Recent Trends in U.S. Services Trade

2002 Annual Report

May 2002
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Investigation No. 332-345
United States International Trade Commission

U.S. International Trade Commission

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This report was prepared by the Office of Industries

Laura Bloodgood, *Project Leader*
lbloodgood@usitc.gov

Staff assigned:

Tsedale Assefa, Jennifer Baumert, Amanda Horan, Dave Ingersoll, Dennis Luther, Christopher Melly, Michael Nunes, Ryan Schroeder, and Joann Tortorice

With special assistance from:

Cynthia Payne

Under the direction of:

Richard W. Brown, *Chief*
Services and Investment Division

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PREFACE

On August 27, 1993, on its own motion and pursuant to section 332 (b) of the Tariff Act of 1930 (19 U.S.C. 1332(b)), the U.S. International Trade Commission (USITC or Commission) instituted investigation No. 332-345, *Annual Reports on U.S. Trade Shifts in Selected Industries.* The current report format was developed by the USITC in response to congressional interest in establishing a systematic means of examining and reporting on the significance of major trade shifts, by product, and with leading U.S. trading partners, in the service, agricultural, and manufacturing sectors. A significant amount of the information contained in this recurring report reflects basic research that is required to maintain a proficient level of trade expertise. The Commission has found such expertise to be essential in its statutory investigations and in apprising its varied customer base of global industry trends, regional developments, and competitiveness issues.

On December 20, 1994, the Commission on its own motion expanded the scope of this report to include more detailed coverage of service industries. Under the expanded scope, the Commission publishes two reports annually: *Shifts in U.S. Merchandise Trade* (June) and *Recent Trends in U.S. Services Trade*[1] (May). Services trade is presented in a separate report in order to provide more comprehensive and timely coverage of the sector performance.

The current report begins with a statistical overview of U.S. trade and foreign direct investment in services and a discussion of key trends. Thereafter, the report presents industry-specific analyses that focus on trends in exports, imports, and trade balances during 1995-2000. Industry-specific analyses also identify major trading partners during the subject period, and discuss the competitive U.S. market situation for each industry.

Further USITC analyses of trade in services include a series of reports on U.S. trading partners' schedules of commitments under the General Agreement on Trade in Services (GATS) administered by the World Trade Organization. The schedules of commitments indicate the extent to which U.S. trading partners grant market access and national treatment to service providers from other countries, including the United States. The USITC reports are entitled *General Agreement on Trade in Services: Examination of Major Trading Partners' Schedules of Commitments* (USITC publication 2940, Dec. 1995), *General Agreement on Trade in Services: Examination of South American Trading Partners' Schedules of Commitments* (USITC publication 3007, Dec. 1996), *General Agreement on Trade in Services: Examination of the Schedules of Commitments Submitted by Asia/Pacific Trading Partners* (USITC publication 3053, Aug. 1997), *General Agreement on Trade in Services: Examination of the Schedules of Commitments Submitted by Eastern Europe, the European Free Trade Association, and Turkey* (USITC publication 3127, Sept. 1998), and *General Agreement on Trade in Services: Examination of the Schedules of Commitments Submitted by African Trading Partners* (USITC publication 3243, Oct. 1999).

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[1] Starting with the 1997 issue, the title of the report on services was changed from *U.S. Trade Shifts in Selected Industries: Services* to *Recent Trends in U.S. Services Trade.*

More recent USITC publications focusing on the service sector include *Electric Power Services: Recent Reforms in Selected Foreign Markets* (USITC publication 3370, Nov. 2000), *Examination of U.S. Inbound and Outbound Direct Investment* (USITC publication 3383, Jan. 2001), and *Natural Gas Services: Recent Reforms in Selected Markets* (USITC publication 3458, Oct. 2001).

The information and analysis in this report are for the purpose of this report only. Nothing in this report should be construed to indicate how the Commission would find in an investigation conducted under other statutory authority.

CONTENTS

CONTENTS--*Continued*

CONTENTS--*Continued*

CONTENTS--*Continued*

CONTENTS--*Continued*

CONTENTS--*Continued*

Figures--*Continued*

CONTENTS--*Continued*

Figures--*Continued*

Tables

CHAPTER 1
INTRODUCTION

Scope

The U.S. International Trade Commission (USITC) routinely monitors trade developments in the service, agricultural, and manufacturing sectors. This report, prepared annually, analyzes significant trends in services trade as a whole, assesses trade and trade-related issues in selected service industries, and identifies major U.S. trading partners. Since a considerable share of service transactions takes place through affiliates established abroad, data for cross-border trade, as well as those for direct investment position and affiliate transactions, are presented in order to analyze the international commercial dimensions of U.S. service industries.

Approach

These trade data are drawn principally from the most recent annual data available for U.S. trade in services, which are estimated and published by the U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA). Data pertaining to trade in environmental services are exceptions. Trade data regarding environmental services are drawn primarily from reports published by Environmental Business International (EBI).

Chapter 2 of this report describes the nature and extent of cross-border trade, direct investment, and affiliate transactions in the service sector and provides, to the extent permitted by available data, an overview of U.S. private-sector services trade and investment by industry and by trading partner. Chapters 3 through 12 examine audiovisual, construction, education, environmental, express delivery, insurance, maritime transport, oil and gas field, retail distribution, and telecommunication services. These chapters define the scope of industry activities; specify the extent to which those activities are captured by trade data; provide an analysis of trends in cross-border trade, affiliate transactions, and direct investment, as appropriate;[1] identify broad industry trends; and examine negotiating proposals submitted by member countries to the World Trade Organization's (WTO) Council for Trade in Services. The trade analysis compares cross-border trade performance in 2000 to trends evident during 1995–99, and/or reviews affiliate transactions during 1997-99. Due to recent industry reclassifications, comparable sales by U.S.-based affiliates of foreign parent firms are reported for 1997-99 only, and sales by foreign-based affiliates of U.S. parents are reported for 1999 only.[2]

[1] Complete data are not available for all industries.
[2] For more information regarding this reclassification, see box 2-1 in ch. 2.

The overview of industry trends comprises a discussion of factors affecting the growth of U.S. service industries and the global competitive environment. Depending on the industry, factors determined to affect competition may include current and evolving market structure, merger and acquisition activity, and recent and emerging technological innovation. For industries for which data are available, industry growth is analyzed by decomposing the growth rate of real gross output into the real growth rates of primary inputs, including labor and capital, and intermediate inputs, including energy, raw materials, semifinished goods, and services.[3] Where growth in real gross output is accompanied by strong growth in primary inputs, trends in employment and fixed capital are explored. Where growth in gross output is accompanied by rapid growth in intermediate inputs, these inputs are identified, thereby providing information on interrelationships among industries. The examination of WTO negotiating proposals identifies the countries which have made submissions, summarizes the content of the submissions, and highlights common themes. Chapter 13 examines the extent of foreign direct investment in the service sectors of member countries of the Organization for Economic Cooperation and Development (OECD), highlighting investment trends in certain infrastructure service industries, including telecommunications, finance, and utilities.

U.S. merchandise trade is not discussed in this report. As noted in the *Preface,* it is the subject of a separate USITC annual report. However, to put U.S. services trade in perspective with merchandise trade, cross-border services trade accounted for 20.4 percent of total U.S. cross-border trade volume in 2000 (figure 1-1).[4] U.S. cross-border trade in private-sector services generated a $78-billion surplus in 2000, in contrast to a U.S. merchandise trade deficit of $452 billion.[5] Further, the service sector accounted for 78.8 percent of U.S. private-sector gross domestic product (GDP) in 1999 (figure 1-2).[6] By comparison, manufacturing accounted for 18.3 percent of GDP, and mining and agriculture together accounted for 2.9 percent. Similarly, the service sector provided 80.5 percent of total private-sector employment in 2000, while the manufacturing sector provided 17.1 percent, and the mining and agriculture sectors together provided 2.5 percent (figure 1-3).[7]

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[3] For a discussion of this methodology, see USDOC, BEA, *Survey of Current Business*, June 2000, pp. 26-27.

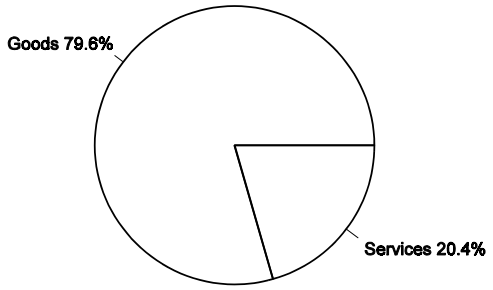
[4] Total trade volume is the sum of imports and exports.

[5] USDOC, BEA, *Survey of Current Business*, Nov. 2001, p. 49.

[6] USDOC, BEA, *Survey of Current Business*, Oct. 2001, p. D-31. The data for 1999 are the latest available.

[7] USDOC, BEA, *Survey of Current Business,* Aug. 2001, p. 78.

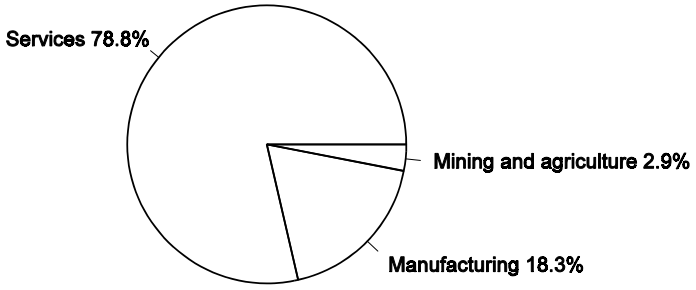
Figure 1-1
U.S. cross-border trade volume, by sector, 2000



Total trade volume = $2.5 trillion

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, p. 65.

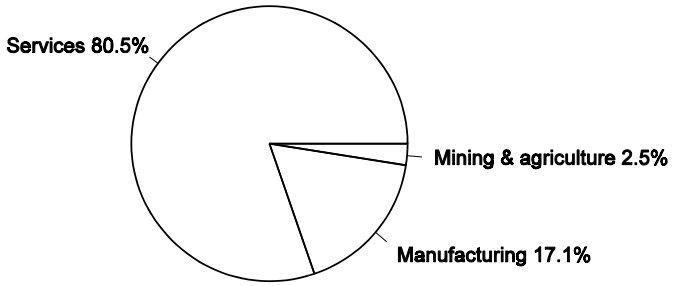
Figure 1-2
U.S. private-sector gross domestic product, by sector, 1999



Total private-sector GDP = $8.2 trillion

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Oct. 2001, p. D-31.

Figure 1-3
U.S. private-sector employment, by sector, 2000[1]



Total full-time equivalent employees = 106.3 million workers

[1] Total may not equal 100 percent due to rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Aug. 2001, p. 78.

According to data reported by the International Monetary Fund (IMF), world cross-border exports of services totaled $1.4 trillion[8] in 1999.[9] The United States was, by far, the largest services exporter, accounting for 19.6 percent of such exports (figure 1-4). Other significant services exporters included the United Kingdom (7.6 percent), Germany (6.2 percent), France (6.0 percent), Japan (4.4 percent), and Italy (4.3 percent). Among those countries for which 1999 trade data were reported, the United States posted the largest services trade surplus ($81.3 billion)[10] while Japan posted the largest services trade deficit ($54.2 billion) (figure 1-5).[11]

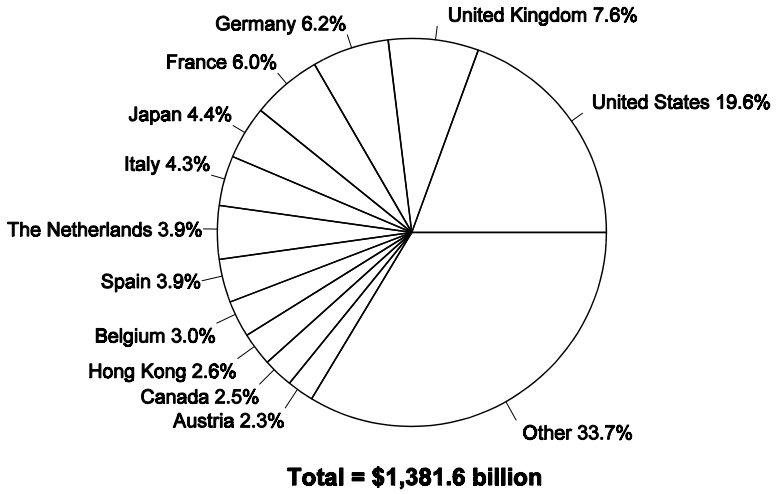
[8] Total services exports were calculated by adding the services exports of all countries for which such data were reported. IMF member countries for which no services trade data were reported include Antigua and Barbuda, Burkina Faso, Cameroon, Cape Verde, the Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Dominica, Equatorial Guinea, The Gambia, Grenada, Guinea-Bissau, Guyana, Haiti, Iraq, Kiribati, Lebanon, Liberia, Malawi, Mali, the Marshall Islands, Mauritania, Micronesia, Mozambique, Namibia, Netherlands Antilles, Niger, Pakistan, Palau, Qatar, Republic of the Congo, San Marino, São Tomé and Principe, Sierra Leone, Somalia, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Tajikistan, Tonga, Trinidad and Tobago, Turkmenistan, the United Arab Emirates, Uzbekistan, Vietnam, Zambia, and Zimbabwe.

[9] IMF data does not include affiliate transactions. Although the IMF has published trade data for 2000, 1999 data were used in this analysis because they are more complete.

[10] This figure includes public-sector transactions, unlike the balance provided earlier.

[11] Compiled by the Commission, based on data found in International Monetary Fund (IMF), *International Financial Statistics*, Nov. 2001.

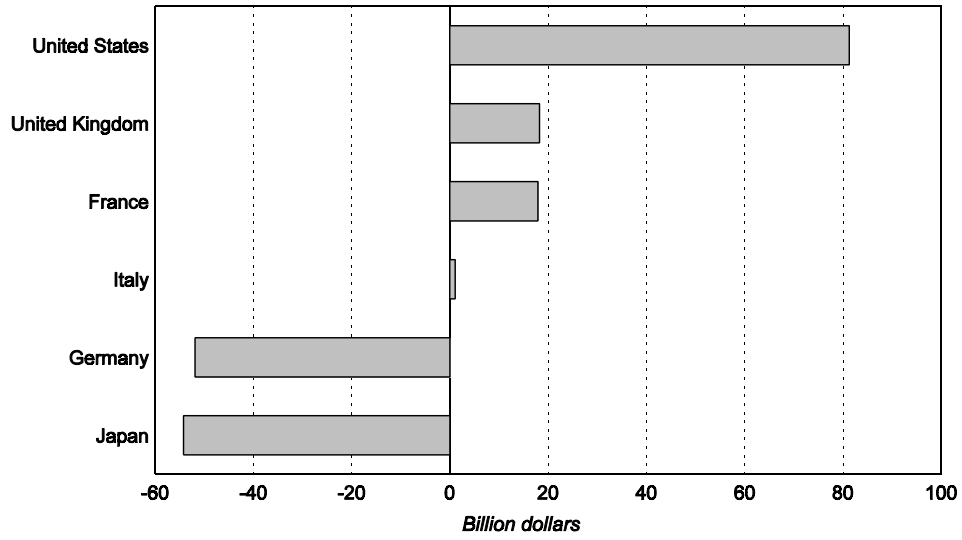
Figure 1-4
Global cross-border exports of services, by exporting country, 1999[1]



[1] Total may not equal 100 percent due to rounding.

Source: International Monetary Fund, *International Financial Statistics*, Nov. 2001, various pages.

Figure 1-5
Services trade balances of leading exporting countries, 1999



Source: Compiled by the Commission, based on data found in International Monetary Fund, *International Financial Statistics*, Nov. 2001.

CHAPTER 2
U.S. TRADE IN SERVICES

Nature of Trade in Services

Nations trade services through two principal channels. The first channel, cross-border trade, entails sending individuals, information, or money across national borders.[1] The second channel, affiliate transactions, entails selling services through affiliated firms established or acquired by multinational companies in foreign markets.[2] Such affiliates are funded through foreign direct investment. In 1990, the majority of U.S. services exports were delivered to foreign consumers through cross-border channels (figure 2-1). However, the relative importance of affiliate sales and cross-border trade gradually shifted during the 1990s. In 1996, U.S. affiliate sales of services surpassed U.S. cross-border services exports, and by 1999, the former exceeded the latter by $82 billion.[3] U.S. purchases of services from foreign-owned affiliates have exceeded cross-border service imports since 1989, with the former exceeding the latter by $116 billion in 1999.

Cross-Border Trade

The U.S. current account reported a surplus on trade in private services[4] of $78.0 billion in 2000 (figure 2-2), which offset 17.2 percent of the $452.2 billion merchandise trade deficit.[5] The private cross-border services trade surplus, which

[1] Employing terminology found in the General Agreement on Trade in Services (GATS), this channel encompasses modes of supply one (cross-border supply), two (consumption abroad), and four (movement of natural persons).

[2] Employing terminology found in the GATS, this channel encompasses mode of supply three (commercial presence).

[3] For a more detailed discussion of the relative importance of cross-border trade and affiliates sales, see United States International Trade Commission (USITC), *Examination of U.S. Inbound and Outbound Direct Investment*, USITC publication 3383, Jan. 2001, pp. 5-1 - 5-3 and 5-11 - 5-13.

[4] Cross-border services trade, as reported in the current account, includes both private- and public-sector transactions. The latter principally reflect operations of the U.S. military and embassies abroad. However, because public-sector transactions are not considered to reflect U.S. service industries' competitiveness and may introduce anomalies resulting from events such as international peace-keeping missions, this report will focus on private-sector transactions.

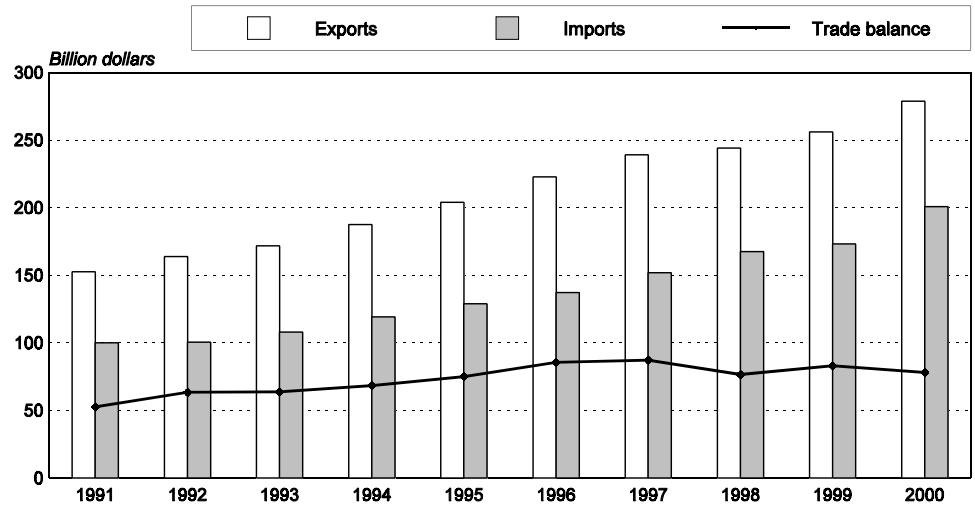
[5] Values are reported before deductions for expenses and taxes, as gross values are most directly comparable across countries, industries, and firms. U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA), *Survey of Current Business*, June 1992, pp. 68-70.

Figure 2-1
U.S. cross-border exports[1] of services and U.S.-owned foreign affiliate sales of services, 1990-99

[1] Trade data exclude public-sector trade.
[2] Affiliate sales data for 1999 were reported under a new industry classification system. For more information, see text box 2-1.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Nov. 2001, p. 49.

Figure 2-2
U.S. cross-border trade in private services: Exports, imports, and trade balance, 1991-2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Nov. 2001, p. 49.

increased at an average annual rate of 8.7 percent during 1990-99, decreased by 6.0 percent in 2000.[6] Exports increased by 8.8 percent to $278.6 billion in 2000, faster than the average annual growth rate of 7.2 percent experienced during 1990-99. Cross-border service imports increased by 15.9 percent to $200.6 billion in 2000, significantly faster than the average annual growth rate of 6.5 percent registered during 1990-99. Principal factors behind the rapid growth of U.S. imports,[7] specifically of travel and insurance services, were strong U.S. economic growth[8] and a strong U.S. dollar.[9]

In 2000, travel and tourism services accounted for 29.5 percent of U.S. service exports, the largest share of total service exports accounted for by a single industry (figure 2-3).[10] Other industries accounting for large shares of total U.S. services exports were those related to intangible intellectual property,[11] which when trade between affiliated firms and unaffiliated firms is tallied, represented 13.7 percent; maritime and air freight transport services (including port services), 10.8 percent; and business, professional, and technical services (hereafter, professional services), 10.1 percent. Intrafirm trade, which principally reflects linkages between U.S. parent firms and foreign affiliates, accounted for 21 percent of services exports in 2000. Prominent services traded between parent firms and their affiliates included those related to intellectual property, financial services, computer and information services, film and television tape rentals, and operational leasing.[12]

With respect to imports, travel and tourism, maritime and air-freight transport, and passenger fares figured prominently in 2000, accounting for 32.2 percent, 20.5 percent, and 12.1 percent of total service imports, respectively.[13] In 2000, intrafirm trade comprised 18.9 percent of total cross-border services imports, the largest component of which likely reflected U.S. affiliates' payments of research and development assessments to foreign parents.

In 2000, as in most other years, the majority of U.S. service industries registered cross-border trade surpluses. Prominent exceptions included maritime and air-freight transport, passenger transport, telecommunication, and insurance services. The trade deficits posted by the freight transport and telecommunication industries

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[6] USDOC, BEA, *Survey of Current Business*, Nov. 2001, pp. 64-65.

[7] USDOC, BEA, *Survey of Current Business*, Nov. 2001, p. 49.

[8] The U.S. economy experienced 4.1-percent growth in real GDP in 2000. USDOC, BEA, "Gross Domestic Product," found at Internet address http://www.bea.doc.gov/, retrieved Dec. 3, 2001.

[9] The U.S. dollar appreciated 7.9 percent on a nominal trade-weighted basis against the currencies of the euro-area countries, Australia, Canada, Japan, Sweden, Switzerland, and the United Kingdom. USDOC, BEA, *Survey of Current Business*, Apr. 2001, p. 22.

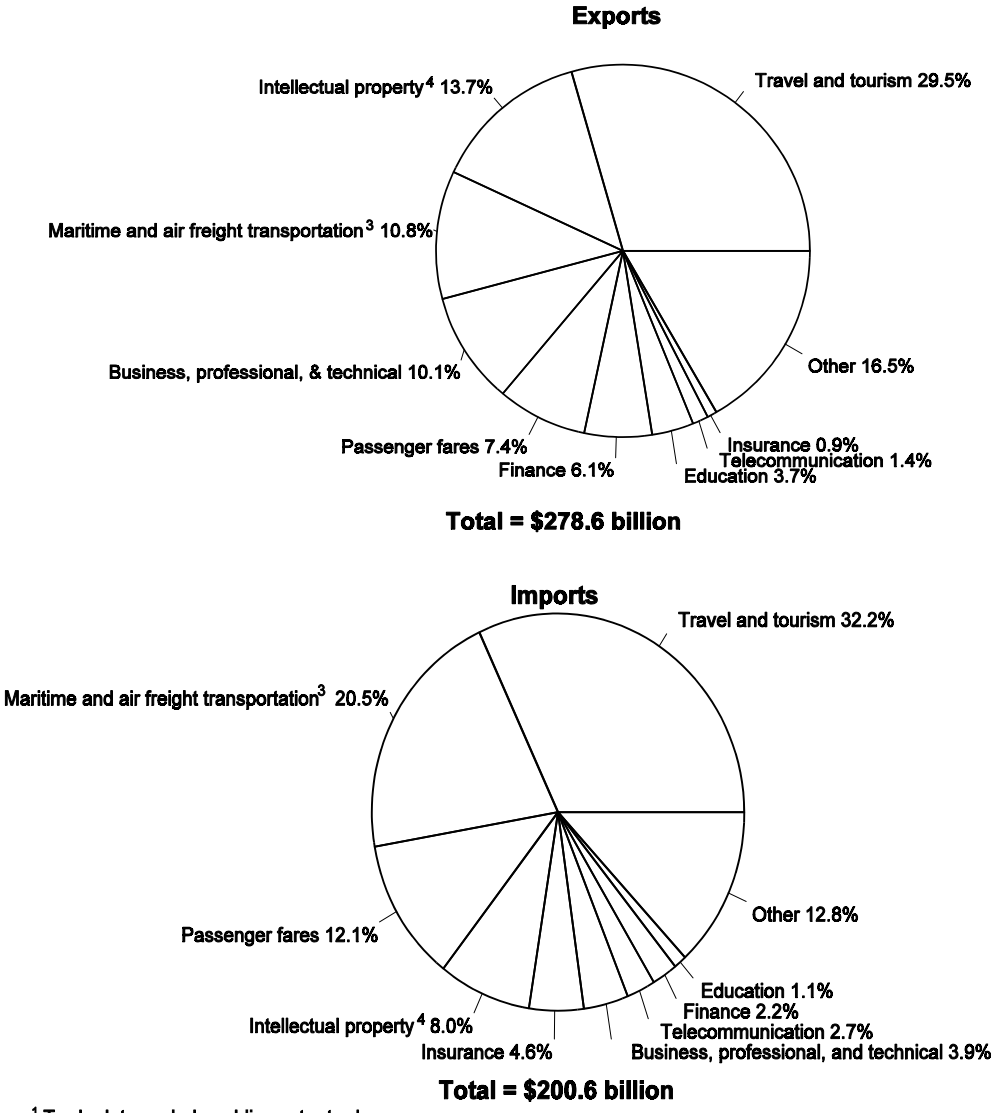
[10] The table in appendix C delineates, where applicable, the activities reflected in official cross-border services trade data.

[11] These services principally include management services and sales of rights to industrial processes; broadcasts and records of live events; books, records, and tapes; business format franchises; trademarks; and distribution, use, and reproduction of computer software.

[12] USDOC, BEA, *Survey of Current Business*, Nov. 2001, p. 62.

[13] Ibid., p. 64.

Figure 2-3
U.S. cross-border service exports and imports,[1] by industry, 2000[2]



[1] Trade data exclude public-sector trade.
[2] Totals may not equal 100 percent due to rounding.
[3] Reflects freight transport and port services only. Excludes ground transport services.
[4] Intrafirm trade between affiliates of multinational corporations represented 70.0 percent of U.S. exports and 75.6 percent of U.S. imports of intellectual property in 2000.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Nov. 2001, pp. 66-83.

largely reflect accounting conventions and trade estimation methodologies.[14] Certain professional service industries, such as the advertising, and the accounting, auditing, and bookkeeping industries, also experienced trade deficits in 2000. However, the professional services industry as a whole posted a $20.3 billion surplus, led by construction, engineering, architectural, and mining; installation, repair, and maintenance; operational leasing; legal; and database and other information services.[15]

In 2000, the European Union (EU) was the largest market for U.S. cross-border exports of services, accounting for 32.3 percent of such exports (figure 2-4). Japan, Canada, and Mexico were the next largest U.S. export markets, accounting for 12.3 percent, 8.3 percent, and 5.0 percent, respectively. With regard to U.S. imports of services, the EU supplied the dominant share (37.2 percent), followed by Japan (8.6 percent), Canada (8.1 percent), and Mexico (5.5 percent). Jointly, these four major trading partners accounted for almost 60 percent of both U.S. cross-border service exports and imports. In 2000, the United States registered cross-border trade surpluses measuring $15.3 billion with the EU,[16] $17.0 billion with Japan, $6.9 billion with Canada, and $3.0 billion with Mexico.[17]

Foreign Direct Investment

The provision of many services requires that the service provider be proximate to the consumer for practical and regulatory reasons. For example, the delivery of certain tourism services, such as hotel and restaurant services, is not feasible across borders. Accounting firms prefer to provide services to overseas clients through foreign affiliates, in part, because regulations may restrict, or render uneconomic, cross-border transmission of financial data. Similarly, architectural and engineering firms find that the establishment of a commercial presence in a foreign market is often a necessary prerequisite for obtaining contracts. Consequently, many firms establish a commercial presence abroad through foreign direct investment.

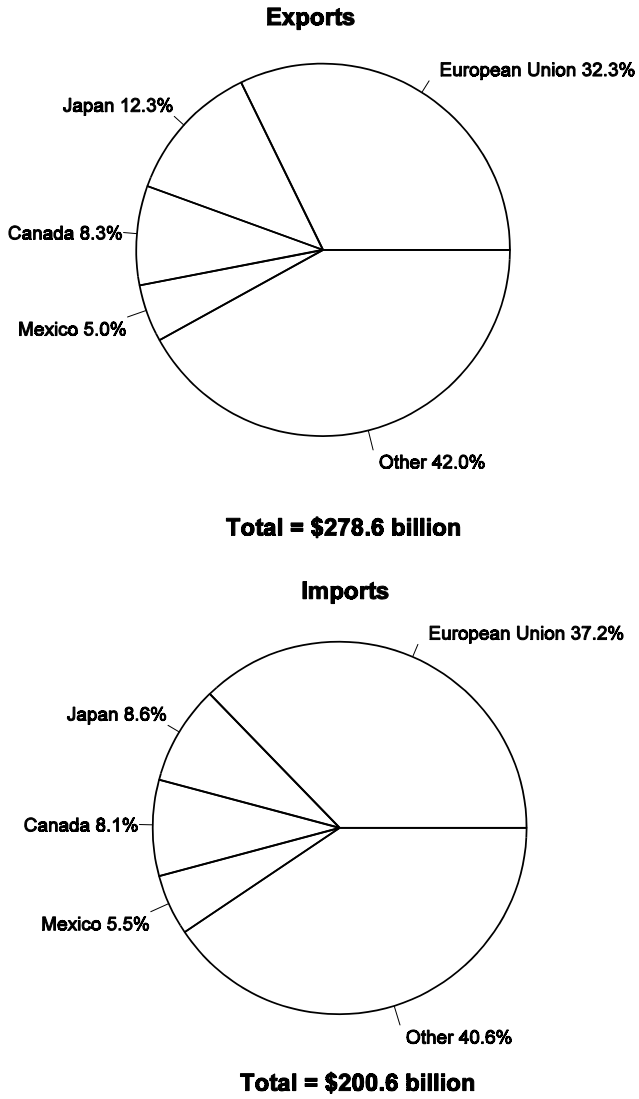
[14] For instance, the shortfall in maritime and air-freight transport services largely mirrors the deficit in U.S. merchandise trade, as payments for such transportation services are, by convention, made by importers to carriers of exporting countries. Because U.S. merchandise imports exceed merchandise exports, U.S. importers are likely to pay foreign freight carriers more than U.S. freight carriers receive from foreign importers of U.S. goods. The deficit in telecommunication services reflects the relatively high volume of international calls originating in the United States, and an international accounting convention whereby carriers providing outbound international calls compensate the carriers handling inbound calls.

[15] USDOC, BEA, *Survey of Current Business*, Nov. 2001, pp. 64-65.

[16] The United States registered a $172 million trade deficit with France, but registered trade surpluses with all other EU member countries for which BEA published separate data.

[17] USDOC, BEA, *Survey of Current Business*, Nov. 2001, pp. 66-67.

Figure 2-4
U.S. cross-border service exports and imports,[1] by selected trading partners, 2000[2]



[1] Trade data exclude public-sector trade.
[2] Totals may not equal 100 percent due to rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Nov. 2001, pp. 66-67.

Data on foreign direct investment position track parent firms' equity holdings in all foreign affiliates,[18] plus the net value of loans that parents have made to these affiliates. These data indicate that the U.S. direct investment position abroad in service industries[19] totaled $795.2 billion in 2000. Such investment increased by 10.3 percent in 2000, slower than the16.9-percent average annual growth rate recorded during 1995-99. These prior years witnessed exceptionally rapid growth in U.S. outbound investment in infrastructure services, including finance, telecommunications, and utilities services (see chapter 13).[20] The foreign direct investment position in U.S. service industries increased by 26.2 percent to $649.2 billion in 2000, significantly faster than the average annual growth rate of 15.9 percent recorded during 1995-99. Foreign acquisitions of U.S. firms in financial services and advertising services likely contributed to the faster-than-average growth recorded in 2000. For instance, two Wall Street investment banks were purchased by foreign firms in 2000. Credit Suisse First Boston (CSFB) purchased Donaldson, Lufkin and Jenrette; and United Bank of Switzerland (UBS) purchased Paine Webber. The combined value of the two transactions was approximately $22 billion.[21] In the advertising industry, British-based WPP Group acquired U.S. firm Young & Rubicam for an estimated $4.5 billion.[22]

Holding companies,[23] the financial services industry,[24] and the wholesale trade industry account for the largest shares of U.S. services direct investment position abroad (figure 2-5). In 2000, U.S. direct investment in holding companies accounted for 36.3 percent of total U.S. services direct investment abroad, while the financial services and wholesale trade industries respectively accounted for 22.8 percent and 11.1 percent of such investment. In 2000, the financial services, wholesale trade, and insurance industries attracted the largest shares of foreign direct investment in the U.S. services sector, accounting for 21.5 percent, 16.9 percent, and 16.4 percent of such investment, respectively.

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[18] An affiliate is a business establishment in which there is investment of 10 percent or more by a single natural (or juridical) person who is a national of (or based in) a country other than that of the establishment.

[19] For the purposes of this discussion on foreign direct investment, due to data limitations, total direct investment in service industries includes investment in agricultural service and mining service affiliates, but does not include investment in oil and gas field services affiliates.

[20] USITC, *Examination of U.S. Inbound and Outbound Direct Investment*, publication 3383, Jan. 2001, p. 3-22.

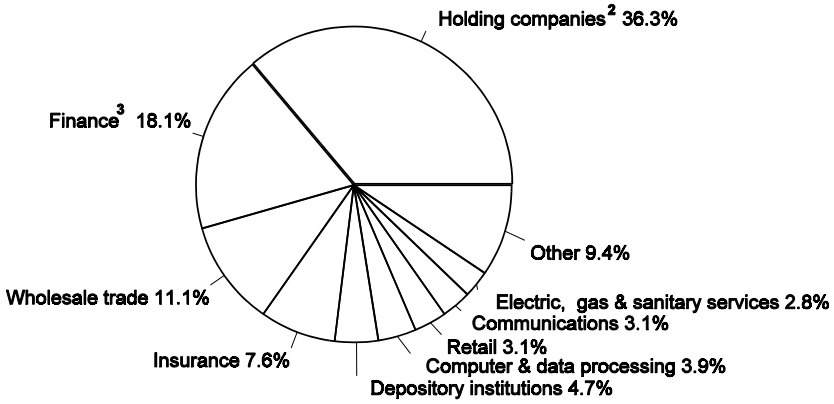
[21] Donaldson, Lufkin, & Jenrette, press release, found at Internet address http://www.dlj.com/, retrieved Sept. 13, 2000; "Credit Suisse First Boston to Buy DLJ," *New York Times*, found at Internet address *http://www.nytimes.com/*, retrieved Aug. 30, 2000; and "UBS to Merge with Paine Webber," press release, July 12, 2000, found at Internet address *http://www.painewebber.com/*, retrieved Sept. 13, 2000.

[22] Richard Linnett and Laura Petrecca, "WPP Proves to Be Tough Parent; Ax Falls at Y&R," *Advertising Age*, Oct. 30, 2000, p. 1; and Sarah Ellison and Kathryn Kranhold, "WPP Purchase of Rival Y&R for $4.5 Billion Greeted Coolly," *Wall Street Journal*, May 15, 2000.

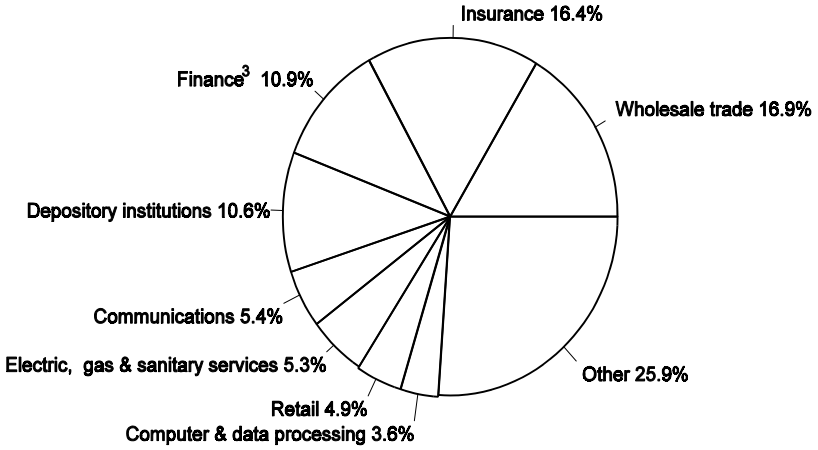
[23] Holding companies are designed primarily for tax purposes, to channel funds to operating companies in both service and non-service industries.

[24] Includes securities and commodities brokerage and depository institutions. Excludes insurance, business franchising, holding companies, and real estate.

Figure 2-5
Investment in the services sector: U.S. direct investment position abroad and foreign direct investment position in the United States, by industry, 2000[1]



Total U.S. direct investment position abroad = $795.2 billion



Total foreign direct investment position in the United States = $649.2 billion

[1] Total may not equal 100 percent due to rounding.
[2] Holding companies are designed primarily for tax purposes, to channel funds to operating companies in a wide variety of industries.
[3] Includes securities and commodities brokerage.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Sept. 2001, pp. 76-77 and 108-109.

In 2000, the United Kingdom was the top host country of U.S. direct investment abroad in services, having accounted for $166 billion, or 21.0 percent, of such investment (figure 2-6). Other countries that hosted significant shares of U.S. services investment included the Netherlands and Canada, which respectively accounted for 10.9 percent and 7.3 percent. Japan was the top source of foreign direct investment in the U.S. service sector in 2000, having accounted for $119 billion, or 18.3 percent. Other leading sources included the United Kingdom and the Netherlands, which respectively accounted for 14.8 percent and 13.6 percent of such investment in 2000.[25]

Affiliate Transactions

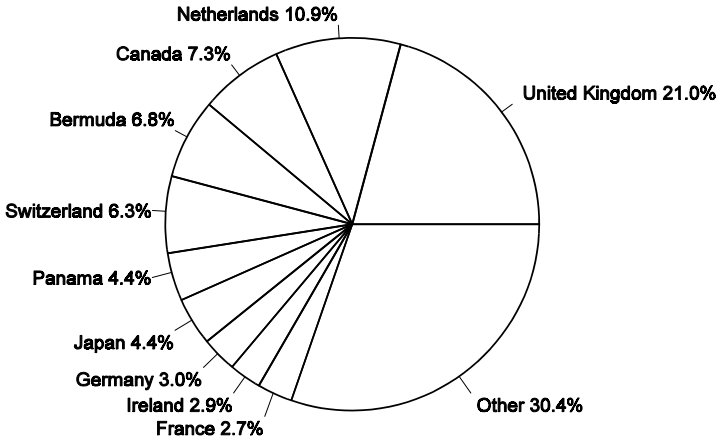
As mentioned above, transactions carried out by foreign affiliates account for the largest share of total U.S. services sales to foreign clients.[26] Unlike data on direct investment position, which reflect equity holdings in all foreign affiliates, data on affiliate transactions track only majority-owned affiliates' sales to unaffiliated foreigners in the host market.[27] The recent change to the NAICS-based data collection methodology also precludes comparisons between affiliate sales in 1999 and years prior, and between affiliate purchases recorded during 1997-99 and years prior to 1997 (box 2-1).

[25] USDOC, BEA, *Survey of Current Business*, Sept. 2001, pp. 74-75 and 106-107.

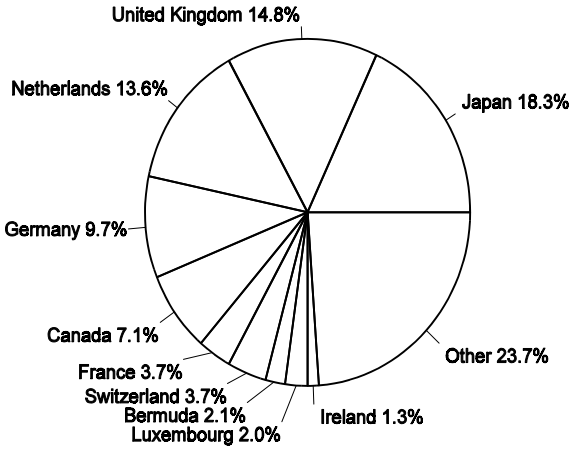
[26] Affiliate sales and purchases figures reflect total services transactions by affiliates from all industries. Thus, these data include services transactions by affiliates in the services, manufacturing, agriculture, and mining sectors. For example, manufacturing firms may provide repair services in addition to producing and selling goods.

[27] Majority-owned foreign affiliates of U.S. firms are defined as foreign affiliates for which the combined direct and indirect ownership interest of all U.S. parents exceeds 50 percent. Majority-owned U.S. affiliates of foreign firms are U.S.-based affiliates for which the combined direct and indirect ownership interest of all foreign parents exceeds 50 percent. For reporting purposes, the country in which the U.S.-based affiliate's "ultimate beneficial owner" resides receives credit for sales to U.S. persons. An ultimate beneficial owner of a U.S. affiliate is the entity, proceeding up the affiliate's ownership chain, that is not owned more than 50 percent by another person. Sales by majority-owned affiliates account for the vast majority of sales by all foreign affiliates. In 1998, sales by U.S. majority-owned affiliates abroad accounted for 83 percent of sales by all U.S. affiliates abroad, while U.S. purchases from majority owned foreign affiliates in the United States accounted for 86.3 percent of U.S. purchases from all foreign affiliates. USDOC, BEA, *Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies, Preliminary 1998 Estimates*, Table J-1; and USDOC, BEA, *U.S. Direct Investment Abroad: Operations of U.S. Parent Companies and their Foreign Affiliates, Preliminary 1998 Estimates*, Tables II.A 1 and III.A 1.

Figure 2-6
Investment in the services sector: U.S. direct investment position abroad and foreign direct investment position in the United States,[1] by country, 2000



Total U.S. direct investment position abroad = $795.2 billion



Total foreign direct investment position in the United States = $649.2 billion

[1] Total may not equal 100 percent due to rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Sept. 2001, pp. 53 and 90.

Box 2-1
U.S. Purchases from Affiliates: Changes in Definition and Classification in 1997

BEA estimates for 1997 and 1998 on U.S. purchases of services from U.S.-based affiliates of foreign companies are reported under industry classifications found in the 1997 North American Industry Classification System (NAICS).[1] The NAICS is the newly instituted classification system for economic activities developed by the United States, Canada, and Mexico.[2] The estimates on U.S. purchases from affiliates of foreign firms for years prior to 1997 are based on industry classifications derived from the 1987 U.S. Standard Industrial Classification (SIC).[3]

Adoption of the NAICS system entailed a redefinition of services classifications. The use of NAICS-based definitions and classifications in redefining service industries created a discontinuity between estimates for U.S. purchases in 1997-98 and such purchases recorded for earlier years. Moreover, comparability is reduced between data on U.S. purchases and data on sales of services to foreign persons by foreign-based affiliates of U.S.-parent firms, for which data are still collected using SIC-based classifications. Beginning with data for 1999, which was published in preliminary form in 2001, estimates on U.S. sales by foreign affiliates will be collected using NAICS-based classifications and definitions.

The redefinition of U.S. purchases of services from affiliates under the NAICS system is believed to raise the estimated value of such purchases. The reason for this increase is that those transactions defined as purchases of services under the NAICS that were previously defined as purchases of goods under the SIC system exceed purchases of goods under the NAICS that were formerly defined as purchases of services under the SIC system. Examples of purchases newly classified as transactions in service industries under the NAICS include purchases from publishers of newspapers, periodicals, books, and records, and purchases from restaurants. Alternatively, NAICS-based definitions of purchases of services exclude some purchases that SIC-based definitions include, such as purchases from dental laboratories and from firms that reproduce software and video.[4]

The conversion to NAICS-based classifications is likely to provide certain advantages over the SIC-based classifications, such as greater industry detail, better reflection of new and emerging technologies, and a more logical distinction between goods and services.[5] For example, restaurants are included in retail trade in the SIC; accordingly, sales by restaurants are treated as sales of goods. Under the NAICS classification, restaurants are included in the service industry "accommodation and food services," and their sales are classified as sales of services. The treatment under NAICS better reflects meal preparation, table service, and the provision of facilities for on-site meal consumption, which differentiate restaurants from grocery stores and other establishments providing unprepared food to retail customers, whose sales are treated as sales of goods.

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[1] Office of Management and Budget, *North American Industry Classification System: United States, 1997* (Washington, DC, 1998).

[2] Ibid., p. 11.

[3] Office of Management and Budget, *Standard Industrial Classification Manual, 1987* (Washington, DC: U.S. Government Printing Office, 1987).

[4] For additional information on differences in classifications between NAICS and SIC systems, see *NAICS: United States, 1997*, and Bureau of the Census, *1997 Economic Census, Core Business Statistics Series, Advance Report* (Washington, DC, Mar. 1999), which may be found at Internet address http://www.census.gov/epcd/www/econ97.html.

[5] USDOC, BEA, *Survey of Current Business*, Oct. 1999, p. 61.

In 1999, sales by majority-owned, foreign-based affiliates of U.S. companies totaled $338.4 billion (figure 2-7).[28] Sales by U.S.-owned insurance affiliates in foreign markets accounted for 13.9 percent of total services sales by foreign affiliates of U.S. firms in 1999,[29] representing the largest share for any single industry.[30] U.S.-owned affiliates in the public utilities industry accounted for 10.1 percent of total services sales. Other industries with large shares of affiliate sales were the financial services industry (9.3 percent), the computer services industry (8.0 percent), and the communications industry (7.5 percent).

In 1999, purchases from majority-owned, U.S.-based affiliates of foreign firms amounted to $289.3 billion, up 17.9 percent over the previous year. Services purchased from U.S.-based insurance affiliates of foreign parents accounted for 27.3 percent of total U.S. purchases of services from foreign-owned affiliates in 1999, reflecting the large presence of foreign insurance companies in the U.S. market.[31] Purchases from communications affiliates, utilities affiliates, transport and warehousing affiliates, and financial services affiliates of foreign firms accounted for 6.7 percent, 6.6 percent, 6.5 percent, and 5.3 percent of total purchases, respectively.

The majority of U.S. affiliate sales and purchases of services are transacted with EU member states, which jointly accounted for 53.4 percent of sales. Among EU-member countries, the top markets for U.S. affiliate sales were the United Kingdom, Germany, and France, which accounted for 26.3 percent, 8.7 percent, and 5.5 percent of total U.S. affiliate sales in 1999, respectively. In 1999, U.S.-owned affiliates in Canada and Japan accounted for 9.9 percent and 8.2 percent of affiliate sales of services, respectively (figure 2-8).

U.S.-based affiliates owned by EU parent companies accounted for 53.7 percent of total U.S. purchases of services from foreign-owned affiliates in 1999. Purchases from British-owned affiliates alone accounted for 21.8 percent of total U.S. purchases, while purchases from Dutch- and German-owned affiliates respectively accounted for 11.0 percent and 10.2 percent of total U.S. purchases. Affiliates of Canadian and Japanese parent firms accounted for 15.8 percent and 9.9 percent of U.S. purchases, respectively. Insurance affiliates accounted for the largest share of U.S. purchases from European- and Canadian-owned affiliates in 1999. By contrast, affiliates in the wholesale trade industry accounted for the largest portion of U.S. purchases from Japanese-owned affiliates.

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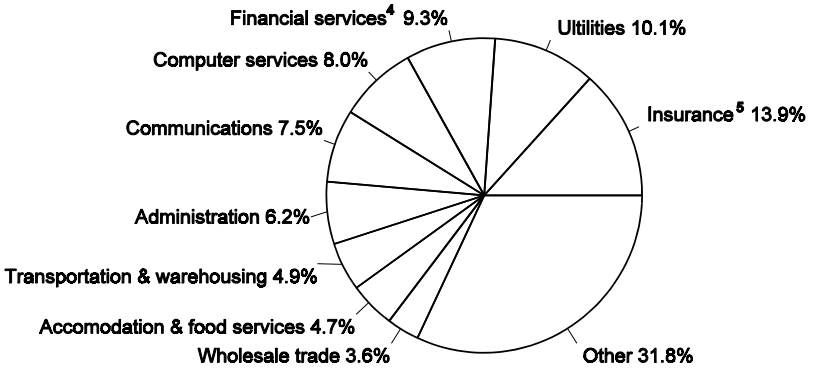
[28] Sales receipts are reported before deductions for expenses and taxes, as gross sales figures are more directly comparable across countries, industries, and firms. USDOC, BEA, *U.S. Direct Investment Abroad: 1994 Benchmark Survey, Final Results*, May 1998, p. M-17; and USDOC, BEA, *Survey of Current Business*, Nov. 2001, p. 92.

[29] Appendix D delineates, where applicable, the activities reflected in official data regarding affiliate transactions.

[30] Ibid., p. 93.

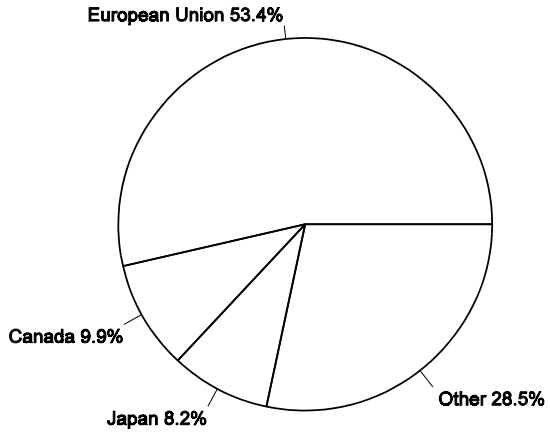
[31] USDOC, BEA, *Survey of Current Business*, Nov. 2001, p. 95.

Figure 2-7
Affiliate service transactions: U.S. sales[1] and purchases,[2] by industry, 1999[3]

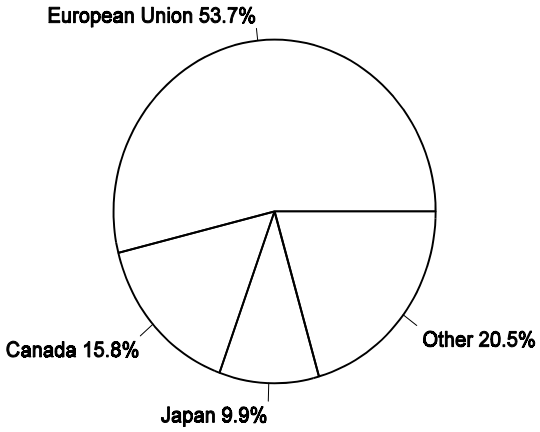


Total sales = $338.4 billion

Figure 2-8
Affiliate service transactions: U.S. sales[1] and purchases,[2] by selected trading partners,[3] 1999



Total sales = $338.4 billion



Total purchases = $289.3 billion

[1] Sales of services by majority-owned foreign affiliates of U.S.-parent firms.
[2] Purchases of services from majority-owned U.S. affiliates of foreign-parent firms.
[3] Total may not equal 100 percent due to rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Nov. 2001, p. 92.

CHAPTER 3
AUDIOVISUAL SERVICES

Introduction

Audiovisual services comprise the production and distribution of recorded entertainment, such as motion pictures, television and radio programs, music, and music videos. These services are provided to consumers through projection in movie theaters, commercial flights, and other public venues; rental or sale of prerecorded work; and television, pay television, and radio broadcasting. Providers of audiovisual services collect royalties, rental fees, license fees, and sales revenue in return for granting rights to display, broadcast, reproduce, or distribute audiovisual works, typically prerecorded on film reels, video tapes, digital video disks (DVD), audio cassettes, and compact disks (CD). Transactions occur both across borders and through foreign affiliates. Data on cross-border trade in audiovisual services reflect only revenues from film and tape rentals.[1] Affiliate data reflect sales to foreign persons by overseas affiliates of U.S. producers and distributors of motion pictures, television tapes, and film, and sales to U.S. persons by foreign-owned motion picture and sound recording affiliates in the United States.[2]

Trade and Investment Trends

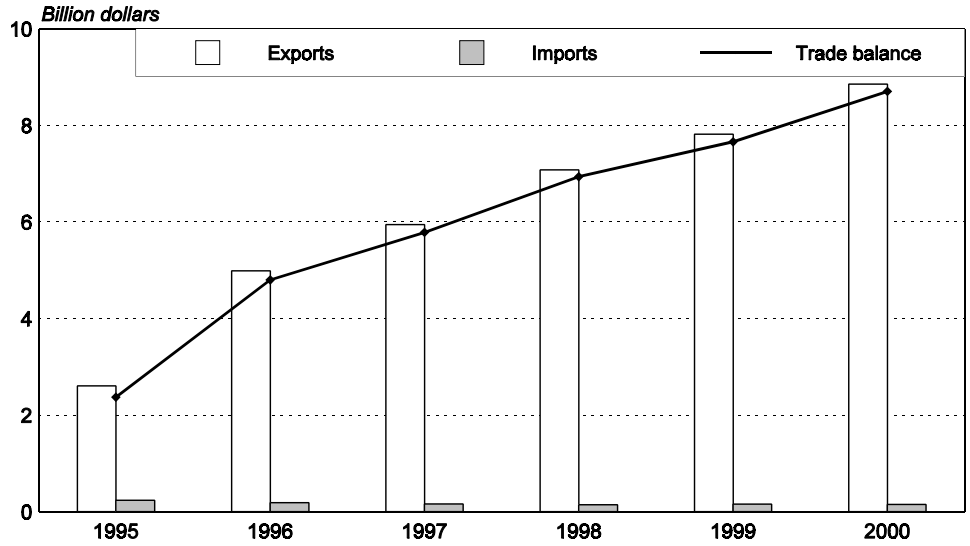
Cross-Border Trade

U.S. cross-border exports in 2000 amounted to $8.9 billion, reflecting 13.3-percent growth over 1999 (figure 3-1). This was less than one-half the 31.6-percent average annual growth rate achieved in 1995-99. European Union (EU) countries and Japan were the largest cross-border export markets for U.S. movies in 2000. The United Kingdom accounted for $1.2 billion in U.S. film and tape rentals; Germany, $1.1 billion; the Netherlands, $862 million; and Japan, $756 million (figure 3-2).[3] The United States posted a trade surplus of $8.7 billion in 2000, representing a 13.7-percent increase over the previous year.

Some potentially large export markets continue to restrict the distribution of audiovisual products by foreign companies. For instance, China restricts the number of foreign movie imports to 40 per year, and China Film Corp. is currently the sole

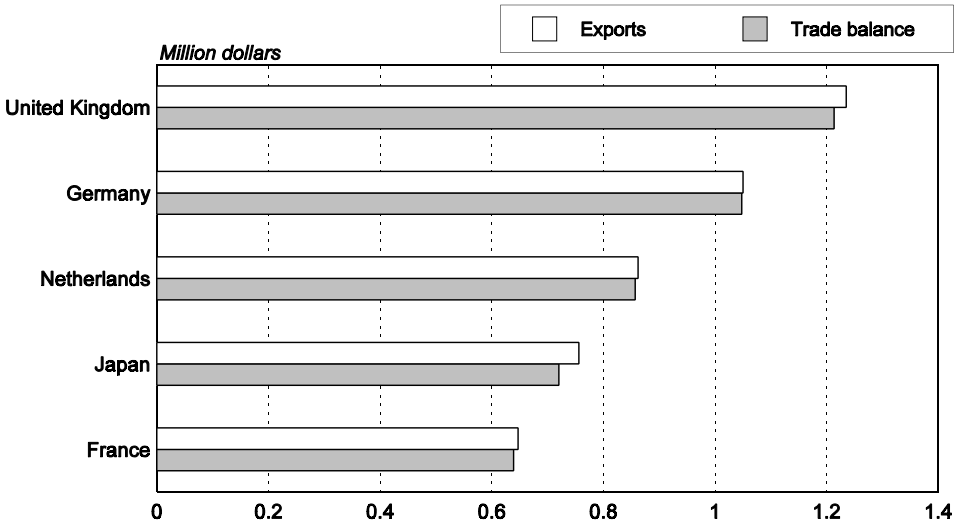
[1] USDOC, BEA, "U.S. International Services: Cross-Border Trade in 2000 and Sales Through Affiliates in 1999," *Survey of Current Business,* Nov. 2001, pp. 76-83.
[2] BEA representative, interview by USITC staff, Dec. 14, 2001.
[3] USDOC, BEA, *Survey of Current Business,* Nov. 2001, pp. 76-83.

Figure 3-1
Audiovisual services: U.S. cross-border exports, imports, and trade balance, 1995-2000



Source: U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA), *Survey of Current Business,* Oct. 2000, pp. 142-149; USDOC, BEA, Oct. 1999, pp. 76-77; and USDOC, BEA, *Survey of Current Business*, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

Figure 3-2
Audiovisual services: U.S. cross-border exports and trade balance, by major trading partners, 2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

importer and distributor of motion pictures in the country.[4] Although China Film Corp. will remain the sole importer of foreign films, in 2001 the government announced that it will revoke the company monopoly in movie distribution and allow foreign firms to compete in movie distribution within China. The announcement did not specify an implementation schedule.[5]

Cross-border imports in 2000 amounted to $149 million, a 3.2-percent decline from the previous year. This followed an average annual decrease of 9.7 percent in 1995-99. Countries in the European Union accounted for $78 million, or 52.3 percent, of U.S. imports in 2000. U.S. imports from Japan, the United Kingdom, and Canada totaled $37 million, $22 million, and $20 million, respectively.

Foreign Direct Investment and Affiliate Transactions

Cumulative U.S. direct investment abroad (USDIA) in the motion picture industry increased by 11.2 percent to $4.1 billion in 2000. This followed 21.8-percent average annual growth during 1995-1999.[6] The overall rapid growth in USDIA may be partially explained by the increase in U.S. movie production abroad. Escalating theatrical costs in the United States are pushing U.S. companies to move the production of motion pictures to other countries, principally Canada, where costs are lower.[7] According to the U.S. Department of Commerce, production of U.S. movies in foreign locations increased by 55 percent between 1994 and 2000.[8]

Cumulative foreign direct investment in the U.S. motion picture industry (FDIUS) increased by 18.9 percent to $5.5 billion in 2000, from $4.6 billion in 1999.[9] Although FDIUS in audiovisual services generally trended upward during 1995-2000, there were sharp declines in 1996 and 1998. These declines are most likely explained by U.S. acquisitions of foreign-owned firms in the industry, such as the 1996 purchase of MGM/Universal by a U.S. holding company from Credit Lyonnais, a French bank.[10] Three of the largest distributors of motion pictures in the United States are foreign owned: Sony Corp. is wholly-owned by Sony Corp. of Japan, Fox Entertainment Group is majority-owned by News Corp. Ltd. of Australia, and Universal Studios Group is a subsidiary of Vivendi Universal, which is majority French owned.

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[4] China allows 20 foreign movies per year on a revenue sharing basis (box office receipts are shared equally between China and the producer), and an additional 20 on flat fee-licensing terms. MPAA, "Valenti Urged Senate to Grant PNTR to China," press release, Apr. 11, 2000, found at Internet address *http://www.mpaa.org/*, retrieved Sept. 14, 2001.

[5] Don Groves, "China ends pic distrib monopoly in WTO bid," *Daily Variety*, p. 10, Jun. 14, 2001.

[6] USDOC, BEA, "U.S. Direct Investment Abroad: Industry Detail for Selected Items," *Survey of Current Business*, Sept. 2001, p. 109.

[7] USDOC, International Trade Administration (ITA),"Commerce Secretary Mineta Releases Report on the Impact of the Migration of U.S. Film and Television Production," press release, Jan. 18, 2001, found at Internet address *http://www.ita.doc.gov*/, retrieved Sept. 17, 2001.

[8] USDOC, ITA, "The Migration of U.S. Film and Television Production," Mar. 2001, p. 28.

[9] USDOC, BEA, *Survey of Current Business*, Sept. 2001, p. 77.

[10] See USITC, Recent Trends in Services Trade, 1999 Annual Report, Investigation No. 332-345, May 1999, p. 6-3.

U.S. consumers purchased services valued at $5.0 billion from affiliates of foreign companies in the motion picture and sound recording industries in 1999, including $3.1 billion in motion picture and video services.[11] This represents an increase of 4 percent over total 1998 affiliate purchases of motion picture and sound recording services (figure 3-3).[12] In 1999, U.S. affiliates of European companies accounted for 51.7 percent of U.S. purchases ($2.6 billion) in motion picture and sound recording services, and 21.9 percent ($680 million) of the motion picture and video sub-category. U.S.-owned affiliate sales of motion picture and sound recording products to foreign individuals totaled $8.2 billion in 1999. Based on 1998 data, these affiliates' sales were likely largest in the Netherlands, the United Kingdom, France, and Japan.[13]

Market Overview

U.S. Output

During 1990-99, the U.S. motion picture industry[14] experienced 3.7-percent average annual growth in real gross output,[15] which reached $65 billion in 1999 (figure 3-4).[16] Motion picture studios met continued strong demand for their product principally by increasing intermediate inputs by an average annual rate of 4.4 percent during 1990-99. In the motion picture industry, advertising is the largest intermediate input, followed by utilities (e.g., energy), maintenance and repair services, construction, and telecommunication and other communication services. According to industry representatives, advertising costs in 2000 accounted for 45 percent of total production and marketing costs.[17] The release of a motion picture is typically intensively advertised on a variety of media, including network, cable, and satellite television; radio; movie theaters; print media; and billboards. These advertising efforts have recently been supplemented by banner ads on the Internet, which have resulted in an increase in total advertising expenses.

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[11] USDOC, BEA, *Survey of Current Business*, Nov. 2001, pp. 93-95.

[12] Separate data on affiliate purchases of motion pictures and videos in 1998 were suppressed to avoid disclosure of individual company information.

[13] Data on market trends for other audiovisual service industries is not available.

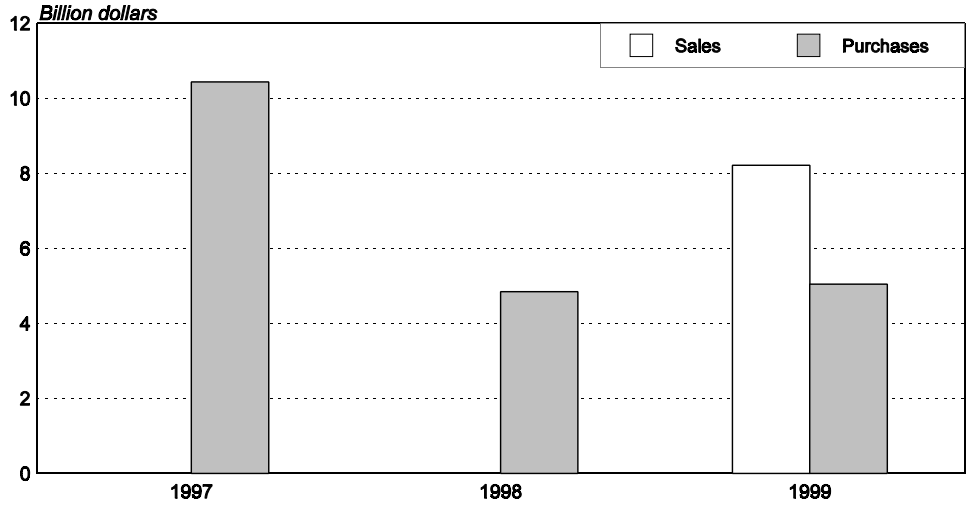
[14] Ibid.

[15] Gross output by industry consists of sales or receipts and other operating income, commodity taxes, and inventory change. Intermediate inputs consist of energy, raw materials, semifinished goods, and services. Gross output by industry minus the industry's intermediate inputs equals gross product by industry, which measures the value added by the industry. Gross product is measured as the sum of distributions by industry attributable to labor and capital, which are generally considered primary, or value added, inputs. Gross output by industry is benchmarked to the output estimates found in the national input-output accounts.

[16] USDOC, BEA, *Survey of Current Business,* June 2001, p. D-35; June 2000, p. D-35; Apr. 2000, p. 83; Aug. 1998, p. 80; Apr. 97, p. D-32; and Jan-Feb. 96, p. 75.

[17] Industry representative, interview by USITC staff, Washington, DC, Oct. 15, 2001.

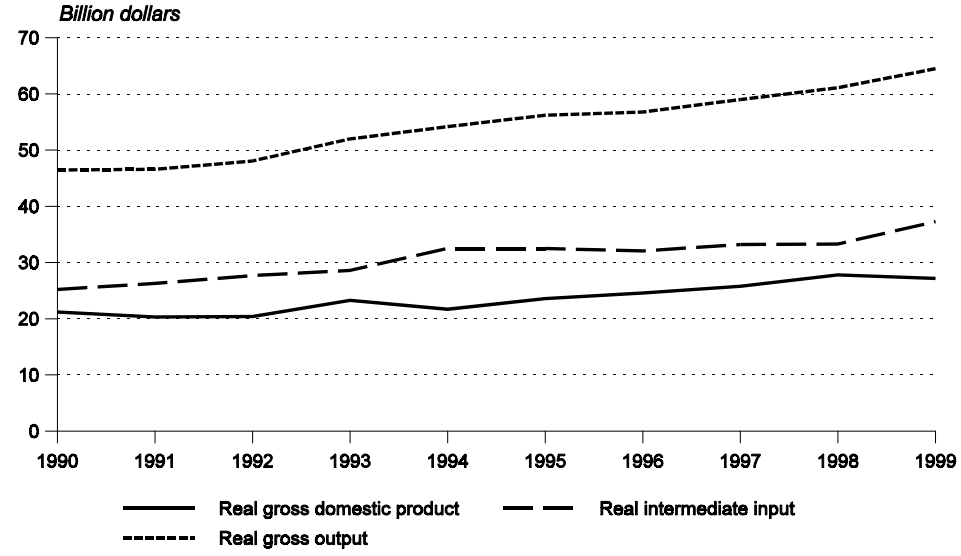
Figure 3-3
Audiovisual affiliates:[1] Sales by U.S-owned affiliates abroad and U.S. purchases from foreign-owned affiliates, 1997-99[2]



[1] Data reflect transactions by majority-owned affiliates.
[2] Data from 1997 reflect sales of goods and services. Data from 1998 and 1999 reflect sales of services only.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Nov. 2001, pp. 93-95 and Oct. 2000, p. 160.

Figure 3-4
Motion pictures: Real gross domestic product, real gross output and real intermediate input, 1990-99



Source: Compiled by the Commission.

Competitive Environment

The U.S. motion picture industry consists of major studios and independent companies. The seven major studios are Metro-Goldwyn-Mayer, Inc. (MGM), Paramount Pictures Corp., Sony Pictures Entertainment, Inc., Twentieth Century Fox Film Corp., Universal Studios, Inc., Walt Disney Company, and Warner Bros. These studios have global film production and distribution capabilities. They develop and finance the creation of motion pictures in house, and finance or purchase the rights to distribute movies made by independent producers. They also promote and market these works through various media, and exploit motion pictures through product merchandising and other ancillary activities.[18] Several have also collected or acquired large motion picture and television program libraries that provide a steady revenue stream through syndications, reruns, and resale of old titles.[19] In 2000, major studios released 191 new movies out of a national total of 461, and accounted for an estimated 70 percent of box office revenues.[20] On average, major studios derive 20 percent of revenues from domestic theater exhibition, 20 percent from foreign theater exhibition, 40 percent from worldwide home video, and the remaining 20 percent from television.[21]

The competitiveness of U.S. audiovisual products in global markets is in part due to the large number of consumers who speak English, which eliminates the need for dubbing, subtitling, and other adjustment prior to sale in many foreign markets.[22] The financial strength of major U.S. studios also gives them a competitive advantage. The average cost of producing and marketing a motion picture by a major studio reached $54.8 million in 2000.[23] Yet, most movies and recorded music releases do not earn a profit, requiring that relatively few successful products provide enough revenue to cover a large share of the expenses incurred by all productions. Studios with the ability to finance the production and marketing of several projects simultaneously are better able to diversify risk and increase the likelihood of periodic financial successes. Finally, the U.S. market for audiovisual services is large, homogeneous, and well developed. This enables U.S. studios to recover a significant share of their costs prior to export. In 1999, for example, there were 1.5 billion theatrical admissions in North America compared to 811 million in the European Union, 265 million in Latin America, and 145 million in Japan.[24]

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[18] Motion Picture Association of America (MPAA), About MPA, MPAA, found at Internet address *http://www.mpaa.org/*, retrieved Sept. 14, 2001.

[19] Metro-Goldwyn-Mayer Inc. (MGM), Annual Report for the fiscal year ended Dec. 31, 2000, Form 10-K, found at Internet address *http://www.sec.gov/*, retrieved Sept. 20, 2001.

[20] MPAA, 2000 U.S. Economic Review, found at Internet address *http://www.mpaa.org*, retrieved Sept. 14, 2001.

[21] S&P Industry Surveys, Movies & Home Entertainment May 10, 2001, found at Internet address *http://www.netadvantage.standardandpoors.com/*, retrieved Sept. 6, 2001.

[22] Ibid.

[23] Data include the United States and Canada. MPAA, 2000 U.S. Economic Review, found at Internet address *http://www.mpaa.org/,* retrieved Sept. 14, 2001.

[24] MPAA, 2000 U.S. Economic Review, found at Internet address *http:// www.mpaa.org/,* retrieved Sept. 14, 2001; and European Audiovisual Observatory, "Focus 2000, World Film Market Trends," found at Internet address *http://www.obs.coe.int/online_publication/reports/focus2000.pdf.en*, retrieved Nov. 1, 2001.

The industry has been undergoing vertical consolidation recently both in the United States and abroad, typically to combine movie and television program production capability with distribution capacity through cable and satellite television networks and the Internet. Many of these conglomerates also hold interests in the music and publishing industries (table 3-1). The largest audiovisual merger in the United States to date, which became effective in January 2000, combined America On Line, an Internet service provider, with Time Warner, a conglomerate with holdings in the motion picture, publishing, music, and cable network industries, to form AOL Time Warner. Time Warner, which owns Warner Bros., had previously acquired Turner Broadcasting Corp., whose assets included Cable News Network and other cable television channels, as well as a large movie library. As a result, AOL Time Warner now has considerable movie and TV program production capability, and multiple distribution channels for its content products. Also in 2000, Vivendi, a French water utility and media conglomerate, joined forces with Canal Plus, a French cable TV company, and Universal Studios, a subsidiary of Seagram (Canada), to form Vivendi Universal. The company also owns interests in USA Networks, a cable TV channel, and in the publishing and telecommunication sectors. The new company assets in the music industry include PolyGram Records, Universal Music, and MP3.com, recently acquired to provide a foothold in Internet music. In addition, in January 2000, Vivendi created Vizzavi, a Europe-wide Internet service provider, in a joint venture with Vodafone, a British telecommunication company.[25]

The audiovisual industry is increasingly shaped by new technology. The Internet and digital media in general present movie and music producers with opportunities to create and distribute a variety of new content products widely and inexpensively. For example, Paramount, Sony Pictures, MGM, Universal Studios, and Warner Bros. recently announced a collaborative venture to provide video-on-demand directly to the consumer using the Internet. This new venture will enable the companies to market their services directly to individual customers, bypassing intermediary carriers such as cable and satellite television companies. Walt Disney and 20th Century Fox are believed to be developing similar online distribution plans separately.[26] Disney's Miramax subsidiary has also announced that it will make 12 movies available for pay-per-view downloads from the Internet as a trial service.[27]

However, new technologies also present new challenges. The protection of intellectual property remains an important challenge facing the audiovisual industry. Digital technology has facilitated the high-quality copying and distribution of content products, which increases the potential for piracy. The motion picture industry has voiced concern about unauthorized video streaming over digital networks along with the manufacturing and sale of pirated videos and DVDs. According to the International Intellectual Property Alliance, the motion picture and recorded music industries lost $1.21 billion and $1.77 billion, respectively, to piracy

[25] Vivendi Universal, homepage, found at Internet address *http://www.vivendi.com/*, retrieved Sept. 14, 2001.

[26] John M. Higgins, "Studios Take Control," *Broadcasting & Cable*, Aug. 20, 2001.

[27] Richard Tedesco, "Miramax Films to Hit the Web," *Broadcasting & Cable*, Apr. 24, 2000.

Table 3-1
Major studios: Selected media affiliation

Corporation (Country of UBO)	Movies and TV programs	Film library	Music	TV networks/ stations	Cable/ satellite systems/ channels	Radio	Internet	Publishing
AOL Time Warner (U.S.)	X	X	X	X	X	X	X	X
Walt Disney (U.S.)	X	X	X	X	X	X		X
Viacom (U.S.)	X		X	X	X	X		X
Vivendi-Universal (France/Canada)	X	X	X		X		X	X
News Corp. (Australia)	X		X	X	X	X		X
Metro-Goldwyn-Mayer (U.S.)	X	X	X					X
Sony (Japan)	X		X					

Source: S&P Industry Surveys, *Movies & Home Entertainment*, May 10, 2001, found at Internet address *http://www.netadvantage.standardandpoors.com*/, retrieved Sept. 6, 2001; and Metro-Goldwyn-Mayer Inc., *Annual Report* for the fiscal year ended Dec. 31, 2000, Form 10-K, found at Internet address *http://www.sec.gov*, retrieved Sept. 20, 2001.

in 2000.[28] In 2001, the music industry successfully sued an Internet music distributor, Napster, on the grounds that it used file sharing technology to illegally distribute proprietary music. Napster is a search engine based on MP3 technology, which lets users compress and send music and other types of files over the Internet.[29] It enabled users on the Internet to download and share music collections on personal computers for free.[30] Since the ruling, Napster has proposed to use its facility to provide a paid service, with compensation to copyright holders.[31] In October 2000, Napster formed a strategic alliance with Bertelsmann AG of Germany, owner of BMG Music, to serve as an outlet for recorded music.[32]

WTO Negotiating Proposals

Brazil, Switzerland and the United States have submitted proposals on audiovisual services to the Council for Trade in Services, a subsidiary body of the World Trade Organization (WTO).[33] All three proposals address the propriety of subsidies in the sector and the sector role in fostering cultural identity and diversity. The proposals recognize that government funding of the audiovisual sector may be appropriate, especially as a means to promote cultural objectives, and that the GATS treaty does not currently prohibit subsidization of the sector. However, the proposals agree that subsidies should be narrowly focused to achieve specific objectives, and that trade distorting effects of the subsidies should be minimized. Brazil and Switzerland also propose that attention be devoted to an examination of trade restricting and anticompetitive business practices with a view toward alleviating possible market distortions.

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[28] International Intellectual Property Alliance (IIPA), "USTR 2001 "Special 301" Decisions, including trade loss estimates and piracy levels for 1999-2000," June 4, 2001, found at Internet address *http://www.iipa.com/*, retrieved Oct. 4, 2001.

[29] Recording Industry Association of America (RIAA), "Clear Victory for Recording Industry in Napster Case," press release, Feb. 12, 2001, found at Internet address *http://www.riaa.com/*, retrieved Oct. 10, 2001.

[30] Napster, Policies, found at Internet address *http://www.napster.com/terms,* retrieved Oct. 30, 2001.

[31] Tom Graves, Standard & Poor's Industry Surveys , *Movies & Home Entertainment,* May 10, 2001, found at Internet address *http://www.netadvantage.standardandpoors.com/*, retrieved Oct. 10, 2001.

[32] Napster, "Bertelsmann And Napster Form Strategic Alliance," press release, Oct. 31, 2000, found at Internet address *http://www.napster.com*/, retrieved Oct. 10, 2001.

[33] World Trade Organization (WTO), "Communication from Brazil: Audiovisual Services," S/CSS/W/99, July 9, 2001; "Communication from Switzerland, GATS 2000: Audio-visual Services," S/CSS/W/74, May 4, 2001; "Communication from the United States, Audiovisual and Related Services," S/CSS/W/21, Dec. 18, 2000, all found at Internet address *http://www.wto.org*/, retrieved Aug. 9, 2001.

Beyond this, the proposals diverge in terms of specific elements. Brazil, for instance, proposes that special attention be paid to the audiovisual services in which developing countries have the most potential, including but not limited to television services. Switzerland highlights the public service aspects of the audiovisual sector, and proposes discussion of regulations intended to protect public morality. The United States calls for a review of the scope of audiovisual services. The United States indicates that technological developments since the Uruguay Round provide for new types of audiovisual works and new means of producing and distributing these works. The U.S. proposal urges that countries develop a comprehensive list of audiovisual services, and schedule trade-liberalizing commitments that are technologically neutral; i.e., commitments that accord an audiovisual service the same treatment irrespective of its technical means of delivery.[34]

Nontariff barriers on imported audiovisual services that the negotiations may seek to address include broadcast and projection restrictions on foreign audiovisual works, local content requirements, and investment limitations. Some countries limit the number of imported films, or the right to import and distribute movies. Countries may also impose screen quotas on the projection of foreign movies in theaters, and scheduling restrictions and quotas for broadcasts of foreign television programs. They may require that printing, dubbing, subtitling, and duplication of imported movies be performed locally. Dubbing may also be prohibited, forcing imported movies to be shown in the original language with subtitles. In addition, countries may impose ownership restrictions on cable and broadcast television channels, or require film producers to invest in the production of local audiovisual works.[35]

[34] For example, a television program produced by a foreign company should receive the same treatment under the GATS, whether it is broadcast by satellite, cable networks or the Internet. WTO, "Communication from the United States: Audiovisual Services," S/CSS/W/21.

[35] MPAA, Trade Barriers to Exports of U.S. Filmed Entertainment, 2001 Report to the United States Trade Representative, Nov. 2000.

CHAPTER 4
CONSTRUCTION SERVICES

Introduction

The construction services industry comprises firms and establishments primarily engaged in three different activities: the construction of buildings and other structures; heavy construction (including infrastructure, such as highways, power plants, and pipelines); and additions, alterations, reconstruction, installation, and maintenance and repairs. Construction services also includes pre-erection work such as excavating, earthmoving, land drainage, and other land preparation. Such services may be provided by general contractors, who oversee all construction work for those awarding the contract, or by specialty subcontractors who perform discrete sections of a construction project. The provision of construction services is often combined with other services such as architecture and engineering, as contracts for new construction are increasingly awarded to firms that both design and build these projects. In developing countries, construction services firms are often required to provide financing as well, as a de facto condition of winning large government procurement contracts.

International trade in construction services takes place on both a cross-border and an affiliate basis. Cross-border trade data on construction services are combined into a single category that includes data from the construction, engineering, architectural, and mining (CEAM) services industries. Cross-border exports of these services are presented net of merchandise exports and outlays abroad for wages, services, materials, and other expenses. Cross-border imports are presented on a gross basis: payments for merchandise, labor, and other inputs are included.[1] Affiliate transactions are reported on a gross basis. U.S. firms that engage in international trade in construction services generally establish some type of subsidiary, joint venture, or representative office in important foreign markets. This is because local presence, as well as knowledge of local building requirements and regulations, is often a determining factor in contract awards.

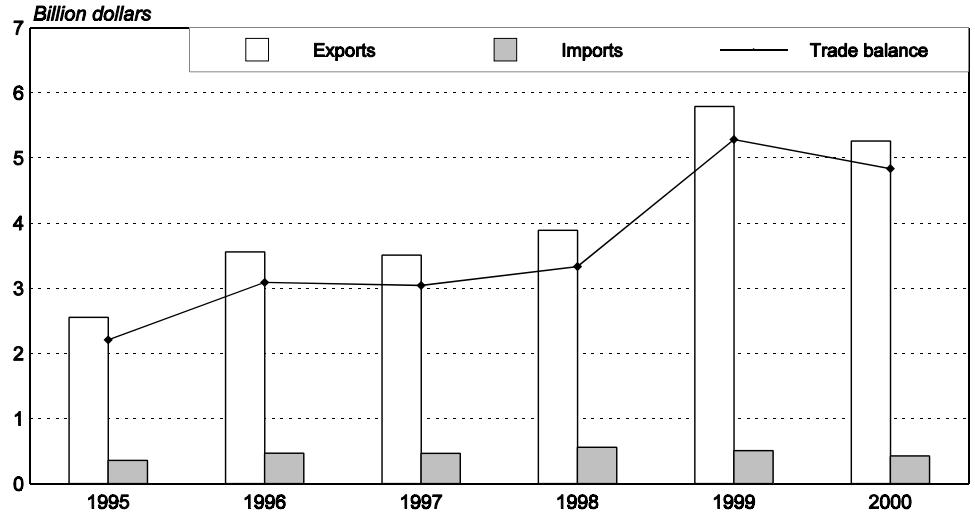
Trade and Investment Trends

Cross-Border Trade

In 2000, U.S. cross-border exports of architectural, engineering, construction, and mining services totaled $5.3 billion, down 9.2 percent from 1999 (figure 4-1). This decline was the first since 1997, and was in sharp contrast to the 22.7-percent

[1] The size of the surplus in construction services is therefore understated.

Figure 4-1
Construction, engineering, architectural, and mining services: U.S. cross-border exports, imports, and trade balance, 1995-2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.*

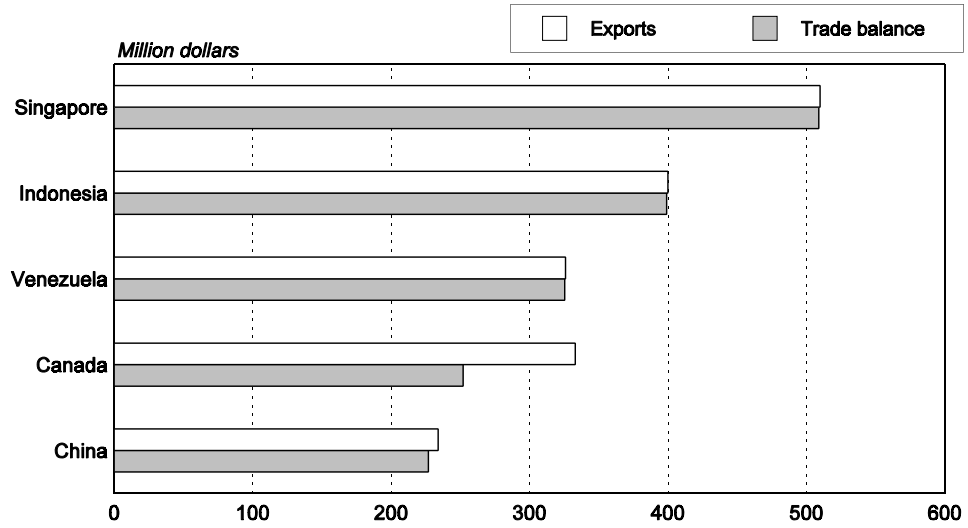
average annual growth rate registered during 1995-99. In 2000, exports to Europe and Asia declined by 35.8 percent and 15.0 percent, respectively, while exports to Latin America declined by 2.0 percent. The decline in exports is attributable in part to the sluggish recovery of the Asian market following the 1997 financial crisis, the small number of projects generated in petroleum-producing regions despite higher oil prices, and lower contract prices owing to increased competition worldwide.[2]

U.S. cross-border imports of architectural, engineering, construction, and mining services declined for the second straight year, falling by 16.4 percent to $422 million in 2000. By contrast, imports of these services increased by 10.0 percent annually during 1995-1999. In absolute terms, exports fell further than imports, yielding an 8.5-percent decrease in the trade surplus to $4.8 billion in 2000.

In 2000, Singapore was the largest export market for AECM services, accounting for exports of $510 million, or 9.7 percent, of total U.S. cross-border exports (figure 4-2). Indonesia was the second-largest export market, accounting for exports valued at $400 million, or 7.6 percent, of U.S. cross-border exports. Canada and Venezuela, the third- and fourth-largest markets, accounted for 6.3 percent and 6.2 percent of U.S. cross-border exports of AECM services, respectively. China ranked fifth, with 4.5 percent.

[2] Peter Reina, Gary J. Tulacz, and David B. Rosenbaum, "The Top 225 International Contractors," *Engineering News-Record*, Aug. 14, 2000, p. 48.

Figure 4-2
Construction, engineering, architectural, and mining services: U.S. cross-border exports and trade balance, by major trading partners, 2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Nov. 2001, p. 91.

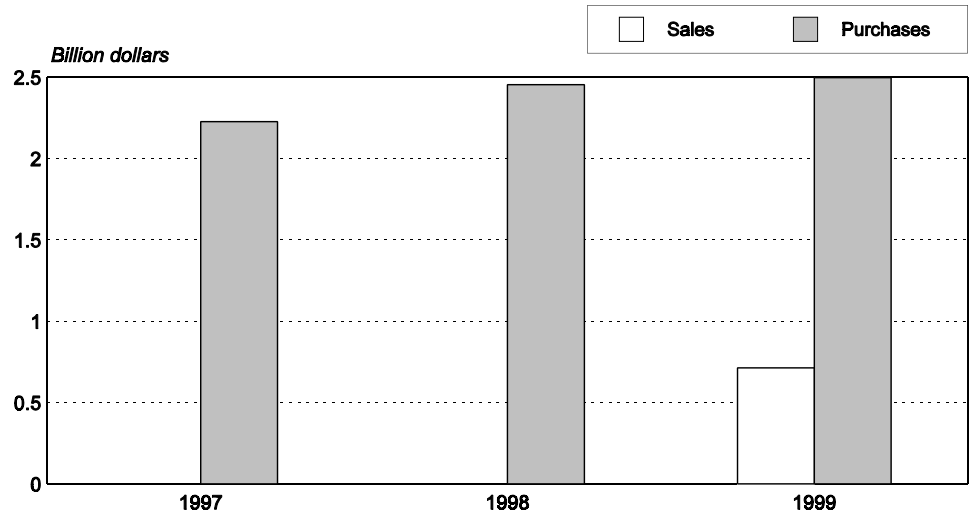
Foreign Direct Investment and Affiliate Transactions

In 2000, foreign direct investment position by U.S. firms in the construction industry rose by 41.6 percent to $1.8 billion. This increase was much higher than the average annual growth rate of 1.9 percent during 1995-99, reflecting market consolidation via a number of mergers and acquisitions. By contrast, direct investment in the United States by foreign construction companies remained virtually unchanged at $3.1 billion in 2000, after having risen at an average annual rate of 12.6 percent during 1995-99.

In 1999, purchases of construction services from foreign-owned affiliates in the United States were valued at $2.5 billion, a 1.8-percent increase from 1998 (figure 4-3). Affiliates owned by European parents accounted for 83.5 percent of the total, and affiliates of Asian and Pacific parents accounted for 14.0 percent.[3] Data regarding sales by foreign affiliates of U.S. parents are not available.

[3] To avoid disclosing data from particular companies, BEA suppressed most individual country data in 1999.

Figure 4-3
Construction affiliates:[1] Sales by U.S.-owned affiliates and U.S. purchases from foreign-owned affiliates, 1997-99



[1] Data reflect transactions by majority-owned affiliates.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Nov. 2001, pp. 94-95 and Oct. 2000, p. 160.

Market Overview

U.S. Output

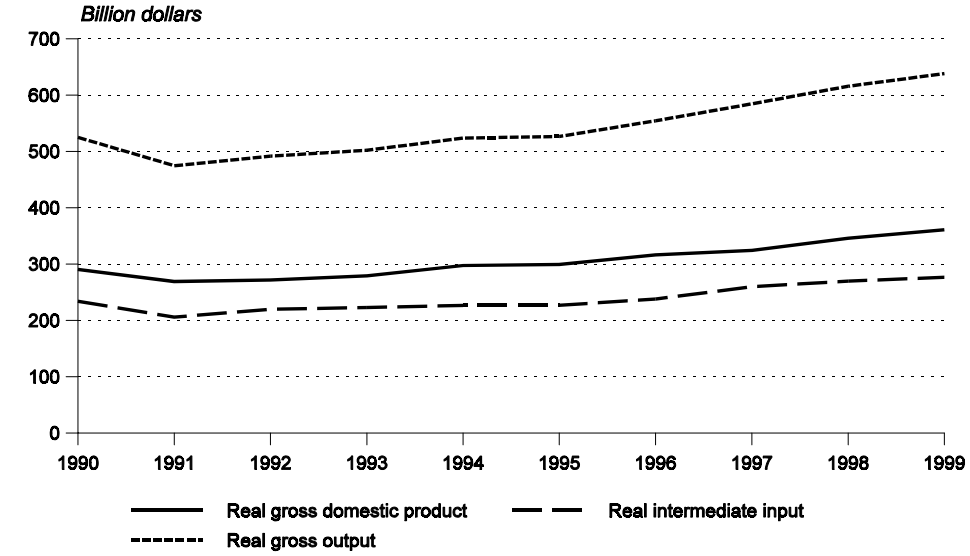
During 1990-99, real gross output in the U.S. construction industry, generally considered to be the value of new construction put in place, increased by 2.2 percent per annum, on average, to $638 billion (figure 4-4). Real gross product, which reflects primary inputs of labor and capital, grew by an average rate of 2.4 percent per annum, while intermediate inputs grew by an average rate of 1.9 percent per annum.[4] The increase in gross output reflects the rapid growth of the U.S. domestic economy during the 1990s. The construction work force also rose substantially over the period, with the number of full-time equivalent employees rising by an average annual rate of 2.9 percent.[5] Simultaneously, the real net stock of private fixed assets in the construction industry grew at 4.0 percent annually over the period, with nearly all the growth coming in the second half of the decade.[6] This trend is consistent with substantial investment in equipment and facilities during the booming market.

[4] USDOC, BEA, *Survey of Current Business*, June 2000, pp. 24-54; and Dec. 2000, pp. 24-35.

[5] USDOC, BEA, *Survey of Current Business*, various issues.

[6] USDOC, BEA, *Survey of Current Business*, Apr. 2000, pp. 24-25.

Figure 4-4
Construction: Real gross domestic product, real gross output, and real intermediate input,
1990-99



Source: Compiled by the Commission.

Competitive Environment

The U.S. market for construction services is the largest in the world, accounting for nearly 8 percent of U.S. gross domestic product (GDP) in 2000. The value of new construction put in place in 1999 was estimated at $700 billion. The largest segment of the construction services market in the United States is housing. In 1999, the domestic industry accounted for 6.3 million employees plus another 1.6 million self-employed workers. The same year, U.S. companies won bids for international construction contracts valued at an estimated $29 billion.[7] Although these contracts constitute less than 5.0 percent of the value of domestic construction contracts, they account for about 24 percent of the value of all international construction contracts awarded worldwide.[8]

The U.S. construction services market is not highly concentrated. Overall, the top 10 construction firms operating in the United States in 2000 accounted for approximately 27 percent of the revenues earned by the top 400 contractors, and less than 10 percent of the entire U.S. construction market.[9] Bechtel Group Inc. was the largest U.S. construction services company, with $12.4 billion in revenues in 2000, followed by Fluor Corp., with revenues of $7.8 billion. The Turner Corp., Centex,

[7] U.S. Department of Commerce (USDOC), *U.S. Industry & Trade Outlook 2000*, p. 6-1.
[8] Peter Reina and Gary J. Tulacz, "The Top 225 International Contractors," *Engineering News-Record*, Aug. 20, 2001, p. 66.
[9] Gary J. Tulacz, "The Top 400 Contractors Sourcebook," *Engineering News-Record*, Sep. 2001, p. 9.

and Skanska, Inc. round out the top five, with revenues of more than $5 billion each. Skanska Inc., whose parent is based in Sweden, is the only foreign-owned firm in the top 10.[10]

Domestic competition is keen in most market segments, as the growth in the construction market has slowed since the late 1990s. The U.S. industry is also encountering intense competition from foreign firms, a tight supply of workers, and rising insurance costs.[11] Competition in the construction services market is based on price and quality, and to some extent, experience and track record. For the housing market, competition takes place through a market that includes many types of projects, from competitive bidding processes for multiple unit complexes to individually designed and negotiated contracts for custom homes. For commercial construction (e.g., factories and commercial office space), and particularly public works (e.g., roads, bridges, waterworks), competition primarily takes place through competitive bidding on public tenders. Such tenders generally require bidders to prequalify in order to demonstrate their ability to perform contracted work, and then to offer the lowest price at which they can meet a given set of contract specifications.

In 2000, 3 of the world's 10 largest international construction services companies were based in the United States. The global leaders in international contracting are Hochtief (Germany), with $9.1 billion in international revenues and $12.0 billion in total revenues, and Skanska AB (Sweden), with $8.6 billion in international revenues and $10.8 billion in total revenues. Bechtel Group Inc., which ranked third, was the largest U.S. international construction services company, with international revenues of $6.8 billion and total revenues of $12.4 billion. U.S. firms, Kellogg Brown & Root and Fluor Corp., ranked seventh and tenth, respectively.[12]

Cross-border market consolidation increased in 1999, both in terms of the number of mergers and acquisitions (M&A) and in the value of the transactions. The number of transactions rose from 57 in 1998 to 78 in 1999, while their value rose from $2.2 billion to nearly $3.6 billion.[13] This change is consistent with industry reports that M&A activity among international construction firms is continuing and may accelerate as international contractors attempt to increase market share in a flat global market.[14] Foreign construction services companies, particularly from Europe, have been entering the U.S. market through acquisitions, while U.S. firms have also been active in acquiring foreign firms.[15]

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[10] Ibid.

[11] U.S. Department of Commerce (USDOC), *U.S. Industry & Trade Outlook 2000*, p. 6-3.

[12] Reina and Tulacz, "The Top 225 International Contractors," p. 72. Contractors were ranked according to revenues generated outside their home country.

[13] KPMG Corporate Finance, mergers and acquisitions database.

[14] Reina and Tulacz, "The Top 225 International Contractors," p. 66.

[15] U.S. Department of Commerce (USDOC), *U.S. Industry & Trade Outlook 2000*, p. 6-9.

WTO Negotiating Proposals

Five countries or groups have submitted proposals to the Council for Trade in Services as part of the on-going negotiations on construction and related engineering services: Australia, Brazil, the European Communities and their member states, Korea, and New Zealand.[16] The construction services sector contributes significantly to the GDP of most countries. The sector provides the infrastructure for most of the other sectors in an economy, and is itself a significant employer. This sector has substantial remaining barriers, although construction services is recognized as being one of the most open services sectors as a result of the Uruguay Round.

Proposals submitted by the European Union and Australia focus on removing impediments to the establishment of a commercial presence and the movement of natural persons.[17] Australia also proposes that WTO members work to enable mutual recognition of engineering and other construction-related professional qualifications,[18] to ensure that regulations formulated by members are no more burdensome than necessary to ensure the quality of service.[19]

Korea has proposed the removal of discriminatory regulations on commercial presence, the elimination of discriminatory treatment of foreign companies in bidding procedures, the relaxation of local content or local use requirements in the performance of contracts, and the elimination of discriminatory treatment of foreign companies in areas such as taxation and remittance of earnings.[20]

New Zealand has noted that there is already sufficient scope for WTO members to increase the number and quality of commitments for construction and related engineering services, and that it is important for negotiations to focus on ensuring commercially significant results. New Zealand is particularly interested in removing

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[16] World Trade Organization (WTO), "Communication from Australia: Negotiating Proposal for Construction and Related Engineering Services," S/CSS/W/64, Mar. 28, 2001; "Communication from Australia: Negotiating Proposal for Engineering Services," S/CSS/W/65, Mar. 28, 2001; "Communication from Brazil: Construction and Related Services," S/CSS/W/113, May 10, 2001; "Communication from the European Communities and their Member States, GATS 2000: Construction and Related Engineering Services," S/CSS/W/36, Oct. 1, 2001, "Communication from the European Communities and their Member States, GATS 2000: Construction and Related Engineering Services, Corrigendum," S/CSS/W/36/Corr.1, Dec. 22, 2000; "Communication from the Republic of Korea: Negotiating Proposal for Construction Services," S/CSS/W/84, Nov. 5, 2001; and "Communication from New Zealand: Negotiating Proposal for Construction and Related Engineering Services," S/CSS/W/91, June 26, 2001, all found at Internet address *http://www.wto.org/,* retrieved Jan. 25, 2002.

[17] WTO, "Communication from the European Communities and their Member States," S/CSS/W/36, and S/CSS/W/36/Corr.11.

[18] WTO, "Communication From Australia," S/CSS/W/64.

[19] WTO, "Working Party on Domestic Regulation, Communication from Australia: Necessity and Transparency," S/WPDR/W/8, Sep. 15, 2000, found at Internet address *http://www.wto.org/,* retrieved Jan. 25, 2002.

[20] WTO, "Communication From the Republic of Korea," S/CSS/W/84.

limitations on the establishment of commercial presence, such as foreign equity caps, as well as ensuring that future specific commitments encompass all stages of the construction process.[21]

Brazil has proposed that members make specific commitments for all construction and related services, and that members eliminate restrictions to market access. However, Brazil also notes that developing countries might need to impose limitations on joint ventures and foreign subcontracting in order to assist in the development of local firms.[22]

[21] WTO, "Communication From New Zealand," S/CSS/W/91.
[22] WTO, "Communication From Brazil," S/CSS/W/113.

CHAPTER 5
EDUCATION SERVICES

Introduction

Education services include formal academic instruction in primary, secondary, and higher education institutions, as well as instructional services offered by libraries and vocational, correspondence, language, and special education schools. U.S. cross-border exports reflect the estimated tuition and living expenses of foreign residents[1] enrolled in U.S. colleges and universities, while U.S. cross-border imports of education services represent the estimated tuition and living expenses of U.S. residents who study abroad.[2] Affiliate transactions in education services occur when educational institutions, using their own faculty and facilities, provide courses in foreign markets. However, because comprehensive data on affiliate transactions are limited, the trade discussion in this chapter focuses principally on cross-border trade.

Trade and Investment Trends

Cross-Border Trade

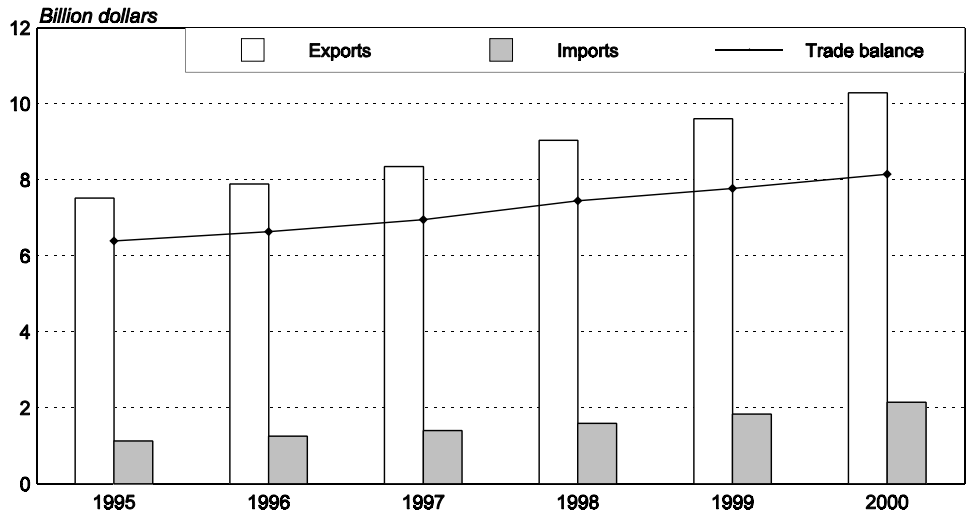
In 2000, U.S. exports of education services totaled $10.3 billion, while imports amounted to $2.1 billion, netting an $8.1-billion surplus (figure 5-1).[3] Exports increased by 7.1 percent in 2000, slightly faster than the 6.3-percent average annual growth rate recorded during 1995-99. In 2000, the principal export markets for education services, in descending order, were Japan (8.8 percent of exports), China (8.7 percent), India (6.8 percent), Korea (6.6 percent), and Canada (4.9 percent) (figure 5-2). Exports to each of these leading markets increased in 2000, led by those to India (up by 16.4 percent) and China (up by 10.0 percent). Exports to top-ranked Japan in 2000 grew by 1.8 percent, the slowest export growth rate recorded among the five principal export markets. This continues the trend of falling export growth rates to Japan in recent years, owing to that country's continuing recession. Overall, U.S. education services export growth was attributable more to higher expenditures by foreign students in the United States than to higher foreign student

[1] Foreign residents do not include U.S. citizens, immigrants, or refugees.

[2] U.S. residents must receive academic credit from accredited U.S. institutions to be included in trade data; those who do not transfer foreign academic credit to U.S. institutions, or who study abroad on an informal basis, are not included. Thus, actual study abroad by U.S. students is understated in the trade data and, accordingly, the U.S. trade surplus in education services is overstated. Institute of International Education (IIE), *Open Doors 2000* (New York, NY: IIE, 2000), p. 94.

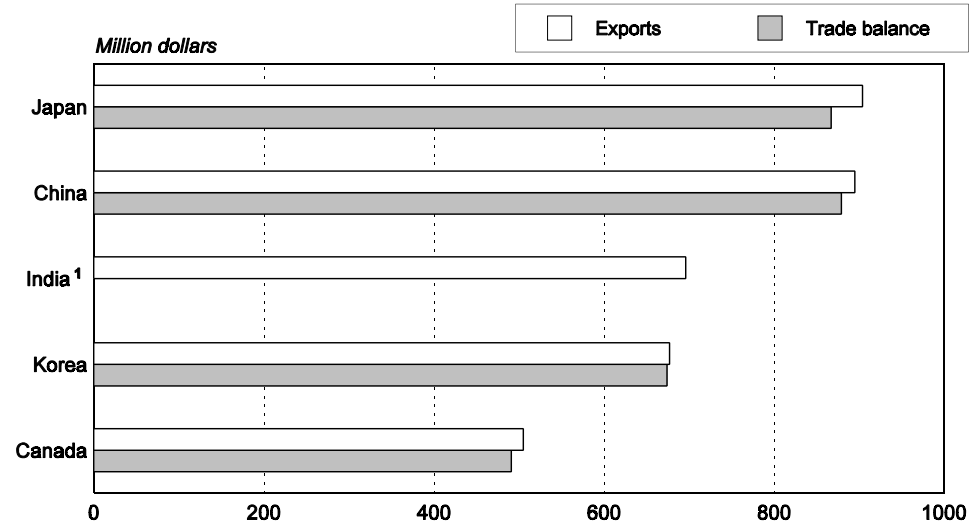
[3] Figures may not total exactly due to rounding.

Figure 5-1
Education services: U.S. cross-border exports, imports, and trade balance, 1995-2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

Figure 5-2
Education services: U.S. cross-border exports and trade balance, by major trading partners, 2000



[1] Trade balance is not available because import data was suppressed by BEA.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

enrollment here. During 1995-2000,[4] average expenditures per foreign student in the United States increased at a 3.8-percent annual rate, while foreign student enrollment in the United States grew by 2.6 percent per year. For the 2000-01 academic year, enrollment data indicate almost 548,000 foreign students enrolled here, a 6.4-percent increase above the previous academic year and the fastest single-year growth rate recorded since the 1978-79 academic year.[5]

U.S. imports of education services increased by 17.0 percent in 2000, faster than the 12.9-percent average annual growth rate registered during 1995-99. In 2000, the leading import suppliers were the United Kingdom (19.7 percent), Spain (9.3 percent), Mexico (9.1 percent), Italy (7.8 percent), and France (7.2 percent). Each of the five leading U.S. suppliers tallied at least a 12-percent increase in exports to the United States in 2000, with the fastest U.S. import growth registered by Spain (23.0 percent), as Spain replaced Mexico as the second leading source of U.S. education service imports. Numerous U.S. colleges and universities recorded study-abroad enrollment increases surpassing 20 percent in 2000, owing largely to the enhanced purchasing power of the U.S. dollar against the euro and the British pound.[6]

The availability of foreign student visas may affect future U.S. trade in education services. Although dramatic increases have been recorded in foreign students' visa applications for the 2001-02 academic year, this contributed to higher refusal rates on such applications, even before the terrorist attacks in the United States on September 11, 2001.[7] Visa issuance was disrupted further in the wake of the attacks and has been slow to recover. There are reports that some foreign students believe that the United States has stopped issuing student visas altogether.[8] Attendance dropped by 50 percent at fairs recently held overseas to inform interested foreign students about opportunities for study in the United States.[9] By early 2002, when foreign students are expected to respond to U.S. educational institutions' letters of

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[4] The period covers academic years beginning in 1994-95 and ending in 1999-2000.

[5] IIE, "The Big Picture," foreign student enrollment data, found at Internet address *http://www.opendoorsweb.org/*, retrieved Nov. 15, 2001.

[6] At mid-2000, the U.S. dollar was at its strongest in 15 years against the currencies of France, Germany, Italy, the Netherlands, Portugal, and Spain, all of which adopted the euro. "Taking Advantage of the Strong U.S. Dollar, Americans Flock to Study-Abroad Programs," *Chronicle of Higher Education*, June 23, 2000, p. A55.

[7] For example, 40 percent of applications from Chinese students have been rejected, compared with 18 percent in the previous year. Reportedly, the factors leading to higher recent rejection rates are substantial increases in the number of student visa applicants and a higher incidence of questionable qualifications by applicants.

[8] Officials of U.S. Departments of Education and State, seminar presentations, National Committee for International Trade in Education, Washington, DC, Oct. 25, 2001.

[9] U.S. industry official, interview by USITC staff, Oct. 25, 2001.

acceptance, the impact of the terrorist attacks on foreign students' intentions to attend U.S. higher education institutions may be more evident.[10]

Foreign Direct Investment and Affiliate Transactions

The amount of U.S. direct investment abroad and foreign direct investment in the United States in education services is small; thus, available data on investment and affiliate operations are limited. Nevertheless, official statistics and anecdotal information indicate that U.S. direct investment abroad in education services increased from $41 million in 1995 to $62 million in 2000.[11] U.S. investors in education service affiliates abroad are believed to consist largely of business entities rather than higher education institutions.[12]

Data regarding foreign direct investment in U.S. education services were suppressed to avoid disclosing information on individual entities. Reportedly, foreign entities acquired 12 U.S. educational institutes and training centers during 1990-99, valued at $1.2 billion.[13] Data on sales by U.S. education services affiliates of foreign parents[14] are also limited, spanning only 1997-99 (figure 5-3). Following a 16.6-percent increase, to $569 million, in 1998, such transactions fell by 37.6 percent, to $355 million, in 1999.[15]

Market Overview

U.S. Output

The U.S. industry's real gross output increased by an average annual rate of 2.9 percent during 1990-99, rising to $111 billion (figure 5-4). During the period, average annual growth of real intermediate inputs in the education services

[10] More definitive information on the likely impact is expected to take even longer to develop, because the process involved in obtaining a student visa is moving more slowly in the aftermath of the attacks, due to increased scrutiny of visa applications. The basic steps to obtain such a visa remain unchanged. Upon receiving an acceptance letter and an accompanying U.S. Immigration and Naturalization Service form I-20 (Certificate of Eligibility for Nonimmigrant (F-1) Student Status - for Academic and Language Students) from a U.S. higher education institution, a foreign student completes the I-20 form and takes it with a visa application to a U.S. embassy or consulate. Thereafter, U.S. officials conduct background checks and usually interview the applicant before rendering a decision on the visa application. Terry W. Hartle, official of American Council on Education, hearing testimony, State of California Assembly, Committee on Higher Education, Stanford, CA, Nov. 28, 2001, found at Internet address *http://www.acenet.edu/*, retrieved Dec. 5, 2001.

[11] USDOC, BEA, *Survey of Current Business*, table 10.1, Sept. 2001, p. 109, and Sept. 2000, p. 89.

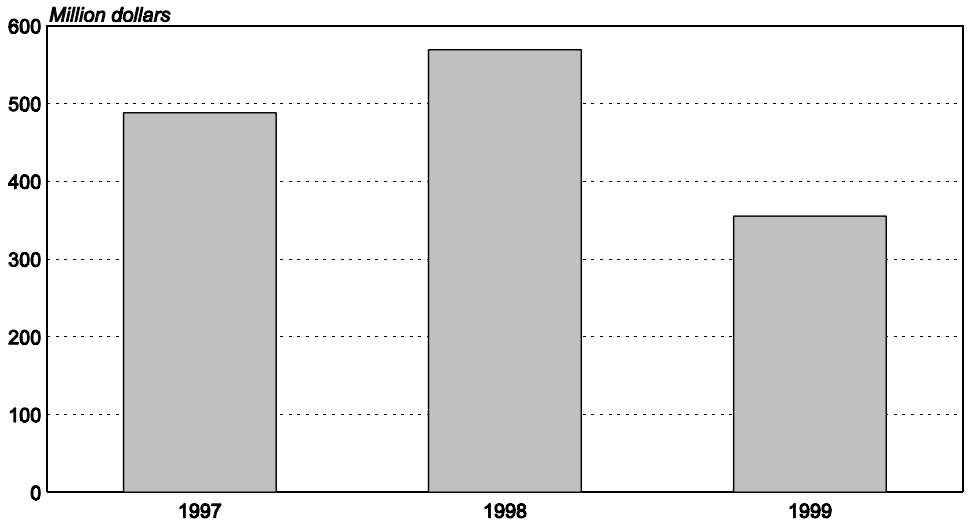
[12] Official of USDOC, BEA, telephone interview by USITC staff, Oct. 19, 2001.

[13] KPMG Corporate Finance, mergers and acquisitions database.

[14] Such sales equal tuition payments by U.S. residents.

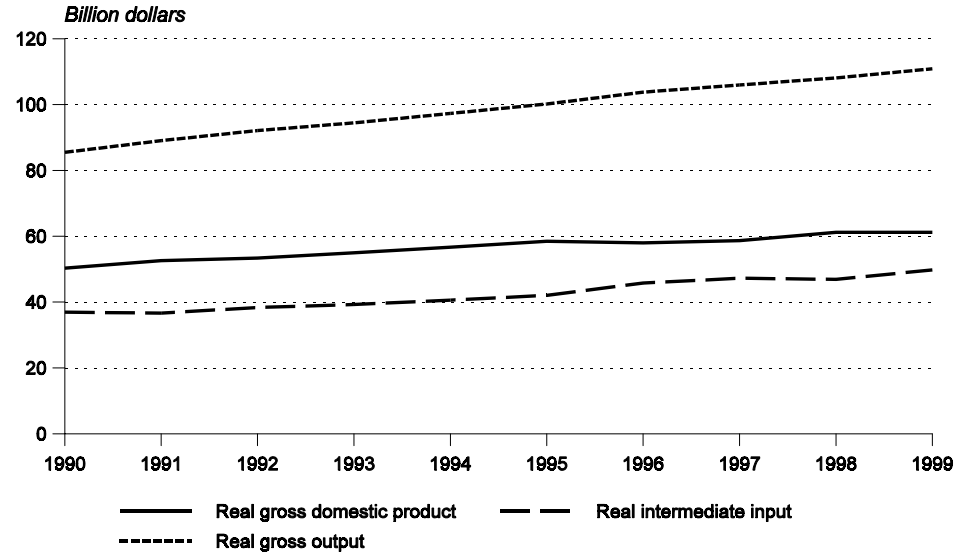
[15] USDOC, BEA, *Survey of Current Business*, tables 10.1 and 10.2, Nov. 2001, pp. 94-95.

Figure 5-3
Education affiliates: U.S. purchases from majority-owned affiliates of foreign firms, 1997-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Nov. 2001, pp. 94-95 and Oct. 2000, p. 160.

Figure 5-4
Education: Real gross domestic product, real gross output and real intermediate input, 1990-99



Source: Compiled by the Commission.

industry[16] increased by 3.4 percent, faster than the 2.2-percent annual growth rate for primary inputs, labor and capital. Among intermediate inputs, financial services and certain business and professional services increased fastest, each by 15.7 percent per annum on average during 1992-97.[17] Sustained strength in the U.S. economy through much of the 1990s stimulated growth in U.S. financial markets, translating into substantial gains in college and university endowments and incentives for expanding university-backed research and new business ventures. The continued growth of educational institutions' endowments countered the softness in State funding in fiscal year 2000, as a reported 13-percent average rate of return for endowments surpassed broad market indexes and the 11-percent return during the previous year.[18]

Competitive Environment

The U.S. system of postsecondary education[19] is vast and diverse. As of the 1998-99 academic year, U.S. postsecondary educational institutions numbered nearly 10,000, of which 4,048 were higher education institutions, chiefly universities and colleges.[20] Nearly three-fifths of higher education institutions was private; nevertheless, public institutions enrolled almost three-fourths of the 14.8 million higher education students as of the fall term in 1999.[21]

An increasing number of "nontraditional" students are participating in higher education programs in the United States, offsetting a decline in the U.S. population of "traditional" undergraduates, aged 18 to 22. Principal among these "nontraditional" students are 25-to-29-year-old secondary school graduates. The proportion of this age group with some college education stood at 66 percent in 2000, up from 52 percent in both 1990 and 1980.[22] Several factors account for higher participation rates among "nontraditional" students. Financial aid options have proliferated, making higher education affordable for a greater number of students, despite tuition increases that exceeded the pace in inflation during the 1990s. In addition, students with some work experience have perceived the widening income gap between high school graduates with and without a college degree as a strong incentive to pursue a

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[16] Intermediate inputs are tabulated for education services together with social services (except health services) and membership organizations.

[17] USDOC, BEA, *Survey of Current Business*, Jan. 2001, p. 33, and Nov. 1997, p. 79.

[18] "The Rich Got Richer in 2000, Study of Endowments Shows," *Chronicle of Higher Education*, Apr. 13, 2001, p. A39. Nevertheless, for the 2001 fiscal year, the investment performance of higher education endowments is expected to fall considerably below levels attained in recent years, owing to significant adverse stock market valuations.

[19] Postsecondary education spans vocational and career schools, as well as colleges, universities, and institutes. American Council on Education (ACE), *An International Visitors' Guide to U.S. Higher Education*, 1999, p. 1.

[20] "Almanac Issue, 2001-2," *Chronicle of Higher Education*, Aug. 31, 2001, p. 7.

[21] Almost three-fourths of private institutions had a 4-year curriculum, while the majority of public institutions enrolled students for 2 years. Two-year colleges, often known as community colleges, junior colleges, or technical colleges, award associate degrees or certificates. About three-fifths of the students in 2-year colleges are enrolled in programs to facilitate career changes, update work skills, or help find employment. ACE, *An International Visitors' Guide to U.S. Higher Education*, p. 8.

[22] U.S. Department of Education (DOE), National Center for Education Statistics (NCES), *The Condition of Education–2001*, NCES-2001-072 (Washington, DC: U.S. Government Printing Office, 2001), p. 151.

degree. More recently, the recession has elicited growth in community colleges and training centers as consumers have sought to improve future employment prospects and job performance.[23]

Among major industrialized countries, the United States is considered one of the leaders in providing broad access to higher education. In 1997, 32 percent of U.S. residents who were 24 years of age held bachelor's degrees, ranking the United States second to the United Kingdom, with 35 percent, and leading Japan (28 percent), Germany (24 percent), and France and Italy (13 percent each).[24]

Owing to the breadth of the system and the strong reputation enjoyed by many of its institutions, the U.S. higher education system enrolls more foreign students than any other country in the world.[25] International students accounted for nearly 3 percent of U.S. undergraduate enrollments and 11 percent of graduate enrollments in the 1998-99 academic year. More than two-fifths of foreign students enrolled at the graduate level, mainly attending research institutions. Enrollment by foreign students has also increased at U.S. community colleges.

Unprecedented demand for higher education services and life-long learning exists in most areas of the world, as students seek to become better qualified for employment at home or abroad. Private institutions are growing more rapidly than government-funded and -controlled public institutions in many countries, because they are better able to provide the capital required to expand education services rapidly.[26] Private institutions are also perceived as offering students greater choice in programs of study and more individualized attention from the faculty. In Central and Eastern Europe, Latin America, and certain Asian countries, growth among private colleges has been pronounced. Other markets are newly opened to private higher education institutions. For example, the president of Syria recently signed a decree to legalize private colleges and universities, which could open the market to education service providers from abroad,[27] and the Canadian Province of Ontario recently passed

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[23] "As Wall Street Took a Dive, Higher-Education Stocks Rebounded," *Chronicle of Higher Education*, May 11, 2001, p. A32.

[24] Nevertheless, the United States ranks below many industrialized countries and some emerging countries in its college-age population attaining natural science or engineering degrees. National Science Board, *Science and Engineering Indicators–2000*, NSB-00-1 (Arlington, VA: National Science Foundation, 2000), p. 4-3.

[25] ACE, *Internationalization of U.S. Higher Education: Preliminary Status Report 2000*, p. 2, found at Internet address *http://www.acenet.edu/*, retrieved Mar. 14, 2001.

[26] "The Worldwide Rise of Private Colleges," *Chronicle of Higher Education*, Mar. 9, 2001, p. A47.

[27] "Private Colleges Legalized in Syria," *Chronicle of Higher Education*, Sept. 14, 2001, p. A51.

legislation to allow private degree-granting universities for the first time.[28] Such market openings are likely to create more opportunities abroad for U.S. providers of higher education and adult education services.

U.S. institutional and corporate involvement in higher education in foreign markets is also proliferating in various forms.[29] U.S. linkages with foreign universities range from an advisory or consultative role to the operation of universities, usually with a local partner. In between are numerous collaborative roles such as joint-credit course offerings and joint degrees. In recent years, U.S.-owned Sylvan Learning Systems, Inc. has made a particular mark in the field by extending itself abroad into new business lines beyond its familiar learning centers and testing services. Sylvan has acquired controlling interests in four postsecondary institutions abroad that together form a foreign university network which provides varied academic degree programs to nearly 55,000 students in four countries.[30]

WTO Negotiating Proposals

Thirty-eight WTO members have previously scheduled commitments on private education services under the General Agreement on Trade in Services (GATS).[31] Because public education services have been established by governments in most countries as an essential government social service, they are outside the scope of GATS coverage.

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[28] "The Worldwide Rise of Private Colleges," *Chronicle of Higher Education*, Mar. 9, 2001, p. A47. The opportunity to establish private degree-granting universities follows from the Ontario Provincial government's initiative, announced in 2000, to convert the high-school curriculum from a 5-year term to 4 years by 2003. The conversion is expected to result in a 24-percent increase in the number of post-secondary students in the Province by 2005. For more information, see USDOC, ITA, "$960 Million Expansion Program," International Market Insight report, Mar. 31, 2000, found at Internet address *http://www.stat-usa.gov/*, retrieved Oct. 19, 2000.

[29] International Education Study Team, Survey of U.S. Posts–International Education: Obstacles and Opportunities, Feb. 2001, found at Internet address *http://exchanges.state.gov/education/educationusa/stats.htm*, retrieved Nov. 9, 2001. The study team was formed, with interagency participation including USITC staff, as part of the implementation of former President Clinton's memorandum on international education policy to the heads of Federal Government agencies in April 2000.

[30] Since 1999, Sylvan has purchased a 54-percent stake (subsequently enlarged) in the Universidad Europea de Madrid, a private university in Spain, the controlling interest in the parent company of the Universidad de Las Americas, an autonomous and fully accredited university in Santiago, Chile, a controlling interest in the parent company of the Universidad del Valle de Mexico, one of the largest private universities in Mexico, and sole interest in the Gesthotel SA Hotel Management School, known as "Les Roches," in Bluche, Switzerland. Sylvan Learning Systems, Inc., press releases, Oct. 26, Dec. 7, and Dec. 12, 2000, and Form 10-Q, Nov. 14, 2000, submitted to the U.S. Securities and Exchange Commission.

[31] World Trade Organization (WTO), Council for Trade in Services, Education Services (S/C/W/49), background note by the Secretariat, Sept. 23, 1998, and Kurt Larsen, Rosemary Morris, and John P. Martin, "Trade in Educational Services: Trends and Emerging Issues," OECD working paper (CERI/CD/RD(2001)6), 2001.

The United States, Australia, and New Zealand have submitted proposals pertaining to education services to the World Trade Organization (WTO).[32] The U.S. proposal states a willingness to consider higher (tertiary) education and training, which would augment commitments on education services spanning adult education and other education services previously made under the GATS. Central elements of the U.S. proposal seek clarification on the five levels of education services found in the informal WTO services sectoral classification list,[33] and include training and educational testing within the scope of education services. The proposal also calls for WTO members to initiate or undertake additional commitments with no limitations on higher education, adult education, and training services, in order to remove obstacles to the transmission, establishment, and operation of education services abroad.

Australia's proposal reiterates the country's current commitments under the GATS in secondary education, higher education, and other education services. The proposal lists several impediments to the liberalization of trade in education services for each mode of service delivery. Unlike the proposals by the United States and New Zealand, the Australian proposal does not call for clarification on the coverage of education services.

New Zealand's proposal acknowledges the country's previous commitments under the GATS in primary, secondary, and tertiary education services. Like the United States, New Zealand calls for clarification on the nature and scope of services within the categorization of education services. In particular, New Zealand holds that the definition of "other education services (CPC 92900)" is insufficient because it does not appear to acknowledge recent changes in the delivery of some education services, such as offerings by organizations or institutions outside those regarded as traditional education systems. Other areas of clarification sought by New Zealand span community education, education agency services, and the academic study and teaching of sport and recreational activities. Unlike the U.S. and Australian proposals, the New Zealand proposal does not include a list of existing trade barriers in education services. However, like the United States, New Zealand holds that reducing barriers to trade in education services can provide a means by which a government can supplement and support national education policy objectives.

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[32] WTO, "Communication from the United States: Higher (Tertiary) Education, Adult Education, and Training," S/CSS/W/23, Dec. 18, 2000; "Communication from Australia: Negotiating Proposal for Education Services," S/CSS/W/110, Oct. 1, 2001; and "Communication from New Zealand: Negotiating Proposal for Education Services," S/CSS/W/93, June 26, 2001, all found at Internet address *http://www.wto.org/,* retrieved Jan. 24, 2002.

[33] The WTO services sectoral classification list (MTN/GNS/W/120) divides education services as follows: primary education services, secondary education services, higher education services, adult education, and other education services. The scope of particular types of education services, such as professional and business, is not provided.

A significant number of nontariff barriers to trade exist in the areas of higher education, adult education, and training services. Many such barriers were identified in a recent survey of 140 U.S. diplomatic posts abroad.[34] The study found that nearly all countries permit private education to exist alongside public education, but with ownership and operational limitations in certain countries. Most barriers listed interfere with a potential supplier's establishment and operation of facilities, such as schools, classrooms, or offices. These include a prohibition on foreign entities offering higher education, adult education, and training services; the inability to obtain authorization to establish facilities abroad or to qualify as a degree-granting institution; restrictions on the electronic transmission of course materials; the imposition of economic needs tests; required use of a local partner; denial of permission to enter or exit from joint ventures voluntarily; exceptional delays in obtaining governmental approval, and denials issued without explanation or information that could be helpful in obtaining subsequent approval; discriminatory tax treatment; treatment less favorable to foreign than to domestic partners in a joint venture; unclear or unfairly administered laws and regulations; unclear or nontransparent subsidies; less favorable treatment of franchises compared with other forms of enterprise; and requirements to hire local workers, which would make operation abroad economically infeasible. Additional obstacles to trade include difficulties in obtaining authorization for skilled personnel to enter and leave a country, and costly fees or high taxes on repatriated earnings.

Visa policies and administration of such policies, and on occasion foreign currency regulations, may also restrict students' consumption of foreign education services.[35] Less directly, restrictions may entail delayed or nontransparent recognition of qualifications, as when subjective criteria are used in translating into national equivalents courses taken or degrees earned abroad.[36] Limits on foreign equity stakes and management control may also be encountered by education service providers seeking to establish and operate abroad.

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[34] International Education Study Team, Survey of U.S. Posts–International Education: Obstacles and Opportunities, Feb. 2001, found at Internet address *http://exchanges.state.gov/education/educationusa/stats.htm*, retrieved Nov. 9, 2001.

[35] WTO, Communication from Australia," S/CSS/W/110.

[36] WTO, Council for Trade in Services, Education Services.

CHAPTER 6
ENVIRONMENTAL SERVICES

Introduction

For the purposes of this report, environmental services[1] specifically include solid and hazardous waste management, environmental consulting and engineering, remediation,[2] environmental analysis and testing, and wastewater treatment, unless otherwise indicated in the text. Architectural, engineering, consulting, and specialized waste management firms, along with construction contractors, laboratories, and other professional service providers, supply these services. National governments, local governments, and firms acting to comply with environmental guidelines are the principal consumers of environmental services. Government purchases account for approximately 50 percent of environmental services consumption in developed countries and approximately 70 percent of consumption in developing countries.[3] Environmental goods and services are often provided as part of a single package, in which services frequently constitute the predominant share.[4] Although the data used in this chapter do not distinguish between cross-border trade and affiliate transactions, it is likely that trade in environmental services is conducted primarily through overseas affiliates, as cross-border trade is often infeasible in this sector.[5]

Trade and Investment Trends

Cross-Border and Affiliate Trade

U.S. exports of environmental services increased by 5.1 percent in 2000, to $3.9 billion (figure 6-1), slightly slower than the 6.0-percent average annual growth rate

[1] The scope of the environmental services sector, as discussed herein, is that used by Environmental Business International Inc. (EBI) in the compilation of trade and market data.

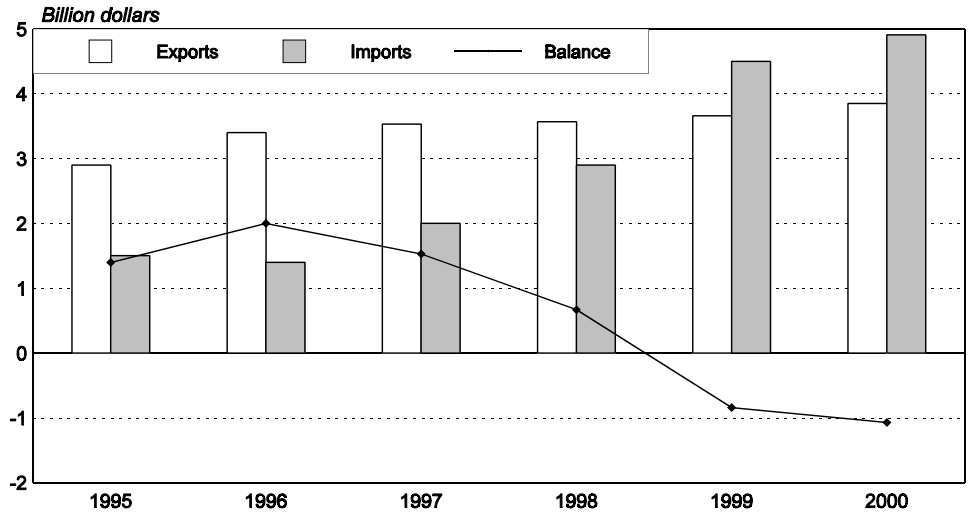
[2] Remediation services comprise the cleanup of polluted land and water sites, as well as the emergency cleanup of accidents that damage the environment, such as oil spills. United Nations Conference on Trade and Development (UNCTAD), "Strengthening Capacities in Developing Countries to Develop Their Environmental Services Sector," May 12, 1998, p. 5.

[3] UNCTAD, "Strengthening Capacities in Developing Countries to Develop Their Environmental Services Sector," pp. 5-6.

[4] Ibid., p. 11.

[5] Bureau of Economic Analysis (BEA) data on cross-border trade in environmental services or transactions by majority-owned affiliates in the environmental services industry are unavailable, principally because they are not captured by an individual service category. Consequently, this chapter includes trade data compiled and reported by EBI.

Figure 6-1
Environmental services: U.S. exports, imports, and trade balance, 1995-2000



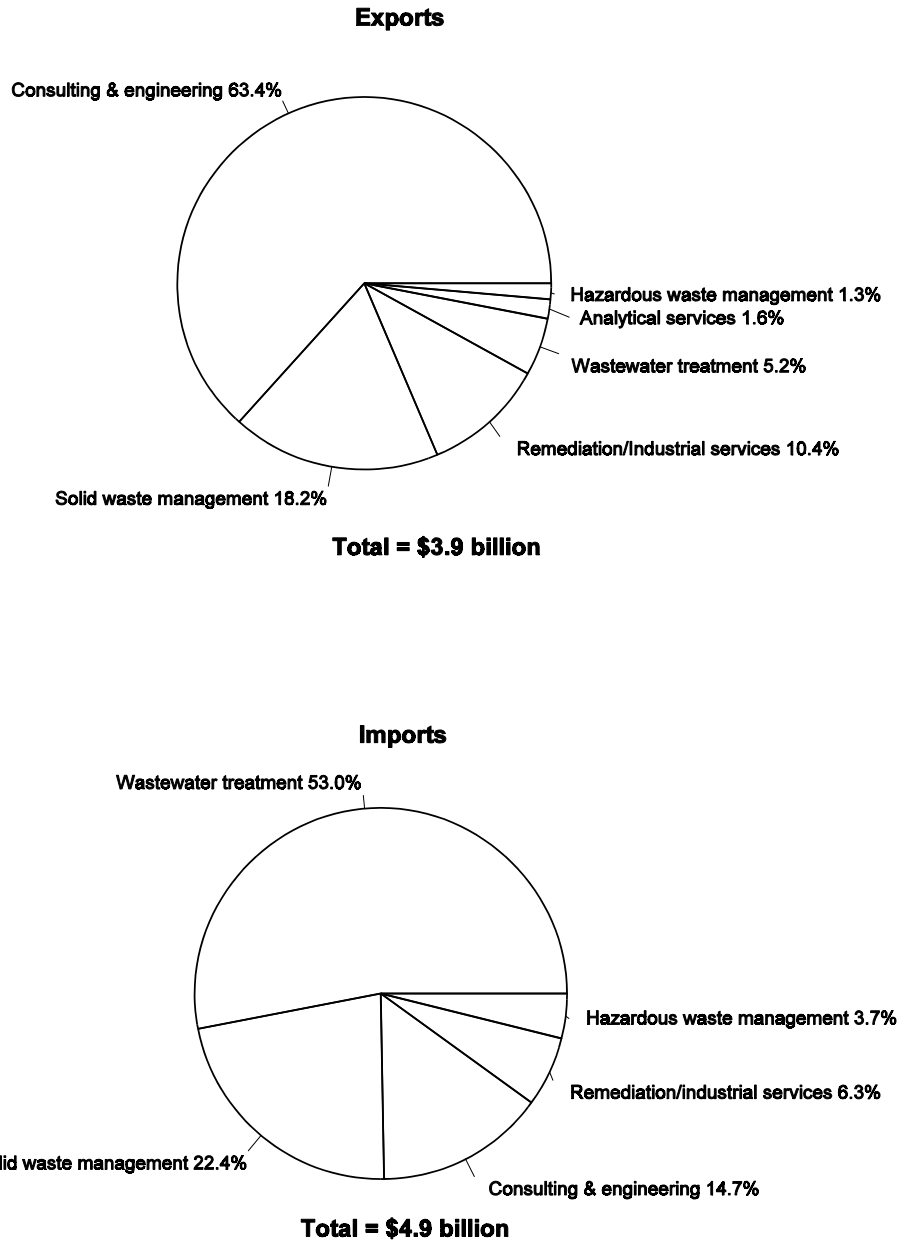
Source: EBI, preliminary estimates, electronic mail, Nov. 1, 2001; EBI, preliminary estimates, facsimile, Oct. 10, 2000; *EBI Report 1211: Asia Country Briefings*, excerpts presented at Environmental Exports: Outlook 2000, Arlington, VA, Nov. 8-9, 1999; EBI, *Environmental Business Journal*, Overview 1998, vol. 11, No. 7, p. 7; and Annual Industry Overview, Apr. 1996, vol. 9, No. 4, p. 7; and Apr. 1997, vol. 10, No. 4, p. 11;

registered during 1995-99.[6] U.S. exports of environmental consulting and engineering services accounted for 63.4 percent of all U.S. environmental services exports (figure 6-2), increasing from $2.3 billion in 1999 to $2.4 billion in 2000. Other industry segments in which the United States recorded relatively substantial exports in 2000 included solid waste management ($702 million) and remediation and industrial services ($403 million). Although these trade data do not distinguish between cross-border trade and affiliate transactions, the majority of environmental services trade likely occurs through foreign affiliates.

U.S. imports increased by 9.2 percent in 2000, to $4.9 billion. This increase was faster than the 2000 increase in exports but significantly slower than the average annual growth rate of 31.6 percent recorded for U.S. environmental services imports during 1995-99. U.S. imports of wastewater treatment services accounted for $2.6 billion, or 53.0 percent, of all U.S. environmental services imports in 2000. Other segments that accounted for large shares of U.S. imports included solid waste management services ($1.1 billion) and consulting and engineering services ($720 million). During 1995-2000, imports accounted for a small but rapidly increasing share of the U.S. environmental services market, as import penetration increased from 1.7 percent in 1995 to 4.8 percent in 2000. Imports were most prevalent as a

[6] EBI, preliminary estimates, electronic Mail, Nov. 1, 2001; EBI, preliminary estimates, facsimile, Oct. 10, 2001; *EBI Report 1211: Asia Country Briefings*, excerpts presented and Environmental Exports: Outlook 2000, Arlington, VA, Nov. 8-9, 1999; EBI, *Environmental Business Journal*, Overview 1998, vol. 11, No. 7, p. 7; EBI, *Environmental Business Journal*, Annual Industry Overview, Apr. 1997, vol. 10, No. 4, p. 11; and EBI, *Environmental Business Journal*, Annual Industry Overview, Apr. 1996, vol. 9, No. 4, p. 7.

Figure 6-2
Environmental services: U.S. exports and imports, by industry segment, 2000[1]



[1] Totals may not equal 100 percent due to rounding.

Source: EBI, preliminary estimates, electronic mail, Nov. 1, 2001.

share of the U.S. wastewater treatment segment (8.4 percent) in 2000, whereas imports accounted for only 0.3 percent of the U.S. market for analytical services.

As a result of these trends, the overall U.S. environmental services trade deficit increased from $840 million in 1999 to $1.1 billion in 2000, following 4 years of surpluses in environmental services trade. The United States recorded trade surpluses in the consulting and engineering, remediation/industrial services, and analytical services segments in 2000, while trade deficits were posted in the wastewater treatment, solid waste management, and hazardous waste management segments.[7] Overall, the trends observed in U.S. environmental services trade data reflect continuing industry consolidation and the transfer of environmental services assets between U.S. and foreign owners, particularly in the solid waste management and wastewater treatment segments.

Foreign Direct Investment

Comprehensive data on U.S. direct investment in foreign environmental services markets are not available, principally because such data are not captured in individual service categories tracked by statistical agencies. However, several U.S. environmental services firms have invested in affiliates abroad. For example, Waste Management and Safety-Kleen have offices in Canada; Bechtel Group Inc. maintains offices in 27 countries other than the United States; the IT Group maintains offices in 10 foreign countries; and CH2M Hill maintains offices in 31 foreign countries.[8]

Only a limited amount of data regarding the operations of U.S.-based environmental service affiliates of foreign parent firms is available. These data indicate that the assets of such affiliates[9] totaled $9.0 billion in 1999.[10] Assets of solid waste, hazardous waste, and remediation affiliates, which accounted for the majority of assets held by U.S.-based environmental services affiliates, totaled $5.7 billion in 1999. Water, sewage, irrigation, and steam and air-conditioning affiliates held assets

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[7] U.S. exports in the hazardous waste segment reflect revenues generated from the management of waste imported from foreign countries, while imports reflect revenues generated in foreign countries from the management of waste exported from the United States. As it is expensive and potentially dangerous to transport hazardous waste over long distances, exports comprise a relatively small share of U.S. revenues in this industry segment and Canada and Mexico are the United States' principal trading partners in this segment. Industry representative, telephone interview by USITC staff, Jan. 16, 2002.

[8] Bechtel Group, Inc., "Offices by Country," found at Internet address *http://www.bechtel.com/,* retrieved Oct. 4, 2001; The IT Group, Inc., "Office Location Directory," found at Internet address *http://www.theitgroup.com/,* retrieved Oct. 3, 2001; and CH2Hill Companies, Ltd., "Office Locations," database, found at *http://www.ch2m.com/*, retrieved Oct. 4, 2001.

[9] In this instance, environmental services include water and sewage utilities, irrigation systems, steam and air-conditioning supply, solid and hazardous waste management, and remediation.

[10] USDOC, BEA, *Foreign Direct Investment in the United States: Operations of Foreign Parent Companies and Their U.S. Affiliates, Preliminary 1998 Estimates*, Dec. 2000, Table A-1.

valued at $3.3 billion in 1999.[11] Data regarding the operations of foreign-based U.S.-owned environmental service affiliates are not available.

Market Overview

U.S. Output

In 1999, the U.S. environmental services industry generated revenues of $98.0 billion and employed approximately 716,000 persons. Revenues in the U.S. environmental services industry increased at an average annual rate of 2.9 percent during 1990-99, while the number of employees in the industry increased at a slower average annual rate of 1.3 percent (table 6-1).[12] This suggests that revenues per employee, or the productivity of labor, increased during the period. In each industry segment, with the exception of analytical services, employment either increased at a slower rate than revenues or decreased at a faster rate than revenues, suggesting increases in labor productivity. In the analytical services segment, employment and revenues decreased at the same rate, suggesting unchanged productivity levels.

Data on intermediate inputs indicate that maintenance and repair construction services; water and sanitary services; trucks and buses (including trailers and parts); and legal, engineering, accounting and related services together comprise almost half of all intermediate inputs consumed by the water and sanitary services industry.[13] During 1992-97, industry consumption of all four of these inputs increased in terms of value.

Competitive Environment

Leading U.S.-owned suppliers of environmental services include Waste Management, Inc., Allied Waste Industries, Inc., and Republic Services, Inc., which provide solid waste management services; Bechtel Group, Inc., The IT Group, Inc., and CH2M Hill Companies, Ltd., which provide consulting, engineering, and/or

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[11] In order to avoid disclosure of individual company data, BEA did not report data reflecting the assets of solid waste, hazardous waste, and remediation affiliates in 1997.

[12] Environmental Business International, Inc. (EBI), *Number of Jobs in the U.S. Environmental Industry by Industry Segment, 1989-1998*, data chart; EBI, *U.S. Environmental Industry Annual Revenues by Industry Segment, 1989-1998*, data chart; and EBI data found in USDOC, ITA, *Environmental Industry of the United States - Overview by State and Metropolitan Statistical Area*, found at Internet address *http://www.environment.ita.doc.gov/,* retrieved Sept. 25, 2001. These data are not adjusted for inflation.

[13] In this instance, the water and sanitary services industry comprises water supply, sewerage services, materials recovery, solid and hazardous waste treatment and disposal, steam and air conditioning supply, irrigation systems, remediation, vacuuming of airport runways, malaria control and mosquito eradication, and other sanitary services. U.S. Census Bureau, *1987 SIC Matched to 1997 NAICS, Major Groups (2-Digit)*, found at Internet address *http://www.census.gov/epcd/naics/nsic2ndx.htm#S4,* retrieved Oct. 4, 2001.

Table 6-1
Average annual growth rate of revenues, employment, and labor productivity in the environmental services industry, 1990-99

Industry	Revenues	Employment	Labor productivity (Revenues/ employee)
		(Percentage)	
Analytical services	(2.84)	(2.84)	0.00
Consulting and engineering	3.07	2.09	0.96
Hazardous waste management	(1.90)	(2.26)	0.36
Remediation/industrial services	0.14	(1.58)	1.75
Solid waste management	4.02	2.42	1.56
Wastewater treatment	4.29	3.43	0.82
All environmental services	2.90	1.27	1.66

Source: Environmental Business International, Inc. (EBI), *Number of Jobs in the U.S. Environmental Industry by Industry Segment, 1989-1998*, data chart; EBI, *U.S. Environmental Industry Annual Revenues by Industry Segment, 1989-1998*, data chart; and and EBI data found in USDOC, ITA, *Environmental Industry of the United States - Overview by State and Metropolitan Statistical Area*, found at Internet address *http://www.environment.ita.doc.gov/*, retrieved Sept. 25, 2001.

remediation services; and Safety-Kleen Corp., which provides recycling and hazardous waste services. It is reported that American Water Works Co., Inc., the only U.S. water company that ranked among the world's top 50 environmental firms in 2000,[14] will soon be acquired by German utilities firm RWE AG.[15]

A substantial number of firms operate in each segment of the U.S. environmental services industry.[16] However, in several industry segments, a small number of firms control a significant share of the market. For example, the three largest firms in the U.S. solid waste management segment accounted for over 50 percent of total U.S. solid waste revenues and approximately 70 percent of the U.S. market for landfill

[14] EBI, "EBJ's Top 50 Environmental Companies in the World," *Environmental Business Journal*, vol. XII, No. 9/10, p. 7.

[15] "American Water Works to be acquired by RWE in $4.6 Billion Cash Transaction," Sept. 17, 2001, found at Internet address *http://waterindustry.org/,* retrieved Sept. 26, 2001.

[16] Specifically, data for 1999 indicate that the U.S. analytical services segment comprised 780 firms; the hazardous waste management segment, 900 firms; the remediation and industrial services segment, 3,100 firms; the consulting and engineering segment, 3,750 firms; the solid waste management segment, 4,600 firms; and the water treatment works segment, 28,000 firms. USDOC, "Environmental Industry of the United States - Overview by State and Metropolitan Statistical Area," found at Internet address *http://www.environment.ita.doc.gov/,* retrieved Sept. 25, 2001.

services in 2000.[17] Safety-Kleen Corp. accounts for approximately 50 percent of the U.S. market for hazardous waste incineration.[18] By contrast, the U.S. water and wastewater services segment largely comprises small municipal monopolies.[19]

Competition in mature segments of the environmental services industry– which include solid waste management, hazardous waste management, remediation, and consulting and engineering– is largely based on price, although some smaller firms compete by focusing on niche markets. Consolidation has been prevalent in these industry segments, as many firms have acquired capabilities in additional market segments in an effort to meet increasingly broad customer demands.[20] Mergers and acquisitions are prevalent in the water and wastewater services industry, as some firms have purchased companies in related industries (such as chemicals and equipment manufacturing) in order to build conglomerates capable of acquiring and managing overseas infrastructure facilities.[21]

U.S. firms are most competitive in the analytical services, consulting and engineering, hazardous waste management,[22] and remediation and industrial services segments of the global environmental services industry. U.S. competitiveness in the solid waste management segment has declined in recent years, as leading U.S. firms, Browning-Ferris Industries, Inc. and Waste Management, have divested foreign assets.[23] The global market for water and wastewater services is dominated by European firms. French firms, Vivendi Environment SA and Suez, and German firm, RWE are the top world providers of water and wastewater services.[24] British firms are also competitive in this market, as the 1989 privatization of the British water system created large firms that were financially capable of establishing overseas

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[17] EBI, "The Environmental Industry in 2001: The Paradox of Change," *Environmental Business Journal*, vol. XIII, No. 3/4, p. 3.

[18] Ibid.

[19] OECD, *Global Trends in Urban Water Supply and Waste Water Financing and Management: Changing Roles for the Public and Private Sectors*, p. 18; and *Economic Regulation of Water Companies*, p. 32.

[20] The McGraw-Hill Companies, Inc., USDOC, ITA, *U.S. Industry and Trade Outlook* (New York: 2000) p. 20-3, 20-12.

[21] Ibid., p. 20-7.

[22] The United States posted small trade deficits in the hazardous waste management industry in 1998, 1999, and 2000. However, because exports constitute a particularly small share of total U.S. revenues in the hazardous waste management segment, these deficits have little bearing on the strength of U.S. firms in this industry. For more information, see OECD, *Environmental Goods and Services,* footnote 31. Industry representative, telephone interview by USITC staff, Jan. 16, 2002.

[23] For example, Waste Management announced the sale of its German waste services business to Australian firm Brambles Industries Ltd. in May 2000. EBI, "The Global Market Rides Economic Recovery," *Environmental Business Journal*, vol. XII, No. 9/10, pp. 1, 2, and 5; and "Brambles Unit to Buy German Waste Business," *Planet Ark*, May 9, 2000, found at Internet address http://www.planetark.org/, retrieved Sept. 5, 2000.

[24] EBI, "The Global Market Rides Economic Recovery," *Environmental Business Journal*, vol. XII, No. 9/10, pp. 1, 2, and 5; and Thibaut Madelin "RWE May Eye German Water," Sept, 26, 2001, *FT.com*, found at Internet address *http://www.ft.com/,* retrieved Sept. 27, 2001.

operations.[25] These included Anglican Water Services Ltd., Severn Trent Water Ltd., Thames Water plc (which was acquired by RWE in 2000),[26] and Yorkshire Water Services Ltd. (a subsidiary of Kelda Group plc).

In recent years, European companies have acquired many of the largest U.S.-owned water/wastewater services firms. For example, Vivendi purchased US Filter in 1999; Thames Water purchased E'Town Corporation, Kelda Group acquired Aquarion Company, and Suez acquired United Water Resources all in 2000; and RWE agreed to purchase American Water Works[27] in September 2001. Consolidation is also occurring in other industry segments. Recent mergers and acquisitions include Allied Waste's purchase of BFI in 1999[28] and British firm Severn Trent's acquisition of several U.S.-based environmental testing firms during 1998-2000.[29] Such consolidation likely will continue in the future, as environmental firms react to slower industry growth.[30]

Recent regulatory developments have had an important impact on the environmental services industry. Environmental regulation, one of the principal sources of demand for environmental services,[31] is increasingly focused on pollution prevention, rather than end-of-pipe[32] solutions.[33] This has led to a decrease in demand for basic equipment and an increase in demand for environmental services such as consulting, auditing, and environmental engineering.[34] In the hazardous waste management and remediation segments, a recent period of excess supply– resulting from a shift in emphasis to these market segments in anticipation of a large increase in Superfund projects, which never occurred– was alleviated to some extent by increased demand for methyl tertiary-butyl ether (MTBE) cleanup services. This increased demand is most pronounced in California, which issued guidance on MTBE cleanup in 1999.[35]

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[25] The McGraw-Hill Companies, Inc., USDOC, ITA, *U.S. Industry and Trade Outlook*, (New York: 2000) p. 20-7.

[26] Andrew Taylor and Uta Harnischfeger, "RWE Acquires Thames Water in £4.3bn Deal," *FT.com,* Sept. 25, 2000, found at Internet address http://news.ft.com/, retrieved Sept. 25, 2000.

[27] Further, American Water Works acquired Azurix North America– a water and wastewater services provider owned by U.S. energy firm Enron– in August 2001.

[28] "Allied Waste's BFI Acquisition Complete," *The Business Journal of Phoenix*, Aug. 2, 1999, found at Internet address *http://phoenix/bcentral.com/,* retrieved Oct. 9, 2001.

[29] EBI, "Acquisitions Boost Severn Trent Laboratories' U.S. Holdings to $200 Million," *Environmental Business Journal*, vol. XIII, No. 3/4, p. 7-8.

[30] The McGraw-Hill Companies, Inc., USDOC, ITA, *U.S. Industry and Trade Outlook*, (New York: 2000) p. 20-4.

[31] OECD, *Environmental Goods and Services: the Benefits of Further Global Trade Liberalization*, (Paris: OECD, 2001), p. 27.

[32] End-of-pipe technologies address the cleanup and management of pollution that has already been produced.

[33] The McGraw-Hill Companies, Inc., USDOC, ITA, *U.S. Industry and Trade Outlook*, (New York: 2000) p. 20-1.

[34] OECD, *Environmental Goods and Services: The Benefits of Further Global Trade Liberalization*, (Paris: OECD, 2001), p. 31.

[35] Kara Sissell, "Economics and Politics Drive Clean-up Trends," *Chemical Week*, Jan. 12, 2000, pp. 35-36.

WTO Negotiating Proposals

Australia, Canada, Colombia, the European Union (EU), Switzerland, and the United States have submitted negotiating proposals on environmental services to the World Trade Organization (WTO).[36] The proposals submitted by Australia, Canada, the EU, Switzerland, and the United States address many of the same issues and suggest similar objectives. Each of these five proposals begins with a discussion of the potential environmental benefits of environmental services trade liberalization, then goes on to suggest that the current WTO classification of the environmental services sector–which comprises sewage services, refuse disposal services, sanitation and similar services, and other environmental services[37]– does not adequately cover all activities of the industry. The papers submitted by the EU and Switzerland favor a slight modification of the WTO environmental services category, and include a specific list of related activities– such as construction, engineering, and research and development– that should be addressed within an environmental services negotiation, but that do not necessarily need to be reclassified as "environmental services." The classification schemes proposed in these papers are almost identical.[38] The United States and Canada also support the consideration of both core environmental services and related activities, but propose no modification to the current environmental services classification. Australia favors the EU approach, but does not specifically list services that should be addressed within these negotiations.

The principal objective of the proposals submitted by Australia, Canada, the EU, Switzerland, and the United States is the reduction or removal of barriers to environmental services trade. Each paper supports the liberalization of a similar list of trade impediments, which includes restrictions on the provision of services through a foreign-invested commercial presence (mentioned in all five papers), limitations on the temporary entry and stay of foreign personnel (listed in every paper except that submitted by Australia), and a lack of regulatory transparency (mentioned in every paper except that submitted by Switzerland). The EU and Switzerland also propose the liberalization of barriers relating to the provision of environmental services through cross-border supply or consumption abroad.[39] Although many of

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[36] World Trade Organization (WTO), "Communication from Australia, Negotiating Proposal for Environmental Services," S/CSS/W/112, Oct. 1, 2001; "Communication from Canada, Initial Negotiating Proposal on Environmental Services," S/CSS/W/51, Mar. 14, 2001; "Communication from Colombia: Environmental Services," S/CSS/W/12, Nov. 27, 2001; "Communication from the European Communities and their Member States, GATS 2000: Environmental Services," S/CSS/W/38, Dec. 22, 2000; "Communication from Switzerland, GATS 2000: Environmental Services," S/CSS/W/76, May 4, 2001; and "Communication from the United States, Environmental Services," S/CSS/W/25, Dec. 18, 2000, all found at Internet address *http://www.wto.org/,* retrieved Jan. 24, 2002.

[37] In this instance, other environmental services include cleaning services of exhaust gases, noise abatement, nature and landscape protection, and other environmental services.

[38] Unlike Switzerland, the EU includes "water for human use" in the modified environmental services category and includes distribution and transportation in its list of related activities.

[39] WTO, "Communication from Australia, Negotiating Proposal for Environmental Services," S/CSS/W/112, Oct. 1, 2001; "Communication from Canada, Initial Negotiating Proposal on Environmental Services," S/CSS/W/51, Mar. 14, 2001; "Communication from

(continued...)

these objectives can be addressed by scheduling or liberalizing GATS commitments that specifically apply to the provision of environmental services, each paper acknowledges that some of these objectives, such as increased transparency and the reduction of certain restrictions on commercial presence, will require the establishment or liberalization of horizontal trade measures.[40] Accomplishment of the objectives listed in these proposals would address most impediments to environmental services trade.

Like the five proposals discussed above, Colombia's environmental services proposal discusses the WTO classification of environmental services. Specifically, Colombia favors using the EU classification as the basis for negotiations and suggests adding environmental impact assessment and mitigation, services related to environmental management systems, and clean technologies services to this classification. Colombia's paper also states that the provision of environmental services often requires the establishment of a commercial presence and the temporary entry and stay of personnel. However, Colombia indicates that commitments should be evaluated based on member-country level of economic development. Colombia also proposes that member countries evaluate the professional qualifications of foreign service providers using the same criteria applied to domestic service providers.

[39] (...continued)
Colombia: Environmental Services," S/CSS/W/12, Nov. 27, 2001; "Communication from the European Communities and their Member States, GATS 2000: Environmental Services," S/CSS/W/38, Dec. 22, 2000; "Communication from Switzerland, GATS 2000: Environmental Services," S/CSS/W/76, May 4, 2001; and "Communication from the United States, Environmental Services," S/CSS/W/25, Dec. 18, 2000, all found at Internet address *http://www.wto.org/,* retrieved Jan. 24, 2002.

[40] A horizontal trade measure is a commitment or discipline that effects all service industries.

CHAPTER 7
EXPRESS DELIVERY SERVICES

Introduction

The express delivery services industry comprises companies involved in the expedited movement of documents, parcels, and other goods. Express delivery operators offer an integrated service, maintaining control of the goods throughout the delivery process and often using tracking and tracing technology to monitor the location of each item. Additional services and value-added elements include, for example, collection from a point designated by the sender, release upon signature, specific delivery time guarantee, and the ability of the sender to confirm delivery. Where items are shipped internationally, express delivery providers are involved in customs clearance procedures, including the payment of required duties and taxes. Express delivery services trade principally takes place through the establishment of a commercial presence in the market to be served. Express carriers also provide regional services between countries. Within service regions, ground transport is generally limited to deliveries of no more than 500 miles, while air transport is reserved for longer distances and "time-sensitive" deliveries.

Trade and Investment Trends

Cross-Border Trade

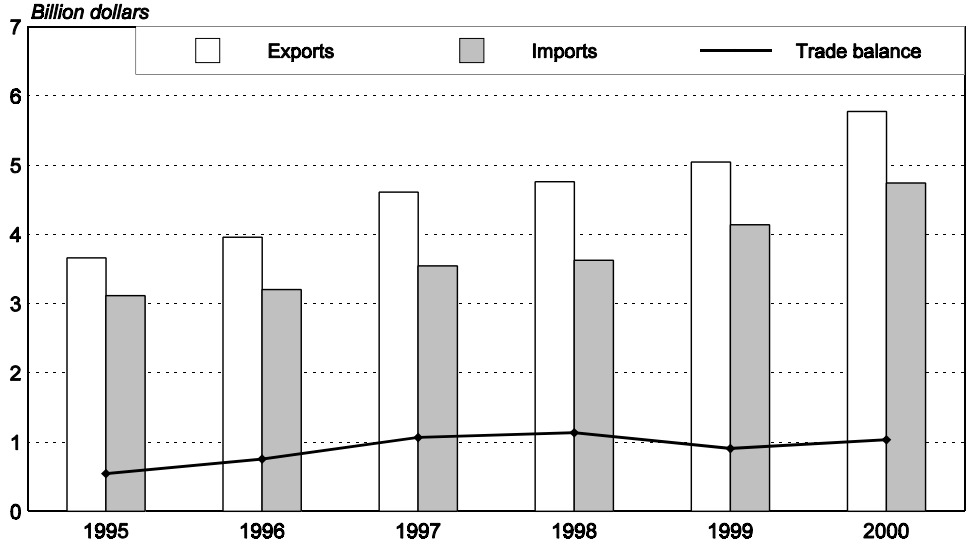
Trade data for cross-border express delivery services are not available. However, an examination of air-cargo transport data[1] indicates that U.S. exports of such services totaled $5.8 billion in 2000, compared to imports of $4.7 billion, resulting in a $1.1 billion surplus (figure 7-1). Exports increased by 14.4 percent in 2000, significantly higher than the 8.4-percent average annual rate of growth recorded during 1995-99. Similarly, imports increased by 14.6 percent during 2000, compared to the 7.4-percent average annual rate of growth recorded during 1995-99. The increase in worldwide air-cargo revenues is attributable, in part, to carrier fuel surcharges on freight rates implemented to offset the rising cost of fuel.[2] The U.S. trade surplus in air-freight transport services increased by 13.9 percent in 2000, in line with the 13.6-percent average annual growth rate recorded during 1995-99.[3]

[1] Cross-border air-freight transport data comprise U.S. international transactions arising from the transport of goods by air, including time definite, or express, carriage.

[2] USDOC, BEA, *Survey of Current Business*, Nov. 2001, p. 55.

[3] USDOC, BEA, *Survey of Current Business*, Nov. 2001.

Figure 7-1
Air freight services: U.S. cross-border exports, imports, and trade balance, 1995-2000



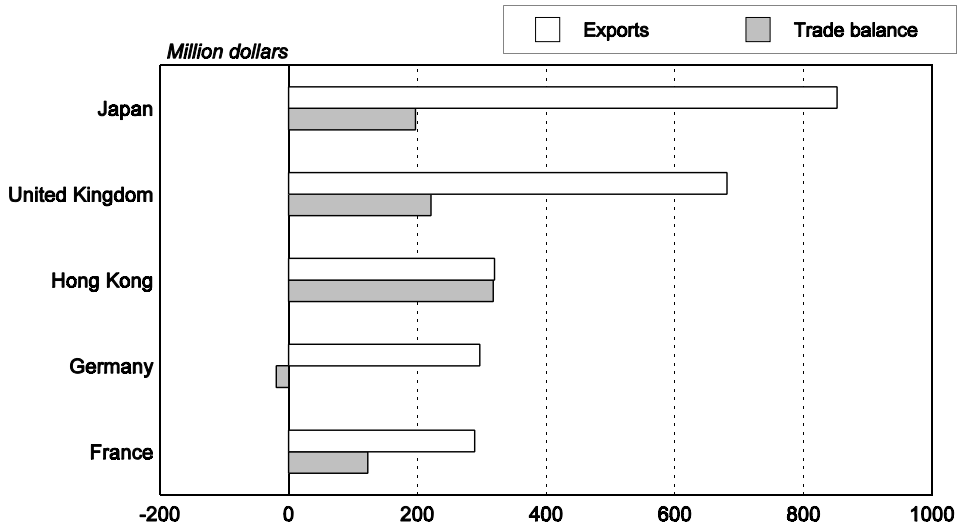
Source: U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA), *Survey of Current Business,* Oct. 2000, pp. 134-137; USDOC, BEA, Oct. 1999, p. 68; and USDOC, BEA, *Survey of Current Business*, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

Japan, the United Kingdom, Hong Kong, Germany, and France were the top five export markets for air-freight services in 2000 (figure 7-2). Japan remained the largest market for U.S. air-freight services, accounting for exports of $852 million during 2000. U.S. exports of such services to Japan increased by 22.9 percent in 2000, representing a return to a more normal growth rate after significantly lower exports during 1998 and 1999, which were attributable, in part, to the Asian financial crisis. The United Kingdom was the United States' second-largest export market for air-freight services, with exports of $681 million in 2000. U.S. exports of air-cargo services to Hong Kong, Germany, and France totaled $320 million, $297 million, and $289 million, respectively, in 2000. Led by China and Korea, the Asia-Pacific region was the fastest growing market for U.S. air-freight exports during 2000. Exports to China grew by 28.1 percent, and exports to Korea increased by 27.3 percent during 2000, registering the fastest growth rates of all U.S. export markets.[4]

U.S. imports of air-freight services from Japan increased by 13.9 percent to $655 million in 2000, making Japan the United States' largest import supplier. With imports of $460 million in 2000, the United Kingdom was the United States' second-largest import supplier of air freight services, followed by China, Germany, and Taiwan, which accounted for U.S. imports of $342 million, $316 million, and $239 million, respectively.

[4] Colography Group, "Colography Group Says Integrators Tightened Grip on U.S. Air Exports in 2000, FedEx Gained Share," press release, Aug. 24, 2001, found at Internet address *http://www.colography.com/press/pr8242001.html,* retrieved Oct. 1, 2001.

Figure 7-2
Air freight services: U.S. cross-border exports and trade balance, by major trading partners, 2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Nov. 2001, p. 71.

Foreign Direct Investment and Affiliate Transactions

In 1999, sales of courier and messenger services[5] by U.S. affiliates of foreign firms totaled $184 million (figure 7-3), representing a relatively small share of the U.S. market.[6] By contrast, U.S.-based FedEx and UPS generated domestic revenues of $11 billion and $24 billion, respectively, in 2000. Although sales by U.S. affiliates declined by 18.5-percent in 1999, such sales will likely increase in coming years as a result of Deutsche Post's acquisition of DHL in 2000.

Market Overview

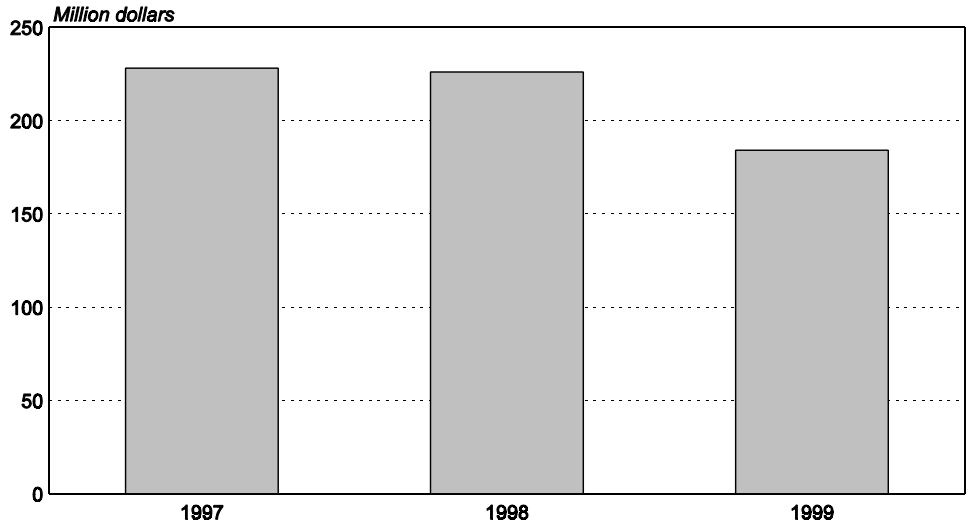
U.S. Output

Although industry output figures are not available specifically for express delivery services, they are available for industries of which express delivery services are a

[5] The courier and messenger services industry comprises firms engaged in air, surface, or integrated delivery services, and includes large integrated carriers, such as FedEx and UPS, as well as smaller establishments that provide services.

[6] USDOC, BEA, e-mail correspondence with USITC staff, Nov. 30, 2001.

Figure 7-3
Express delivery service affiliates: U.S. purchases from majority-owned affiliates of foreign firms, 1997-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business.*

significant component. U.S. air cargo transport carriers[7] handled 30 billion revenue ton miles (RTM) in 2000,[8] representing an increase of approximately 20 percent over 1999. This figure was significantly faster than the average annual growth rate of 6.3 percent experienced during 1990-99.[9] International air freight/express is reportedly the fastest growing component of the air cargo market, with shipments increasing to 14.8 billion RTMs in 2000. This represents an increase of 8.6 percent from 1999, consistent with the 8.1-percent average annual growth rate recorded during 1990-2000.[10]

Surface transport, of which express delivery services are an important component, is contributing an increasing share of the industry revenue. It is estimated that surface transport represented 52 percent of total parcel shipments in 2001, representing a 4.2-

[7] Air cargo traffic comprises domestic and international freight/express and mail shipments. Cargo is moved in passenger aircraft and in dedicated all-cargo aircraft, on both scheduled and nonscheduled flights.
According to Boeing, in 1999, the express segment comprised almost 63 percent of the U.S. air cargo market, and 9.2 percent of the international air cargo market. Boeing Corp., *World Air Cargo Forecast, 2000/2001*, found at Internet address *http://www.boeing.com/commercial/cargo/cargo02.html#4,* retrieved Oct. 4, 2001.

[8] Revenue ton miles (RTM) incorporates both the cargo tonnage and the distance over which it is flown. U.S. Department of Transportation (USDOT), "FAA Aerospace Forecasts, Fiscal Years 2000-2012," *Federal Aviation Administration, Office of Aviation Policy and Plans*, Mar. 2001, p. III-43.

[9] USDOT, *Historical Air Traffic Data,* Bureau of Transportation Statistics, found at Internet address *http://www.bts.gov/oai/indicators/airtraffic/annual/1981-2001.html,* retrieved Oct. 5, 2001.

[10] USDOT, "FAA Aerospace Forecasts, Fiscal Years 2000-2012," pp. III-44 and III-46.

percent increase over 2000.[11] One proxy for the surface transportation sector is the trucking and warehousing industry. Real gross output of the trucking and warehousing industry increased by 1.7 percent per annum, on average, during 1990-99. The industry met rising demand principally by outsourcing more intermediate inputs, which increased by 5.2 percent per annum during 1990-99. Increased expenditures on transport services, fuel, equipment leases, and equipment maintenance seem to account for relatively rapid growth among intermediate inputs. For example, UPS operating expenses increased by 6.3 percent in 1998 as purchased transport expenses increased by $160 million and fuel costs increased by $77 million.[12] FedEx contracts with local transport companies to complete deliveries in regions where it does not have a physical presence.[13] DHL Worldwide buys cargo space in the holds of aircraft operated by other airlines for shipments to Asia, which reportedly provides the express carrier with the flexibility to offer services in the region without having to negotiate landing rights under bilateral aviation agreements.[14]

Competitive Environment

In 2000, the two largest U.S. express delivery operators–UPS and FedEx–generated revenues of $29.8 billion and $19.6 billion, respectively, jointly accounting for almost 86 percent of major U.S. express delivery operators' revenues. Other major U.S. express delivery operators include Airborne Express,[15] Emery Worldwide,[16] and Bax Global,[17] with revenues of $3.3 billion, $2.6 billion, and $2.1 billion, respectively.[18] U.S.-based express delivery providers generated non-U.S. revenue of slightly more than $10 billion in 2000.[19] Deutsche Post-subsidiary DHL Worldwide Express (DHL)[20] and Netherlands-based TNT Post Group (TNT) are the two largest foreign-based express delivery providers. In 1999, DHL generated total revenues of

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[11] Colography Group, *Surface Transportation to Dominate U.S. Expedite Market in 2001*, press release, Dec. 11, 2001.

[12] UPS, Form 10-K, 1998, found at Internet address *http://www.sec.gov/,* retrieved Dec. 14, 2001.

[13] Federal Express, Form 10-K, 2000, found at Internet address *http://www.sec.gov/*, retrieved Feb. 23, 2000.

[14] "Pass the Parcel: Transport in Asia," Mar. 18, 1995, found at Internet address *http://www.proquest.com*, retrieved Nov. 23, 1999.

[15] Airborne Express is a division of Airborne, Inc.

[16] Emery Worldwide is a division of CNF, Inc. In December 2001, CNF subsidiaries Emery Worldwide and Menlo Logistics were merged with Vector SCM, a joint venture partnership between CNF and General Motors, to form Menlo Worldwide. The new company will provide worldwide express delivery- and logistics-related services.

[17] Bax Global is a division of the Pittston Company.

[18] Revenue numbers are from company 10-K reports filed with the Securities and Exchange Commission, found at Internet address *http://www.sec.gov,* retrieved Nov. 6, 2001.

[19] International revenue numbers are from company 10-K reports filed with the Securities and Exchange Commission, found at Internet address *http://www.sec.gov,* retrieved Nov. 6, 2001.

[20] Although DHL began its operations in the United States, the non-U.S. portions of the company's operations, which generate the largest share of its revenues, are based in Brussels. DHL is majority owned by Germany's Deutsche Post.

approximately $5.1 billion,[21] and in 2000, TNT generated express delivery revenues of approximately $3.7 billion.[22]

Express delivery providers primarily compete with transport companies involved in the movement of goods, including freight forwarders, local courier providers, and postal service operators. The industry generates revenues from several sources, including same day and next day delivery, and expanded services, such as deferred freight transport, logistics management services,[23] and certain mail management services.[24]

Express delivery providers have recently been expanding their service offerings in order to create new revenue opportunities. For example, in January 2001, FedEx announced a $7-billion, 7-year service agreement with the United States Postal Service (USPS) to provide air-transport capacity for certain postal items in exchange for the option to place FedEx drop boxes in every postal location throughout the United States.[25] FedEx and UPS have both recently acquired freight forwarding companies as well, which will allow both firms to expand their range of freight delivery services.[26]

Express delivery firms have also begun to package their logistics management expertise as a revenue-generating product. Demand for logistics management services is increasing as companies continue to use "just-in-time" manufacturing techniques, which enable them to produce to order, thereby reducing inventory costs. Outsourcing logistics management to express delivery operators enables manufacturers to improve efficiency and focus on their core competencies. In 2000, UPS Logistics Group generated revenues of approximately $1 billion, representing a 32-percent increase over 1999 levels,[27] and TNT Post Group's logistics division generated revenues of $1.9 billion, representing a 43-percent increase over 1999.[28] Logistics management solutions require significant capital investments in advanced information technologies. For example, in 1999 FedEx announced its intention to spend approximately $1 billion annually on shipping technology in order to provide

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[21] Most recent data available.

[22] TNT Post Group N.V., the Netherlands' privatized postal service, generates the majority of its revenue from postal-related services, but its express delivery service's revenues have been increasing.

[23] Logistics management services involve the process of planning, implementing and controlling the flow and storage of products from the point of origin to the final destination. U.S. Department of Commerce (USDOC), International Trade Administration (ITA), *U.S. Industry and Trade Outlook, 1999* (New York: McGraw-Hill, 1999), p. 43-14.

[24] Rigas Doganis and Associates, "The Importance and Impact of the Express Industry in Europe," p. 3.

[25] FedEx, "FedEx, USPS Forge Two New Service Agreements," Company press release, Jan. 10, 2001, found at Internet address *http://www.federalexpress.com,* retrieved Sept. 7, 2001.

[26] FedEx, "FedEx completes acquisition of American Freightways and announces formation of FedEx Freight," Company Press Release, Feb. 12, 2001, found at Internet address *http://www.federalexpress.com,* retrieved Sept. 7, 2001, and Richard Stice, *Transportation: Commercial*, Standard & Poor's Industry Surveys, July 12, 2001, p. 3.

[27] UPS, form 10-K, found at Internet address *http://www.sec.gov/*, retrieved Sept. 7, 2001.

[28] TNT Post Group (TNT), company annual report, found at Internet address *http://www.tntpost.com,* retrieved Sept. 7, 2001.

warehouse and distribution services for semiconductor and computer companies. One objective is to develop software tools that link customers' ordering, manufacturing, and inventory systems with FedEx's network of automated warehouses, call centers, and global shipping centers.[29]

WTO Negotiating Proposals

The United States, the European Union (EU), Mercosur (plus Bolivia), and Switzerland have submitted express delivery services negotiating proposals to the World Trade Organization.[30] All of these proposals urge countries to make additional market access and national treatment commitments in express delivery services. Presently, express delivery providers encounter significant impediments to trade, including limited airport landing slots, inadequate airport facilities, ground-handling service restrictions, and cargo processing impediments.[31] Express delivery providers also face customs clearance restrictions, self-handling restrictions, and restrictions on the right to provide pick up and delivery services.[32] Most of the negotiating proposals also suggest changes in the classification of express services,[33] although they disagree on how the industry should be classified.

The U.S. negotiating proposal on express delivery services principally establishes a new definition for the industry and suggests classification as a subheading of "communication services," along with telecommunications, postal services, courier services, and audiovisual services. Additionally, the U.S. submission suggests undertaking additional commitments relating to regulation of the sector.[34]

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[29] Julia King, "Shipping firms exploit IT to deliver e-commerce goods," *ComputerWorld,* vol. 33, No. 31 Aug. 2, 1999, found at Internet site *http://proquest.umi.com*, retrieved Mar. 21, 2000.

[30] World Trade Organization (WTO), "Communication from the United States: Express Delivery Services," S/CSS/W/26, Dec. 18, 2000; "Communication from the European Communities and their Member States: GATS 2000, Postal/Courier Services," S/CSS/W/61, Mar. 23, 2001; "Communication from Switzerland: GATS 2000, Postal/Courier Services," S/CSS/W/73, May 1, 2001; and "Communication from Mercosur and Bolivia: Postal Services," S/CSS/W/108, Sept. 26, 2001, all found at Internet address *http://www.wto.org/,* retrieved Jan. 25, 2002.

[31] General Accounting Office (GAO), "International Aviation: DOT Needs Better Data for Monitoring and Decision-Making," Report No. GAO/RCED-95-24, July 11, 1995, found at Internet address *http://www.gao.gov,* retrieved Oct. 1, 2001.

[32] Prehearing Brief of Federal Express Corp., submitted to the USITC, investigation No. 332-367, July 12, 1996, p. 12.

[33] The Mercosur proposal does not include a proposal to change the industry's classification.

[34] WTO, "Communication from the United States: Express Delivery Services," S/CSS/W/26.

The EU negotiating proposal seeks to reclassify postal services and courier services under a single heading in the GATS entitled "services relating to the handling of postal items," under which "express delivery services" would appear as a subheading.[35] The EU submission seeks market access and national treatment commitments from all WTO members on all categories of postal services as a long term goal, and on express delivery services and certain other mail-handling services, such as document and parcel handling, as a short term goal. The EU recognizes that the current GATS classification of postal and courier services does not reflect the "market reality very well... and even introduces an artificial separation of the market."[36] However, the EU proposal to negotiate postal and courier services could complicate the negotiating process, potentially limiting the number of countries willing to make commitments in a service area still partially controlled by national monopolies.[37]

Proposals from Switzerland and the Mercosur countries,[38] with the addition of Bolivia, seek commitments on postal and courier services resembling the EU approach. Like the EU, Switzerland's proposal seeks a new classification for postal and courier services that would contain express delivery services as a subheading. However, unlike the United States and the EU, Switzerland supports the incorporation of air-transport services within the GATS framework.[39] The Mercosur submission similarly focuses on postal and courier services, but does not consider the establishment of a separate express delivery services subheading.[40]

[35] See WTO, "Communication from the European Communities and their Member States," S/CSS/W/61.

[36] WTO,"Communication from the European Communities and their Member States," S/CSS/W/61.

[37] The majority of countries maintain reservations for the provision of postal services. Only Finland, New Zealand, and Sweden have fully removed monopoly rights for postal services. Argentina, Germany, and the Netherlands are currently in the process of privatizing their postal systems.

[38] Mercosur members include Argentina, Brazil, Paraguay and Uruguay.

[39] WTO, "Communication from Switzerland," S/CSS/W/73.

[40] See WTO, "Communication from Mercosur and Bolivia," S/CSS/W/108.

CHAPTER 8
INSURANCE SERVICES

Introduction

The insurance industry underwrites financial risk for life and nonlife (property/casualty) products, and provides many specialty products. The latter include reinsurance (the transferring of risk between insurance companies), marine and transport insurance (for hulls, cargoes, and off-shore oil rigs), and brokerage services (the packaging of policies from several underwriters to cover a given risk). In addition to risk transfer, insurance is also an important individual savings device in most countries.[1] The 1999 passage of the Financial Services Modernization Act (Graham-Leach-Bliley Act) has changed the competitive environment, allowing insurance companies, banks, and other financial firms to consolidate under a single corporate holding structure, thereby creating opportunities for mergers and cross-selling between financial service providers. Consequently, insurance firms are increasingly offering products traditionally associated with other financial services such as banking, securities and mutual funds, while banks and mutual funds are beginning to offer annuities and insurance products.

International trade in insurance takes place on both a cross-border and an affiliate basis. Insurance sales often demand knowledge of, and proximity to, insurance consumers, so affiliate transactions are considerably larger than cross-border trade. Cross-border trade data for insurance services are presented on a net basis; i.e., imports comprise premiums paid to foreign insurers minus claims received, and exports comprise premiums received from foreign policyholders minus claims paid. Unlike the cross-border trade data, affiliate transactions data reflect premiums only, so data for cross-border trade and affiliate transactions are not directly comparable.

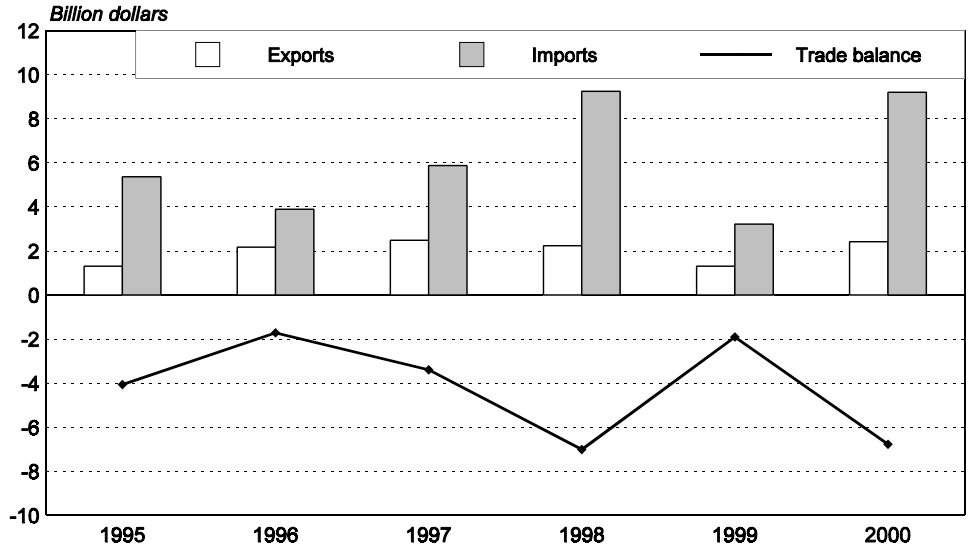
Trade and Investment Trends

Cross-Border Trade

In 2000, U.S. cross-border exports of insurance services totaled $2.4 billion, and imports totaled $9.2 billion, yielding a trade deficit of $6.8 billion (figure 8-1). U.S. exports increased by 85.7 percent in 2000, much faster than the average annual growth rate of 0.1 percent recorded during 1995-99. In contrast, exports to Europe

[1] Consumers in many countries use private life insurance products such as annuities and other pension products to supplement government-sponsored social assistance programs. American Council of Life Insurance, *Life Insurance Fact Book 1999* (Washington, DC: ACLI, 1999), p. 155.

Figure 8-1
Insurance services: U.S. cross-border exports, imports, and trade balance, 1995-2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2000, pp. 130-131 and USDOC, BEA, *Survey of Current Business*, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

totaled $111 million in 2000, marking a 29.3-percent decline from 1999. Exports fell as claims paid to Europe increased, principally due to property damage resulting from violent windstorms (Lothar and Martin) in France in December 1999.[2] Exports to Latin America and the Caribbean totaled $911 million in 2000, a 33.8-percent increase from 1999.[3] Exports to Asia and the Pacific totaled $1.0 billion, an increase of 322 percent over 1999 exports, and accounted for 42.2 percent of total U.S. cross-border insurance exports in 2000.

U.S. cross-border imports of insurance services increased by 186.6 percent in 2000, much faster than the average annual decrease of 12.1 percent during 1995-99. The increase was due to a 29.5-percent increase in premiums paid to foreign insurers in 2000; claims collected by U.S. clients increased only by 2 percent. The combined result was a 255.4-percent increase in the U.S. trade deficit in cross-border insurance services, compared to an average annual decrease of 17.2 percent during 1995-99.

In 2000, the largest U.S. cross-border export markets for insurance services were Japan, Canada, the United Kingdom, Bermuda, and Mexico, which accounted for exports of $1.0 billion, $338 million, $304 million, $142 million, and $50 million, respectively (figure 8-2). With respect to cross-border imports, Bermuda remained the largest supplier of insurance services to the United States, accounting for $4.7 billion of net U.S. insurance imports in 2000. Other leading importers were the United Kingdom and France, which accounted for imports of $2.2 billion and $516 million, respectively.

[2] The catastrophic losses occurred in 1999, but claims payments occurred during 2000. "Expect the Unexpected," *Reactions*, Feb. 2000, pp. 18-22.

[3] BEA data does not permit country breakdowns.

Figure 8-2
Insurance services: U.S. cross-border exports and trade balance, by major trading partners, 2000

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

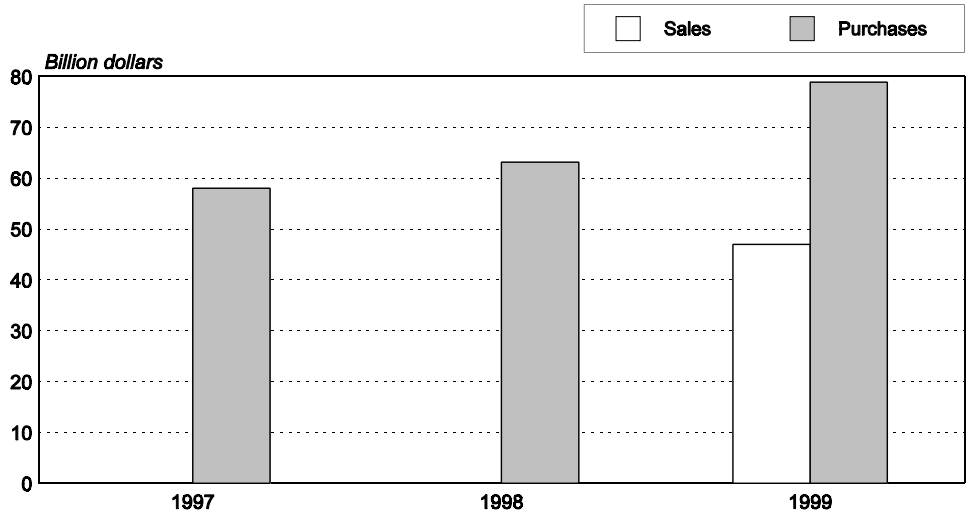
Foreign Direct Investment and Affiliate Transactions

U.S. direct investment abroad in insurance services totaled $60.8 billion in 2000, an increase of 13.5 percent from 1999. This was consistent with the 13.1-percent average annual increase during 1995-99.[4] Foreign direct investment in the United States totaled $106.4 billion in 2000, reflecting an increase of 24.8 percent from 1999, compared to an average annual increase of 13.9 percent during 1995- 99.[5] The increase is consistent with the higher value of U.S. insurance firms acquired by foreign companies in 1999, due primarily to rising stock valuations.

In 1999, U.S. purchases from U.S.-based insurance affiliates of foreign companies totaled $78.8 billion. This was a 24.9-percent increase from 1998, most likely due to Netherlands-based AEGON NV's acquisition of U.S. insurance firm Transamerica Corp. (figure 8-3).[6] Life insurance accounted for 50.9 percent of total purchases from affiliates in 1999, property/casualty insurance for 43.6 percent, and insurance agents and brokers for 5.5 percent. As in previous years, six countries accounted for approximately 95 percent of U.S. insurance purchases from foreign-owned affiliates: Canada and the United Kingdom (18.3 percent each), the Netherlands (17.6 percent), Switzerland (16.2 percent), France (12.0 percent), and Germany (11.9 percent). Dutch-owned affiliates recorded the strongest increases in sales (78.2 percent), again consistent with the AEGON-Transamerica merger. French- and Canadian-owned affiliates increased their U.S. sales by 48.4 percent and 38.5 percent, respectively, followed by German-owned affiliates (16.0 percent), British-owned affiliates (9.9

[4] USDOC, BEA, *Survey of Current Business*, Sep. 2000, p. 89 and Sep. 2001, p. 109.
[5] USDOC, BEA, *Survey of Current Business*, Sep. 2000, p. 59 and Sep. 2001, p. 77.
[6] USDOC, BEA, *Survey of Current Business*, Oct. 2000, p. 160 and Nov. 2001, p. 95.

Figure 8-3
Insurance affiliates:[1] Sales by U.S-owned affiliates abroad and U.S. purchases from foreign-owned affiliates, 1997-99



[1] Data reflect transactions by majority-owned affiliates.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Nov. 2001, pp. 93- 95 and Oct. 2000, p. 160.

percent), and Swiss-owned affiliates (2.4 percent). Sales of insurance services by U.S.-owned affiliates in foreign markets in 1999 totaled $46.9 billion.

Market Overview[7]

U.S. Output

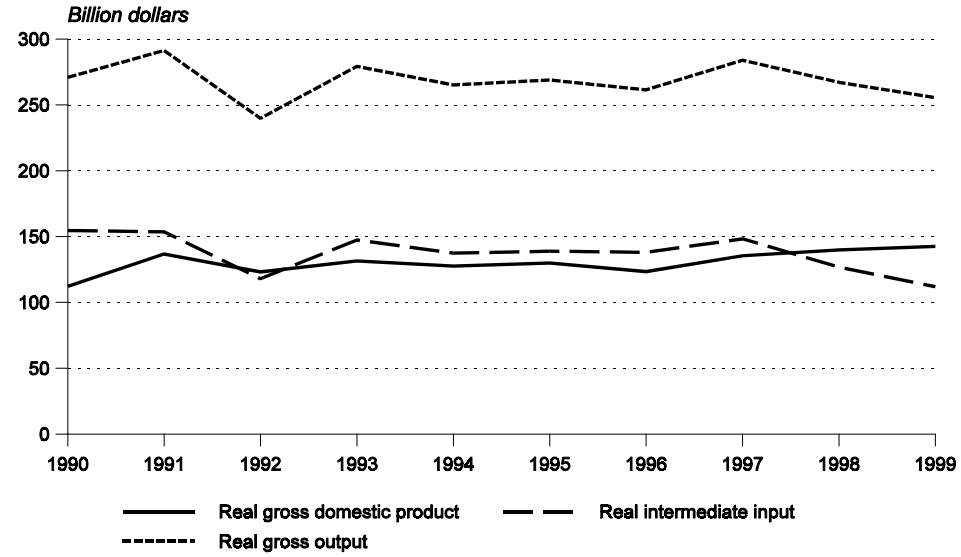
During 1990-99, real gross output among U.S. insurance carriers declined by 0.6 percent per annum, on average, to $256 billion. Although primary inputs increased by 2.7 percent per annum, declining demand resulted in a reduction in purchases of intermediate inputs of 3.5 percent per annum (figure 8-4). Intermediate inputs declined, in part, as insurance carriers reduced the commission rates paid to independent agents for distributing policies. Insurance carriers have significantly increased their reliance on independent agents in recent years, the result of cost reduction efforts that reduced the number of agents directly employed by the carriers.[8]

The single largest intermediate input into the U.S. insurance industry is insurance provided by outside parties, which accounted for 49 percent of total intermediate

[7] Only insurance carriers, representing the life insurance and property/casualty insurance sub-sectors, were included in this analysis. Insurance agents and brokers are included only in the data on international trade flows.

[8] Industry representative, telephone interview by USITC staff, Oct. 10, 2001.

Figure 8-4
Insurance carriers: Real gross domestic product, real gross output and real intermediate input, 1990-99



Source: Compiled by the Commission.

inputs in 1997. Intermediate inputs of insurance may correspond to carriers' payments to independent agents or to purchases of reinsurance by direct insurance underwriters.[9] Financial services were the second-largest intermediate input, accounting for 13.3 percent of inputs.[10] Intermediate inputs of financial services likely correspond to fees paid to investment managers, in connection with the rising value of investments and the unusually high number of mergers and acquisitions during the booming stock market of the late 1990s.

Competitive Environment

The U.S. market for insurance is the largest in the world.[11] The market for insurance in the United States is divided between life and health insurance and property and casualty insurance, and may also be divided into primary and secondary (reinsurance) markets. The U.S. insurance market is not highly concentrated. There were 7,987 domestic insurance companies in the United States in 1999.[12] The domestic industry employed nearly 2.3 million people in 1999,[13] and had assets

[9] Ibid.

[10] USDOC, *Survey of Current Business*, Jan. 2001.

[11] U.S. Department of Commerce (USDOC), *U.S. Industry & Trade Outlook 2000*, p. 46-1.

[12] National Association of Insurance Commissioners (NAIC), *1999 Insurance Dept. Resources Report* (Kansas City, MO: NAIC, 2000), p. 39.

[13] U.S. Department of Commerce (USDOC), *Survey of Current Business*, Jun. 2001, p. D-35. The number represents full-time equivalent employees in industry.

totaling $4.1 trillion at yearend.[14] Total premiums written in the U.S. market totaled $798.9 billion in 1999, accounting for 34.2 percent of the global market.[15] The State Farm Group was the largest nonlife firm in the United States in terms of premiums, with $33.8 billion in direct premiums written in 1999, accounting for 11.3 percent of the U.S. market. Allstate Insurance Group, the next largest nonlife firm, accounted for 6.6 percent of the market, and American International Group (AIG), for 3.6 percent. Overall, the top 10 U.S. nonlife firms accounted for 41.8 percent of the U.S. non-life market in 1999.[16] Metropolitan Life & Affiliated (MetLife) was the largest U.S. life insurance company with $11.7 billion in direct premiums written in 1999, accounting for 4.8 percent of the U.S. life insurance market. Prudential of America Group ranked second, accounting for 4.1 percent of the market. More broadly, the top 10 U.S. life insurance firms accounted for 30.6 percent of total direct premiums written in 1999, reflecting a consolidation in the U.S. life market since 1997, when the top 10 firms controlled 22.5 percent of the market.[17]

In the global market for nonlife insurance, State Farm and American International Group (AIG) rank second and fourth, respectively, behind Allianz of Germany, which recorded 1999 revenue of $74.2 billion.[18] Three other U.S. firms rank among the top ten global nonlife insurance providers, including Allstate, Berkshire Hathaway, and Loews (CNA Financial Group).[19] Only one U.S. company ranks among the top 10 global life/health insurance firms. TIAA-CREF, with revenues of $39.4 billion and premiums of $5.7 billion in 1999, ranks eighth behind global leader AXA of France, which recorded revenues of $87.6 billion in 1999. Other life insurance firms in the top five include Nippon Life of Japan, ING Group of the Netherlands, Dai-Ichi Mutual Life of Japan, and Assicurazioni Generali of Italy, which recorded revenues of $78.5 billion, $62.5 billion, $55.1 billion, and $53.7 billion, respectively, in 1999.[20]

U.S. firms are more prominent in the global re-insurance market, with three U.S. firms in the top 10 behind market leaders Swiss Re Group and Munich Re Group, both of which recorded gross premiums in excess of $14 billion in 1999. Ranking third and fourth, Employers Re/General Electric Re Group and General Cologne Re Group/Berkshire Hathaway, both based in the United States, recorded gross premiums of $10.6 billion and $9.7 billion, respectively, in 1999. U.S.-based Lincoln Re ranked tenth, with gross premiums of $2.8 billion.[21]

The global insurance industry is consolidating due to intensifying competitive pressures. There were 132 cross-border insurance industry mergers or acquisitions

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[14] NAIC, *Statistical Compilation of Annual Statement Information for Life/Health Insurance Companies* (Kansas City, MO: NAIC, 2000), p. 2 and NAIC, *Property/Casualty Insurance Companies in 1999* (Kansas City, MO: NAIC, 2000), p. 2.

[15] Swiss Re, *Sigma Database*.

[16] Insurance Information Institute (III), *The III Fact Book 2001*, p. 18.

[17] Ibid.

[18] Ibid., p. 12. Revenues are the units of record used to measure the nonlife (property/casualty) market.

[19] Insurance Information Institute (III), *The III Fact Book 2001*, p. 12.

[20] Ibid., pp. 12 and 18.

[21] Ibid., p. 13. Gross premiums are the units of record used to measure the re-insurance market. Lincoln Re was acquired by Swiss Re Group in 2001.

worldwide in 1999, valued at more than $34.3 billion. This represented a decline of $3.6 billion in comparison to 1998, during which 129 cross-border mergers or acquisitions, valued at $37.9 billion, were executed.[22] The largest of these was AEGON's acquisition of Transamerica for $9.7 billion, almost three times the value of the next largest acquisition.[23] The arrival of a number of foreign firms such as AEGON has further increased competition in the U.S. insurance market and thereby moderated premium increases.[24]

WTO Negotiating Proposals

Seven WTO members have submitted negotiating proposals regarding financial services for the current round of negotiations: Australia, Canada, Colombia, the EU, Korea, Switzerland, and the United States.[25] The proposals from Australia, Canada, Colombia, and Korea address points for future financial services negotiations only in general terms. The proposals from the United States, the EU, and Switzerland specifically mention insurance services.

The Swiss proposal, in particular, states that "the clear convergence between insurance and banking activities tends to make the current distinction somewhat obsolete." Changes in the nature of insurance services resulting from "new products associated with pension fund management and asset management in general... should be incorporated into the existing commitments."[26] The European Union, Switzerland, and the United States seek increased commitments on the cross-border provision of

[22] KPMG Corporate Finance, Cross-border mergers and acquisitions database.

[23] Insurance Information Institute (III), *The III Fact Book 2001*, p. 20.

[24] Industry representative, telephone interview by USITC staff, Oct. 11, 2001.

[25] World Trade Organization (WTO), "Communication from Australia: Negotiating Proposal for Financial Services," S/CSS/W/66, Mar. 28, 2001; "Communication from Canada: Initial Negotiating Proposal on Financial Services," S/CSS/W/50, Mar. 14 2001; "Communication from Colombia: Financial Services," S/CSS/W/96, Sept. 7, 2001; "Communication from the European Communities and their Member States: GATS 2000, Financial Services," S/CSS/W/39, Mar. 14, 2001; "Communication from the Republic of Korea: Negotiating Proposal for Financial Services," S/CSS/W/86, Nov. 5, 2001; "Communication from the Republic of Korea: Negotiating Proposal for Financial Services Corrigendum," S/CSS/W/86/Corr.1, Dec. 6, 2001; "Communication from Switzerland: GATS 2000, Financial Services," S/CSS/W/71, Apr. 5, 2001; and "Communication from the United States: Financial Services," S/CSS/W/27, Dec. 18, 2000, all found at Internet address *http://www.wto.org,* retrieved Nov. 7, 2001. Japan, Kenya, and Norway have also made submissions that touch on financial services, but these are categorized as general/horizontal negotiating proposals. See WTO, "Communication from Japan," S/CSS/W/42, Dec. 22, 2000; "Communication from Kenya," S/CSS/W/109, Sept. 26, 2001; and "Communication from Norway," S/CSS/W/59, Mar. 21, 2001, all found at Internet address *http://www.wto.org,* retrieved Jan. 25, 2002.

[26] WTO, "Communication from Switzerland," S/CSS/W/71.

marine, aviation, and transport (MAT) insurance, reinsurance (and retrocession), insurance intermediation, and auxiliary insurance services.[27] Switzerland includes life insurance in its proposal, and urges that reservations affecting commitments on commercial presence be reconsidered.[28]

[27] The Swiss proposal, unlike the others, includes Mode 2 (consumption abroad) in its proposals concerning insurance services.

[28] WTO, "Communication from Switzerland," S/CSS/W/71.

CHAPTER 9
MARITIME TRANSPORT SERVICES

Introduction

For the purpose of this discussion, maritime transport services include freight transport and port services. Trade in freight transport and port services stems from merchandise trade. For instance, exports of freight transport services take place when U.S. ocean carriers[1] transport U.S. merchandise to foreign destinations, or when U.S. ocean carriers convey cargo between two foreign ports.[2] Imports of freight transport services, on the other hand, occur when foreign ocean carriers transport merchandise to the United States.[3] U.S. exports of port services encompass the value of goods and services procured by foreign ocean carriers while in U.S. sea ports, whereas imports of port services comprise the value of goods and services procured by U.S. carriers while in foreign sea ports. Because many countries maintain prohibitions on the provision of inland waterway and intercoastal services by foreign entities, cross-border delivery is the prevailing mode of trade in maritime transport services.

Trade and Investment Trends

Cross-Border Trade

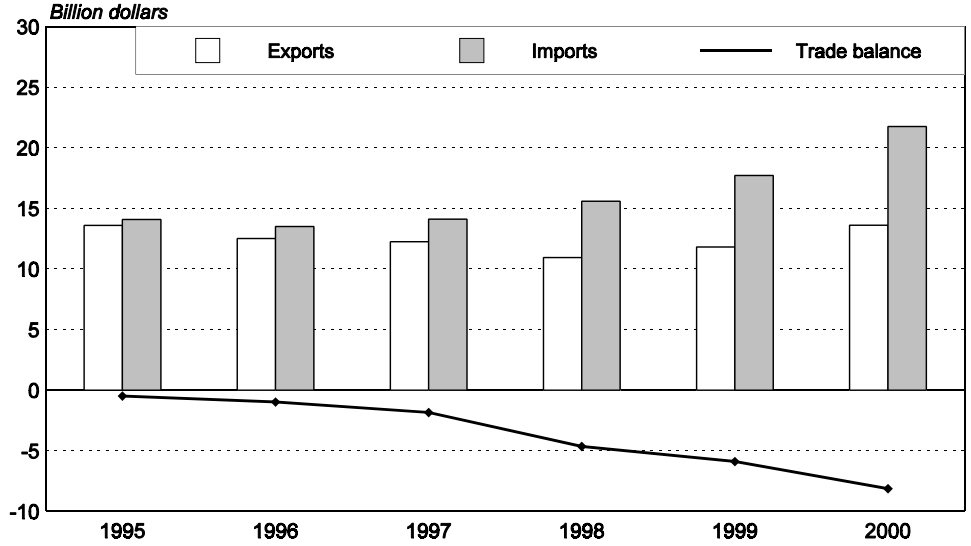
The U.S. trade deficit in maritime services increased by 38.0 percent from $5.9 billion in 1999 to $8.1 billion in 2000 (figure 9-1). The increase was slower than the 86.0-percent average annual increase in the deficit registered during 1995-99. In 2000, U.S. exports of maritime services grew by 13.5 percent to $13.4 billion, compared to an average annual decrease of 3.4 percent for such exports during 1995-

[1] According to the U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA), a U.S. ocean carrier is a ship which is operated by crew members whose country of residence is the United States, but which may not necessarily be U.S.-owned or U.S.-flagged.

[2] According to balance-of-payments accounting convention, the importer is said to assume ownership of the goods when they cross the border of the exporting country and, as a consequence, bears all subsequent transport costs. By this convention, imports do not include U.S. importers' payments to inbound U.S. carriers because these are transactions between U.S. parties. Similarly, exports do not include foreign importers' payments to foreign carriers transporting U.S. merchandise exports, as these are transactions between foreign parties. USDOC, BEA, *Survey of Current Business*, Oct. 1998, p. 78.

[3] Transactions wherein a U.S. resident contracts with a foreign carrier to transport goods between two foreign points are not included in calculations of U.S. imports. BEA official, telephone interview by USITC staff, Nov. 16, 1998.

Figure 9-1
Maritime transport services: U.S. cross-border exports, imports, and trade balance, 1995-2000



Source: U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA), *Survey of Current Business,* Oct. 2000, pp. 134-137; USDOC, BEA, *Survey of Current Business*, Oct. 1999, p. 68; and USDOC, BEA, *Survey of Current Business*, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

99. The five leading export markets for U.S. maritime services in 2000 were Japan, accounting for 12.7 percent of total U.S. exports; Korea, 7.5 percent; Taiwan, 6.3 percent; Germany, 5.6 percent; and the Netherlands, 2.9 percent. The United States registered a trade deficit in maritime services with each of these trading partners, except the Netherlands (figure 9-2). The U.S. deficits with Germany and Japan increased by 33.2 percent and 19.0 percent respectively, due in part to a sharp rise in U.S. ocean freight imports.[4] The U.S. deficits with Korea and Taiwan decreased by 18.2 and 16.3 percent, respectively, as a result of significant growth in U.S. ocean freight exports to these markets.[5] Reportedly, U.S. merchandise exports to Korea and Taiwan increased by 10 percent in the first quarter of 2000, compared to 1999, due to their recovery from the Asian financial crisis.[6]

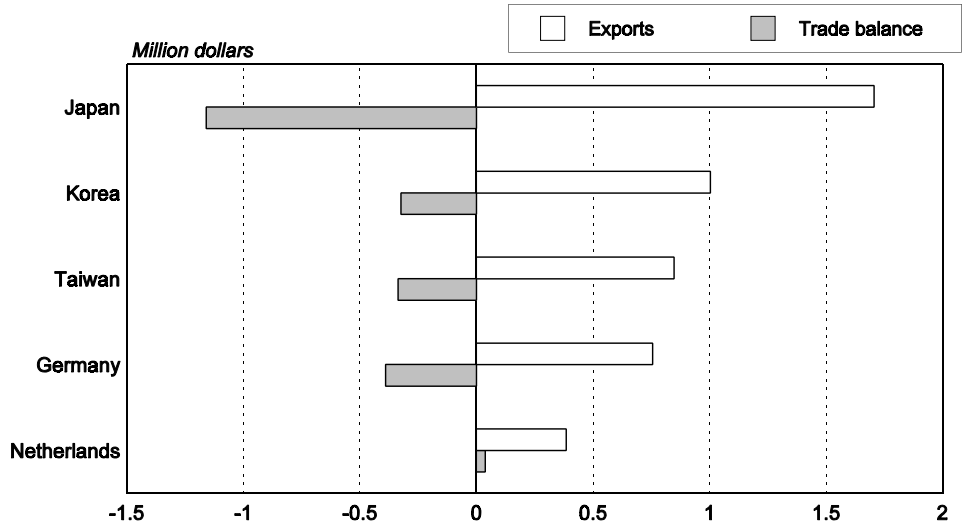
U.S. imports of maritime services increased by 22.8 percent in 2000 to $21.7 billion. By contrast, during 1995-99, such imports increased at an average annual rate of 5.9 percent. In 2000, the top five suppliers of U.S. imports were Japan, accounting for 13.2 percent; Korea, 6.1 percent; Taiwan, 5.4 percent; Germany, 5.3 percent; and

[4] In 2001, the U.S. Federal Maritime Commission (FMC) renewed an investigation, originally begun in 1997, on port restrictions in Japan. These restrictions impose stringent requirements on the use of Japanese port and terminal facilities by U.S. and other foreign maritime firms, and effectively prohibit them from loading and unloading cargo from their own vessels or vessels of second-parties. For more information, see FMC, "Port Restrictions and Requirements in the United States/Japan Trade," Docket No. 96-20, Aug. 9, 2001, found at Internet address *http://www.fmc.gov,* retrieved Oct. 30, 2001.

[5] USDOC, BEA, *Survey of Current Business*, Oct. 2000, p. 137.

[6] FMC, *39th Annual Report*, Fiscal Year 2000, p. 34.

Figure 9-2
Maritime transport services: U.S. cross-border exports and trade balance, by major trading partners, 2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

Singapore, 2.3 percent.[7] The ranking of Japan, Korea, and Taiwan as the three largest suppliers of maritime services in 2000 remained unchanged from 1999, and likely reflects continued strong U.S. consumer demand for manufactured goods, such as automotives, consumer electronics, and computer components, from these trading partners through 2000.[8]

Foreign Direct Investment and Affiliate Transactions

In 2000, the U.S. direct investment position abroad (USDIA) in maritime services stood at $519 million, a decrease of 53.8 percent from 1999. By contrast, USDIA in the maritime services industry fell at an average annual rate of 6.1 percent during 1995-99.[9] Foreign direct investment in the United States (FDIUS) stood at $1.9 billion in 2000. This represented a 1-year increase of 251.9 percent from the $538 million in FDIUS registered in 1999, compared to average annual growth of 15.2 percent during 1995-99.[10] The sharp increase in FDIUS in 2000 is likely due to the purchase of U.S. shipping line Sea-Land Service, Inc. by Danish firm A.P. Moller,

[7] USDOC, BEA, *Survey of Current Business*, Oct. 2000, p. 137.
[8] FMC, *38th Annual Report*, Fiscal Year 1999, p. 38.
[9] The large decrease in USDIA may in part be due to the sale by Sea-Land Service, Inc. of some of its overseas cargo handling and warehousing facilities to its parent firm, Netherlands-based A.P. Moller. USDOC, BEA, *Survey of Current Business*, Sept. 2001, p. 109; and industry representative, telephone interview by USITC staff, Jan. 7, 2002.
[10] USDOC, BEA, *Survey of Current Business*, Sept. 2001, p. 109 and, Sept. 2000, p. 89.

creating Maersk Sealand.[11] Apart from Maersk Sealand, other foreign firms that now have a large presence in the U.S. market include Canadian Pacific (CP) Ships, Hamburg-Sud (Germany), Neptune Orient Lines (Singapore), and P&O Nedlloyd (the Netherlands/United Kingdom).

U.S. purchases from U.S.-based majority-owned affiliates of foreign firms in 1999 increased by 15.1 percent to $3.1 million (figure 9-3). Such growth was slightly lower than the 18.2-percent average annual growth rate in U.S. purchases registered during 1997-99.[12] Affiliate sales data for maritime transport services are not available.

Market Overview

U.S. Output

During 1990-99, the U.S. maritime transport industry achieved average annual growth of 2.8 percent in real gross output[13], compared with 0.7 percent average annual growth in employment (figure 9-4). Increasing demand motivated 3.0-percent average annual growth in intermediate inputs, including water transport services from second parties; pipeline, freight forwarding, and related services; business and professional services; and advertising services. Among these, water transport inputs increased most significantly during 1992-97, by 9.2 percent per annum in inflation-adjusted terms.[14] This may have reflected, in part, procurement of services by megaships'[15] from terminal and port operators and from smaller shipping lines that operate feeder vessels (see discussion below). Separately, growth in procurement of business and professional services may have been partially due to shipping firms' purchases of logistics management services by shipping firms.

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[11] Kevin G. Hall, Thierry Ogier, and Dan McCosh, "Maersk-Sealand Venture Creates New Volume Leader in Americas," *Journal of Commerce*, July 23, 2001, found at *http://www.joc.com,* retrieved Oct. 10, 2001.

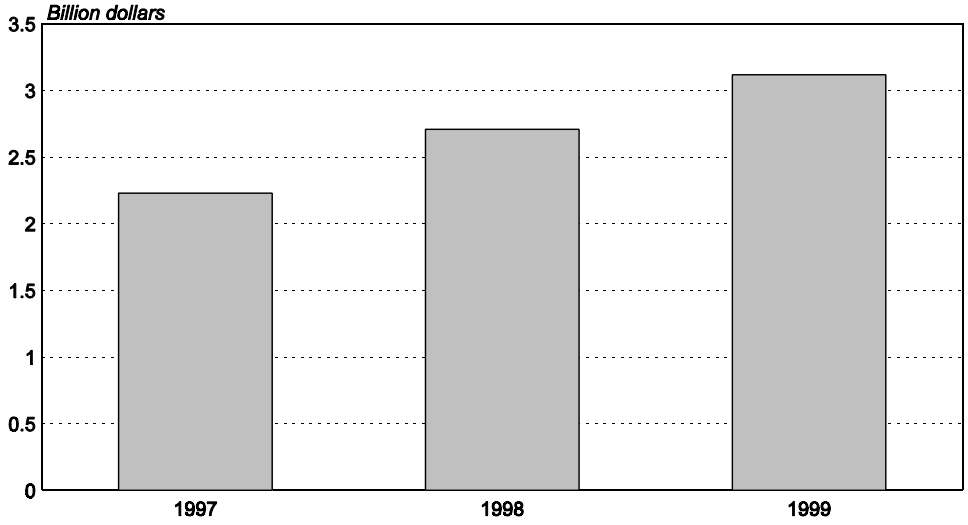
[12] USDOC, BEA, *Survey of Current Business*, Oct. 2000, p. 160; and Nov. 2001, pp. 94-95.

[13] Gross output by industry consists of sales or receipts and other operating income, commodity taxes, and inventory change. Intermediate inputs consist of energy, raw materials, semifinished goods, and services. Gross output by industry minus the industry intermediate inputs equals gross product by industry, which measures the value added by the industry. Gross product is measured as the sum of distributions by industry attributable to labor and capital, which are generally considered primary, or value added, inputs. Gross output by industry is benchmarked to the output estimates found in the national input-output accounts.

[14] USDOC, BEA, *Survey of Current Business*, Jan. 2001, p. 31.

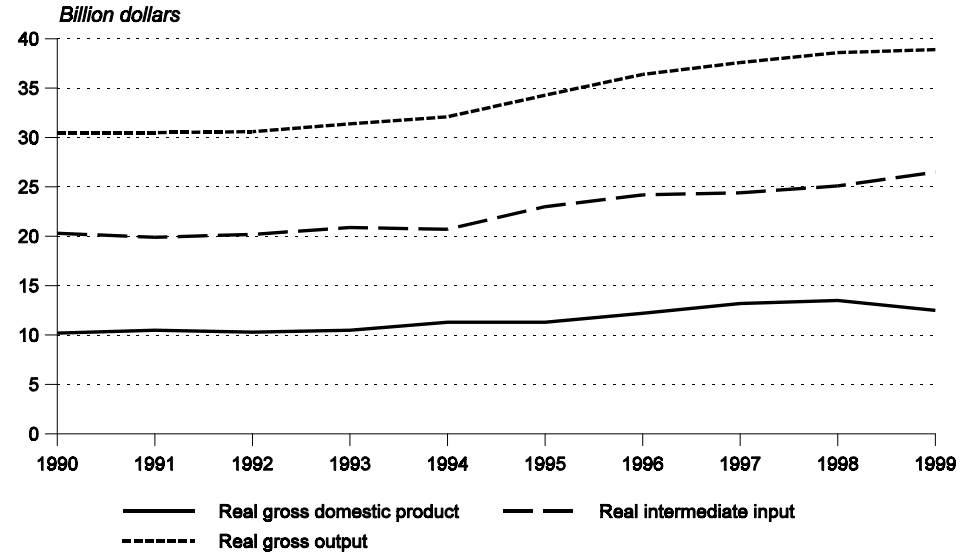
[15] Megaships are large containerships which primarily dock at centralized hubs, where they offload their cargoes onto smaller, "feeder" ships.

Figure 9-3
Maritime transport affiliates: U.S. purchases from majority-owned affiliates of foreign firms, 1997-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Nov. 2001, pp. 94-95 and Oct. 2000, p. 160.

Figure 9-4
Maritime transport: Real gross domestic product, real gross output, and real intermediate input, 1990-99



Source: Compiled by the Commission.

Competitive Environment

The structure of the U.S. maritime industry is highly fragmented, and is segmented by type of vessel and type of trade. Containerships[16] transport primarily semimanufactured and manufactured goods between noncontiguous U.S. ports[17] and between U.S. and foreign destinations. Dry bulk carriers transport commodities such as grains, coal, and iron ore between noncontiguous U.S. ports and between U.S. and foreign destinations. Tankers carry liquid cargo,[18] including petroleum and petroleum products, mainly between coastal and noncontiguous U.S. ports and between U.S. and foreign destinations. Other types of vessels are used to transport freight primarily within U.S. inland rivers and intracoastal waterways, and between U.S. ports and the Great Lakes and St. Lawrence Seaway.[19]

As of January 1, 2000, the U.S.-flag merchant fleet[20] ranked as the eleventh-largest merchant fleet in the world.[21] In 2000, the number of vessels in the U.S.-flag merchant fleet accounted for 1.6 percent of the worldwide total, while the amount of cargo carried by these vessels accounted for 2.4 percent of global gross tonnage. During the period 1995-99, the number of privately owned vessels in the U.S.-flag merchant fleet decreased at an average annual rate of 6 percent.[22] The decrease is partially attributable to U.S. ship owners' and operators' re-flagging their vessels under foreign registries to avoid comparatively high tax, labor, and insurance costs in the United States.[23]

Within the past 5 years, several large U.S. shipping lines have been acquired by foreign maritime firms.[24] As a consequence, there no longer exists any U.S. shipping firm that ranks among the top 20 container-shipping lines in the world. According to one U.S. industry representative, intense price competition within the maritime industry has reduced profit margins and spurred consolidation among U.S. and

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[16] A containership is a vessel used for the transport of cargo that can be stored and carried in standard-size containers.

[17] Noncontiguous U.S. ports are ports located between the U.S. mainland and Alaska, Hawaii, Puerto Rico, and Guam.

[18] A tanker is a self-propelled vessel with hulls that are subdivided to serve as tanks for the carriage of liquid cargo.

[19] U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics, Maritime Administration, and U.S. Coast Guard, *Maritime Trade and Transportation '99*, pp. 1 and 18-20.

[20] The U.S.-flag merchant fleet consists of publicly- and privately owned vessels that are registered under the flag of the United States but that are not necessarily U.S. owned.

[21] This ranking is based on the tonnage carried by self-propelled U.S.-flag vessels of 1,000 tons and above, and includes passenger vessels. USDOT, Maritime Administration, "Merchant Fleets of the World," Jan. 1, 2000.

[22] USDOT, Maritime Administration, "Merchant Fleets of the World," Jan. 1, 1995 and Jan. 1, 1999.

[23] USDOT, Bureau of Transportation Statistics, Maritime Administration, and U.S. Coast Guard, *Maritime Trade and Transportation '99*, p. 6.

[24] In 2001, the top five container carriers, accounting for nearly 50 percent of worldwide containership capacity, were Maersk Sealand (Denmark); P&O Nedlloyd (U.K./Netherlands); Evergreen Group (Taiwan); Hanjin/Senator Lines (South Korea); and MSC (Switzerland). Simon Heaney, "The Top 20," *American Shipper*, Aug. 2001, p. 24.

foreign maritime firms.[25] In 1997, Canadian Pacific (CP) Ships acquired U.S. shipping firm Lykes Line,[26] and Singaporean-based Neptune Orient Lines (NOL) Ltd. purchased U.S. shipping company APL.[27] In 1999, Maersk, a subsidiary of Danish company A.P. Moller, acquired U.S. shipping line Sea-Land Service, Inc.[28], and Crowley American Transport sold its South American operations to German shipping line Hamburg-Sud.[29] In 2000, Anglo-Dutch shipping line P&O Nedlloyd purchased U.S. firm Farrell Lines.[30]

U.S. maritime firms compete largely in terms of price and quality. Shipping lines that transport low-value cargo (e.g., agricultural goods) are essentially engaged in a commodity business and are therefore subject to intense price competition. Shipping lines that carry high-value cargo, such as automotives, apparel, or other manufactured goods, face more stringent quality requirements (e.g., just-in-time delivery) and, in turn, may charge a premium for such service. Recently, shipping firms have begun to offer value-added services to further differentiate themselves from their competitors. Such services include electronic track-and-trace services, which allow shippers to track the location of their cargo while in transit; freight forwarding; warehousing; and inland transport services.[31]

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[25] Industry representative, telephone interview by USITC staff, Oct. 15, 2001.

[26] CP Ships homepage, found at Internet address *http://www.cpships.com/history.htm,* retrieved Oct. 18, 2001.

[27] "NOL/APL," Press Statement, Nov. 7, 1997, found at Internet address *http://www.oocl.com,* retrieved Oct. 10, 2001.

[28] Under the terms of the acquisition, ownership of 19 Sea-Land vessels was transferred to a U.S. bank, while operation of the vessels remained with a U.S. ship management company. As such, the vessels continue to be eligible for U.S. Government subsidies under the Maritime Security Program (MSP). Both APL and Lykes have engaged in similar arrangements, thus permitting their acquiring companies, Neptune Orient Lines (NOL) and Canadian Pacific (CP) to deploy ships that are owned and operated by U.S. citizens, fly the U.S. flag, and receive U.S. Government subsidies. Industry representative, telephone interview by USITC staff, Feb. 3, 2000; Tim Sansbury, "Maersk-Sealand: Marad Approves Transfer of Sealand Subsidies," *Journal of Commerce*, Dec. 10, 1999, found at Internet address *http://www.joc.com,* retrieved Oct. 10, 2001; and Joseph Bonney, "Maersk Sealand: Consolidation with Caution," *Journal of Commerce*, Dec. 21, 1999, found at Internet address *http://www.joc.com,* retrieved Oct. 10, 2001.

[29] Crowley retains ownership of the portion of its operations that serve Central America and the Caribbean. Joseph Bonney, "Hamburg-Sud: Carrier Finalizes Liner Deal," *Journal of Commerce*, Jan. 3, 2000, found at Internet address *http://www.joc.com,* retrieved Oct. 10, 2001; and industry representative, telephone interview by USITC staff, July 31, 2000.

[30] Paul Spillenger, "Marad Approves Farrell Sale to P&O Nedlloyd," *Journal of Commerce*, July 11, 2000, found at Internet address *http://www.joc.com,* retrieved Oct. 9, 2001.

[31] Philip Damas, "Transship or Direct: A Real Choice," *American Shipper*, June 2001, p. 60; "MOL Sets Course," *American Shipper*, Aug. 2001, p. 64; and "Global Container Shipping Market Collapses," *American Shipper*, Oct. 2001, p. 56.

In recent years, U.S. and other shipping lines have increased the number and types of customer transactions that are conducted over the Internet. To date, two large global container shipping firms, APL Ltd. and Overseas Orient Container Line Ltd. (OOCL), have developed their own Internet-based cargo management systems, which enable customers to reserve cargo space online and track the movement of their shipments.[32] In addition, some shipping lines have jointly developed Internet portals that allow multiple carriers to conduct online transactions with their customers. These portals enable shippers[33] to print bills of lading,[34] view sailing schedules, and compare freight rates.[35]

As a means of achieving greater operational efficiency, many shipping lines have also invested in megaships, or large containerships. Carriers use megaships, rather than a number of smaller containerships, to carry large cargo volumes over long distances. Megaships dock at centralized hubs, where cargo is offloaded to smaller, feeder vessels, which deliver cargoes to their ultimate destinations.[36] Shipping lines that own and operate megaships procure water transport services from port authorities and from other shipping firms. Recently, several operators of major U.S. and foreign ports have upgraded their terminal and cargo-handling facilities to accommodate megaships, and container shipping lines have invested in new equipment, such as cranes, that enable them to more efficiently unload large cargoes from their vessels.[37]

WTO Negotiating Proposals

On June 28, 1996, the World Trade Organization's (WTO) Negotiating Group on Maritime Transport Services (NGMTS) agreed to suspend negotiations on maritime services, which had been extended past the conclusion of the Uruguay Round, until the beginning of a new round of services negotiations. At that time, the NGMTS adopted a standstill clause according to which no new trade restrictive measures would be applied to maritime transport by WTO members unless such measures were in direct response to those taken by other member countries. Few WTO members have scheduled substantial commitments in maritime services.[38]

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[32] Philip Damas, "Internet Boost for Shippers, Forwarders," *American Shipper*, Feb. 2001, pp. 28-32.

[33] A shipper refers to a party that purchases maritime transport services.

[34] A bill of lading is a document that specifies the terms, conditions, and prices under which a shipping line transports freight for a shipper.

[35] Philip Damas and Chris Gillis, "Inside the Maersk Machine," *American Shipper*, Mar. 2001, p. 56.

[36] Industry representative, telephone interview by USITC staff, Oct. 15, 2001.

[37] Philip Damas, "Big Ships. Big Problems," *American Shipper*, Aug. 2001, pp. 12-22.

[38] Reportedly, 29 WTO members have scheduled specific commitments on maritime transport services. WTO, "Communication from the European Communities and Their Member States," S/CSS/W/41, Dec. 22, 2000, found at Internet address *http://www.wto.org/,* retrieved Jan. 24, 2002.

In preparation for ongoing negotiations under the General Agreement on Trade in Services (GATS), seven WTO members submitted proposals on maritime transport services: Australia, Chile, Colombia, the European Union, Japan, Korea, and Norway.[39] Another member, Switzerland, submitted a proposal on services auxiliary to all modes of transport, including maritime transport. Finally, seven members issued a joint statement to the WTO supporting the inclusion of maritime services in the new round.[40]

Australia, Chile, Colombia, the European Union, Japan, Korea, and Norway submitted similar proposals.[41] These countries support negotiations principally based on a model that was developed by the NGMTS at the conclusion of the Uruguay Round. The model identifies three categories of maritime services: transport services, auxiliary services, and port services. Transport services pertain to the international carriage of passengers and freight. Auxiliary services include cargo handling, customs clearance, freight forwarding, storage and warehousing, and shipping agency services. Port services are those services procured by an ocean carrier from a port authority, such as emergency repair services, fueling services, and towing and tug assistance.[42]

All seven countries support greater market access and the elimination of nontariff barriers that adversely affect trade in maritime services. Among the major nontariff barriers identified in the proposals are restrictions on the establishment of local subsidiaries for the purpose of operating a fleet under a foreign country's flag, limitations on foreign ownership of domestic shipping lines, and exclusive cargo preference and cargo sharing agreements.[43] Other significant nontariff measures

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[39] World Trade Organization (WTO), "Communication from Australia: Negotiating Proposal for Maritime Transport Services," S/CSS/W/111, Jan. 10, 2001; "Communication from Chile: The Negotiations on Trade in Services," S/CSS/W/88, May 14, 2001; "Communication from Colombia: Maritime Transport Services," S/CSS/W/123, Nov. 27, 2001; "Communication from the European Communities and their Member States: GATS 2000, Transport Services," S/CSS/W/42, Dec. 22, 2000; "Communication from Japan: The Negotiations on Trade in Services," S/CSS/W/42, Dec. 22, 2000; "Communication from the Republic of Korea: Negotiating Proposal for Maritime Transport Services," S/CSS/W/87, Nov. 5, 2001; and "Communication from Norway: The Negotiations on Trade in Services," S/CSS/W/59, Mar. 21, 2001, all found at Internet address *http://www.wto.org/*, retrieved Jan. 24, 2002.

[40] See WTO, "Joint Statement from the European Communities and Their Member States; Hong Kong; China; Japan; Republic of Korea; Norway and Singapore," S/CSS/W/8, June 10, 2000.

[41] In addition, Norway recommends that WTO members adhere to specific principles with respect to the scheduling of MFN exemptions on maritime services. WTO, "Communication from Norway," S/CSS/W/59.

[42] WTO, "Communication from the European Communities and Their Member States," S/CSS/W/41.

[43] Cargo sharing agreements permit carriers to share cargo capacity on certain trade routes. Cargo preference agreements allow countries to reserve the transport of government-generated cargo for national flag vessels.

include certain environmental and safety requirements, lengthy customs clearance and cargo inspection procedures, and restrictive access to ports and port services.[44]

Many of the seven countries also recommend that multimodal activities be included in negotiations on maritime services under the GATS. Multimodal activities entail the carriage of goods from one country to another country using multiple modes of transport (e.g., land and maritime transport). In its proposal, Australia recommends that multimodal transport be added as the fourth pillar of the negotiating model for maritime transport services.[45]

Finally, in its proposal, Switzerland recommends liberalizing a broad range of services auxiliary to all modes of transport, such as cargo handling, container handling, storage, and freight transport agency services.[46] Relevant trade barriers identified by Switzerland include restrictive licensing requirements for freight forwarders and high terminal usage fees charged to foreign firms.[47]

[44] The proposals by the European Communities and Norway also note a restriction on the provision of cabotage, or domestic point-to-point, service by foreign ocean carriers. WTO, "Communication from the European Communities and Their Member States," S/CSS/41; and WTO, "Communication from Norway," S/CSS/W/59.

[45] Ibid.

[46] The European Union addresses commitments on services auxiliary to all modes of transport in a model schedule that it has proposed for maritime services. WTO, "Communication from the European Communities and Their Member States," S/CSS/W/41.

[47] WTO, "Communication from Switzerland: GATS 2000, Transport Services," S/CSS/W/78, Apr. 5, 2001.

CHAPTER 10
OIL AND GAS FIELD SERVICES

Introduction

Oil and gas field services comprise a host of activities related to the development of oil and natural gas resources, including exploration and evaluation, well development and completion, production support, operation and maintenance, offshore support, and research and development activities. Oil and gas field services are provided both on a cross-border basis and through affiliates, with the latter mode predominating.

Trade and Investment Trends

Cross-Border Trade

Assessing the nature and extent of cross-border trade in the oil and gas field services industry is difficult due to limited data availability. In U.S. cross-border trade data, oil and gas field services cannot be distinguished from the larger category of construction, engineering, architectural, and mining services, which recorded exports and imports of $5.3 billion and $422 million, respectively, in 2000 (see Chapter 4). The relatively small volume of imports for the entire category suggests that the volume of cross-border imports of oil and gas field services is small. Further, since the global market for oil and gas field services is estimated to be nearly $100 billion,[1] it appears likely that more trade is conducted through affiliates than on a cross-border basis.

Foreign Direct Investment and Affiliate Transactions

U.S. direct investment abroad in the oil and gas field services sector rose by 16 percent in 2000 to reach nearly $9 billion as a result of the jump in oil and gas prices. This is somewhat slower than the 23-percent average annual rate of growth recorded during 1995-99, which was driven largely by a 50-percent increase during 1995-97, when rising oil prices spurred demand for exploration and development services. When oil prices plunged in 1998, the rate of investment growth slowed markedly, such that in 1999 the U.S. direct investment position increased by only 8 percent. Sales of services through U.S. affiliates were estimated to be nearly $9 billion in 1999, with the largest markets for U.S. service providers being Europe and Latin America, followed by the Asia/Pacific region and Canada. Within Europe, U.S.

[1] Standard & Poor's Industry Surveys, *Oil and Gas: Equipment and Services,* June 21, 2001, p. 7.

firms are most active in the North Sea region, with most affiliate sales taking place in the United Kingdom, Norway, and the Netherlands. In Latin America, U.S. firms appear to be most active in Venezuela, Brazil, and Trinidad and Tobago. The largest markets in the Asia/Pacific region are Australia and Indonesia.

Foreign direct investment in the U.S. oil and gas field services sector fell by 79 percent in 2000, to $260 million. This plunge capped a period of wide fluctuation that included a 69-percent decline in 1998 and an 87-percent increase in 1999. The steep variations in foreign direct investment levels likely reflect mergers and acquisition activity rather than growth or contraction in the industry itself. Data on the regional distribution of foreign investment and sales could not be reported without revealing information about the activities of individual firms. Nevertheless, it appears likely that most foreign investment in the U.S. oil and gas sector originates in Europe (especially the United Kingdom and the Netherlands), Australia, and Canada.

Market Overview

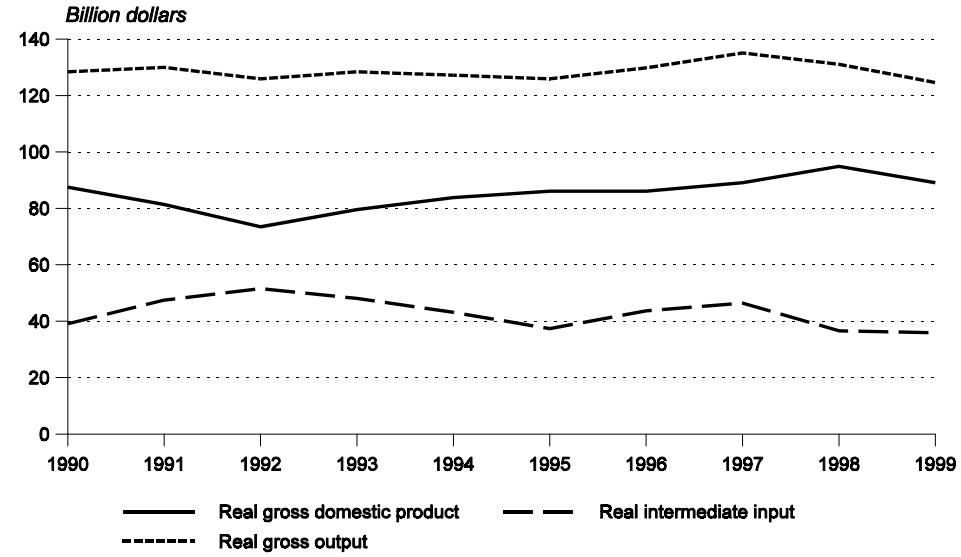
U.S. Output

Market trends in the oil and gas field services industry are characterized by periods of boom and bust, driven largely by the needs of the major oil and gas production companies. When oil and gas prices are moderate or high, oil producers hire more contract drillers and field service providers to increase production from existing fields and to explore for new resources. The resulting increase in production capacity ultimately pushes prices down, reducing demand for oil and gas field services. Oil and natural gas price trends are broadly reflected in gross output for the entire U.S. domestic petroleum industry, which includes output for oil and gas production companies as well as field service firms. Gross output in the industry rose slightly in 1990-91 and more quickly in 1995-97, as oil and gas prices rose, and declined precipitously in 1997-99, as prices declined (figure 10-1). Primary inputs, reflected in gross domestic product, declined precipitously in 1990-92, reflecting a temporary but pronounced downturn in investment in fixed assets and a sharp fall-off in employment. The diverging trends in primary and intermediate inputs, most noticeable in 1992 and 1998, may be due in part to a dynamic whereby, when facing adverse market conditions, firms delay new investment and choose to meet contractual obligations with purchases of goods or services through third parties. By contrast, when the industry is expanding to meet growing demand, as in 1997, firms may increase their investment in new capacity as well as increase consumption of intermediate inputs. This would be reflected in simultaneous growth of both gross product and intermediate inputs.

Competitive Environment

Oil and gas field services are provided by a wide range of companies, including small firms that focus on narrow segments or technologies, and large diversified firms that offer a full range of services. Difficult business conditions experienced

Figure 10-1
Oil and gas extraction: Real gross domestic product, real gross output, and real intermediate input, 1990-99



Source: Compiled by the Commission.

during 1982-95 resulted in market exit by weaker firms as reflected by a number of mergers and acquisitions, which resulted in an increasingly concentrated industry.[2] By 2000, three firms, Halliburton Co. (U.S.), Schlumberger Ltd. (Netherlands Antilles), and Baker Hughes, Inc. (U.S.), had captured major shares of the global market, recording sales revenues of $11.9 billion, $9.6 billion, and $5.2 billion, respectively. This represents nearly 30 percent of global upstream expenditures as estimated by Standard & Poor's.[3] A number of other companies, primarily based in the United States, reported sales in excess of $1 billion in 2000, including Smith International, Global Marine, Nabors Industries, and Transocean Sedco Forex.[4] Despite the major role played by these large firms, more than 200 companies are active in the provision of oil and gas drilling and exploration services in the United States.[5]

Competition in the sector appears to be strongly influenced by technological resources. Financial resources and breadth of service offerings are other important factors of competition. Firms possessing technology that affords improved identification or enhanced recovery of oil and gas resources are able to offer their customers greater production levels at lower cost.[6] An important example of such new technology includes horizontal (directional) drilling, whereby a well initially can be drilled vertically and then turned to run parallel to the surface. Because it can

[2] Ibid., p. 12.
[3] Ibid., p. 21.
[4] Ibid., p. 34.
[5] Kompass, "Oil and gas drilling and exploration contractors," found at Internet address *http://www.kompass.com,* retrieved Sept. 4, 2001.
[6] Standard & Poor's Industry Surveys, *Oil and Gas: Equipment and Services*, June 21, 2001, pp. 10-11.

penetrate more than one reservoir, this technique can yield as much as 10 times the production of a standard vertical well. In addition, since fewer wells need to be drilled, directional drilling reduces environmental impacts. New technologies have also been developed in measurement techniques and in seismic imaging and analysis. Promising technologies still under development include seismic surveys from airplanes, low-cost microdrilling systems, and computer aided design techniques. Access to state-of-the-art technologies requires adequate capital, because research to develop new technology is expensive and time consuming. Consequently, firms with sufficient capital to develop or acquire promising technologies hold a competitive advantage over smaller firms. The range of services provided by a single firm offers competitive advantage as well, as large, interdisciplinary field service firms can offer their clients an integrated array of expert services through a single contract.

In the contract drilling segment, competition appears to be influenced by firm location. Firms operating rigs in a particular region are generally able to relocate them to new production sites in that region, or construct new rigs on-site, more rapidly and at lower cost than firms without current operations in that region.[7] The underlying cost of production in a given region may also confer competitive advantages on firms operating there. For example, due to more favorable weather conditions and water depths, it is generally less costly to extract oil from fields in the Gulf of Mexico than in the North Sea. When oil prices fall, production is curtailed first in the more costly North Sea, while firms servicing fields in the less costly Gulf of Mexico continue to operate.

As noted above, difficult market conditions and the desire to acquire technology have fostered a number of mergers and acquisitions. Major transactions in 2001 include the acquisition of R&B Falcon by Transocean Sedco Forex (both U.S.-based) to form the world's largest deepwater drilling firm, the announced merger of Pride International with Marine Drilling (both U.S.-based) in a $2-billion transaction to form one of the largest offshore drilling contractors,[8] and the announcement of a $3-billion merger between Global Marine and Santa Fe International (both U.S.-based), which would make the combined company the second-largest drilling contractor worldwide.[9] In the exploration and development segments, Halliburton and DSND of Norway announced plans to merge their offshore field service

[7] The location advantage is mitigated somewhat in the offshore segment, however, as it is less costly to move offshore rigs.

[8] Robin Sidel and Alexei Barrionuevo, "Pride International to Merge with Marine Drilling," *Wall Street Journal*, May 24, 2001, p. A4.

[9] Matthew Jones, "Global Marine Third-Quarter Earnings Almost Double," *Financial Times*, Oct. 15, 2001, found at Internet address *http://news.ft.com,* retrieved Oct. 17, 2001.

businesses to create a company with annual sales of $800 million,[10] and Devon Energy (U.S.) committed to acquire Anderson Exploration of Canada for $4.6 billion.[11]

As oil exploration moves further offshore and into deeper waters, companies possessing specialized offshore exploration, drilling, and production technology are encountering new market opportunities. Firms with extensive experience in the North Sea region, where harsh weather conditions can drive wave heights to more than 30 meters, appear to be particularly competitive and are seeking to extend their market reach globally.[12] Important technological developments include new drillships and advanced floating production facilities. The latest generation of drillships features significantly greater automation, which permits many operations to be performed concurrently. This offers time and labor savings in addition to enhanced worker safety.[13] Floating production facilities are specialized ships or floating structures anchored to the ocean floor that extract oil and gas, provide temporary storage, and subsequently offload the production to transport vessels or a pipeline. Some facilities also provide offshore gas-processing services, which may include separating propane from natural gas to produce liquefied petroleum gas, liquefying natural gas for transport, or converting natural gas into synthetic fuel.[14] Often less expensive to construct than fixed installations, floating installations can also be used at alternative locations and offer the only viable means of developing resources in very deep waters.

WTO Negotiating Proposals

As of December 2001, the following seven World Trade Organization (WTO) members had presented negotiating proposals concerning energy services: Canada,

[10] Matthew Jones, "DSND and Halliburton May Merge Subsea Units," *Financial Times,* Oct. 18, 2001, found at Internet address *http://news.ft.com,* retrieved Oct. 19, 2001.

[11] Ken Warn and Sheila McNulty, "U.S. Energy Groups Agree Takeover Deals," *Financial Times*, Sept. 5, 2001, found at Internet address *http://news.ft.com,* retrieved Sept. 5, 2001.

[12] Norwegian industry representative, meeting with USITC staff, Geneva, Switzerland, Oct. 9, 2001.

[13] *International Petroleum Encyclopedia 2000,* "Drillship Technologies Introduce Simultaneous Operations," found at Internet address *http://orc.pennnet.com,* retrieved Oct. 24, 2001.

[14] *International Petroleum Encyclopedia 1998,* "Floating Production Technology at Use in Variety of Projects," and "Floaters Dominate Northwest Europe's Offshore Oil Development Operations," found at Internet address *http://orc.pennnet.com,* retrieved Oct. 24, 2001.

Chile, the European Union (EU), Japan, Norway, the United States, and Venezuela.[15] The proposals share a common objective of improving market conditions for energy service providers by obtaining stronger commitments from WTO members on market access and nondiscriminatory treatment of foreign service providers. Inadequate regulatory transparency figures prominently among the list of impediments to trade that WTO members seek to address. Other major impediments cited in the proposals include restrictions on licensing and temporary movement of key personnel and equipment.[16] Difficulties concerning access to natural gas and electric power networks have also been noted by the EU, Japan, Norway, and the United States.[17] Venezuela has suggested that the negotiations should address the needs of developing countries to increase domestic capacity and access to technology in the energy sector.

In addition to agreeing on the broad objective of improving market access, the proposals also appear to agree on a number of issues that are beyond the scope of negotiation. Several proposals stress that public ownership of natural resources should not be addressed and that the negotiations should not infringe upon the ability of members to develop and implement regulations to achieve legitimate public policy objectives such as security, environmental protection, public safety, and universal service. The proposal by the EU also notes that the negotiations should not seek to compel deregulation or the breakup of monopolies.

Perhaps the most prominent issue raised by the proposals thus far concerns the lack of a unique classification for energy services in the list of services activities used during the Uruguay Round.[18] Because there is no such classification, the extent to which existing and future GATS obligations apply to energy services activities is unclear to both industry participants and governments. Resolving this problem poses some significant challenges. Although developing a new classification offers the benefit of clarity, changing the existing classification may alter the legal standing of existing commitments. In addition, developing new categories or even a checklist that indicates where energy services activities may be found within the existing

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[15] WTO, "Communication from Canada: Initial Negotiating Proposal on Oil and Gas Services," S/CSS/W/58, Mar. 14, 2001; "Communication from Chile," S/CSS/W/88, May 14, 2001; Communication from the European Communities and their Member States, GATS 2000: Energy Services," S/CSS/W/60, Mar. 23, 2001; "Communication from Japan: Negotiation Proposal on Energy Services, Supplement," S/CSS/W/42/Suppl.3, Oct. 4, 2001; "Communication from Norway: The Negotiations on Trade in Services," S/CSS/W/59, Mar. 21, 2001; "Communication from the United States," S/CSS/W/24, Dec. 18, 2000; and "Communication from Venezuela: Negotiating Proposal on Energy Services, Addendum," S/CSS/W/69, Oct. 15, 2001, all found at Internet address *http://www.wto.org*, retrieved Jan. 24, 2002.

[16] Because movement of equipment involves imports of merchandise, addressing this issue may require separate negotiations on trade in goods.

[17] The Commission conducted two studies that addressed network access issues. See USITC, *Electric Power Services, Recent Reforms in Selected Foreign Markets* (investigation No. 332-411), USITC publication 3370, Nov. 2000, and USITC, *Natural Gas Services: Recent Reforms in Selected Markets* (investigation No. 332-426), USITC publication 3458, Oct. 2001, both of which may be found at Internet address *http://www.usitc.gov/*.

[18] In fact, energy services are scattered throughout the Uruguay Round classification list. For example, oil and gas field services arguably may be found within the categories of "Services incidental to mining," "Engineering services," and "Technical testing and analysis services," among others.

classification system may entail protracted negotiations that could forestall progress toward scheduling improved commitments on market access. Ultimately, however, the classification issue requires resolution in order to ensure that commitments are commercially relevant.[19]

[19] For further information, see Melly, Christopher, "Electric Power and Gas Market Reform and International Trade in Services," in *Trade in Energy and Enviornmental Services: Bridges to Sustainable Development* (Geneva: UNCTAD, forthcoming).

CHAPTER 11
RETAIL SERVICES

Introduction

Retailers serve as intermediaries between wholesalers or manufacturers, and ultimate consumers, who may be individuals, households, or businesses. Retailers may take title to merchandise or they may hold merchandise through a contractual arrangement. Although international trade in retail services is increasingly taking place across borders through catalog shopping and the Internet, most international retailing transactions currently take place through foreign-based affiliates. For this reason, data collection agencies have focused solely on affiliate transactions. Additionally, data collection agencies collect data only for sales nonincidental to the sale of goods, as the value of services incidental to the sale of goods can not be separated from the value of the goods sold. Nonincidental services include assembly, installation, maintenance, and repair services; credit services; warranty services; promotion and advertising services; and delivery services. In the case of computer retailers, nonincidental services may also include systems integration and support services.

Foreign Direct Investment and Affiliate Transactions

U.S. direct investment abroad in the retail trade industry increased by 11 percent to $24.7 billion in 2000. This was slower than average annual growth of 22 percent recorded during 1995-99.[1] Cumulative retail foreign direct investment in the United States totaled $32.1 billion in 2000, up by 29 percent from 1999, compared to the 19-percent average annual rate recorded during 1995-1999.[2] EU-member states accounted for $26.3 billion or 82 percent of total foreign direct investment in the U.S. retailing industry in 2000. The Netherlands was the single largest investor in 2000, with cumulative investment valued at $14.1 billion or 44 percent of the total,[3] reflecting the large number of investments made by Royal Ahold in the grocery sector during recent years. The United Kingdom is the second-largest investor with $5.0 billion (16 percent of the total) in 2000, followed by Japan (7 percent), Germany (6 percent), Italy (6 percent), and Canada (3 percent).[4] Data limitations prevent detailed country analysis of outbound investment in the retail sector.

[1] USDOC, BEA, *Survey of Current Business*, Sept. 2000, p. 89, and Sept. 2001, p. 109.
[2] USDOC, BEA, *Survey of Current Business*, Sept. 2000, p. 59, and Sept. 2001, p. 76.
[3] USDOC, BEA, *Survey of Current Business*, Sept. 2001, p. 53.
[4] Ibid.

Sales of retailing services by foreign-based affiliates of U.S. firms totaled $483 million in 1999 (figure 11-1).[5] U.S. purchases of services from U.S.-based retail affiliates of foreign firms totaled $388 million in 1999. Purchases of services from U.S.-based retail affiliates declined by 9.2 percent in 1999, slower than the decline of 13.6 percent during 1997-98. The continued decline is largely due to a reduction of U.S. purchases from British-owned firms, which sold services worth $26 million in 1999, down by 66.7 percent from 1998. On a bilateral basis, Japan accounted for the largest portion of total purchases, with $99 million (26 percent of the total), followed by the Netherlands with $76 million (25 percent), Canada with $29 million (7.5 percent), and the United Kingdom with $26 million (6.7 percent).[6]

Market Overview

U.S. Output

During the 1990s, the U.S. retail industry experienced 4.0-percent average annual growth in gross output, to $1.3 trillion in 1999. Primary or value-added inputs (i.e., labor and capital) increased by 4.7 percent over the course of the decade (figure 11-2). The industry experienced 5-percent average annual growth in employee compensation during the 1990s, a reflection of productivity growth. Concurrently, the industry's net stock of private fixed assets increased by 3.7 percent per annum, to $616 billion. Consequently, primary inputs as a share of gross output increased during the decade, from 63 percent in 1990 to 67 percent in 1999.

Growth in the retail trade industry followed the U.S. economic expansion during the 1990s. Large general merchandise retailers captured over half of total retail sales and accounted for half of retail employment in 1999. These retailers, including Wal-Mart, Kmart, and Target, utilized large "big box" stores that carry a wide variety of merchandise.[7] As they expanded, these retailers made substantial investments in fixed assets such as buildings, property, and information technology.

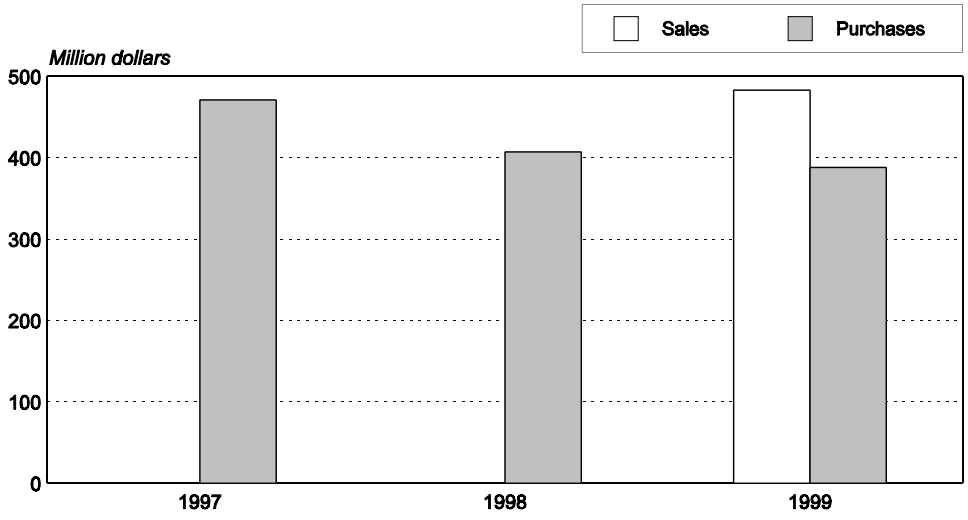
In 1997, personal consumption expenditures accounted for 89 percent of total retail sales, as the overwhelming portion of retail sales went to end users. Principal intermediate inputs used by the retailing industry include real estate and royalties, as well as advertising, and other business and professional services. Real estate and royalties accounted for 21 percent of total intermediate inputs, while advertising

[5] BEA reported data on 1999 affiliate sales using the NAICS (North American Industry Classification System), not the SIC (Standard Industrial Classification) system used to report 1998 affiliate sales.

[6] USDOC, BEA, *Survey of Current Business*, Oct. 2000, p. 160, and Nov. 2001, pp. 93-95.

[7] "Productivity in the United States," McKinsey Global Institute, Oct. 2001, found at Internet address *http://www.mckinsey.com*, retrieved Oct. 17, 2001.

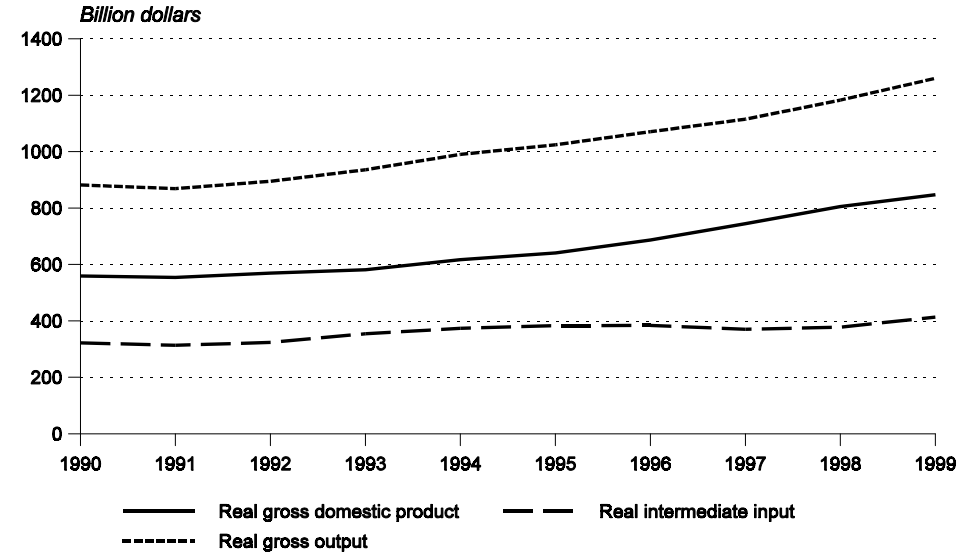
Figure 11-1
Retail distribution affiliates:[1] Sales by U.S-owned affiliates and U.S. purchases from foreign-owned affiliates, 1997-99



[1] Data reflect transactions by majority-owned affiliates.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Nov. 2001, pp. 93-95 and Oct. 2000, p. 160.

Figure 11-2
Retail distribution: Real gross domestic product, real gross output, and real intermediate input, 1990-99



Source: Compiled by the Commission.

services accounted for 16 percent, and other business and professional services accounted for 14 percent of total intermediate inputs.[8]

Competitive Environment

The retail market in the United States is highly concentrated and competition is intense. With revenues of $193 billion in 2000, Wal-Mart Stores is the largest retailer in the United States and the world. Wal-Mart has transformed the retailing landscape in the United States with its sourcing and logistics capabilities.[9] The Kroger Co. is the second-largest U.S. retailer, with revenues of $49 billion in 2000. Kroger, a grocery retailer, has pursued an aggressive consolidation strategy, and currently controls approximately 3,500 stores with 24 different brand names.[10] Home Depot is the largest do-it-yourself (DIY) retailer in the United States and the third-largest U.S. retailer overall with revenues of $45 billion in 2000.[11] Completing the list of top five retailers in the United States are Sears Roebuck and Kmart.[12] Sears, the number four retailer, had revenues of $41 billion in 2000, while Kmart revenues for the same period totaled $37 billion.[13]

As noted, the majority of U.S. retail revenues are concentrated in a small number of firms. For example, the top 10 retailers together earn twice the revenues of the next 25 combined.[14] Industry concentration is likely to progress as retailers worldwide attempt to increase and solidify their market share. As retailers exhaust potential acquisition targets in the home market, they may seek to globalize their operations and acquire competitors abroad.[15] Netherlands-based Ahold USA is one of the most active foreign investors in the U.S. retail industry. The company has approximately 1,600 stores in the United States and currently controls the Bi-Lo, Stop and Shop, Giant (Carlisle, PA and Landover, MD), Tops Markets, and Bruno's supermarket

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[8] USDOC, BEA, "Annual Input-Output Accounts of the U.S. Economy, 1997," *Survey of Current Business*, Jan. 2001, p. 32.

[9] "America's Largest Corporations," Fortune 500, found at Internet address *http://www.fortune.com*, retrieved Aug. 14, 2001, and Company information, Wal-Mart Stores, "Hoover Business Capsules," found at Internet address *http://www.fortune.com*, retrieved Oct. 16, 2001.

[10] "America's Largest Corporations," Fortune 500, found at Internet address *http://www.fortune.com*, retrieved Aug. 14, 2001; and Company information, The Kroger Co., "Hoover Business Capsules," found at Internet address *http://www.fortune.com*, retrieved Oct.16, 2001.

[11] "America's Largest Corporations," Fortune 500, found at Internet address *http://www.fortune.com*, retrieved Aug. 14, 2001; and David P. Shultz, "Top 100 Retailers," *Stores*, July 2001, p. S5.

[12] It is unclear how Kmart's financial restructuring will affect its rank among other retailers in the future.

[13] "America's Largest Corporations," Fortune 500, found at Internet address *http://www.fortune.com*, retrieved Aug. 14, 2001; and Company information, Sears, Roebuck and Co. and Kmart Corp., "Hoover Business Capsules," found at Internet address *http://www.fortune.com*, retrieved Oct.16, 2001.

[14] "America's Largest Corporations," Fortune 500, found at Internet address *http://www.fortune.com*, retrieved Aug. 14, 2001.

[15] "Sectoral Focus," *Acquisitions Monthly*, Sept. 2001, p. 37.

chains. It also owns part of online grocer Peapod[16] and U.S. Foodservice, the latter of which is the second-largest food distributor in the United States. In 2001, Ahold's retail and distribution businesses resulted in sales of approximately $35.3 billion,[17] and the company announced that it planned to purchase the remaining shares of Peapod and take that company private. In addition, Ahold USA has announced plans to purchase Grand Union supermarkets, another regional grocery retailer.[18] Ahold controls approximately 9,000 supermarkets and other stores worldwide.[19]

Many retailers, particularly discount merchandisers and grocers, primarily compete on the basis of price. Efficient distribution systems, particularly in areas such as sourcing and logistics, bring a wider choice of products to consumers at lower prices. For example, in sourcing merchandise, large-scale retailers like Wal-Mart are able to negotiate lower prices from suppliers because of the quantities of product they purchase. These savings are then passed on to consumers.[20] Similarly, improvements in logistics, such as inventory management, transportation, and warehousing, also reduce costs. As U.S. retailers expand overseas, they have used these efficiencies to maintain low prices. Retailers have also developed tracking systems to analyze consumer data, to ensure that stores are stocked with high demand products and to avoid shortages. Finally, high global demand for U.S. products helps U.S. retailers compete in foreign markets by offering products that cannot be supplied by local retailers.[21]

In terms of revenues, U.S. retailers are among the largest in the world. In fact, 6 of the top 10 global retailers, and 13 of the top 25, are U.S. firms. Some of these firms have achieved their global status by operating in just a few markets. Kroger, the third-largest retailer in the world, currently operates only in the United States, and Sears, the eighth-largest global retailer, operates only in Canada and the United States. Some firms have expanded overseas, only to retrench in the United States. Kmart, for instance, closed or sold off stores in the Czech Republic, Slovakia, and Singapore, and now concentrates on its stores in North America.[22] However, other retailers have relied on overseas markets to increase global market share. Wal-Mart operates in Argentina, Brazil, Canada, China, Germany, Korea, Mexico, Puerto Rico,

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[16] "Hoover Business Capsules," found at Internet address *http://www.fortune.com*, retrieved Nov. 29, 2001; and "Ahold Named U.S. Retailer of the Year," Giant Food press release, Dec. 14, 2001, found at Internet address *http://biz.yahoo.com*, retrieved Dec. 17, 2001.

[17] "Ahold 2001 sales surge 27% to record Euro 66.6 billion," found at Internet address *http://www.ahold.com*, retrieved Jan. 17, 2002.

[18] "Retail Sector Focus," *Acquisitions Monthly*, Sept. 2001, p. 34.

[19] Ahold US, found at Internet address *http://www.aholdusa.com*, retrieved Nov. 29, 2001; and "Ahold Successfully Completes Acquisition of Bruno's Supermarkets, Inc.," Ahold NV press release, Dec. 12, 2001, found at Internet address *http://www.biz.yahoo.com*, retrieved Dec. 17, 2001.

[20] "Productivity in the United States," McKinsey Global Institute, Oct. 2001, found at Internet address *http://www.mckinsey.com*, retrieved Oct. 17, 2001.

[21] USDOC, ITA, *U.S. Industry and Trade Outlook 2000* (New York: McGraw-Hill, 2000), pp. 42-44.

[22] Kmart 1996 Annual Report, found at Internet address *http://www.kmartcorp.com*, retrieved Nov. 12, 2001.

and the United Kingdom,[23] and Home Depot is opening stores in Canada, Mexico, and Puerto Rico.[24]

WTO Negotiating Proposals

The negotiating proposals on distribution services submitted by Canada, the European Union (EU), Korea, MERCOSUR, Switzerland, and the United States, and the more general negotiating proposals submitted by Japan and Chile, may provide a roadmap for the upcoming negotiations.[25] Broadly speaking, the proposals recognize the paucity of commitments on distribution services, including retailing, and the continuing existence of obstacles to market access and national treatment in this sector. Each of the specific proposals focuses on narrowing the scope of product exclusions, encouraging members to schedule additional commitments on distribution services, and promoting transparency in domestic regulation.

Only 30 World Trade Organization (WTO) members have commitments on retailing services, and many of these prohibit foreign firms from distributing certain products. Product exclusions impede the economic provision of distribution services by the United States and other members, and because many product exclusions pertain to agricultural goods, hinder commodity exports by developing countries. In addition to reducing such exclusions, Korea, MERCOSUR, and the United States propose addressing the following topics in negotiations: foreign equity restrictions; restrictions on store location, size or number; minimum sales and capital requirements; restrictions on sales volumes and products; real estate restrictions; economic needs tests; joint venture or partnership requirements; lack of regulatory transparency; and discriminatory tax treatment. Colombia's submission also proposes foreign equity restrictions, economic needs tests and performance requirements as topics for negotiation, but includes restrictions on the number of service suppliers and residence or nationality restrictions as additional topics. Additionally, Colombia, Korea, MERCOSUR, the United States, and the EU propose the liberalization of temporary entry for personnel. Japan's submission proposes that negotiations address foreign equity restrictions, capital requirements, nationality or residency requirements, market-entry requirements, and corporate structure

[23] Wal-Mart International, found at Internet address *http://www.walmart.com*, retrieved Jan. 17, 2002.

[24] "Global Powers of Retailing," *Stores*, Oct. 1999, p. 10.

[25] These proposals address distribution services as a whole and include commission agents' services, franchising services, retailing services, and wholesaling services. World Trade Organization (WTO), "Communication from the European Communities and their Member States: GATS 2000: Distribution," S/CSS/W/37, Dec, 22, 2000; "Communication from Canada: Initial Negotiating Proposal on Distribution Services," S/CSS/W/57, Mar. 14, 2001; "Communication from the United States: Distribution Services," S/CSS/W/22, Dec. 18, 2000; "Communication from the Republic of Korea: Negotiating Proposal for Distribution Services," S/CSS/W/85, May 11, 2001; "Communication from Switzerland: GATS 2000: Distribution Services," S/CSS/W77, May 4, 2001; "Communication from MERCOSUR: Distribution Services," S/CSS/W/80, May 4, 2001; "Communication from Japan: The Negotiations on Trade in Services," S/CSS/W/42, Apr. 10, 2001; and "Communication from Chile: The Negotiations on Trade in Services," S/CSS/W/88, May 14, 2001, all found at Internet address *http://www.wto.org/*, retrieved Aug. 9, 2001.

requirements. Additionally, Japan proposes that after-sales services should be liberalized in tandem with retail services, since such services are critical for distribution service providers. In its proposal, Chile recognizes the need for improved liberalization in the distribution services sector and proposes the elimination of economic needs tests and discriminatory tax and licensing regulations.

CHAPTER 12
TELECOMMUNICATION SERVICES

Introduction

Telecommunication services trade encompasses basic[1] and value-added[2] services, both of which can be provided across national borders and through foreign-based affiliates. Cross-border trade, which predominantly involves the placement of a call in the home market and the termination of the call in a foreign market, is the dominant mode of trade. Cross-border trade data are essentially a product of the accounting rate system fashioned by European carriers in the latter half of the nineteenth century. Under this system, telecommunication carriers bilaterally negotiate fees, called accounting rates, for carrying international traffic, measured in calling minutes. Each carrier's portion of the accounting rate is referred to as the settlement rate, which in almost all cases is equal to one-half of the negotiated accounting rate. As bilateral imbalances in international calling traffic occur, the carrier whose outbound calling minutes exceed its inbound calling minutes makes a net settlement payment to its foreign counterpart. The net settlement payment is essentially calculated by multiplying the settlement rate by the number of imbalanced calling minutes.[3] Net settlement payments are recorded as imports on the balance of payments, whereas net settlement receipts are recorded as exports. Cross-border trade data also reflect private leased channel services and support services, which appear to account for approximately 15 percent of cross-border transactions in telecommunication services; net settlement payments appear to account for the remaining 85 percent.[4] Affiliate transactions are increasing in importance as foreign countries continue to privatize state-owned monopolies and liberalize foreign ownership restrictions, thereby creating more opportunities for overseas participation by foreign carriers. Affiliate transactions data predominantly reflect the payment of network access fees by wireline and wireless telecommunication services providers, and capacity leasing fees charged to resellers and other telecommunication services providers.

[1] Basic services entail the transmission of voice and data without change in form or content.

[2] Value-added services include services such as electronic mail, electronic data interchange, electronic funds transfer, enhanced facsimile, and on-line database access.

[3] Settlement payments may also reflect surcharges that some countries impose on collect and country-direct calls.

[4] U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA), *Survey of Current Business*, Oct. 1997, p. 100.

Trade and Investment Trends

Cross-Border Trade

In 2000, U.S. exports of telecommunication services totaled $3.8 billion, while U.S. imports totaled $5.4 billion, resulting in a $1.5-billion deficit (figure 12-1). Exports increased by 2.9 percent in 2000, generally in line with the 3.7-percent average annual growth recorded during 1995-99. In contrast, U.S. imports declined by 18.8 percent in 2000, significantly faster than the 2.5-percent average annual decrease recorded during 1995-99. Because imports declined significantly, while exports rose slightly, the telecommunication services trade deficit declined by 47.2 percent in 2000.[5]

Despite a 78.6-percent total increase in U.S. billed international minutes during 1995-99, net U.S. settlement payments declined from an all-time high of $5.7 billion in 1996 to $4.6 billion in 1999.[6] The decline in net settlement payments, and the resulting decline in U.S. imports of telecommunication services, is largely attributable to a reduction in settlement rates, which the Federal Communications Commission (FCC) moved to lower with its 1997 Benchmark Order. The order established a 5-year time frame during which settlement rates would be reduced to $0.15 per minute for upper income countries, $0.19 per minute for middle income countries, and $0.23 per minute for lower income countries.[7] During the first four years of the staged reductions, which commenced January 1, 1998, the average settlement rate declined from $0.27 per minute to approximately $0.16 per minute.[8]

Mexico, Canada, the United Kingdom, Japan, and Australia were the top five export markets for U.S. telecommunication services in 2000 (figure 12-2). U.S. exports to Mexico increased by 62 percent to $491 million, while exports to the United Kingdom, previously the top U.S. export market, declined by 153 percent to $271 million. The large decrease in exports to the United Kingdom is the result of an overall decline in call volumes from the United Kingdom, which may be attributable, in part, to increased use of alternative communication media, such as e-mail.[9] In part as a result of this decline, Canada became the second largest U.S. export market. In 2000, U.S. telecommunication service receipts from Canadian firms totaled $352

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[5] U.S. billed minutes includes all minutes billed by U.S. carriers, and include most calls that originate in the United States. Federal Communications Commission (FCC), *Trends in the International Telecommunications Industry*, Apr. 3, 2001, found at Internet address *http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/Intl/itrnd00.pdf*, retrieved, Dec. 11, 2001.

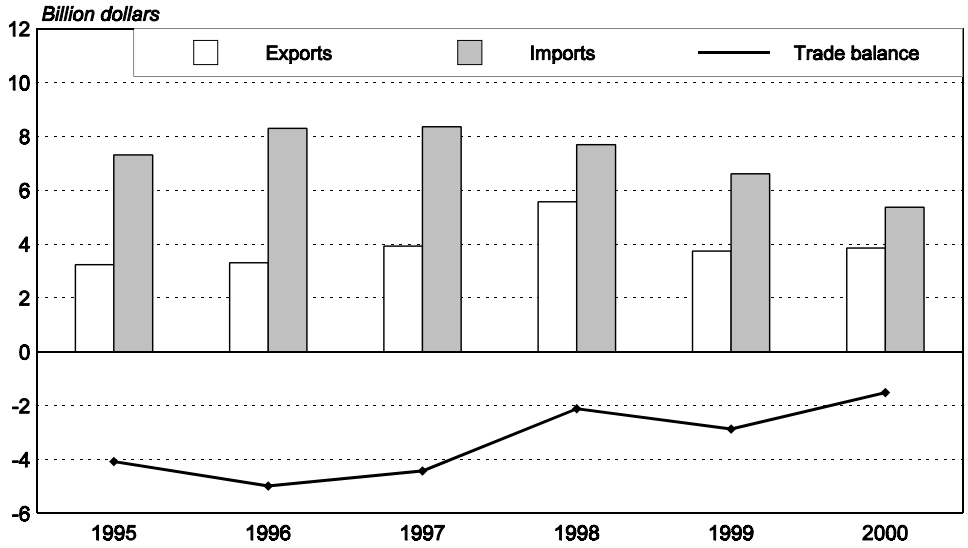
[6] FCC, *Trends in the International Telecommunications Industry*.

[7] FCC, *Benchmark Order*, 12 FCC Rcd 19,806 (1997).

[8] Analyst estimate. Data based on FCC, *IMTS Accounting Rates of the United States, 1985-2001*, Dec. 1, 2001, found at Internet address *http://www.fcc.gov/ib/td/pf/account.html,* retrieved Dec. 11, 2001.

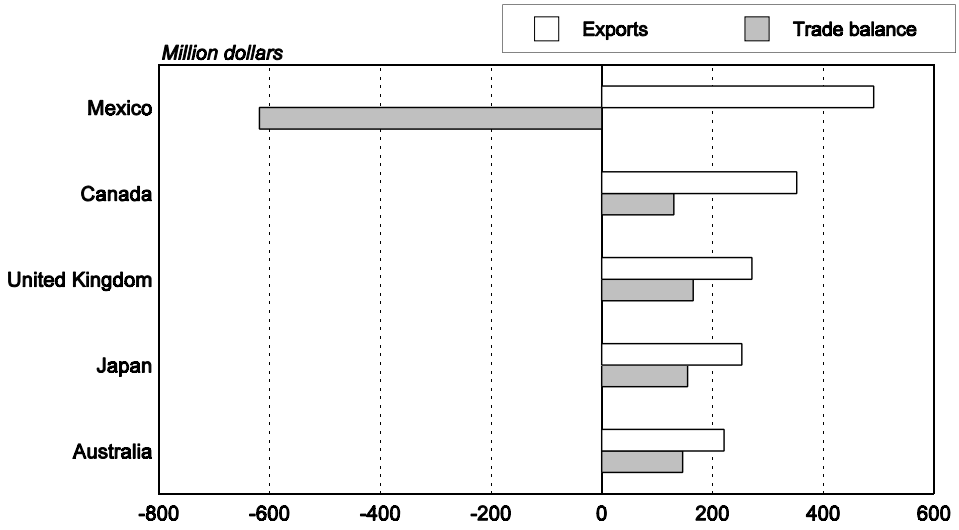
[9] UK billed minutes to the United States totaled 949 million in 2000, representing a decline of 15 percent from 1.15 billion in 1999. FCC, *Trends in the International Telecommunications Industry,* and FCC representative, telephone interview with USITC staff, Washington, DC, Dec. 12, 2001.

Figure 12-1
Telecommunication services: U.S. cross-border exports, imports, and trade balance, 1995-2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2000, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

Figure 12-2
Telecommunication services: U.S. cross-border exports and trade balance, by major trading partners, 2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

million, representing an increase of approximately 45 percent over 1999. Japan remained the fourth-largest U.S. export market, with U.S. telecommunication services exports of $253 million in 2000. Australia replaced Brazil as the fifth-largest U.S. export market, as exports to Australia increased by 125 percent, while exports to Brazil declined by 9.5 percent. Increased telecommunication receipts from Australia may be attributable, in part, to increased telecommunications traffic as a result of the 2000 Summer Olympic Games. Mexico remains the top U.S. import market for telecommunication services. U.S. imports from Mexico totaled $1.1 billion in 2000, representing an increase of nearly 40 percent from $794 million in 1999. This large increase indicates that growth in U.S. call volumes to Mexico continued to outweigh settlement rate declines.[10]

Foreign Direct Investment and Affiliate Transactions

U.S. telecommunication service providers' direct investment position abroad totaled $15.9 billion in 2000, representing a 2.7-percent increase over 1999. This increase was significantly lower than the 16-percent average annual increase recorded during 1995-99. The slower 2000 increase corresponds with the beginning of the slowdown in telecommunication mergers and acquisitions discussed below. Foreign direct investment in the U.S. telecommunication service industry increased by 8.6 percent to $27.7 billion in 2000, in contrast to the average annual growth rate of almost 50 percent recorded during 1996-99.[11] Inbound foreign direct investment growth reflects several large telecommunication mergers in recent years, including Deutsche Telecom's $24-billion acquisition of Voicestream Wireless in May 2000, and British-based Vodafone Group's $65.9-billion acquisition of San Francisco-based Airtouch Communications in September 1999.

Market Overview

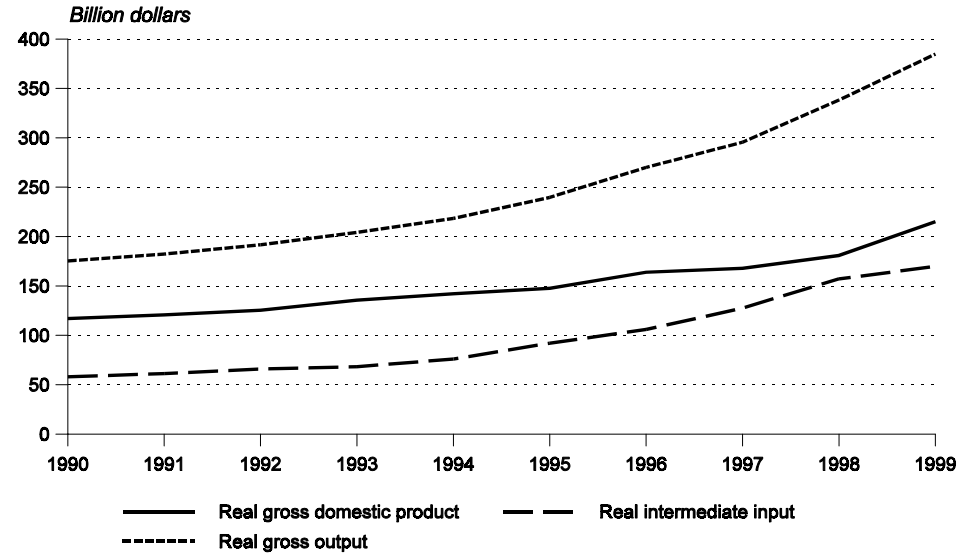
U.S. Output

The U.S. telecommunication service industry experienced 9.1-percent average annual growth in real gross output during 1990-99, to $385 billion. The increase in demand drove 12.7-percent average annual growth in intermediate inputs during the 1990s (figure 12-3). Principal inputs include communication services from second parties; maintenance and repair construction; legal, engineering, architectural, and related services; other business and professional services; audio, video, and other

[10] Mexican billed minutes increased at an average annual rate of 7.69 percent during 1995-99. FCC, *Trends in the International Telecommunications Industry*. Former Mexican telecommunication services monopoly Telmex recently reached an agreement with U.S.-based Worldcom, Inc. that would progressively lower settlement rates to $0.10 per minute in 2003 from $0.19 per minute in 2001. Such a reduction would likely result in a decrease in U.S. settlement payments to Mexico and a corresponding decline in U.S. imports of telecommunication services from Mexico. Inside U.S. Trade, "USTR Backs Off U.S. WTO Threat In Wake of Telecom Company Deal," June 1, 2001.

[11] Data for 1995 are not available.

Figure 12-3
Telephone and telegraph : Real gross domestic product, real gross output, and real intermediate input, 1990-99



Source: Compiled by the Commission.

communication equipment; and electronic components and accessories. Intermediate inputs that grew most rapidly during 1992-97 in terms of producer prices were audio, video, and other communication equipment, and electronic components and accessories, which increased at average annual rates of 14.9 percent and 15.1 percent, respectively, in real terms.[12] Such inputs have contributed to telecommunication network expansion. For example, main telephone lines in the United States increased at an average annual rate of approximately 5 percent during 1992-99, totaling 183.5 million in 1999.[13] Additionally, U.S. telecommunication firms' investment in Internet network infrastructure, wireless network digital technology, and local loop infrastructure totaled $88 billion in 1999, representing an increase of 34 percent over 1998.[14]

Competitive Environment

In terms of revenues, U.S. telecommunication service providers lead the world, with 1999 revenues of over $268 billion, representing almost 32 percent of global

[12] The McGraw-Hills Companies, U.S. Department of Commerce (USDOC), International Trade Administration (ITA), "Telecommunications Services, Economic and Trade Trends," in *U.S. Industry & Trade Outlook, 2000* (Washington, DC: McGraw-Hill, 2000), p. 30-2, and Organization for Economic Cooperation and Development (OECD), "OECD Economic Surveys - United States," found at Internet address *http://www.lexis-nexis.com/,* retrieved Oct. 12, 2000.

[13] International Telecommunications Union (ITU), *World Telecommunication Indicators, 1999* (Geneva: ITU, Oct. 1999), p. A-11, and ITU, *World Telecommunication Indicators, 1994* (Geneva: ITU, Mar. 1994), p. A-3.

[14] OECD, *Communications Outlook* (Paris: OECD, 2001), p. 76.

revenues.[15] Almost 90 percent of wireline service revenues in the United States are controlled by seven large companies -- AT&T Corp., Worldcom, Inc., Sprint FON Group, and four Regional Bell Operating Companies (RBOCs).[16] In the United States, there are nearly 1,300 local telephone service companies.[17] Approximately 150 firms offer long-distance services over network facilities that they own, or partly own, and another 350 companies resell local services using leased lines. More than 300 competitive local exchange carriers (CLECs) provide local and, increasingly, long-distance, international, and Internet services in urban areas.[18]

In the United States, incumbent wireline telecommunication firms increasingly face competitive pressure both from alternative communication media, such as e-mail and wireless technology, and from other industry players. In the long-distance voice service market, incumbent firms have experienced a decrease in overall call volumes and a reduction in service prices. For example, in 2000, AT&T reported that its long-distance calling volumes decreased by approximately 5 percent during the fourth quarter of 2000, compared to the previous year.[19] Simultaneously, AT&T, Worldcom, and Sprint reduced long-distance calling rates from 10 cents per minute to between 5 and 7 cents per minute.[20] Call volumes lost to market entrants and alternative communication media, together with service price reductions, resulted in an overall reduction in incumbent long-distance carriers' revenues in 2000. These fell by approximately 17 percent, 21 percent, and 33 percent for Sprint, AT&T, and Worldcom, respectively.[21]

The RBOCs continued to increase revenues markedly in 2000, despite the beginning of an economic slowdown in the U.S. telecommunications market. In 2000, the four RBOCs recorded revenues of $158.8 billion, a cumulative increase of 31 percent over 1999 levels.[22] RBOCs stand to gain incremental revenue by providing long-distance services in addition to their traditional local services. The Telecommunication Act of 1996 (Telecom Act) enables RBOCs to sell long-distance services provided that they open their local markets to competition. RBOC's long-distance revenue is expected to increase to $14 billion in 2003 from $1 billion in 2000.[23] To date, SBC Communications and Verizon have achieved regulatory approval to provide long-

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[15] ITU, *World Telecommunication Indicators, 2000/2001* (Geneva: ITU, Mar. 2001), p. 55.

[16] The four remaining Regional Bell Operating Companies are Verizon, BellSouth, SBC, and Qwest.

[17] Standard & Poor's, *Telecommunications: Wireline*, Industry Survey, May 31, 2001.

[18] The McGraw-Hill Companies and USDOC, ITA, *U.S. Industry and Trade Outlook, 1999* (New York, NY: McGraw-Hill, 1999), *Telecommunications Services, Economic and Trade Trends*, p. 30-5. Competitive Local Exchange Carriers (CLECs) include cellular/PCS providers, Internet Service Providers, cable television providers, and interexchange providers. CLECs build, or rebuild, their own local networks, or they lease portions of local networks from incumbent local providers. Recent industry consolidation and financial difficulties may have reduced the total number of CLECs.

[19] AT&T Group, *Earnings Commentary*, Jan. 29, 2001, found at Internet address *http://www.att.com/ir/pdf/004q_cmnt.pdf,* retrieved Dec. 3, 2001.

[20] Standard & Poor's, *Telecommunications: Wireline*, p. 1.

[21] Ibid.

[22] Analyst estimates. Revenue data from company 10-K reports.

[23] Tim Greene, "The long road to long distance," *Network World,* June 29, 1998; and Glenn Bischoff, "The long and winding road," *Telephony*, Apr. 23, 2001, p. 12.

distance services in their service markets.[24] Despite potentially higher revenues from long-distance service offerings, RBOCs expect overall revenue growth to slow beginning in 2001, largely as a result of the U.S. economic downturn. For example, Verizon expects annual revenue growth of 4 to 5 percent in 2001, compared with previous estimates of 5 to 6 percent.[25] Similarly, the U.S. economic slowdown has had a large negative impact on the CLECs, which depend, in part, on capital markets to fund network construction.[26] Although CLEC revenues increased by 53 percent in the first half of 2000, many CLECs are beginning to struggle financially as funding sources disappear. In December 2001, for example, local telephone and data services provider McLeodUSA, an Iowa-based CLEC, announced that it would initiate a restructuring plan to reduce debt, but may eventually be forced to seek bankruptcy protection.[27] Similarly, California-based NorthPoint Communications, a national CLEC, closed its network in April 2001, 3 months after entering bankruptcy proceedings.[28]

Demand for wireless telecommunication services in the United States remains strong. Total wireless subscribers increased to approximately 101 million in 2000, representing an increase of 29.4 percent over 1999.[29] This increase was slightly higher than the 24.5-percent average annual growth rate registered during 1995-2000. Although wireless subscriber growth is expected to plateau as wireless penetration rates reach saturation levels, revenue growth will likely continue as service providers upgrade their network infrastructures to utilize the next generation of wireless technologies. Such technology reportedly uses wireless spectrum capacity more efficiently, potentially doubling carriers' voice capacity.[30] Additionally, increased spectrum capacity enables the provision of new service

[24] Although Qwest Communications provides long-distance services outside its regional market, it is still awaiting regulatory approval to provide long-distance services within its local service area, which encompasses 14 western states.

[25] Barbara Etzel, "Big is better: Mergers are coming to troubled telecom, with regionals leading the way," *The Investment Dealers' Digest*, Nov. 19, 2001, found at Internet address *http://www.proquest.umi.com,* retrieved Dec. 5, 2001.

[26] Standard & Poor's, *Telecommunications: Wireline*, p. 2.

[27] Staff, "McLeodUSA to restructure, warns may file for bankruptcy," *Reuters*, Dec. 4, 2001, found at Internet address *http://www.totaltele.com,* retrieved Dec. 4, 2001.

[28] Reuters, "Verizon to maintain links for NorthPoint DSL," Apr. 2, 2001, found at Internet address *http://www.totaltele.com,* retrieved Dec. 4, 2001.

[29] Standard & Poor's, *Telecommunications: Wireless*, Industry Survey, Nov. 1, 2001, p. 1.

[30] Standard & Poor's, *Telecommunications: Wireless*, p. 3.

offerings, such as voice portals and unified messaging,[31] which has the potential to appeal to new customers and contribute to revenue growth.[32]

Overall merger and acquisition (M&A) activity in the U.S. telecommunication market declined markedly in 2001 after several strong years. During the first half of 2001, U.S. telecommunication firms entered into merger and acquisition agreements worth $8.1 billion, compared to the $23 billion in M&A activity announced during the first quarter of 2000.[33] During 1998-2000, several large mergers were announced or completed as telecommunication firms sought to expand their service offerings. For example, AT&T spent $110 billion to acquire cable companies TCI and MediaOne during 1998 and 1999,[34] and Qwest Communications, previously a long-distance voice and data service provider, completed its $48-billion merger with US West in 2000, creating a company able to offer its customers Internet access, data, multimedia and voice services over a 25,000-mile broadband fiber-optic network.[35] With demand for bundled data and voice services slow to develop, however, the pace and size of mergers and acquisitions in the U.S. telecommunications industry has decreased, as firms reevaluate their product markets and shift resources to focus on revenue generating services. Industry analysts expect to see continuing consolidation in the CLEC market segment, however, as established telecommunication firms seek to improve product offerings and increase their market share by acquiring struggling CLECs or their assets.[36]

WTO Negotiating Proposals

The World Trade Organization's (WTO) Agreement on Basic Telecommunications entered into force on February 5, 1998. At the conclusion of negotiations in February 1997, 69 countries, accounting for approximately 90 percent of global

[31] Voice portals are voice activated Internet sites that customers access using wireless phones. Such sites typically consist of a search engine, personalized web-pages, and e-mail services. Unified messaging, or integrated messaging, enables customers to access all of their personal communication media, such as voice mail, e-mail, and fax transmissions, from a single device, such as a wireless phone.

[32] Standard & Poor's, *Telecommunications: Wireless*, p. 4.

[33] Barbara Etzel, "Some 82% of telecom mergers used no bankers," *The Investment Dealers' Digest: IDD*, Mar. 26, 2001; and Barbara Etzel, "Telecom Recovery? Think 2002: Overcapacity, too much debt and hyper-competition could keep the industry sidelined," *The Investment Dealers' Digest: IDD*, July 2, 2001, found at Internet address *http://www.proquest.umi.com,* retrieved Dec. 4, 2001.

[34] Dave Lindorff, "The Next wave," *The Investment Dealers' Digest*, New York, Oct. 4, 1999, found at Internet address *http://proquest.umi.com,* retrieved Nov. 8, 1999.

AT&T has since moved to divest its interests in TCI and MediaOne in an effort to reduce its debt burden. Standard & Poor's, *Telecommunications: Wireline*, p. 3.

[35] Deborah Mendez-Wilson, "A new Qwest: Less choice?" *Wireless Week*, July 3, 2000.

[36] Standard & Poor's, *Telecommunications: Wireline*, p. 6. In December 2001, AT&T announced that it may acquire fiber-optic networks and equipment from bankrupt communications companies. Reuters Staff, "AT&T eyes networks of struggling telcos," *Total Telecom*, Dec. 7, 2001.

telecommunication revenues, scheduled market liberalizing commitments.[37] To date, 89 countries have made commitments on at least 1 telecommunication subsector, and many other countries have further liberalized their markets on a unilateral basis.[38]

As of December 2001, Australia, Canada, Colombia, the European Union, Korea, Switzerland, and the United States had submitted negotiating proposals to the WTO for the current round of services negotiations.[39] In general, the negotiating proposals seek to encourage full commitments on telecommunication services, eliminate restrictions on market access and national treatment, accelerate the implementation of current commitments, and ensure domestic competition through pro-competitive regulation.[40] Some WTO members have suggested that telecommunication coverage should be expanded to incorporate certain technological developments, such as Internet-based services.[41] Additionally, some developed countries propose the elimination of MFN exemptions related to accounting rates.[42] The U.S. proposal seeks to ensure a trade environment conducive to network construction and use, which would involve full commitments on basic telecommunication services, value-added services, services complementary to telecommunications,[43] and full commitments on all electronically delivered services.[44]

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[37] WTO, "Ruggiero congratulates governments on landmark telecommunications agreement," Press Release, Feb. 17, 1997, found at Internet address *http://www.wto.org/english/news_e/pres97_e/pr67_e.htm,* retrieved Dec. 12, 2001.

[38] Office of the United States Trade Representative (USTR), *Annual Report, 1999*, p. 112, found at Internet address *http://www.ustr.gov/pdf/2000tpa_ii.pdf,* retrieved Dec. 13, 2001.

[39] WTO, "Communication from Australia: Negotiating Proposals on Telecommunication Services," S/CSS/W/17, Dec. 5, 2000; "Communication from Canada: Initial Negotiating Proposal on Telecommunication Services," S/CSS/W/53, Mar. 14, 2001; "Communication from Colombia: Telecommunication Services," S/CSS/W/119, Nov. 27, 2001; "Communication from the European Communities and their Member States," S/CSS/W/35, Dec. 22, 2000; "Communication from Korea: Negotiating Proposal for Telecommunication Services," S/CSS/W/83, Nov. 5, 2001; "Communication from Switzerland, GATS 2000: Telecommunications," S/CSS/W/72, Apr. 5, 2001; "Communication from the United States: Market Access in Telecommunications and Complementary Services," S/CSS/W/30, Dec. 18, 2000; all found at Internet address *http://www.docsonline.wto.org,* retrieved Aug. 9, 2001.

[40] See, for example, WTO, "Communication from the European Communities and their Member States," S/CSS/W/35. The implementation of procompetitive domestic regulation, where it does not already exist, would fulfill the requirements of the Reference Paper on Regulatory Principles, which is included as additional commitments in the schedules of signatories to the Basic Telecom Agreement.

[41] See, for example, WTO, "Communication from Switzerland," S/CSS/W/72, and "Communication from Colombia," S/CSS/W/119.

[42] WTO, "Communication from the European Communities," S/CSS/W/35.

[43] Such services include distribution, computer services, express delivery, advertising, and certain financial services.

[44] WTO, "Communication from the United States," S/CSS/W/30.

CHAPTER 13
FOREIGN DIRECT INVESTMENT IN INFRASTRUCTURE SERVICES IN OECD[1] COUNTRIES

Introduction

In recent years, the service sector has accounted for an increasing share of GDP in most countries. Prominent among service-sector industries are the infrastructure services, such as finance, telecommunications, and utilities, which provide most other businesses with efficient and low-cost services that they need to compete in global markets. Regulatory and technological changes in the 1990s have all enhanced the significant role of foreign direct investment (FDI) in the provision of such services in many countries. This chapter examines the extent of inbound FDI in the service sectors of the member countries of the Organization for Economic Cooperation and Development (OECD),[2] with special attention to investment trends in infrastructure service industries.

FDI in OECD infrastructure industries has increased for several reasons. First, in an effort to attract capital and increase efficiency, many countries have unilaterally removed burdensome investment regulations, especially those pertaining to foreign firms. Second, some countries have undertaken large-scale privatization of state-owned enterprises in these industries, many of which have been purchased by foreign investors.[3] Third, technological advances in telecommunication services and electricity and gas services have encouraged profound changes in the market structures that characterize these industries. Fourth, upgrading existing infrastructure to take advantage of these new technologies requires substantial capital, much of which has also had to come from FDI. These combined developments have generated new private-sector competition in many countries. Much of this liberalization has

[1] As of April 2002, the following countries were OECD members: Australia, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States.

[2] Data on services investment outside of the OECD member countries are not available. Belgium, Ireland, Japan, Korea, Luxembourg, New Zealand, Spain, and Turkey do not report inbound direct investment by industry (see box) to the OECD, and are therefore not included in this report. Data in this chapter reflect trends in direct investment during 1990-98.

[3] See Rudolf Adlung, "Services Trade Liberalization from Developed and Developing Country Perspectives," in Pierre Sauvé and Robert M. Stern, eds., *GATS 2000: New Directions in Services Trade Liberalization* (Washington, DC: The Brookings Institution, 2000), pp. 112-131.

been formalized through the General Agreement on Trade in Services (GATS).[4] For instance, special protocols to the GATS have been concluded for the financial services and telecommunication services industries. Energy services are included in the current round of World Trade Organization (WTO) negotiations.

Direct Investment in OECD Service Sectors

Among the member countries of the OECD, the service sector accounted for 56 percent of total inbound direct investment stock, on average, in 1998. This reflected average annual growth of 22 percent in service sector investment stock during 1990-98, compared to 19-percent average annual growth in all industries.[5] The United States held the greatest amount of service-sector investment in 1998, with $401.7 billion in direct investment stock. Germany and the United Kingdom followed with $188.1 billion and $179.4 billion, respectively (table 13-1). The investment levels reflect both the importance of the service sector in each country and the relative size of each economy. The share of service-sector investment was highest in Switzerland, Germany, and Denmark, where 80 percent of inbound direct investment stock resided in service industries (figure 13-1).[6]

Direct Investment

Direct investment is a significant investment by a parent company in a foreign-based affiliate, such that the parent has substantial influence in the management of the affiliate company. For statistical purposes, the International Monetary Fund (IMF) recognizes direct investment to be ownership of 10 percent or more of the voting securities of a foreign business enterprise. This is the same standard applied by U.S. statistical agencies and most other OECD member countries. The data presented in this chapter are derived from direct investment position, or stock data, which is a cumulative statistic. Direct investment position measures the sum of parents' equity holdings in their foreign affiliates, plus the net value of loans from parents to their affiliates. Direct investment can take place in two ways: through foreign investment in new firms or production facilities (greenfield investment), or through cross-border mergers with and acquisitions of existing facilities (brownfield investment).

[4] The GATS is a multilateral treaty signed in 1994, under the auspices of the WTO's Uruguay Round.

[5] Nineteen OECD member countries reported data on their inbound direct investment position for 1998. Belgium, Denmark, Greece, Ireland, Japan, Korea, Luxembourg, New Zealand, Spain, and Turkey did not report such data.

[6] Calculations by the Commission, from OECD data. OECD, *International Direct Investment Statistics Yearbook 2000* (Paris: OECD, 2001).

Table 13-1
Inbound direct investment position in services, 1990-98

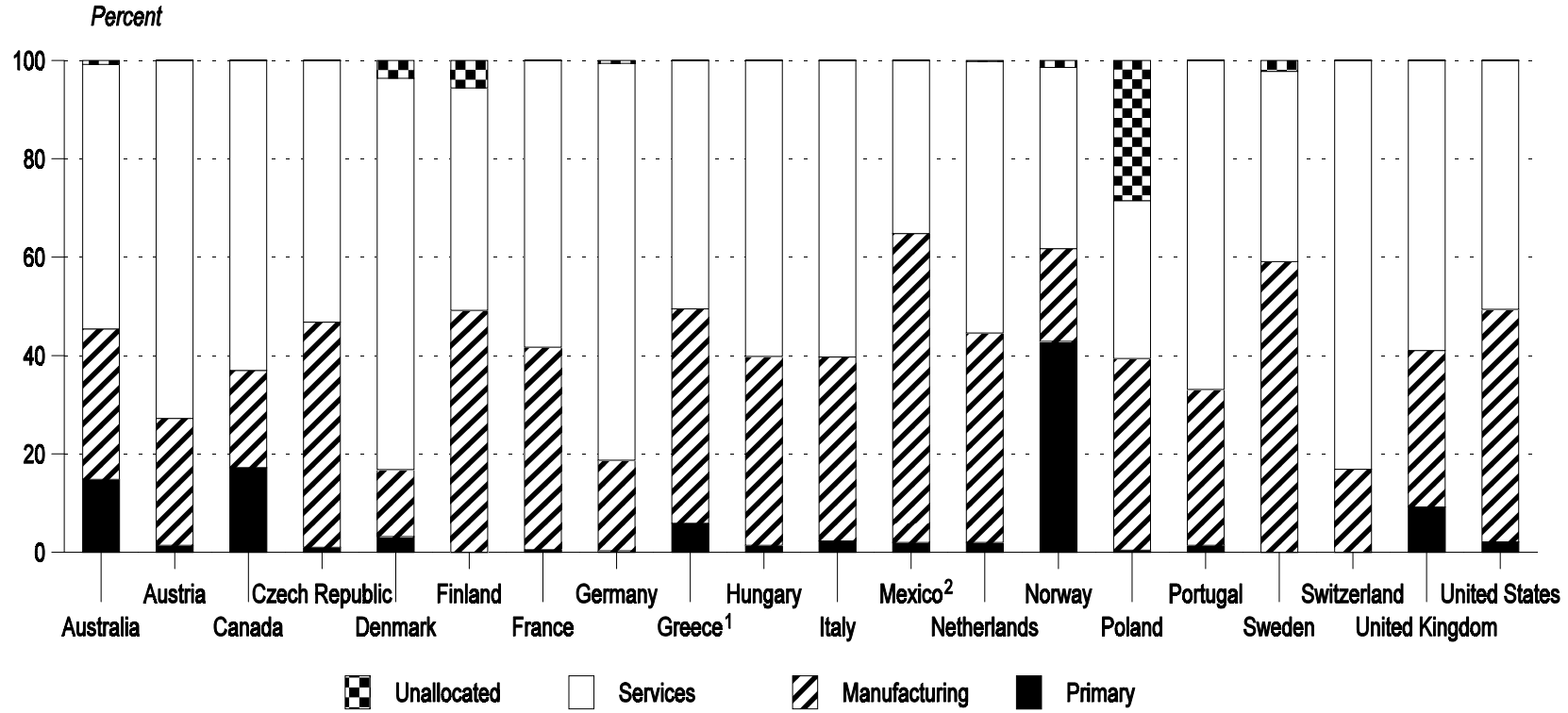
Country	Inbound services direct investment, 1998	Services as share of total inbound direct investment, 1998	Average annual growth of direct investment in services, 1990-98
	Million dollars	*Percent*	
Australia	52,324.9	53.8	6.7
Austria	14,719.3	72.8	15.3
Canada	93,092.0	63.0	18.9
Czech Republic	7,072.1	53.2	88.4
Denmark	23,207.9	79.6	13.7
Finland	7,089.2	45.2	20.7
France	94,215.0	58.3	10.7
Germany	188,085.1	80.7	14.3
Greece[1]	8,708.0	50.5	([2])
Hungary	6,640.5	60.2	42.8
Italy	58,778.5	59.9	13.1
Mexico[3]	19,641.0	35.2	14.4
Netherlands	88,683.6	55.2	15.9
Norway	9,694.2	36.9	12.1
Poland	7,221.0	32.1	63.4
Portugal	13,799.3	66.9	13.2
Sweden	20,259.2	38.7	21.5
Switzerland	54,946.9	83.1	9.2
United Kingdom	179,367.1	59.0	12.3
United States	401,652.0	50.6	10.1

[1] Data are for 1999.
[2] Not available.
[3] Data are for 1997.

Note.—Data are not available for Belgium, Ireland, Japan, Korea, Luxembourg, New Zealand, Spain, and Turkey.

Source: Calculations by the Commission, based on OECD data.

Figure 13-1
Inbound direct investment position, by country and sector, 1998



[1] Data are for 1999.
[2] Data are for 1997.

Source: OECD, *International Direct Investment Statistics Yearbook 2000*, (Paris: OECD, 2001).

The Czech Republic, Poland, and Hungary experienced the most rapid growth in inbound service-sector investment stock during 1990-98, with average annual growth rates of 88 percent, 63 percent, and 43 percent, respectively.[7] These rapid growth rates principally reflect a wave of privatization in the infrastructure service industries during the 1990s, along with the liberalization of foreign investment rules designed to meet standards for entry into the European Union.[8]

In the Czech Republic, the largest shares of inbound direct investment in service industries went to financial services, along with wholesale/retail trade and repair services, followed by the communications and utilities industries. During 1991-96, more than 4,700 state-owned firms with $32 billion in assets were sold to the private sector. New FDI accounted for $6 billion of this total.[9] Investment in the communications industry during 1990-98 primarily targeted the mobile telephone industry.[10] FDI in Czech infrastructure services is likely to show continued strong growth in subsequent years. In 1998, the country launched a privatization program for its four largest banks, which finished on schedule in June 2001, with the sale of a 48-percent stake in Komer…ní Banka to Société Générale (France) for $1.01 billion.[11] The banks have been sold primarily to foreign investors.[12] Four new mobile telecommunication licenses were also scheduled for auction in 2001. Cesky Telecom, the state-owned landline telephone company, was in the process of privatization in early 2002, with a short list of seven bidders announced in January.[13]

In Poland, the financial services industry attracted the largest share of infrastructure services investment. The majority of Poland's banks have been privatized, and approximately 70 percent of the country's commercial banking sector is now controlled by foreign investors, most prominently from Germany, Italy, and the United States.[14] In the insurance industry, foreign-controlled firms accounted for 99 percent of the nonlife market and 78 percent of the life insurance market in 1999.[15] More recently, foreigners have invested in Poland's telecommunications and utilities

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[7] Average annual growth rates calculated by USITC staff from available OECD data. The Czech Republic reported service sector investment data from 1991-98, Poland reported data from 1994-98, and Hungary reported data from 1992-98.

[8] See Swiss Re, *Sigma,* No. 1/2001, pp. 19-22, for details on preparation for EU membership specific to the insurance industry.

[9] U.S. Department of State telegram No. 06302, "Czech Privatization Revisited," prepared by U.S. Embassy, Prague, Oct. 4, 1996.

[10] U.S. Department of State telegram No. 00306, "Czech Telecoms: Mobile Phones and 3G Licenses," U.S. Embassy, Prague, Feb. 1, 2001.

[11] "The End of the Beginning," *The Daily Deal,* June 11, 2001, p. 4; and "Czech Republic: Focus on Privatization Deals," *Acquisitions Monthly,* July 31, 2001, found at Internet address http://www.acquisitions-monthly.com/, retrieved Aug. 1, 2001.

[12] U.S. Department of State telegram No. 00277, "Czech Banking Sector on Road to Recovery," U.S. Embassy, Prague, Jan. 31, 2001.

[13] U.S. Department of State telegrams, No. 00248, "Czech Telecoms: Privatization and Interconnectivity," prepared by U.S. Embassy, Prague, Jan. 29, 2001; and No. 00306 "Czech Telecoms: Mobile Phones and 3G Licenses," prepared by U.S. Embassy, Prague, Feb. 1, 2001; and Total Telecom, "Seven bidders shortlisted in Cesky Telecom sale," Jan. 25, 2000, found at Internet address http://totaltele.com/, retrieved Feb. 6, 2002.

[14] "Foreigners Buy Up Poland's Banks," *Euromoney*, Sept. 2000, found at Internet address *http://www.euromoney.com/*, retrieved Mar. 1, 2001.

[15] Swiss Re, *Sigma,* No. 1/2001, table A3, p. 34.

industries as well. France Telecom invested $3.2 billion and Sweden's Telia invested $300 million in the telecommunications industry during 2000.[16] Several French and German firms have acquired stakes in Polish electric and gas utilities since 2000. The Polish Government is planning to find strategic investors, most likely large global companies, for more than 60 electric power generation and distribution firms by the end of 2002.[17]

In Hungary, the largest share of service-sector direct investment (23 percent) has been concentrated in the electric, gas, and water industries. Much of this investment went to finance the privatization of Hungary's electric power sector during the 1990s.[18] Electricité de France holds substantial shares in several Hungarian electricity distribution companies.[19] Other industries receiving significant direct investment include financial services and communications. For example, foreign insurance firms accounted for approximately 90 percent of market share in both the Hungarian life and nonlife insurance markets in 1999.[20]

Since cross-border mergers and acquisitions are one of the primary sources of FDI, the service industries that register the highest proportions of inbound direct investment stock are also the industries that registered the highest number of cross-border mergers and acquisitions in recent years. In 1999 5,232 cross-border mergers, valued at $804 billion, took place worldwide. Service-sector firms were involved in 2,999, or 57 percent, of these mergers, and accounted for $452 billion (56 percent) of the total value (table 13-2). The infrastructure services addressed herein jointly accounted for 71 percent of cross-border mergers and acquisitions in the service sector by value, but only 29 percent of the number of such mergers.[21] The remainder of the chapter addresses three infrastructure service industries in

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[16] Polish Agency for Foreign Investment, found at Internet address http://www.paiz.gov.pl/, retrieved July 19, 2001.

[17] "Polish Treasury Selects Power Partner," *Acquisitions Monthly,* May 24, 2001; "Europe Looks Ahead to the US," *Acquisitions Monthly,* Jan. 1, 2000; and "EdF and EnBW Acquire Rybnik Power Plant," *Acquisitions Monthly,* July 30, 2001, all found at Internet address http://www.acquisitions-monthly.com/, retrieved Aug. 1, 2001.

[18] U.S. Department of State, Energy Information Administration, Hungary: Country Analysis Brief, found at Internet address *http://www.eia.doe.gov/emeu/international/hungary.html*, retrieved Feb. 28, 2001.

[19] Individual company websites: *http://www.dedasz.hu/angol.htm*; http://www.demasz.hu/; and *http://www.edasz.hu/eng/index_e.html*, all retrieved Mar. 1, 2001.

[20] Swiss Re, *Sigma,* No. 1/2001, Table A3, p. 34.

[21] Compiled by KPMG from press reports. It is possible that some mergers are not included, or that the value of the transactions changed between the press announcement and the concluded transaction. When no value for a merger is reported in the press, KPMG records the value as zero, so total values for broad industry categories are most likely understated. KPMG Corporate Finance, Cross-Border Mergers and Acquisitions database, received Nov. 2000.

Table 13-2
Worldwide cross-border mergers and acquisitions in the service sector, 1999

Industry	Number of mergers	Value of mergers
		Billion dollars
Communications	220	167.1
Financial services	481	95.9
Electric, gas & water	174	56.9
Real estate and business services	1,199	45.6
Trade and repairs	320	29.7
Transport	180	15.1
Hotel and restaurant services	73	6.5
Construction	78	3.6
Other services	274	31.2
Total service sector	2,999	451.5
Total all industries	5,232	804.0

Source: Calculations by the Commission, based on data provided by KPMG Corporate Finance.

greater detail: financial services; telecommunication services; and electric, gas, and water utilities.

Telecommunication Services

Technological and regulatory changes in the telecommunication services industry in recent years have encouraged a significant increase in FDI. Traditionally, telephone services have been provided by monopoly telephone companies, either government-owned, or privately owned and highly regulated. The high infrastructure costs required to provide universal telephone coverage resulted in natural monopolies in most countries. More recently, however, new technologies have lowered infrastructure costs and permitted increased competition, including foreign competition. In wireless telecommunication, the infrastructure costs are so much lower than for landline systems, that it is economically feasible for competing telephone companies to invest in competing networks. Governments have embraced this newly competitive system as a way to increase efficiency in the market, thus lowering prices for consumers. To this end, many governments have reformed their telecommunication regulations, issuing new licenses and permitting foreign investment. The result has been very rapid growth in FDI in the telecommunications industry.

During 1990-98, inbound direct investment in telecommunications increased at an average annual rate of 75 percent in OECD member countries.[22] The United States was the largest recipient of such investment, with $32.5 billion, followed by the United Kingdom, with $19.1 billion (table 13-3 and figure 13-2).[23] The United

[22] Includes data for Australia, France, Germany, Hungary, Italy, Mexico, the Netherlands, Norway, Poland, Portugal, the United Kingdom, and the United States. No data are available for other OECD members.

[23] The remainder of British Telecom was sold off in two sales in 1991 and 1993, with the three sales raising a total of $22.9 billion. See International Telecommunication Union (ITU), *World Telecommunication Development Report 1996/97* (Geneva: ITU, 1997), p. 52.

Kingdom began the process of privatizing its telecommunications industry with the sale of a 50-percent stake in British Telecom, for $6.4 billion, in 1984.

In five OECD countries, telecommunication services accounted for large shares of all inbound direct investment in the service sector: Denmark, the Czech Republic, the United Kingdom, Austria, and Hungary. In 1998, telecommunications accounted for 28 percent of inbound direct investment in services in Denmark; 16 percent in the Czech Republic; 11 percent in the United Kingdom; and 10 percent in both Austria and Hungary (see table 13-3). In Denmark, U.S.-based Ameritech purchased 42 percent of former monopoly provider Tele Danmark for $3.1 billion in 1998, and in Austria, Telecom Italia paid $2.3 billion for a 25-percent stake in former monopoly Post und Telekom Austria in 1998.[24] In 1994 and 1995, the Czech Republic sold a total of 49 percent of SPT Telecom for $1.3 billion, with Swiss Telecom and Netherlands PTT purchasing the largest shares.[25] Deutsche Telekom and Ameritech purchased two-thirds of Hungary's Matav for $1.7 billion, in two separate transactions in 1993 and 1996.[26]

Privatization, often accompanying regulatory reform, has opened many new markets to foreign investment. By the end of 1998, at least 69 state-owned telephone and postal companies had been privatized worldwide, in transactions valued at over $240.5 billion, with foreign investors playing an active role in the process.[27] Firms in Japan, the United Kingdom, Germany, Brazil, and Mexico accounted for over $123 billion of this total, with Japan's NTT alone raising $70.5 billion.[28] Foreign interests have also invested large sums in many countries to acquire mobile telephone licenses, and to set up the infrastructure necessary to offer mobile telephone services. Extensive cross-border investment in the industry continued through 2000. For example, Telecom Italia paid $700 million for 25 percent of the Austrian telecommunications firm Mobilkom in 1997, Sweden's Telia raised $8.6 billion from foreign investors for a 29-percent stake in the company in 2000, and Deutsche Telekom (Germany) paid $939 million for 51 percent of the Slovak Republic's telephone company, also in 2000.[29]

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[24] Ameritech was purchased by U.S.-based SBC Communications Corporation in 1999. "Europe's Incumbents Learn the American Way," *Communications Week International,* May 4, 1998; "SBC Bid May Boost Ameritech in Europe," *Bloomberg News,* May 11, 1998; and "Telecom Italia Outbids Ameritech to Win Telekom Austria Stake," *Bloomberg News,* Oct. 20, 1998, all found at Internet address http://www.totaltele.com/, retrieved July 31, 2001.

[25] ITU, p. 51.

[26] Privatisation International, database of completed mergers and acquisitions, found at Internet address http://www.privatisationintle.com/, retrieved Feb. 28, 2001; and ITU, p. 51.

[27] Calculations by Commission staff, based on data from ITU, pp. 45-54; and USITC, Global Privatization Initiatives database.

[28] ITU, pp. 45-54

[29] USITC, Global Privatization Initiatives database.

Table 13-3
Inbound direct investment position in telecommunications in OECD countries, 1998

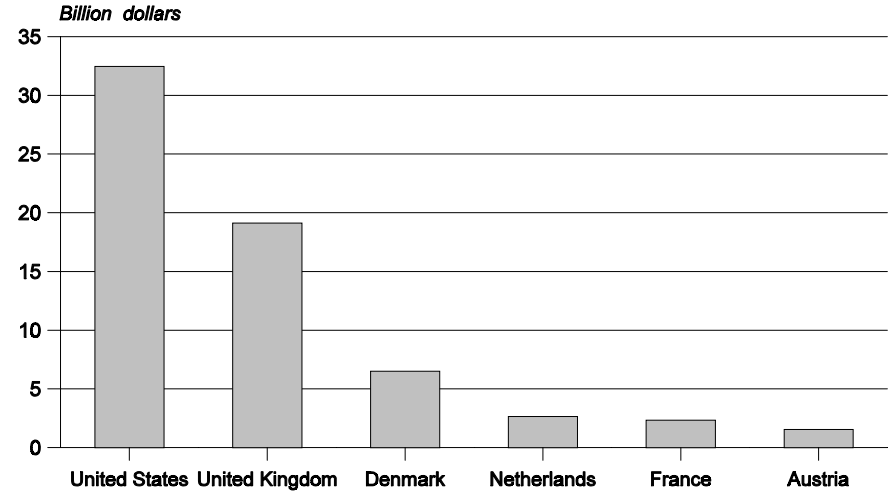
Country	Inbound position	Telecommunications/total inbound services position
	Million dollars	*Percent*
Australia	([1])	([1])
Austria	1,534.8	10.4
Canada	([1])	([1])
Czech Republic	1,131.0	16.0
Denmark	6,496.0	28.0
Finland	([1])	([1])
France	2,342.3	2.5
Germany	372.9	0.2
Greece	([1])	([1])
Hungary	677.2	10.2
Italy[2]	2,228.7	4.4
Mexico[2]	1,191.0	6.1
Netherlands	2,653.4	3.0
Norway[2]	59.4	0.5
Poland	162.0	2.2
Portugal	135.6	1.0
Sweden	([1])	([1])
Switzerland	([1])	([1])
United Kingdom	19,112.0	10.7
United States	32,468.0	8.1

[1] Not available.
[2] Data are for 1997.

Note.—Data are not available for Belgium, Ireland, Japan, Korea, Luxembourg, New Zealand, Spain, and Turkey.

Source: Calculations by the Commission, based on OECD data.

Figure 13-2
Inbound direct investment position: Telecommunications investment, by country, 1998



Source: OECD, *International Direct Investment Statistics Yearbook 2000* (Paris: OECD, 2001).

Considerable amounts of FDI in the industry also stem from cross-border mergers and acquisitions between private companies in the United States and Europe. In 1998, for example, there were 232 cross-border mergers or acquisitions in the telecommunication services industry, valued at $40.4 billion. This was followed in 1999 by 227 cross-border mergers, with a sharply increased value of at least $167 billion.[30] The higher 1999 value was largely driven by British-based Vodafone AirTouch's purchase of Mannesmann, a German telecommunications company, for $136 billion.[31] Vodafone AirTouch is itself a product of the $65.9-billion merger of British-based Vodafone and U.S.-based Airtouch in 1999.[32] Among many other recent cross-border mergers in the industry were Deutsche Telekom's $53.9-billion acquisition of U.S.-based Voicestream Wireless Corporation and its $7.2-billion takeover of U.S. mobile operator PowerTel, both in 2000. Deutsche Telekom also acquired British-based One 2 One for $13 billion in 1999. In a separate merger, British Telecom acquired Viag Interkom of Germany for $13 billion in 2000.[33]

[30] KPMG Corporate Finance.

[31] When the merger was first proposed in late 1999, it was valued at approximately $136 billion. Due to changes in the share prices of both Mannesmann and Vodafone after the bid was announced, the merger was valued at over $180 billion by the time it was completed. See Michael Murphy, "Much done, more to come," *Acquisitions Monthly,* Jan. 1, 2000, found at Internet address *http://www.acquisitions-monthly.com/*, retrieved Mar. 2, 2001; and "Mannesmann Board OKs Vodafone Merger Bid," *Reuters,* Feb. 4, 2000, found at Internet address *http://www.totaltele.com/*, retrieved Feb. 26, 2001.

[32] UNCTAD, *World Investment Report 1999* (Geneva: United Nations, 1999), p. 96.

[33] "The Waiting Game," Jan. 2001, and "Much Done, More to Come," Jan. 2000, *Acquisitions Monthly,* found at Internet address *http://www.acquisitions-monthly.com/*, retrieved Mar. 2, 2001.

Electric, Gas, and Water Utilities

Direct investment trends in the electric, gas, and water utilities industry once again illustrate the impact that technological developments and regulatory reforms can have on investment growth. As in the case of the telecommunications industry, the utilities industries have traditionally operated as highly regulated natural monopolies, whether government-owned or privately owned. Electric power, gas, and water utilities were characterized by high infrastructure costs, making it too expensive to replicate the infrastructure in order to introduce competition. Beginning in the early 1990s, new technologies offered increased efficiencies, particularly in the electric power industry. The two most important technological innovations in electric power were Combined Cycle Gas Turbine technology (CCGT) and improved communication and control methods for electric power network systems. CCGT is a highly efficient gas turbine system used in electricity generation. The new technology has greatly reduced the fixed costs of generating electricity, permitting additional generators to enter the market, thus creating increased competition in the electric power industry. At the same time, the innovations in network communication have allowed effective coordination between an increased number of electric power generation and distribution firms in a single electricity network, again increasing the overall efficiency of the system.[34]

In the natural gas and water industries, reforms have introduced greater efficiency into the systems by separating the production, transmission, and distribution functions of vertically integrated utility companies, and facilitating market competition where possible. For example, many countries have introduced competition in both the production and distribution segments of the natural gas industry. In the water industry, governments have reportedly increased operational efficiency by privatizing their water companies, thereby introducing a profit motive, but retaining the system of regional water monopolies.[35] In response to these changing conditions, a number of countries have opened their electric power, natural gas, and water industries to FDI as a means to pay for necessary infrastructure development. Inbound direct investment stock in the utilities industry increased at an average annual rate of 37 percent during 1990-98,[36] compared with 19 percent for all industries, and 22 percent for the service sector as a whole.

The United Kingdom was the largest destination for inbound investment in the utilities industries during the 1990s, with total inbound direct investment stock of $19.5 billion in 1998 (figure 13-3). Australia ranked second, with $5.1 billion the same year. In the United Kingdom and Australia, electric, gas, and water services accounted for 6 percent and 5 percent, respectively, of total inbound direct

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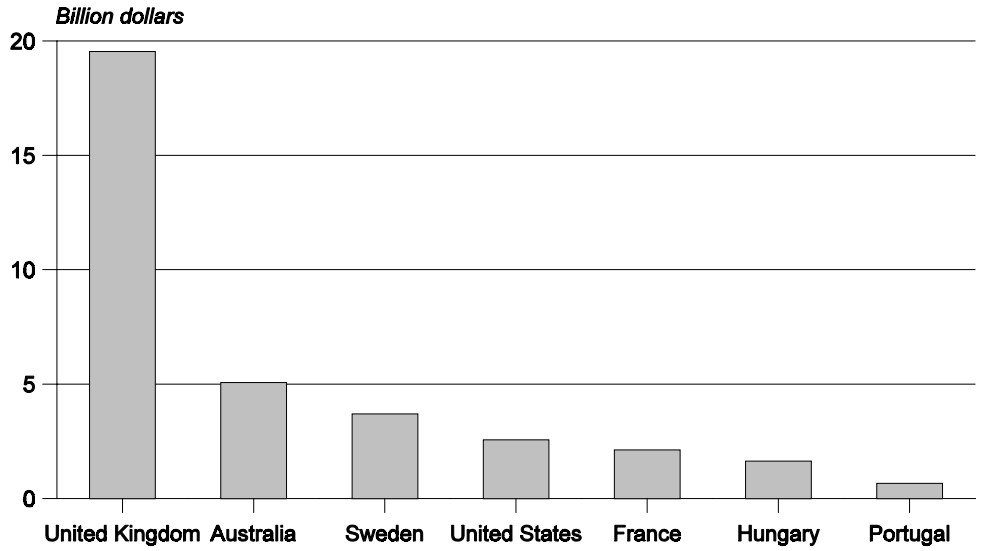
[34] USITC, *Electric Power Services: Recent Reforms in Selected Foreign Markets,* publication No. 3370, Nov. 2000, pp. 2-6 - 2-7.

[35] See International Energy Agency, *Natural Gas Pricing in Competitive Markets* (OECD: Paris, 1998), pp. 13-52; and World Bank, "Private Participation in the Water and Sewerage Sector - Recent Trends," Note No. 147, Aug. 1998.

[36] Includes data for Australia, Austria, the Czech Republic, France, Germany, Hungary, Mexico, the Netherlands, Poland, Portugal, Sweden, the United Kingdom, and the United States. No data available for other OECD members.

Figure 13-3
Inbound direct investment position: Utilities investment, by country, 1998



Source: OECD, *International Direct Investment Statistics Yearbook 2000* (Paris: OECD, 2001).

investment in the service sector. Both of these countries have recently completed significant privatization programs involving their electricity and gas industries, which attracted large foreign investments during the 1990s. In Australia, for example, the State of Victoria privatized its six major generating companies between 1996 and 1999. The sales yielded $23.5 billion over 4 years, primarily from U.S. and British investors.[37] In the United Kingdom, U.S.-based power companies owned seven electric power firms, and state-owned Electricité de France owned another as of April 2001.[38]

In Hungary and Sweden, the utilities industries accounted for 25 percent ($1.6 billion) and 18 percent ($3.6 billion), respectively, of total inbound service-sector investment stock (table 13-4). Hungary privatized its public utility companies during the 1990s. As part of the process, foreign investors acquired shares in gas and electricity distribution firms and two electric power plants.[39] Since 1992, market reforms in Sweden's electricity industry have opened up the electricity generation

[37] Electricity Supply Association of Australia, *Electricity Australia 1999* (Sydney: ESAA, 1999), pp. 21 and 24; and U.S. Department of Energy, Energy Information Administration, *Country Analysis Brief: Australia*, June 1999, found at Internet address http://www.eia.doc.gov/emeu/cabs/, retrieved Feb. 2, 2000.

[38] "Summary of Who Owns Whom," Business Information Center, Electricity Association, Apr. 9, 2001, found at Internet address http://www.electricity.org.uk/, retrieved July 18, 2001.

[39] Hungarian Investment and Trade Development Agency, "Doing Business in Hungary," at Internet address http://www.itd.hu/guide/aaguide.htm#Countryprofile, retrieved Jan. 4, 2001.

Table 13-4
Inbound direct investment position in electricity, gas, and water services in OECD countries, 1998

Country	Inbound position	Utilities/total inbound services position
	Million dollars	*Percent*
Australia	5,065.0	9.7
Austria	34.0	0.2
Canada	([1])	([1])
Czech Republic	594.7	8.4
Denmark	283.8	1.2
Finland	([1])	([1])
France	2,124.1	2.3
Germany	640.0	0.3
Greece	([1])	([1])
Hungary	1,629.8	24.5
Italy	([1])	([1])
Mexico	69.0	0.4
Netherlands	588.4	0.7
Norway	([1])	([1])
Poland	31.0	0.4
Portugal	661.3	4.8
Sweden	3,649.2	18.0
Switzerland	([1])	([1])
United Kingdom	19,539.4	10.9
United States	2,558.0	0.6

[1] Not available.

Note.—Data are not available for Belgium, Ireland, Japan, Korea, Luxembourg, New Zealand, Spain, and Turkey.

Source: Calculations by the Commission, based on OECD data.

segment of the industry to foreign investment, and firms from Germany, Norway, France, Finland, and the United States have subsequently invested in the Swedish electric power market.[40]

The United States has also benefitted from significant foreign investment in its electricity and water industries. Most notably, Scottish Power purchased Pacificorp for $7.9 billion in 1998; Vivendi (France) purchased U.S. Filter for $5.5 billion in 1999; and Suez Lyonnaise des Eaux (France) purchased United Water Resources for $1.02 billion in 2000.[41]

[40] USITC, "Electric Power Services," pp. 14-18.

[41] Pacificorp, 8-K report filed with the Securities and Exchange Commission (SEC), Dec. 8, 1998; United States Filter, 8-K report filed with the SEC, May 10, 1999; United Water Resources, 8-K report filed with the SEC, July 31, 2000; all found at Internet address http://www.sec.gov/Archives/edgar/data, retrieved July 18, 2001.

Financial Services

Recent regulatory reforms and technological innovations have created incentives for financial services firms to consolidate both domestically and across borders, leading to increased FDI in the industry. Two key regulatory changes have eliminated rules that prevented financial services firms from operating across state and country borders, and which maintained legal barriers between the banking, insurance, and securities industries. In the United States, the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 eliminated most restrictions on interstate banking, and the Gramm-Leach-Bliley Act of 1999 removed most restrictions separating the financial services industries. In the European Union (EU), the First and Second Banking Co-ordination Directives (1977 and 1989) created a single European financial services market, and likewise permitted European firms to engage in all aspects of financial services.[42]

Technological innovations have changed the industry in a number of important ways. For example, improved global telecommunications systems have helped to reshape the financial services industry by permitting multinational firms to coordinate their widespread operations more closely, greatly improving efficiency. Heavy investment in computer technology has greatly improved the back-office processing capabilities of banks, insurance companies, and securities firms, adding to revenue generation and increasing economies of scale. The Internet has given retail and wholesale consumers unprecedented access to information, creating new competitive pressures on financial intermediaries as varied as stock brokers, insurance agents, and bank loan officers, and promising to reshape those industries.[43]

Innovations such as automatic teller machines, debit cards, telephone banking, and Internet banking, have permitted customers to access their funds more easily, and have made it possible for banks to compete in overseas markets with smaller initial investments.[44] By permitting financial services firms to grow both in terms of function and geographic reach, these changes have encouraged the finance industry to consolidate into more efficient, multinational, and multi-functional financial services firms. The consolidation process has increased FDI financial services, both through greenfield investment and through cross-border mergers and acquisitions.

For all reporting countries, the financial services industry accounted for the largest share of inbound direct investment stock in OECD services markets, 31 percent, on average, in 1998.[45] The United States and the United Kingdom were the largest

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[42] Allen N. Berger, et. al., "Globalization of Financial Institutions: Evidence from Cross-Border Banking Performance," in *Papers on Financial Services* (Washington, DC: Brookings Institution Press, 2000), pp. 30-31.

[43] Charles W. Calomiris and Robert E. Litan, "Financial Regulation in a Global Marketplace," in *Papers on Financial Services*, pp. 283-285.

[44] See James Essinger, *The High-Tech Retail Financial Services Revolution* (London: Datamonitor PLC, 1999), pp. 40-41.

[45] Investment statistics for the finance industry include holding companies, set up primarily for tax reasons, which are designed to channel funds to operating companies in a wide variety of industries. Unlike direct investment in other financial service areas such as commercial banks or insurance companies, it is unlikely that funds invested in holding companies will remain in the financial services industry. Consequently, these statistics may overstate the

recipients of inbound direct investment in financial services, with direct investment stock in the industry totaling $167.5 billion and $80.5 billion, respectively (table 13-5), reflecting the fact that these countries possess the world's largest financial markets, and that many financial firms consider a presence in one or both markets to be essential. In Switzerland, financial services accounted for 74 percent of total inbound service-sector investment stock, the highest of any country. Financial services investment in Italy was also high, compared to investment in other industries, having accounted for 67 percent of 1998 inbound service-sector stock. By contrast, direct investment stock in Germany's financial services-sector represented only 11 percent of total service-sector investment, well below the average for all reporting countries.

Countries within the OECD show different patterns of investment within the financial services industry (table 13-6). In France, Germany, Mexico, and the United Kingdom, the largest share of direct investment stock in the industry was invested in monetary institutions (banks). The Lloyd's market, which remains an important player in the British nonlife insurance market, has traditionally been organized as a cooperative venture between individual investors, leaving a smaller investment arena for large, multinational insurance companies in the United Kingdom as compared with some other markets.[46] In the United States, by contrast, a much larger percentage of total financial services stock was invested in the insurance industry (46 percent) than in commercial banks (26 percent). In Switzerland, almost one-third of total inbound investment in financial services was directed to monetary institutions, reflecting the positive global reputation of Switzerland's banking industry, with 6 percent of inbound financial services investment in Swiss insurance firms (figure 13-4).

Outlook

Due to record flows of direct investment in the 1990s, infrastructure services are among the most globalized of industries. Although future investment trends in individual countries may not keep pace with recent levels, there is no reason to anticipate that the overall pace of investment in these industries will slow significantly. In the emerging economies of Poland, Hungary, and the Czech Republic, for example, much of the inbound direct investment during the 1990s was driven by the privatization of state-owned power, telecommunications, and financial

proportion of total direct investment in financial services.

[46] Beginning in 1994, corporate members have been permitted in the Lloyd's market. See, for example, D.S. Hansell, *Introduction to Insurance,* 2d ed. (London: LLP Reference Publishing, 1999), ch. 12.

Table 13-5
Inbound direct investment position in financial services in OECD countries, 1998

Country	Inbound position	Financial services/ total inbound services position
	Million dollars	*Percent*
Australia	15,837.5	30.3
Austria	2,726.6	18.5
Canada	31,902.9	34.3
Czech Republic	1,962.0	27.7
Denmark	2,374.6	10.2
Finland	3,948.0	55.7
France	37,355.1	39.6
Germany	20,493.4	10.9
Greece[1]	233.0	2.7
Hungary	1,205.1	18.1
Italy	39,230.0	66.7
Mexico[2]	4,425.0	22.5
Netherlands	34,589.9	39.0
Norway	1,304.3	13.5
Poland	3,053.0	42.3
Portugal	3,843.1	27.8
Sweden	2,768.3	13.7
Switzerland	40,711.0	74.1
United Kingdom	80,507.0	44.9
United States	167,484.0	41.7

[1] Data are for 1999.
[2] Data are for 1997.

Source: Calculations by the Commission, based on OECD data.

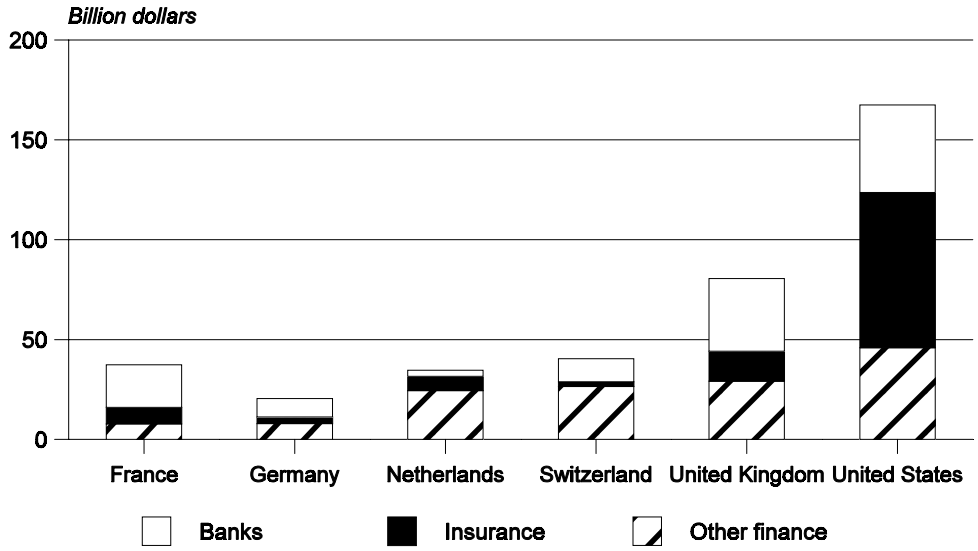
Table 13-6
Inbound direct investment position in financial services, industry breakdown for selected countries, 1998

Country	Total finance sector	Banks	Insurance	Other finance[1]
	Million dollars		*Percent*	
France	37,355.1	57.0	22.2	20.8
Germany	20,493.4	45.1	15.9	39.0
Mexico	4,425.0	69.2	18.8	12.0
Netherlands	34,589.9	8.7	20.7	70.7
Switzerland	40,711.0	28.4	6.2	65.4
United Kingdom	80,507.0	45.1	18.7	25.2
United States	167,484.0	26.2	46.4	27.4

[1] Includes securities and commodities brokerage and holding companies.

Source: Calculations by the Commission, based on OECD data.

Figure 13-4
Inbound direct investment position: Financial services, by country, 1998



Source: OECD, *International Direct Investment Statistics Yearbook 2000* (Paris: OECD, 2001).

firms, a process that has largely run its course. However, the introduction of competition into infrastructure service industries in these and many other countries, and the removal of numerous restrictions on foreign investment, have increased incentives and opportunities for private-sector firms to invest overseas, through both greenfield investment and acquisitions. Additionally, bringing these infrastructure industries under the World Trade Organization (WTO) General Agreement on Trade in Services (GATS) has served to assure foreign investors of transparent national regulations and nondiscriminatory treatment by regulators, thus promoting additional investment.

The continued globalization of infrastructure service industries has implications for the entire global economy. First, global competition among intensive users of these services is expected to increase, as factor costs decline and the reliability of telecommunication and energy services improve, and the availability of financing increases. Second, to the extent that globalization brings about the harmonization of regulatory principles, industries that intensively consume infrastructure services will be better able to focus on their core businesses, thereby improving economic efficiency and consumer welfare.

APPENDIX A
Summary of the Current Round of GATS Negotiations

The General Agreement on Trade in Services (GATS) was signed in April 1994. Under Article XIX of the GATS, which covers the Negotiation of Specific Commitments, member states are required to engage in successive rounds of negotiations starting not later than 5 years from the entry into force of the World Trade Organization (WTO) Agreement in January 1995. This "built-in agenda" is unique to the GATS. It requires members to continually improve their commitments and liberalize trade in services by further reducing barriers to market access.[1] As mandated by Article XIX, the first such round of negotiations formally began on February 25, 2000. The negotiations are currently underway in special sessions of the Council for Trade in Services, with Sergio Marchi, the Canadian Ambassador to the WTO, serving as chair.

In addition to the built-in agenda, Article XIX states that the negotiations should respect members' policy objectives and developmental status, and provide developing countries the appropriate flexibility to liberalize their service sectors and accord market access consistent with each country's level of development.[2] Article XIX also requires that member states develop negotiating guidelines for each round of negotiations, which must take into account autonomous liberalization undertaken since the previous round and the special treatment of developing countries as discussed above.

Member states agreed to a roadmap for the first phase of negotiations at the May 26, 2000, special session meeting of the Council for Trade in Services.[3] The roadmap included a December 2000 deadline for the submission of proposals addressing several issues: the form of negotiations; increasing the participation of developing and least-developed member states; developing guidance on the treatment of autonomous liberalization; and other issues relating to Council work on the framework of negotiations. The roadmap stated that the negotiating guidelines should offer direction on the work mandated in Articles VI:4 (Domestic Regulation),

[1] WTO, Services: Agreement, Part IV, Progressive Liberalization, Article XIX, Negotiation of Specific Commitments, found at Internet address *http://www.wto.org/,* retrieved Nov. 28, 2001.

[2] Under Article IV, members must negotiate commitments in all services negotiations that help developing countries strengthen their domestic services industry; improve their access to distribution channels and information networks; and gain access to export markets of interest. WTO, Services: Agreement, Part II - General Obligations and Disciplines, Article IV, Increasing Participation of Developing Countries, found at Internet address *http://www.wto.org/,* retrieved Nov. 28, 2001.

[3] WTO, Council for Trade in Services, "Report of the Meeting Held on 26, May 2000," S/CSS/M/3, June 26, 2000, found at Internet address *http://www.wto.org/,* retrieved Dec. 5, 2001.

XIII (Government Procurement), and XV (Subsidies).[4] March 2001 was set as a target deadline for work on classification and scheduling guidelines. A stock-taking exercise was scheduled for the March 2001 special session meeting to evaluate progress and determine the course of action.

The United States submitted its proposal regarding negotiating guidelines in July 2000,[5] outlining its interests and objectives, and proposed approaches for the negotiations.[6] Member states reached agreement on negotiating guidelines during the March 28-30, 2001 Special Session of the Council for Trade in Services. The adopted guidelines were broken into three sections: objectives and principles, scope and modalities, and procedures. Under objectives and principles, members reaffirmed the mandate of Article XIX, namely, that the negotiations should aim for progressive liberalization by reducing or eliminating barriers to market access, recognizing the right of members to regulate the supply of services in order to achieve national policy objectives, and taking into account the size and development level of participants, both generally and sectorally. Additionally, the negotiations should increase the participation of developing countries and provide such members with appropriate flexibility.

Under the scope of the negotiating guidelines, no service sector or mode of supply will be excluded from the negotiations, and those of interest to developing countries will be paid particular attention. Any negotiation of MFN exemptions will take place according to the rules established in the Annex on Article II Exemptions.[7] Additionally, the deadline for safeguards negotiations is set for March 15, 2002, and negotiations on Domestic Regulation (Article VI), Government Procurement (Article XIII), and Subsidies (Articles XV) should be completed before the negotiations on specific commitments conclude.

The third section outlines the procedural structure of the negotiations, establishing the current GATS Schedules of Commitments as the baseline for negotiations. Negotiations may take place on a bilateral, plurilateral, or multilateral basis, using requests and offers to achieve greater liberalization of services markets. Under the

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[4] In its work on Article VI:4 (Domestic Regulation), the Council on Trade in Services may develop disciplines to ensure that qualification requirements and procedures, technical standards, and licensing requirements are objective and transparent, not unnecessarily burdensome, and not trade restrictive in themselves. Under Article XIII, (Government Procurement), negotiations are required within 2 years of the implementation of the WTO Agreement. Article XV(Subsidies) requires members to develop disciplines on subsidies to avoid trade distortion, and consider the appropriateness of countervailing procedures.

[5] See, "Framework for Negotiations S/CSS/W/4, found at Internet address *http://www.wto.org/,* retrieved, Dec. 5, 2001.

[6] U.S. Department of State, "WTO Services - U.S. Negotiating Proposals," USTR Fact Sheet, Dec. 14, 2000, found at Internet address *http://usinfo.state.gov/,* retrieved Nov. 28, 2001. For more information see WTO, "Communication from the United States, Framework for Negotiation," S/CSS/W/4, found at Internet address *http://www.wto.org/,* retrieved Nov. 28, 2001.

[7] The Annex on Article II Exemptions lays out rules for the review and termination of MFN exemptions. Reviews must take place not later than 5 years after the implementation of the WTO Agreement, and must determine if the conditions that created the need for the exemption still exist. Exemptions generally must be terminated by the date specified in the exemption or within 10 years, and are subject to negotiations in future rounds.

request-offer system members can request commitments from and offer commitments to other members. Members also will work to develop criteria for crediting autonomous liberalization as required under Article XIX before negotiations on specific commitments begin.[8]

Now that the work on negotiating guidelines has been completed, the Council's focus has turned to the sectoral negotiations. In addition to the general proposals on negotiating guidelines and horizontal and multi-modal proposals, member states also submitted 100 sectoral proposals, covering 22 service sectors. The United States has submitted 12 sectoral proposals, 1 modal proposal, and 1 proposal on transparency in domestic regulation.[9] After the stocktaking meeting in March 2001, the Council on Trade in Services held negotiating meetings in May, July, October, and December 2001. The Council has scheduled an additional meeting for March 2002, during which it plans to evaluate the progress made up to that point.[10] At the WTO November Ministerial meeting in Doha, Qatar, members established a further timetable for the services negotiations. The next stage of negotiations will begin in 2002, with initial requests for specific commitments due by June 30, 2002, and initial offers due by March 31, 2003.[11]

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[8] WTO, "WTO Services Talks Press Ahead, Members Adopt Negotiating Guidelines at Special Session, 28-30 March," Press/217, Apr. 2, 2001, found at Internet address *http://www.wto.org/,* retrieved Nov. 28, 2001.

[9] The United States submitted negotiating proposals in accountancy services; advertising services; audiovisual and related services; distribution services; education and training services; energy services; environmental services; express delivery services; financial services; legal services; telecommunication, value-added network, and complementary services; tourism services; and the movement of natural persons, which may apply to any industry.

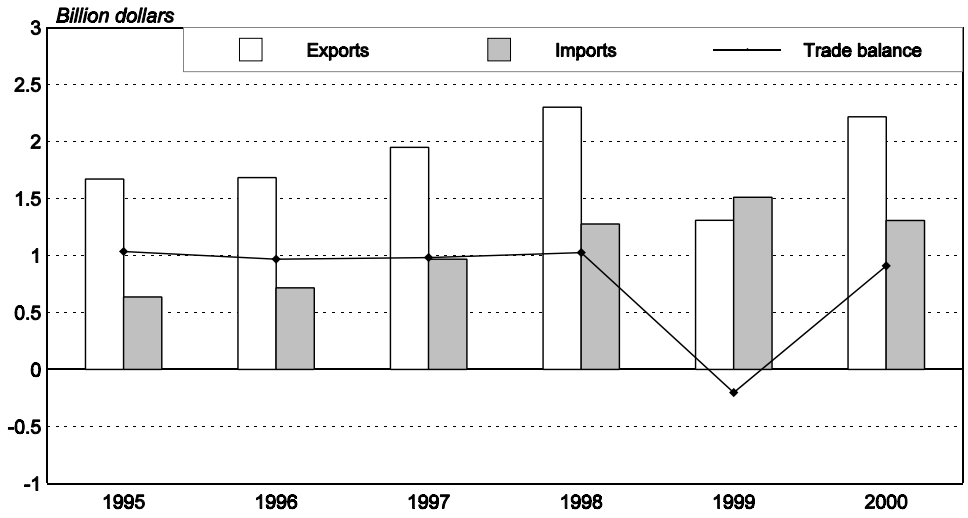
[10] WTO, "WTO Services Talks Press Ahead, Members Adopt Negotiating Guidelines at Special Session, 28-30 March," Press/217, Apr. 2, 2001, found at Internet address *http://www.wto.org/,* retrieved Nov. 28, 2001; and U.S. Department of State, "WTO Services - U.S. Negotiating Proposals," USTR Fact Sheet, Dec. 14, 2000, found at Internet address *http://usinfo.state.gov/,* retrieved Nov. 28, 2001.

[11] USTR, "Results of the Fourth WTO Ministerial Conference," Nov. 14, 2001, found at Internet address *http://usinfo.state.gov/,* retrieved Nov. 28, 2001; and WTO, "Conference Ends with Agreement on New Program," found at Internet address *http://www.wto.org/,* retrieved Nov. 28, 2001.

APPENDIX B
U.S. Trade in Services, Selected Industries

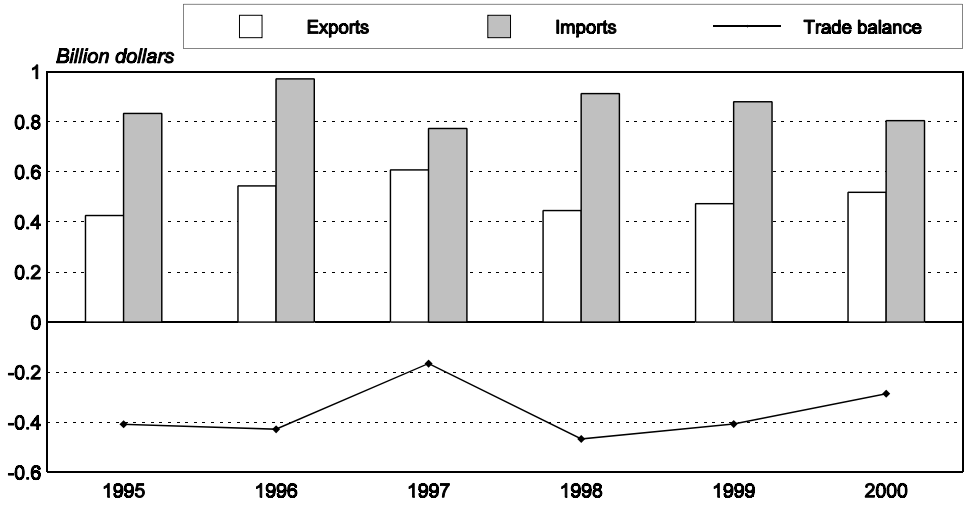
In an effort to cover as many service industries as possible in this report, and to present the information in a concise and readable format, the following figures present cross-border trade data for all available U.S. service industries that are not discussed in the preceding chapters. Where available, the figures present data for U.S. cross-border exports, imports, and trade balance for 1995-2000.

Figure B-1
Accounting services: U.S. cross-border exports, imports, and trade balance, 1995-2000



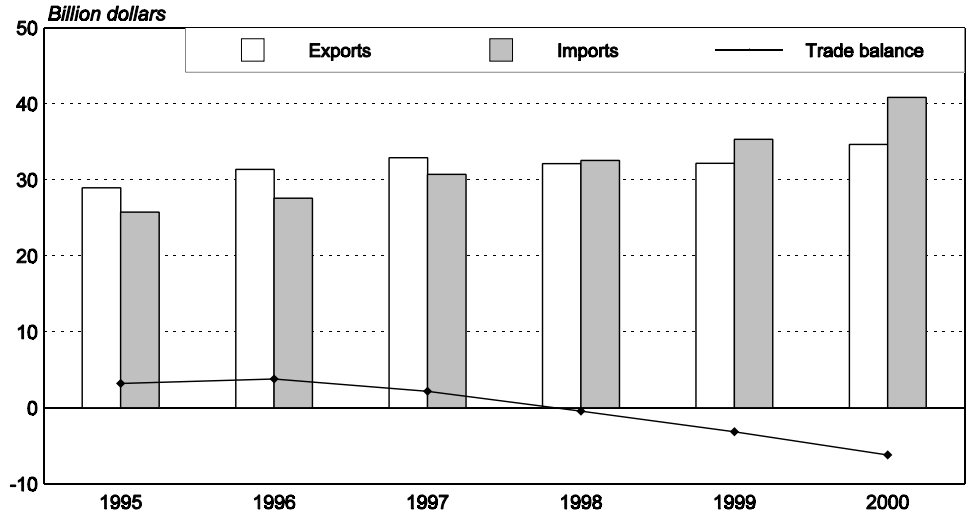
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.*

Figure B-2
Advertising services: U.S. cross-border exports, imports, and trade balance, 1995-2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.*

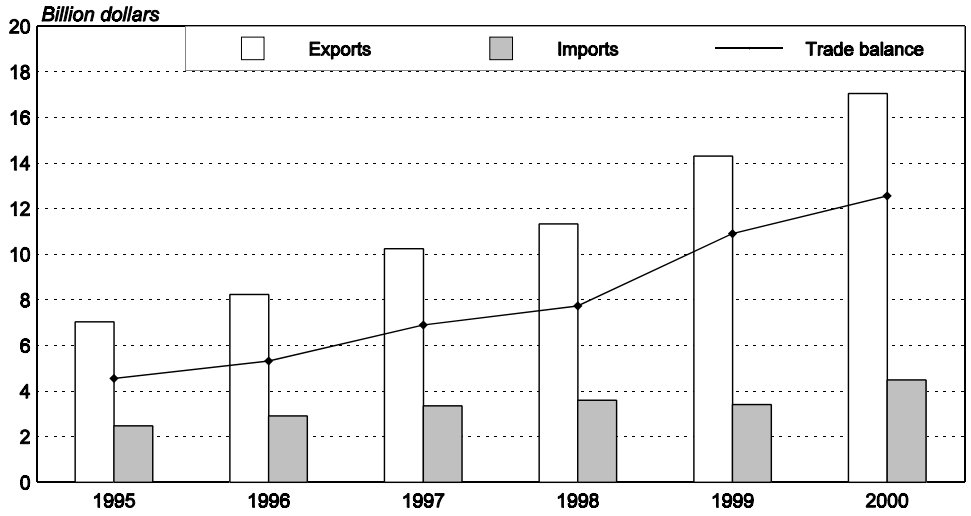
Figure B-3
Air transport[1] services: U.S. cross-border exports, imports, and trade balance, 1995-2000



[1] Air transport services includes air freight services, air port services, and passenger fares. See chapter 8 for a breakout of express services.

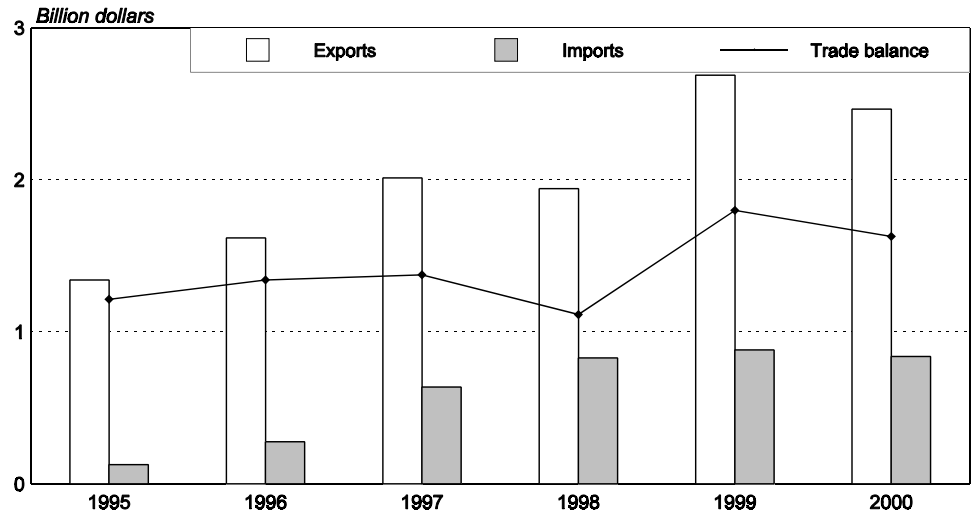
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.*

Figure B-4
Banking and securities services: U.S. cross-border exports, imports, and trade balance, 1995-2000



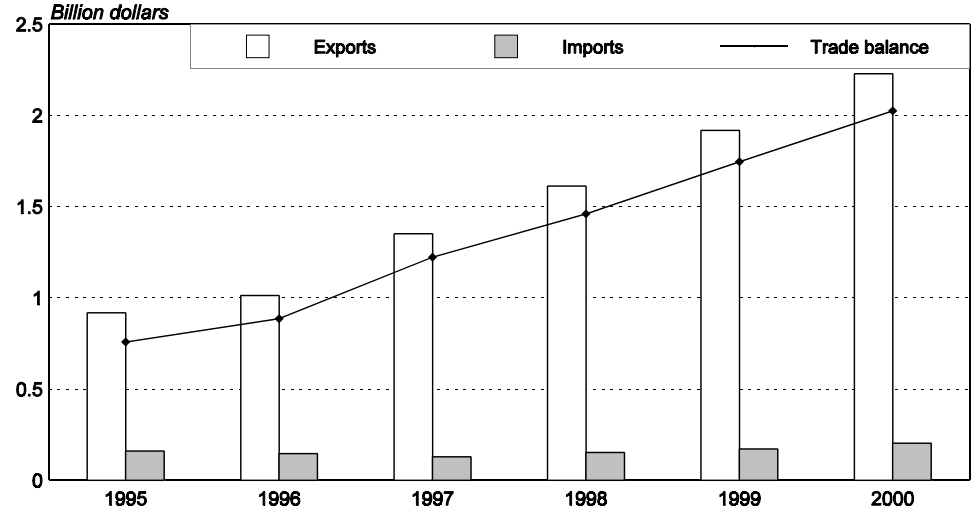
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

Figure B-5
Computer and data processing services: U.S. cross-border exports, imports, and trade balance, 1995-2000



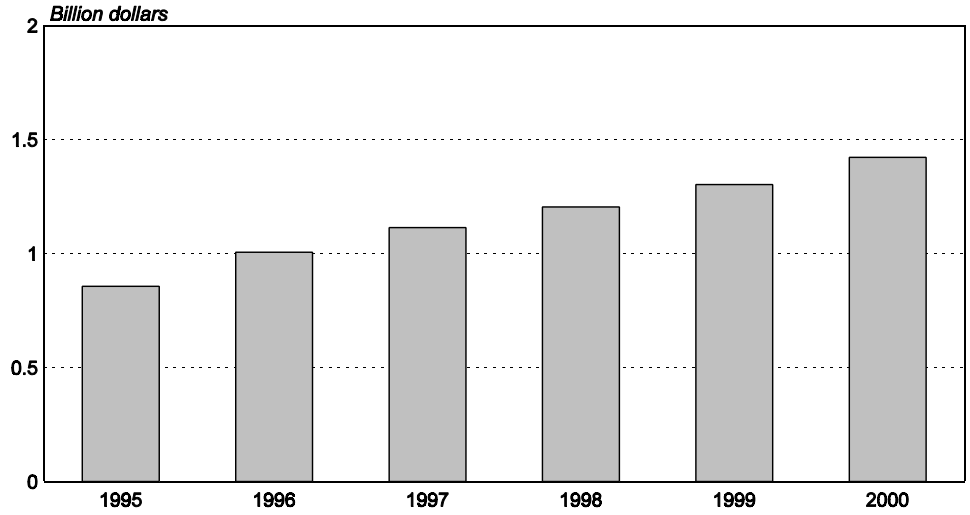
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.*

Figure B-6
Database and other information services: U.S. cross-border exports, imports, and trade balance, 1995-2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

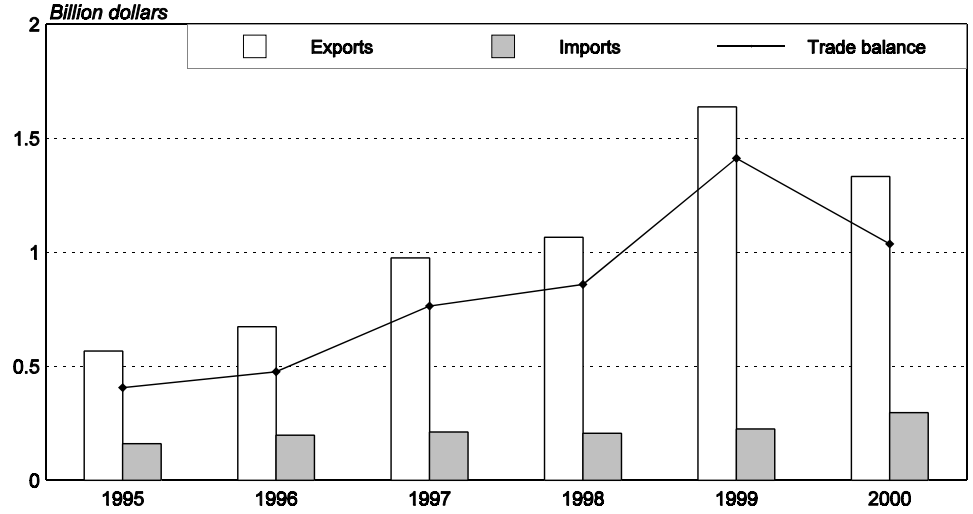
Figure B-7
Health care services: U.S. cross-border exports,[1] 1995-2000



[1] Data on U.S. cross-border imports of health care serices are not available.

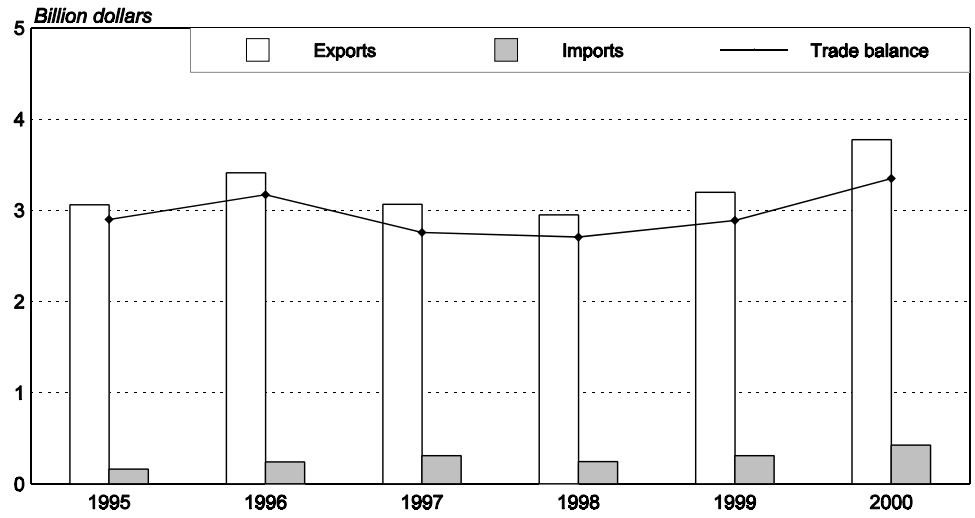
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.

Figure B-8
Industrial engineering services: U.S. cross-border exports, imports, and trade balance, 1995-2000



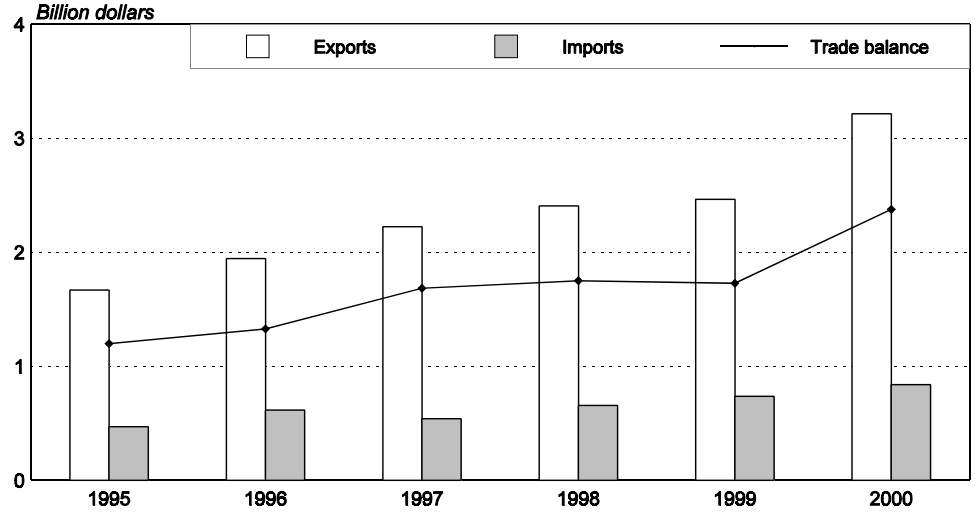
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

Figure B-9
Installation, maintenance, and repair of equipment services: U.S. cross-border exports, imports, and trade balance, 1995-2000



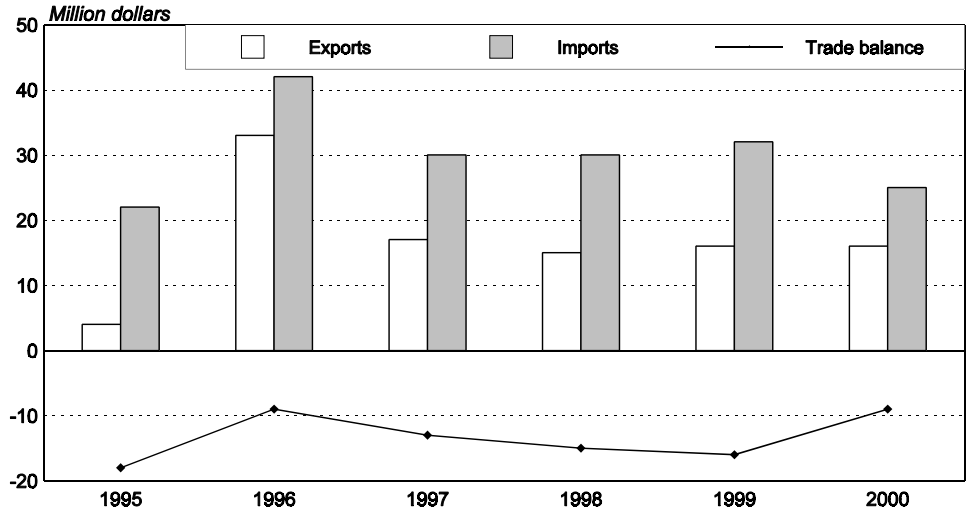
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.*

Figure B-10
Legal services: U.S. cross-border exports, imports, and trade balance, 1995-2000



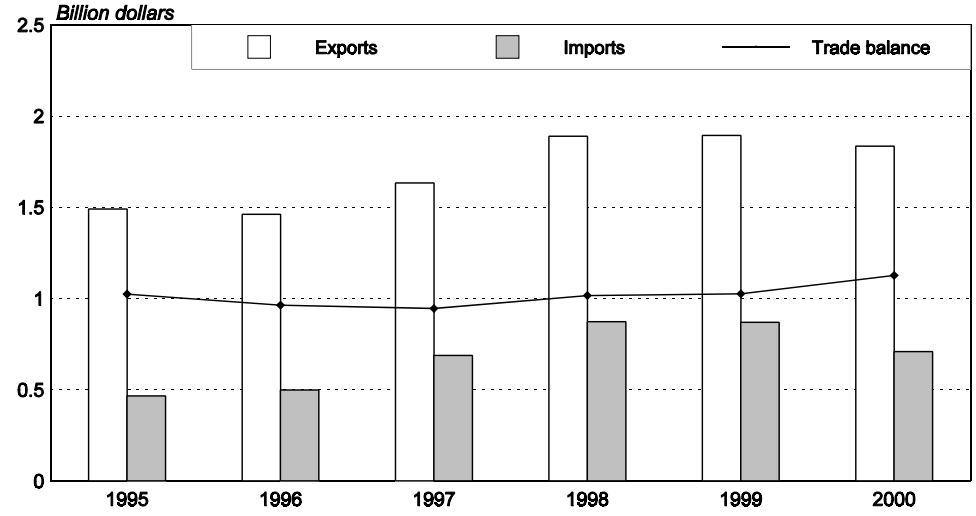
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

Figure B-11
Mailing, reproduction, and commercial art services: U.S. cross-border exports, imports, and trade balance, 1995-2000



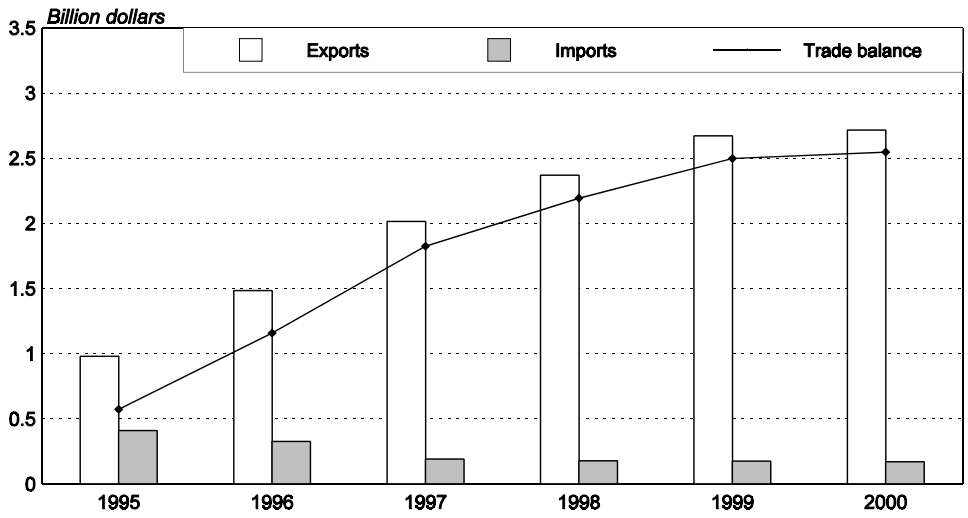
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

Figure B-12
Management, consulting, and public relations services: U.S. cross-border exports, imports, and trade balance, 1995-2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.*

Figure B-13
Operational leasing services: U.S. cross-border exports, imports, and trade balance, 1995-2000

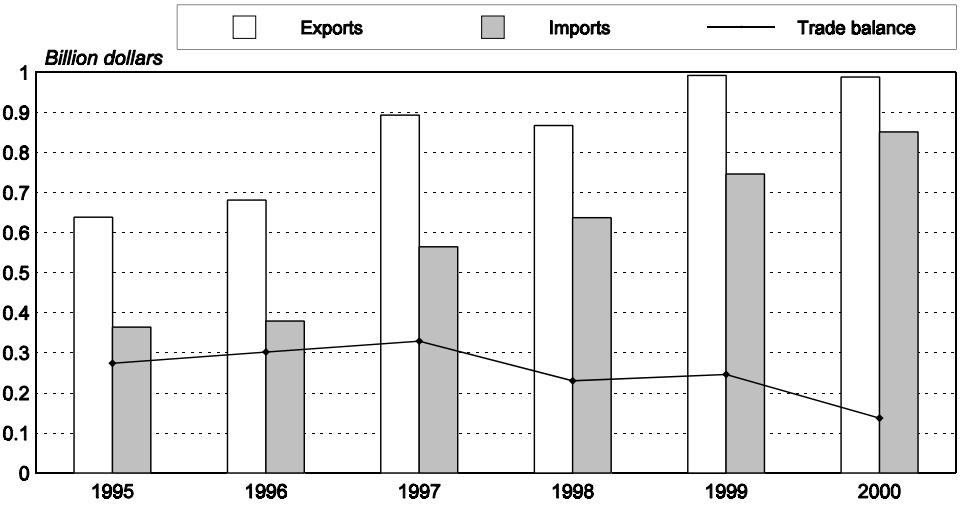


Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.*

Figure B-14
Personnel supply services: U.S. cross-border exports, imports, and trade balance, 1996-2000

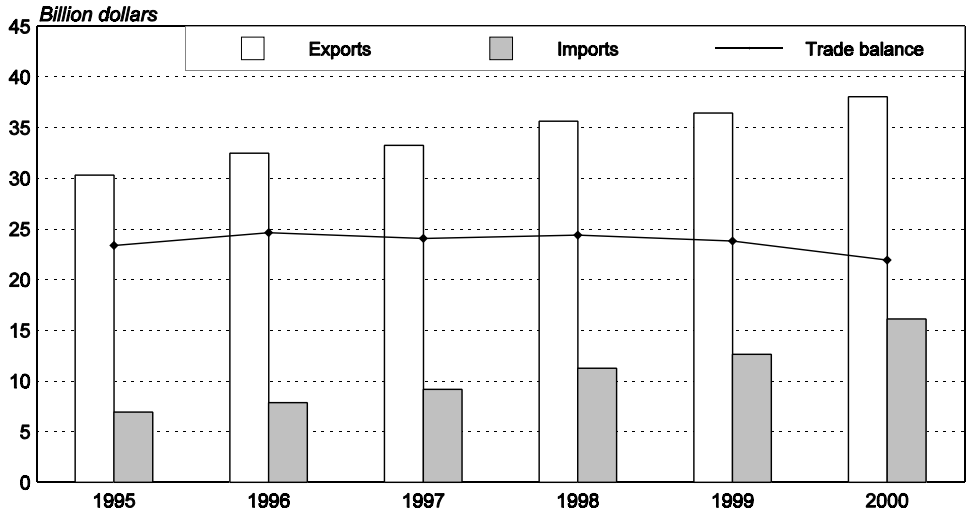
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.*

Figure B-15
Research, development, and testing services: U.S. cross-border exports, imports, and trade balance, 1995-2000



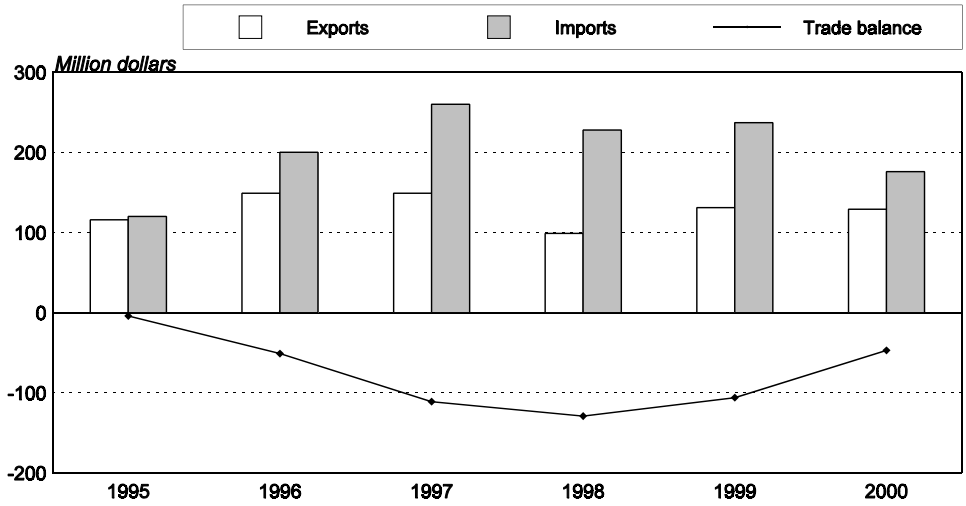
Source: 1995 data from U.S. Department of Commerce (USDOC), Bureau of Economic Analysis (BEA), *Survey of Current Business,* Oct. 1999, p. 88; 1996 data from USDOC, BEA, *Survey of Current Business*, Oct. 2000, p. 154; 1997-2000 data from USDOC, BEA, *Survey of Current Business*, Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.*

Figure B-16
Royalties and license fees: U.S. cross-border exports, imports, and trade balance, 1995-2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm.*

Figure B-17
Sports and performing arts services: U.S. cross-border exports, imports, and trade balance, 1995-2000

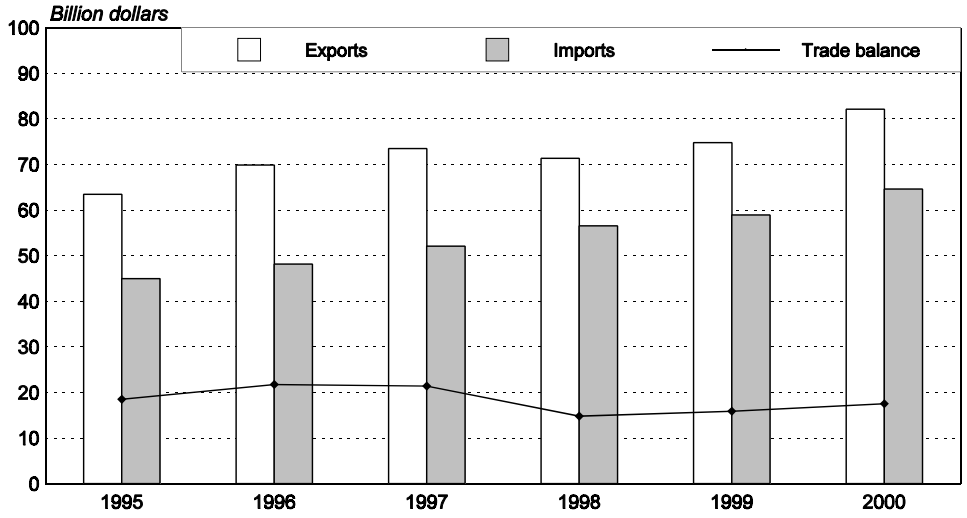


Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

Figure B-18
Training services: U.S. cross-border exports, imports, and trade balance, 1995-2000

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

Figure B-19
Travel and tourism services: U.S. cross-border exports, imports, and trade balance, 1995-2000



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* Oct. 2001, found at Internet address *http://www.bea.doc.gov/bea/di/1001serv/cross-oct.htm*.

APPENDIX C
Activities Captured in Official U.S. Data on Cross-border Trade in Services by Industry

Appendix C
Activities captured in official U.S. data on cross-border trade in services by industry

Service	U.S. Exports	U.S. Imports
Accounting	Includes accounting, auditing, and bookkeeping services. Excludes data processing and tabulating services.	Same
Advertising	Includes preparation of advertising and placement of such advertising in media.	Same
Air transport		
Passenger fares	Predominantly includes receipts by U.S. air carriers from passengers traveling between the United States and foreign countries and between two foreign points. Also includes receipts by U.S. ocean carriers for the transport of passengers.	Predominantly includes payments to foreign air carriers by U.S. residents traveling between the United States and foreign countries. Also includes payments to foreign ocean carriers for the transport of passengers.
Freight	Includes receipts of U.S. air carriers for the international transportation of U.S. exports to foreign countries, and receipts of U.S. air carriers transporting U.S. exports between foreign points.	Includes payments to foreign-operated air carriers for transportation of U.S. imports from a foreign country to the United States.
Port	Includes goods and services purchased in U.S. airports by foreign-operated carriers, including fuel and oil, station and maintenance bases, wages, and other goods and services except aircraft leasing expenses.	Includes goods and services purchased in foreign airports by U.S.-operated carriers.
Architectural, engineering, construction, and mining	Includes architectural, construction, engineering, and mining services, including oil and gas field services. Architectural services include services mainly for businesses, but exclude landscape architecture and graphic design services. Engineering services relate to construction and mining services projects only, and exclude industrial engineering services, such as product design services. Land-surveying services are included, as are services of general contractors in the fields of building and heavy construction, construction work by special trade contractors, and drilling wells or erecting and dismantling drilling rigs for oil and gas fields. Data are reported for services purchased in connection with proposed projects (i.e., feasibility studies) as well as projects contracted or underway, but exclude contractors' expenditures on merchandise and labor.	Same, except data include contractors' expenditures on intermediate inputs of wages, services, materials, and other expenses.
Audiovisual	Includes foreign rentals of films and tapes from U.S. sources.	Includes U.S. rentals of films and tapes from foreign sources.

Appendix C--*Continued*
Activities captured in official U.S. data on cross-border trade in services by industry

Service	U.S. Exports	U.S. Imports
Banking and securities	Includes commissions and fees for brokerage services, private placement services, underwriting services, financial management services, credit card services, credit-related services, financial advisory and custody services, securities lending services, electronic funds transfer services, asset management services, and other financial services. Excludes deposit taking and lending services.	Same
Computer and data processing	Includes data entry, processing (both batch and remote), and tabulation; computer systems analysis, design, and engineering services; custom software and programming services; rights to produce, use, and distribute general use software, except prepackaged computer software physically shipped to or from the United States; integrated hardware/software services; and other computer services (e.g., timesharing, maintenance, and repair). Excludes operational leasing of computer and data processing equipment.	Same
Database and other information	Includes business and economic database services; medical, legal, technical, and similar database services; general news services; and credit reporting systems.	Same
Education	Includes tuition and living expenses of foreign students studying in U.S. colleges, universities, and other institutions of higher education.	Includes tuition and living expenses of U.S. students studying in foreign colleges, universities, and other institutions of higher education through "study abroad" programs sponsored by U.S. institutions.
Environmental	Includes environmental testing and analytical services, wastewater treatment works, solid waste management, hazardous waste management; remediation and industrial services, and environmental consulting and engineering.[1]	Same
Health care	Includes inpatient and outpatient fees charged to foreign residents. Inpatient fees include all hospital staff and outside physician fees, tests, drugs, and room and board. Outpatient charges include outpatient surgery, physical rehabilitation and therapy, dermatology, AIDS treatments, and consultations. Excludes fees for ambulatory treatment or drugs provided outside a hospital.[2]	Not available

Appendix C--*Continued*
Activities captured in official U.S. data on cross-border trade in services by industry

Service	U.S. Exports	U.S. Imports
Industrial engineering	Includes engineering services related to the design of movable products, including product design services. Includes services performed with the assistance of computers. Excludes engineering and architectural services that relate to immovable products, such as those that relate to proposed construction services projects.	Same
Insurance	Includes primary and reinsurance premiums paid by foreign persons to U.S. insurance carriers operating in the U.S. market, net of claims paid to foreign persons.	Includes primary and reinsurance premiums paid by U.S. persons to foreign insurance carriers operating in their home markets, net of claims received by U.S. persons.
Installation, maintenance, and repair of equipment	Includes maintenance services for machinery and equipment, small maintenance work on structures, and installation and training services that are provided by a manufacturer in connection with the sale of goods, when the price of these services is not incorporated into the price of the goods that is entered on the declaration files with the U.S. Customs Service.	Same
Intangible intellectual property (royalties and license fees)	Includes payments for the sale or use of intangible assets and proprietary rights. Includes, among others, license fees and royalties for industrial processes and products; royalties for use of copyrighted material in books, records, and audio tapes; payments for the use of trademarks and brand names; license and rental fees for rights to use or reproduce prerecorded performances and events; payments for rights to broadcast and record live performances; license fees for rights to distribute or reproduce general-use computer software; and fees for business-format franchising.	Same
Legal	Includes legal advice and other legal services.	Same
Mailing, reproduction, and commercial art	Includes direct mail advertising services; mailing services, such as remailing services in connection with direct mail advertising; commercial photography, art, and graphic services; address list compilation; and stenographic services.	Same
Management, consulting, and public relations	Includes management services, except management of health care facilities; consulting services, including computer consulting but excluding consulting engineering services related to construction and mining projects; and public relations services, except those that are part of an advertising campaign.	Same

Appendix C--*Continued*
Activities captured in official U.S. data on cross-border trade in services by industry

Service	U.S. Exports	U.S. Imports
Maritime transport		
Freight	Includes receipts of U.S.-operated ocean carriers for the international transportation of U.S. exports, and receipts of U.S.-operated carriers transporting foreign freight between foreign points. Includes revenue on cargo outbound from U.S. ports, revenue on cross-trade cargoes, payments for charter hires, and expenses in foreign countries.	Includes payments to foreign-operated ocean carriers for international transportation of U.S. imports.
Port	Includes goods and services purchased in U.S. sea ports by foreign-operated carriers, including port call, cargo, fuel, and other vessel expenses.	Includes goods and services purchased in foreign sea ports by U.S.-operated carriers.
Oil and gas field	Not available. Data for this industry are included in the architectural, engineering, construction, and mining services category.	Same
Operational leasing	Includes rentals for computer and data processing equipment, transportation equipment without crew or operators, and all other machinery and equipment. Excludes rentals under leases that have been capitalized, and rentals of any items other than machinery and equipment, such as real estate, film rentals, and employee leasing.	Same
Personnel supply	Includes fees paid for employment services and the provision of temporary help and personnel to perform services on a contract or fee basis, and the compensation of workers on the payroll of the agency.	Same
Research, development, and testing	Includes laboratory and other physical research, product development services, and product testing services. Also includes experiments and research and development activities aboard spacecrafts. Excludes medical and dental laboratory services.	Same
Sports and performing arts	Includes fees received for performing arts and sports events, paid through management companies, booking agents, promoters and presenters, and fees paid directly to U.S. performers by foreign persons.	Includes fees paid for performing arts and sports events, paid through management companies, booking agents, promoters and presenters, and fees paid directly to foreign performers by U.S. persons.
Telecommunication	Predominantly includes net settlement receipts of U.S. carriers for terminating inbound foreign calls. Also includes telex, telegram, and other basic telecommunication services; value-added services, such as electronic mail, management of data networks, enhanced facsimile, and electronic funds transfer; telecommunication support services, such as repair and ground station services; and the launching of communications satellites.	Same, except predominantly includes net settlement payments by U.S. carriers to compensate foreign carriers for terminating outbound U.S. calls.

Appendix C--*Continued*
Activities captured in official U.S. data on cross-border trade in services by industry

Service	U.S. Exports	U.S. Imports
Training	Includes educational or training services provided on a contract or fee basis. Excludes tuition and fees charged to individual foreign students by U.S. educational institutions. Also excludes training performed by a manufacturer in connection with the sale of a good.	Includes educational or training services provided on a contract or fee basis. Excludes tuition and fees charged to individual U.S. students by foreign educational institutions. Also excludes training performed by a manufacturer in connection with the sale of a good.
Travel and tourism	Includes expenditures in the United States by foreign travelers (except foreign government personnel and their dependents, and other foreign citizens residing in the United States) for lodging, food, and transportation within the United States, and recreation and entertainment, personal purchases, gifts, and other outlays associated with travel in the United States.[3]	Includes expenditures abroad by U.S. travelers (excluding U.S. Government personnel and their dependents, and other U.S. citizens residing abroad) for lodging, food, and transportation within foreign countries, and recreation and entertainment, personal purchases, gifts, and other outlays associated with travel abroad.[4]

[1] Most of the data reported in Chapter 6 are from industry sources.

[2] BEA has revised its methodology, and uses newly available source data to determine total medical exports. Inpatient estimates were obtained from data collected from State regulatory agencies, hospital associations, hospitals with international medical centers, and emergency rooms. USDOC, BEA, *Survey of Current Business*, July 1999, p. 69.

[3] Expenditures are estimated by the USDOC, BEA, based on data principally supplied by the USDOC, International Trade Administration, Tourism Industries, in conjunction with the U.S. Department of Justice, Immigration and Naturalization Service, and by Statistics Canada and the Banco de Mexico. Officials of BEA and Tourism Industries, telephone interviews with USITC staff, Oct. 22 and 23, 1998.

[4] Ibid. Tourism imports were revised based on the results of a one-time survey that compared expected travel expenditures to post-trip expenditures. The survey results indicate that U.S. travelers' expected expenditures understate post-trip expenditures in Latin America and the Asia-Pacific region. Accordingly, data for 1998 were revised upward, increasing travel payments by $1.7 billion. Data for 1997 were adjusted using one-half the value of the adjustments in 1997. Estimates for the years prior to 1997 were not adjusted. USDOC, BEA, *Survey of Current Business*, July 1999, pp. 69-70.

Sources: USDOC, BEA, *U.S. International Transactions in Private Services: A Guide to the Surveys Conducted by the Bureau of Economic Analysis*, Mar. 1998; Environmental Business International (EBI); USDOC, International Trade Administration, Tourism Industries, in conjunction with the U.S. Department of Justice, Immigration and Naturalization Service, and Statistics Canada and the Banco de Mexico; OECD, *Services Statistics on International Transactions*, p. 119; USDOC, BEA, *Survey of Current Business*, July 1999, pp. 69-70; and USDOC, BEA, *Survey of Current Business*, July 2000, pp. 72-73.

APPENDIX D
Activities Captured in Official U.S. Data on Affiliate Transactions by Industry

Appendix D
Activities captured in official U.S. data on affiliate transactions, by industry

Service	Sales and Purchases
Audiovisual	Motion picture, television tape, film, and sound recording production; distribution services; post-production services such as editing, film/tape transfers, and subtitling; and operating motion picture theaters. Does not include video tape and disk rentals or wholesale distribution of video cassettes and sound recordings.
Construction	The construction of buildings and other structures, heavy construction (such as highways, power plants, and pipelines), land subdivision and development, additions, alterations, installation, maintenance, and repair services. Includes demolition services or clearing of building sites, along with other land preparation services. Also includes "Special Trade Contractors" which often subcontract to general contractors, such as plumbing, painting, electrical, masonry, and carpentry contractors.
Education	Instruction and training in any subject, either for-profit or nonprofit, by either privately or publicly owned entities. Includes preschool, elementary school, secondary school, junior and four-year colleges, universities, and professional schools, and technical training schools specializing in various subjects, such as secretarial skills, computer training, cosmetology, language instruction, automobile driving, flight instruction, and fine arts. This category also includes educational support services, such as educational consultants, guidance counseling services, and student exchange services.
Environmental	Includes environmental testing and analytical services, wastewater treatment works, solid waste management, hazardous waste management, remediation and industrial services, and environmental consulting and engineering.[1]
Express delivery	*(Couriers and messengers)* Intercity and/or local delivery of parcels that may be handled by one person without using special equipment. May include collection, pick-up, and delivery operations using limited labor and minimal equipment.[2]
Insurance carriers and related activities	Insurance carriers primarily engaged in underwriting annuities and insurance policies and investing premiums to build up a portfolio of financial assets to be used against future claims. Includes direct life, health, and medical insurance carriers, property/casualty and title insurance carriers, and reinsurance carriers. Also includes insurance agencies and brokerages, which are primarily engaged in acting as agents in selling annuities and insurance policies, and insurance claims adjusters.
Maritime transport	Deep sea, coastal, and great lakes water transportation, including both freight and passenger transportation, using ships, barges, and boats.
Oil and gas field services	Includes drilling of oil and gas wells and other support services for oil and gas operations performed on a contract or fee basis, such as excavating slush pits and cellars; grading and building foundations at well locations; and cleaning out, bailing, and swabbing wells.
Retail distribution	Sales of merchandise to the general public for personal or household consumption, and services related to such sales, including after-sale repairs. Retailers fall into store and non-store categories, such as catalogs, door-to-door sales, and the Internet.

Appendix D–*continued*
Activities captured in official U.S. data on affiliate transactions, by industry

Service	Sales and Purchases
Telecommunication	Includes the operation, maintenance, or provision of access to facilities for the transmission of voice, data, text, and full motion picture video between network termination points, and telecommunications reselling. Includes wired, wireless, and satellite telecommunications.

[1] Data reported in chapter 6 are from industry sources. Reflects both cross-border trade and affiliate sales.

[2] As discussed in chapter 7, express delivery services also includes regional and long-distance delivery services by air and ground transport.

Sources: North American Industry Classification System, United States, 1997 (Lanham, Md: Berman Press, 1998); USDOC, BEA, "Guide to Industry and Foreign Trade Classifications for International Surveys, Oct. 1997," found at Internet Address *Http://www.bea.doc.gov/bea/surveys.htm,* retrieved Dec. 28, 2001; and Environmental Business International, Inc.