to wholesale banking, including interbank transfers..., are consistent with the view that growth of the foreign presence in the U.S. banking industry is no longer so tightly associated with the growth of foreign direct investment in nonbank sectors of the economy." (page 79, par. 8 and 9). The Commerce report also examines the activities of Japanese-owned banks, the largest foreign investor in banking: "...business lending by these [Japanese-owned banks]...in the United States increased nearly \$13 billion during 1990, while business lending by other foreign banks declined in both 1989 and 1990...From December 1985 to December 1990...These bank offices also accounted for over half of the total increase in business lending in the United States...[T]he Japanese banks were also significant net lenders to U.S.-owned business during the tight credit environment prevailing during the last several years." (page 76, par. 5).

- (17) "... the high concentration of foreign banking activities are [sic] not directly discussed...It does not mention that Federal Reserve Board data show that in 1990 the top 25 foreign banks [world wide] held 66 percent of all foreign-owned banking assets in the United States. Sixteen of these 25 were Japanese owned,



Now on p. 18.

controlling 50 percent of all foreign banking assets in the United States and 10.5 percent of all U.S. banking assets." (page 26, par.2) "The enormous worldwide asset strength of many Japanese and other foreign banks is not mentioned as a factor behind such concentration or as a possible concern in itself." (page 27, par. 3).

Now on p. 18.

See comment 16.

The Department's report discusses, extensively, concentration on: page 75, par. 8; page 76, par. 1 - 5, and 7; page 77, par. 1 - 6; Table 10-1; page 78, par. 5; Figures 10-5 and -6; page 79, par. 2; Figure 10-7; and page 79, par. 8.

The Department highlights the dominance of Japanese-owned banks, which control 55 percent of foreign assets in U.S. banking, and identifies the top six such banks (page 75, par. 8).

The Department discussed the "enormous worldwide asset strength of [foreign banks]." The Department points out that "By way of comparison to the asset size of Japan's and the world's largest banks, the December 1990 total asset value of U.S. subsidiaries of foreign banks (\$154.5 billion), was only about one-third of the current asset value (end of March, 1991) of any one of the six largest banks in Japan." (page 77, par. 5).

#### MINIMAL USE OF PUBLIC AND GOVERNMENT STUDIES

Now on p. 19.

- (18) "... makes minimal use of existing studies prepared by other offices within Commerce or by the private sector" (page 27, par. 3).

See comment 4.

The facts discussed under "GENERAL COMMENTS" above, clearly suggest that the GAO's conclusion is unwarranted.

#### Electronics Industry

Now on p. 19.

- (19) "Commerce does not include information from various government and private sector sources" (page 27, par. 4).

See comment 17.

Now on pp. 20 and 21.

The GAO report cites studies by "Dalton" in footnotes 5 and 6, page 30, and footnotes 8 and 9, page 31. Dalton is the author of Commerce chapters 6, on the electronics industry, and 7, on the automotive industry. These chapters also cite a wide range of other government and public information sources, and use data sources other than BEA data.

Vertical Integration

- (20) "Commerce's [OTIA] FDI transactions report...could also be used to document vertical integration efforts by foreign firms." (page 30, par. 2).

The OTIA report is a compilation of transactions, as reported largely in the press. It is not clear how this data source could be used for a systematic analysis of the extent of vertical integration of these firms. These data do not identify the chain of ownership of foreign firms operating in various industries, do not have product line information, nor do they have financial or operating data necessary to analyze the extent of foreign ownership or control of a particular industry sector or product line.

Technology Transfer

- (21) "Spending by FAFs on [R&D] is also often used to measure technology flows." (page 34, par. 2).

R&D spending does not measure technology flows, and studies show no statistical relation between spending and technology flows. R&D spending measures the resources devoted to developing new research results, new inventions, and new technologies.

Automotive Industry

Technology transfers

- (22) "...inclusion of data demonstrating productivity gains in foreign-affiliated firms and the Big Three auto makers, or case studies discussing these gains, would have documented the positive effect of technology transfer." (page 38, par. 3)

Quantitative measures are desirable, but would require exhaustive analysis of single plants by expert industry analysts. Such measurements simply could not have been accomplished in the time available for the first annual Commerce report. Furthermore, evidence of the extent of the positive effect of technology transfer would have to be demonstrated by more than productivity data, even at the individual plant level, because of the many complex sources of productivity growth.

Now on p. 21.

See comment 18.

See comment 7.

Now on p. 25.

See comment 19.

**Banking**

- (23) "...does not mention publicly raised questions about the effects of high levels of foreign investment." (par. 39, par. 2)

See the discussion at item (8) above.

**DATA ITEMS SPECIFIED IN THE ACT BUT NOT INCLUDED IN THE REPORT**

- (24) "...does not include data comparing FAFs with U.S.-owned firms on value added, profitability, productivity, or taxes paid." (page 40, par. 1) "Productivity and value-added cannot be determined using data from the BEA questionnaire." (page 40, par. 3).

An entire sub-section, "Gross Product of Affiliates," (pages 31-32) covers value added by foreign-owned affiliates. These data are available from BEA at the enterprise level. As the Commerce report pointed out on page 31, the term, "gross-product," in this context is synonymous to "value added."

Productivity comparisons were made on page 34, par. 5.

- (25) "According to Commerce officials, data on incentives by state and local governments were not provided due to the complexity of gathering this information." (page 41, par. 2)

Although BEA does collect these kinds of data for new investments, it does not publish them because of their questionable quality and reliability. For that reason these data were not used in this report.

**Critical Technologies**

- (26) "...includes a discussion of 3 of the 21 critical technologies cited by DOD's critical technologies list." (page 41, par. 3)

The scope of the Department's report is broader than critical technologies. The report itself is, as mandated by the act, the first in a series of reports, not a one-time report. The Department does not believe that treatment of all 21 technologies could have been adequately undertaken in the time frame of the first report. The three technologies examined were selected because they were appropriate to the sector chapters included in this first report.

Now on p. 25.

See comment 16.

Now on p. 26.

See comment 20.

Now on p. 26.

See comment 7.

Now on p. 27.

See comment 21.

14

Now on p. 27.

See comment 7.

- (27) "semiconductor manufacturing equipment, robotics, and biotechnology--received only fragmentary treatment in the report." (page 41, par. 3).

Separate sections of the Commerce report were specifically dedicated to each of the three technologies within the relevant industry chapters. We do not believe such attention is "fragmentary" treatment.

Now on p. 27.

See comment 22.

- (28) "...does not discuss foreign investment in these [semiconductor materials and equipment] industries." (page 42, par. 2)

Foreign investment in these industries is discussed on page 47, pars. 3 - 5. GAO also notes (page 42, par. 2) "In addition, Commerce notes that Japanese-owned affiliates account for 90 percent of FDI in semiconductor materials industries."

CHAPTER 3 IMPROVING GOVERNMENT INFORMATION ON FDI

Specific comments on the data link project are covered extensively above. The Department would appreciate the GAO adding the following information to their report.

(29) Insert on page 47 between pars. 2 and 3:

"As a result of this verification process, the final tally of Census establishments that link to BEA enterprises may be significantly less than the 130,000 that initially linked. This is because the mechanical link pulled in data for all the establishments of a given linked U.S. company, including establishments that were not foreign owned. The verification process weeds out the data on the non-foreign-owned U.S. establishments."

(30) Page 52 be corrected to read as follows:

"According to a BEA official, however, the time companies take to respond has improved due to increased effort and resources at BEA. In 1990, BEA instituted an accelerated schedule for sending out 'reminder' letters to delinquent companies and increased its telephoning of companies. A BEA official stated that these procedures have significantly improved the timeliness of responses and accuracy of its preliminary data.

"BEA officials explained that companies are required to submit BEA annual surveys 5 months after the year surveyed in order to give companies time to close their books, gather the required information, and complete the survey forms. For example, the due date for the BEA's annual survey requesting 1989 data was May 31, 1990. BEA then prepares its preliminary statistics for publication the following summer -- approximately one year after the due date of the survey.

"For companies that do not complete the survey on time, BEA sends a follow-up letter 6 to 7 weeks after the May deadline, reminding the companies of their legal obligation to complete the survey. A second, 'legal' letter, signed by the Chief Counsel of the Economics and Statistics Administration of Commerce, is sent in September to those companies that have not yet responded and that have \$100 million or more of assets or sales. Smaller nonrespondents are sent a second general follow-up letter by BEA, also in September. According to BEA, if a company that was sent the 'legal' letter has not responded by October of that year, BEA begins calling the company. In November, all the companies that are still delinquent are reported to Commerce's Chief Counsel of the Economics and Statistics Administration. The Chief Counsel then contacts the company by telephone. The procedures for contacting companies that were delinquent the year before are similar to those previously mentioned except that they are slightly accelerated: A 'legal' letter is sent in August instead of September, and

Now on p. 30.

See comment 7.

Now on pp. 32 and 33.

See comment 7.

16

companies are referred to the Chief Counsel's office for contact by telephone in October instead of November."

The following are GAO's comments on the Department of Commerce's letter dated February 12, 1992.

---

## **GAO Comments**

1. Our report criticized the Commerce report with respect to (1) its discussions of the effects of FDI on the U.S. economy and (2) its minimal use of private sector data. Both these subjects were specifically cited in the act as items to be covered in the Commerce report. Our report clearly stated that Commerce could improve its coverage of these items in its future annual reports.

With respect to the data link, we fully recognized the limitations of the BEA data in providing all the data items mentioned in the act, even once the data link becomes operational. We noted this in chapter 3 and referred the reader to appendix I, which deals directly with this more technical subject. In addition, we have modified the executive summary to reflect this limitation.

2. Our report notes in numerous places, including the first paragraph of the executive summary, that the Commerce report is an annual one and that this was Commerce's first report, prepared in a relatively short time frame. We would also point out that our recommendations address ways in which Commerce can improve future reports.

3. One of the requirements of the act is that the Commerce report address the effects on the U.S. economy of FDI. As we demonstrated in chapter 2, the Commerce report did not analyze or, in some cases, even mention important questions frequently raised about the effects of FDI in certain industry sectors. If the Commerce report is to assist public debate about the effects of FDI, as noted in the act, Commerce needs to recognize this public debate and provide a more focused analysis of the issues involved.

Nowhere in our report do we suggest that Commerce should not look at sectors where FDI is not controversial. We noted in our methodology section that, for our review, we chose to test Commerce's analysis of three industry sectors of high public interest.

4. Our report states that Commerce made minimal use of data other than official BEA data, not that it used no other sources. Our criticism is based on the Commerce report's analysis of the electronics and automotive sectors. Commerce makes incidental mention of some private sector sources but does not attempt analysis of them. In our judgment, and as we

showed in chapter 2, greater use of private sector data and other government studies can be helpful in addressing questions regarding the effects of FDI.

In considering information collected by other sources, Commerce is expected to be fair and balanced in presenting competing perspectives of private policy groups. Commerce should not assert that the views of others are without merit without having analyzed them. If positions are taken based on inaccurate data, Commerce should refute these positions.

Our report cites the inherent limitations of BEA data, particularly with respect to timeliness and industry classification problems. Private sector sources can provide more current and detailed data, and we have recommended that Commerce make greater use of such data in order to produce annual reports that present as up-to-date a discussion of FDI as possible. Indeed, we believe that Commerce's annual report can make an important contribution to public debate about FDI by using various data sources, as specified in the act, to compensate for the lack of timeliness of official BEA data.

5. We have done a detailed evaluation of what Commerce has described as its specific comments. In a number of cases, we have modified our report to reflect Commerce's concerns. However, in other cases, Commerce misconstrued what our report says. Comments 6 through 22 summarize our evaluation of Commerce's specific comments.

6. Commerce also used this same definition of foreign direct investment on page 74 of its report.

7. The report has been modified in response to this comment.

8. Chapter 2 of our report discusses Commerce's weak analysis of the effects of FDI on the U.S. economy. The chapter notes that Commerce's analysis of the employment effects of FDI is unclear, referring to jobs "created," "supported," or "provided" by FDI. Because almost 90 percent of recent FDI has occurred through acquisitions of existing U.S. businesses, it is not appropriate to aggregate the employment of these businesses and call it job creation. As our chapter notes, any calculations of the employment effects of FDI need to be based on a carefully explained methodology taking into consideration the various repercussions the investment may have for the U.S. economy. Commerce did not attempt such an analysis in its report, nor did it point out the complexities in



analyzing employment effects. We note that Commerce included more information on this subject in its comments on our draft report than it provided in its annual report.

9. The major concerns cited in the executive summary of our report are discussed in detail in chapter 2 of our report. They represent important areas of public concern regarding the effects of FDI in the three industry sectors where we reviewed Commerce's analysis. Concerns in the banking sector relate to the threshold, or level, at which foreign-controlled banks could make lending decisions adversely affecting U.S. industry.

We agree that there are many other possible public concerns about foreign direct investment that could have been included in Commerce's report, but we recognized that this was its first report done within a limited time frame. Future Commerce reports can address these other concerns.

10. In appendix I we state that data on profitability, taxes paid, and R&D are collected at the enterprise and not the establishment level. We devote a subsection to each of these data items explaining why the data link cannot provide information on them. We have also modified the executive summary to recognize this limitation.

We also provide a lengthy discussion explaining why the data link will not provide information on imports and exports.

11. Commerce's comment is an incomplete statement of the purposes for which GAO has access to certain confidential BEA data. Section 4 of the Foreign Direct Investment and International Financial Data Improvements Act of 1990 authorizes broader GAO access than is reflected in Commerce's comment.

12. Our report recognizes the complexity of establishing the data link and does not state or imply that BEA and Census are behind schedule in their data link project.

13. Nowhere in our report did we say that Commerce failed to address vertical integration. Commerce's comments misrepresented our report by eliminating several lines of our report. Our point is that Commerce's report includes little substantive information on vertical integration practices by foreign firms or the effects on competitiveness that these practices may have on the U.S. electronics sector.

Commerce's report does not include any discussion on the issue of whether foreign companies have focused on acquiring U.S. firms that have developed leading-edge technologies and the competitive effects of this situation.

14. Our report clearly acknowledges the difficulty in addressing the question of technology flows. We point out that BEA collects data on two indicators of technology transfer—royalties and license fees—and that Commerce officials told us that they did not include information on these data because of the short time frame in which they were working. They did not say the data were excluded because the issue was beyond the mandate and scope of the Commerce report.

15. Although the Commerce report provides some descriptive information, it does not provide a direct analysis examining these issues. Private sector information is available on these matters and is used in public debate. In our view, some analysis would have enhanced Commerce's report.

16. Chapter 2 of our report notes that the Commerce report describes the growth of foreign-owned banks, particularly Japanese banks, in the U.S. banking sector. The pages of the Commerce report cited in Commerce's comments do not address the points we made in chapter 2—i.e., that a small number of foreign banks control the majority of foreign-owned banking assets in the United States and that foreign banks, particularly the Japanese banks, have enormous worldwide asset strength, compared to U.S. banks.

17. Although Donald Dalton is one of the authors of several studies cited in our report, information and analysis included in those studies were not incorporated into Commerce's chapter on the electronics industry. Also, see our comment 4.

18. Commerce's electronics chapter does not provide any information documenting vertical integration efforts by foreign firms. Commerce's annual Office of Trade and Investment Analysis report identifies specific foreign direct investment transactions in the United States. It analyzes recent trends in such investment and provides data and related information on significant transactions. For example, it lists over 70 acquisitions by foreign firms of U.S. companies in the electronics industry (both downstream and upstream industries) for 1989.

19. As Commerce notes in its report, the newer, state-of-the-art transplant facilities tend to be more efficient than older, U.S.-owned plants. This is likely to be the case also with newer, U.S.-owned plants compared to older ones. We recognize that Commerce had limited time to prepare its first annual report, but for future reports some comparative analyses of industry efficiency would be useful in understanding the benefits of FDI.

20. The Commerce report does not include data comparing FAFs with U.S.-owned firms on value added in the five industry sectors discussed in the report. The cited Commerce productivity comparison dealt only with total manufacturing, noting that comparable data on other sectors are not available.

21. Our report recognizes the tight time frame in which the Commerce report was prepared. Commerce's comments provide additional explanation for not addressing the other 18 critical technologies.

22. We revised our report to indicate that we did not review Commerce's biotechnology discussion in its chapter on chemicals. With respect to semiconductor manufacturing equipment and robotics, chapter 2 of our report describes Commerce's fragmentary treatment. Our report clearly referred to "product industries," rather than "semiconductor materials and equipment industries." The former were identified in Commerce's report as "at least seven" product industries, such as semiconductor manufacturing and semiconductor testing. Commerce's discussion of this in its annual report was limited to providing the number of plants and workers in two of those industries and identifying the Japanese share.

---

# Major Contributors to This Report

---

**National Security and  
International Affairs  
Division, Washington,  
D.C.**

Curtis F. Turnbow, Assistant Director  
Virginia C. Hughes, Project Manager  
Elizabeth Morrison, Deputy Project Manager  
Louis D'Abbraccio, Evaluator  
Jane-Yu Li, Economist  
Rona Mendelsohn, Reports Analyst

---

**Office of the Chief  
Economist**

Richard Krashevski, Economist

---

#### Ordering Information

The first copy of each GAO report is free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

U.S. General Accounting Office  
P.O. Box 6015  
Gaithersburg, MD 20877

Orders may also be placed by calling (202) 275-6241.

---

United States  
General Accounting Office  
Washington, D.C. 20548

Official Business  
Penalty for Private Use \$300

First-Class Mail  
Postage & Fees Paid  
GAO  
Permit No. G100

---