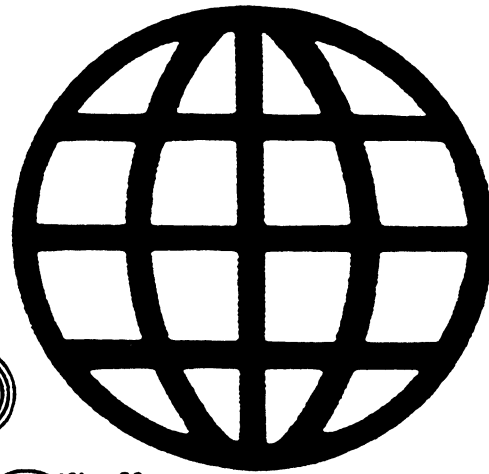


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PREFACE

The *Industry, Trade, and Technology Review (ITTR)* is a quarterly staff publication of the Office of Industries, U.S. International Trade Commission. The opinions and conclusions it contains are those of the authors and do not necessarily reflect the views of the Commission or of any individual Commissioner. The report is intended to provide analysis of important issues and insights into the global position of U.S. industries, the technological competitiveness of the United States, and implications of trade and policy developments.

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APPROACHING THE NEXT FRONTIER FOR TRADE IN SERVICES: LIBERALIZATION OF INTERNATIONAL INVESTMENT

International investment liberalization has been described as having the potential to “unleash enormous new opportunities for growth and prosperity in developing and developed countries alike.”¹ In recognition of this potential, ministers from the 25-member Organization for Economic Cooperation and Development (OECD) voted on May 23, 1995, to sponsor negotiations to reach a multilateral agreement on international investment (MAI) within two years.² The stated objective of the MAI is to establish a broad, multilateral framework for international investment that would set high standards for liberal investment policies, provide effective protection of investments, and create a credible dispute-settlement mechanism.

Efforts to liberalize international investment have a long history, dating to the late 1940s with the formation of the Organization for European Economic Cooperation (OEEC), which became the OECD in 1961.³ International codes established under the auspices of these organizations contributed substantially to the elimination of most restrictions on payments between OECD countries and to the easing of restrictions on capital flows.⁴ The principles established by the OECD codes have been incorporated in subsequent trade agreements. For example, the North American Free Trade Agreement (NAFTA) provided for the removal of significant barriers to investment, established a dispute-

settlement process, and guaranteed investor protection.⁵ Similarly, the GATT Uruguay Round concluded an Agreement on Trade-Related Investment Measures (TRIMS) that prohibits the imposition of local content requirements and trade or foreign exchange balancing requirements.⁶ The Uruguay Round also developed the General Agreement on Trade in Services (GATS), which committed signatory countries to permit direct investment by foreign service firms for the purpose of establishing a commercial presence, subject to defined exceptions.⁷

Despite these efforts, investment issues are not covered comprehensively, and investment rules are not fully enforceable on a multilateral basis. For example, the NAFTA provides fairly comprehensive coverage of investment concerns, but the agreement only applies to the United States, Canada, and Mexico. The Uruguay Round encompasses many more countries than the NAFTA, but the level of coverage is not nearly as comprehensive. For this reason, trade ministers perceive a comprehensive multilateral agreement on investment as the next frontier for international trade negotiations. Such an agreement ideally would reduce uncertainty and improve the flow of investment capital around the

¹ Sir Leon Brittan, “Investment Liberalization: The Next Great Boost to the World Economy,” *Transnational Corporations*, vol. 4, no. 1 (April 1995), p. 1.

² U.S. Department of State cable, “Paris 12422 1995 OECD Ministerial Communique,” May 23, 1995.

³ OECD, *Introduction to the OECD Codes of Liberalisation* (Paris, 1987) pp. 9-10.

⁴ Members of the OEEC established the Code of Liberalisation of Trade in 1950, which was intended to facilitate the flow of trade and related payments. In 1961, this code was expanded to encompass trade in services and capital movements by the establishment of the Codes of Liberalisation of Current Invisible Operations and of Capital Movements. *Ibid.*, pp. 9-10 and pp. 16-18.

⁵ Richard Harmsen and Michael Leidy, “Regional Trading Arrangements,” ch. in *International Trade Policies, the Uruguay Round and Beyond, Volume II Background Papers*. (Washington: International Monetary Fund, 1994), p. 19.

⁶ Richard Harmsen and Arvind Subramanian, “Uruguay Round and Trade-Related Investment Measures,” ch. in *International Trade Policies, the Uruguay Round and Beyond, Volume II Background Papers*. (Washington: International Monetary Fund, 1994), pp. 12-13.

⁷ For a thorough treatment of the GATS, see U.S. International Trade Commission, *General Agreement on Trade in Services: Examination of Major Trading Partners’ Schedules of Commitments*, USITC publication 2940, Dec. 1995.

International Investment

world, thereby enhancing efficiency and promoting global economic growth.

This article provides an overview of international investment issues, including the factors motivating different types of investment, the growing importance of direct investment flows, and the U.S. international investment position. Remaining barriers to direct investment among the OECD-member countries are then examined on a regional and industry basis. Service industries receive considerable attention because they are subject to some of the most stringent investment restrictions and yet account for a large and growing share of U.S. direct investment.

Factors Motivating International Investment

International investment is closely linked to international trade and competition. As global competition has intensified, many firms have found advantages in establishing a presence overseas. For example, building manufacturing facilities in regions where labor or raw material costs are low may reduce the cost of inputs and improve profitability. Similarly, acquisition of an equity position in principal suppliers or distributors may enhance managerial control, reduce costs, improve efficiency, or reduce foreign exchange risk.⁸

As manufacturing concerns have globalized their operations, many service firms have been motivated to establish overseas offices to maintain business relationships with longstanding clients. Banks, insurance companies, and advertising or public relations firms increasingly find their customers establishing overseas facilities and realize that, by establishing offices abroad, they can provide better service and expand their own markets. In addition, as international trade and investment facilitate export-driven growth in emerging markets, service firms that specialize in infrastructure development -- such as construction, power generation, and

⁸ A further discussion of such advantages in an important global activity is contained in USITC, *Production Sharing: Use of U.S. Components and Materials in Foreign Assembly Operations, 1991-1994* (available in April, 1996).

telecommunications companies -- increasingly seek to establish a foreign presence in order to win major contracts and capture larger markets.

Beyond specific commercial reasons for transborder investment flows, the professional investment community directs funds to endeavors that offer the greatest financial return within acceptable levels of risk. By investing in other countries, firms from the United States and other OECD countries have acquired a financial interest in some of the world's most rapidly growing companies and most promising development projects.

Nature of International Investment

All investment may be divided into two broad categories: portfolio investment and foreign direct investment (FDI). Portfolio investment involves acquiring shares of foreign corporations through an organized securities exchange typically without exercising any direct control over the management of the organization. In contrast, FDI involves acquiring a significant controlling interest of existing foreign organizations through securities transactions or establishing new, or green-field, entities.⁹ The level of *control* therefore provides an operative distinction between portfolio and direct investment.

Although both forms of international investment generate important economic activity, in the context of government policy and industrial competitiveness, portfolio investment appears to demand less attention because the issue of control is less significant. Since individual transactions under portfolio investment are relatively small (i.e., not large enough to change the ownership structure), only substantial flows of large numbers of transactions will significantly alter industry structures or affect the financial system. Consequently, with respect to portfolio investment, governments generally encourage inward flows and guard against capital flight by creating a stable macroeconomic environment. Within OECD countries, most barriers to portfolio investment have

⁹ Typically, a foreign investor must hold at least 10 percent of a firm's equity in order for that investment to be classified as FDI.

been removed, as were measures that restricted the free flow of foreign exchange.

Foreign direct investment is viewed differently because it involves a foreign entity exerting significant control over a domestic firm or real estate. This poses a sovereignty issue as major landmarks are purchased by foreign interests, as domestic employees are managed by foreign citizens, and as substantial businesses and industries become increasingly controlled by foreign interests. Historically, these issues have led governments to place heavy restrictions on FDI. However, attitudes recently have changed somewhat for a variety of reasons (see *Benefits of FDI* below). In fact, some governments now actively encourage inbound FDI by offering tax or other incentives to foreign concerns and attempt to counteract or minimize the effects of outbound FDI on domestic growth and employment.¹⁰

Significance of FDI

Most FDI takes place among OECD countries. In 1994, OECD members accounted for over 90 percent of global outflows and 80 percent of global inflows.¹¹ As of the end of 1993, OECD countries had accumulated a global outward direct investment position of \$1.6 trillion and a global inward direct investment position of \$1.1 trillion.¹²

During 1980-89, total outbound FDI from OECD countries grew at an average annual rate of 16.3 percent, which is more than 2.5 times the growth rate of OECD trade.¹³ Over the same period, FDI data reveal a significant shift away from manufacturing toward services, due in part to

deregulation and privatization of major service industries such as transportation, utilities, telecommunication and financial services. During 1980-90, manufacturing FDI declined from 60 percent to 50 percent of global flows while services FDI increased from 22 percent to 30 percent.¹⁴

Composition of U.S. Direct Investment

The United States is both the largest donor and recipient of FDI, representing 35 percent of the total OECD outward position and 41 percent of the total inward position in 1993 (figure 1).¹⁵ In 1994, the U.S. invested \$48 billion abroad, resulting in a cumulative outward direct investment position of \$612 billion (figure 2).¹⁶ Income derived from these investments totaled nearly \$68 billion in 1994.¹⁷ Foreign direct investment in the United States was \$50 billion in 1994, resulting in a cumulative inward position of \$504 billion.¹⁸ From these investments, foreign individuals derived income of almost \$23 billion.¹⁹

The composition of inward versus outward investment flows differs substantially. Most inward investment in the United States takes the form of new equity capital (65 percent), while most outward U.S. investment takes the form of reinvested earnings (69 percent).²⁰ This suggests that U.S. firms have been established abroad longer and, as a result, have had more time to recoup their initial investment and to develop their businesses.²¹ The lower return on investment realized by foreign investments in the United States may be explained similarly, since recent investments may take some time to begin generating significant returns.

¹⁰ Despite concerns about the apparent negative impact of outward FDI, one reason governments may hesitate before imposing restrictions is that other countries may follow suit, which would result in declining inward flows.

¹¹ OECD, *International Direct Investment Statistics Yearbook, 1995*, (Paris: OECD, 1995), p. 9.

¹² *Ibid.*, p. 15.

¹³ OECD, *Linkages, OECD and Major Developing Economies* (Paris: 1995), p. 101. OECD trade constitutes the sum of imports and exports recorded by OECD-member countries with all trading partners.

¹⁴ *Ibid.*, p. 106.

¹⁵ *Ibid.*

¹⁶ Investment is valued at historical cost, or book value. Capital flows include equity capital, intercompany debt, and reinvested earnings. USDOC, BEA, *Survey of Current Business*, June 1995, pp. 62-63.

¹⁷ *Ibid.*, pp. 84-85.

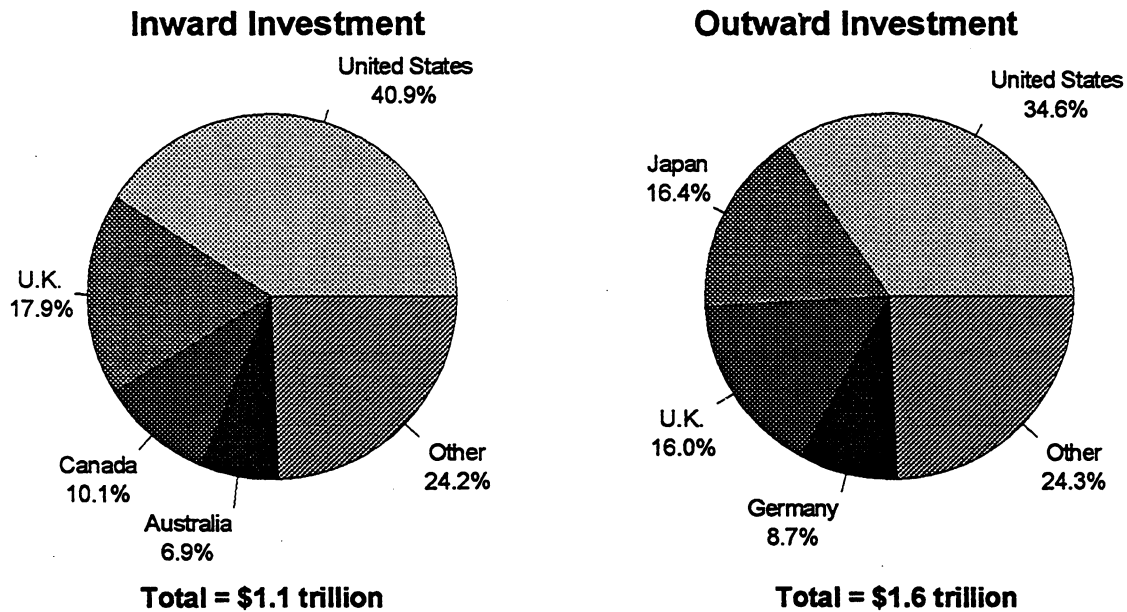
¹⁸ *Ibid.*, p. 65 and p. 67.

¹⁹ *Ibid.*, pp. 84-85.

²⁰ *Ibid.*, p. 62 and p. 65.

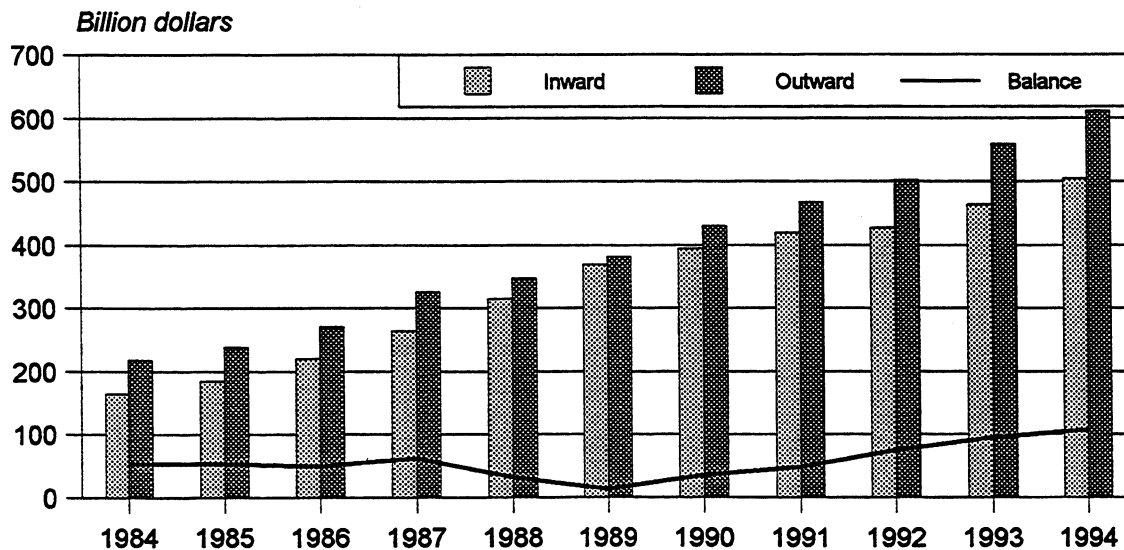
²¹ To fund additional investment, well-established firms are more likely to reinvest earnings generated in the local market than to receive infusions of new equity capital from the foreign parent.

Figure 1
Cumulative international direct investment position of OECD countries, 1993



Source: OECD, *International Direct Investment Statistics Yearbook 1995*, p. 15.

Figure 2
U.S. cumulative international investment position: Inward, outward, and balance, 1994



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, June 1995, p. 61.

Despite strong growth in U.S. direct investment flows to the developing regions of Asia and Latin America in recent years, the overall composition of U.S. direct investment relative to the major regions of the world has not changed significantly over the past decade. Europe remains by far both the largest investor in the United States and the largest recipient of U.S. investment capital, accounting for 62 percent of U.S. inward investment position and 49 percent of the U.S. outward investment position (figure 3). The strong investment relationship between the United States and Europe most likely reflects the size and strength of these economies and their long history of close economic ties. The investment relationship with Japan is not as balanced. Japan is the second largest investor in the United States, accounting for 20 percent of the U.S. inward investment position. However, U.S. investment in Japan represents only 6 percent of the total U.S. outward investment position, which is just 1 percent greater than U.S. investment in Bermuda.²² The U.S. investment relationship with Latin America also is imbalanced, with the United States investing far more capital than it receives,²³ most likely as a result of the larger supply of investment capital in the United States.

The industry composition of U.S. direct investment reveals that services account for the majority of both the inward and outward U.S. investment position (figure 4).²⁴ As with total OECD investment patterns, U.S. investment in services has been growing faster than investment in manufacturing, leading to an increase in the share of total investment accounted for by services and a decrease in the share accounted for by manufacturing.²⁵ Among the service industries, most

²² USDOC, BEA, *Survey of Current Business*, June 1995, p. 63 and p. 67.

²³ Ibid.

²⁴ Service industries include financial services, business services, wholesale and retail trade, construction, transportation, and telecommunication services.

²⁵ During 1990-94, the services share of the U.S. inward investment position increased from 48 percent to 54 percent while the manufacturing share declined from 39 percent to 37 percent. Similarly, the services share of the U.S. outward investment position increased from 47 percent to 52 percent while the manufacturing share

(continued...)

international investment has been directed toward financial services, which include banking, securities, insurance, and real estate services (51 percent of inward and 64 percent of outward investment). With respect to manufacturing, investment has been more widely distributed, although the chemical and allied products industries account for the largest share (37 percent of inward and 23 percent of outward investment).²⁶

Benefits of FDI

Growth in FDI is considered to be beneficial because it enhances economic growth, productivity, and competitiveness.²⁷ The benefits provided by FDI begin at the firm level. An individual company that invests abroad may take advantage of lower-cost source materials and labor markets and thereby improve the competitiveness of its products. The company also may sell these products through affiliates located in foreign markets, resulting in increased sales, reduced foreign exchange risk, and decreased dependence upon the home country market. Benefits also accrue to the recipient country as the foreign-owned company's presence and investment capital create jobs and may transfer technology and commercial expertise. Likewise, investor nations stand to benefit as domestic companies, strengthened by the income or competitive advantages created by FDI, may invest further in domestic facilities or in research and development.

While interest groups in some developed countries express concern that outgoing FDI contributes to higher levels of domestic unemployment, these claims often are based upon

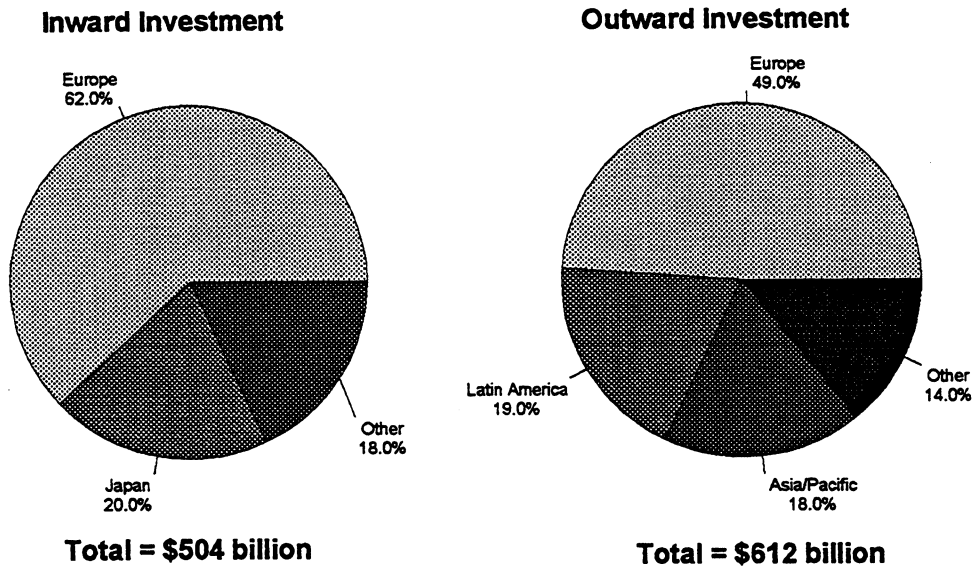
²⁵ (...continued)

declined from 40 percent to 36 percent. USDOC, BEA, *Survey of Current Business*, Aug. 1995, pp. 85-6 and pp. 115-6.

²⁶ Ibid.

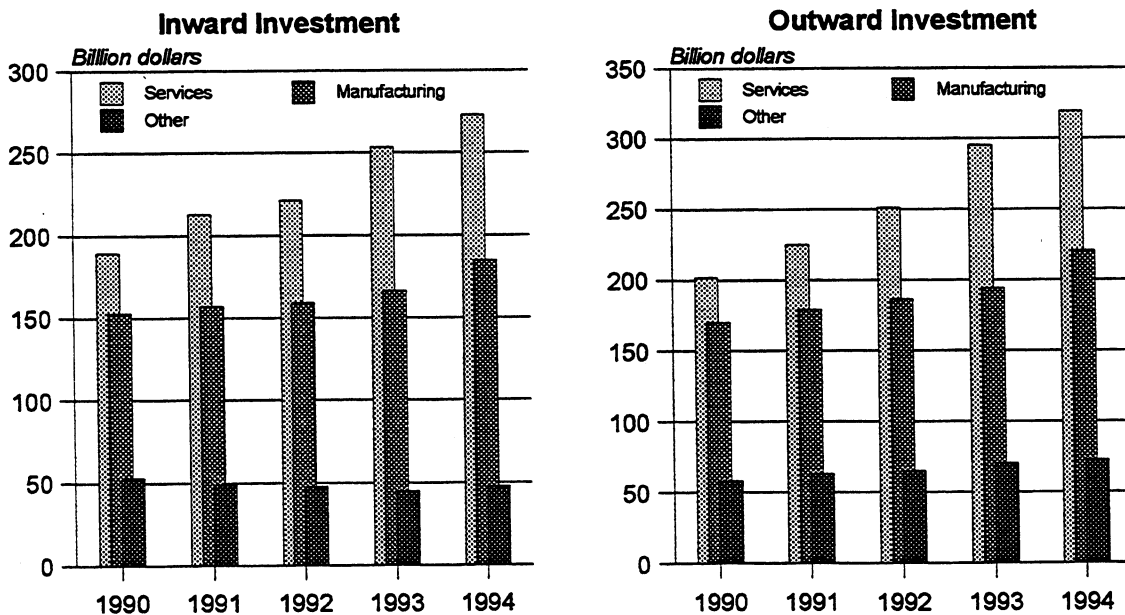
²⁷ Committee on International Investment and Multinational Enterprises (CIME) and the Committee on Capital Movements and Invisible Transactions (CMIT), "A Multilateral Agreement on Investment" (Paris: OECD, 1995), p. 3.

Figure 3
U.S. cumulative international investment position, by region or country, 1994



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, June 1995, p. 63 and p. 67.

Figure 4
U.S. cumulative international investment position, by industry, 1990-94



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Aug. 1995, pp. 85-6 and pp. 115-6.

limited anecdotal evidence and debatable assumptions.²⁸ For example, a number of U.S. apparel firms have moved the labor-intensive assembly steps of production offshore, largely to low-wage countries such as Mexico, and employment in the U.S. apparel industry has declined. Anecdotal evidence may suggest that outgoing FDI is directly responsible for reduced U.S. apparel employment. However, such an assertion assumes that U.S. firms would have remained open and competitive had they retained all stages of production in the United States. This assumption is questionable given the industry's sensitivity to labor costs. Without FDI, U.S. firms may have been forced to close, resulting in even greater job loss.²⁹

Arguments against FDI based upon employment issues also overlook the dynamic spillover effects of investment, such as increasing exports of capital goods to support foreign operations.³⁰ For example, in 1994, office and computing machines accounted for almost 10 percent of the total U.S. outward investment position.³¹ Presumably this equipment was purchased by foreign affiliates of U.S. companies to support their operations abroad. Since U.S. products may be more familiar or better integrated with U.S. parent operations, it is likely that foreign affiliates of U.S. companies will direct at least some portion of this investment to the purchase of U.S.-made products.

Empirical evidence concerning the effect of FDI on employment is inconclusive.³² For example, studies on the effects of FDI on employment conducted during the NAFTA debate produced varied results, ranging from substantial U.S.

industrial job losses to moderate employment gains.³³ Despite the fact that the relationship between employment and outward FDI remains unclear, there remains little doubt that inward FDI provides substantial benefits to the recipient country. In 1993, more than 4.7 million U.S. citizens were employed by affiliates of foreign firms as a direct result of FDI.³⁴ Consequently, while erecting barriers to outbound FDI arguably may save some jobs, those same barriers could reduce inward flows of FDI, causing job losses in other sectors.

Barriers to FDI

Despite the many benefits of freely flowing direct investment, a number of artificial restrictions still remain, even within the comparatively open investment regimes of OECD members. The most common restrictions include investment notification, approval or authorization requirements, which may be contingent upon tests of economic need;³⁵ limitations or conditions placed on the acquisition of real estate, such as prohibiting foreign investment in certain regions; and conditions requiring nationality or residency of senior managers or members of the board of directors. Less widespread but more restrictive measures include reciprocity conditions, equity caps, exclusion from certain sectors due to national monopoly or national interest, discriminatory tax treatment, preferential treatment of subsidiaries, and provision of subsidies to indigenous firms.

In many cases, the most restrictive measures are directed toward service industries, where they also may have the most debilitating effect in view of the growing interdependence of business operations with service industry infrastructures. Investment barriers are particularly problematic for service firms because a significant portion of services can only be delivered

²⁸ Rolf Alter, *Foreign Direct Investment, Trade and Employment* (Paris: OECD, 1995), p. 10.

²⁹ For additional information on U.S. apparel producers' production sharing strategies, see USITC, *Production Sharing...*, Ch. 5 (available in April, 1996).

³⁰ Rolf Alter, *Foreign Direct Investment, Trade and Employment*, p. 12.

³¹ USDOC, BEA, *Survey of Current Business*, Aug. 1995, p. 115.

³² Rolf Alter, *Foreign Direct Investment, Trade and Employment*, p. 13.

³³ Ibid.

³⁴ USDOC, BEA, *Survey of Current Business*, May, 1995, p. 66.

³⁵ Economic needs tests assess the impact of the proposed investment on domestic industries, population density, geographic spread, traffic conditions, and job creation, among other economic indicators. Such tests are viewed as potential barriers because the criteria are highly subjective and therefore open to political manipulation.

by having a direct presence in the market, or when the provider and client are physically located in the same place. Consequently, investment barriers may prohibit effective market access for certain service providers. The remainder of this article explores in greater detail some of the more significant investment barriers that remain among the world's most highly developed nations, and demonstrates the disproportionate implications for service industries.

Regional Distribution of Investment-limiting Measures

A review of published sources on the investment policies of OECD members reveals that these countries collectively maintain over 400 investment limitations.³⁶ The restrictiveness of these limitations varies substantially. For example, one Mexican measure restricts foreign ownership to 49 percent or less for most service sectors. This clearly is more restrictive than a Swiss requirement that the majority of the board of directors of a corporation must be Swiss nationals, yet each limitation may be counted as a single investment restriction. As a result, determining whether one country is more restrictive than another is not feasible. However, the volume of measures identified generally provides an indication of the level of regulation that exists in each country and the number of factors warranting consideration by any prospective investor. In addition, the sectors in which investment limitations proliferate also are likely to be those that are most sensitive and will present the greatest difficulty in reaching a liberalization agreement.

³⁶ The investment measures discussed below were compiled by USITC staff from a number of different sources, including the OECD's *National Treatment for Foreign-Controlled Enterprises* series, the General Agreement on Trade in Services Schedules of Services Commitments, the U.S. Trade Representative's *Foreign Trade Barriers* report, the U.S. Department of the Treasury's *National Treatment Study*, the European Union's *Report on United States Barriers to Trade and Investment*, and Country Commercial Guides furnished by the Commerce Department through the National Trade Data Bank. The OECD and the GATS provide the most comprehensive treatment.

The 15 member states of the European Union as a group have the greatest number of investment restrictions, accounting for 54 percent of all restrictions identified for OECD members. The United States listed the second greatest number of limitations, accounting for 17 percent of restrictions, followed by Canada, Mexico, and Australia, with 14 percent, 7 percent, and 6 percent, respectively.³⁷ The main determinant of the volume of investment restrictions is the presence of strong sub-Federal or sub-Union entities. Approximately 72 percent of all investment restrictions listed for OECD countries are measures established at the sub-Federal or sub-Union level. Within this category, 73 percent are imposed by members of the European Union and 13 percent are imposed by individual U.S. States. Consequently, the harmonization of investment measures within the European Union and within the United States would substantially clarify the investment climate. However, the fact that these measures remain in place highlights the difficulties faced by Federal or Union negotiators who may not have the authority to make commitments on behalf of sub-Federal or sub-Union jurisdictions.³⁸

³⁷ The information provided by the OECD and the GATS show a slightly different regional breakdown. Selecting only the OECD data, the share of limitations within the EU drops to 52 percent by the OECD, 16 percent from Canada, followed by the United States (11 percent) and Mexico (10 percent). According to the data provided by the GATS, the EU as a group contributed 58 percent, followed by the United States (21 percent), and Canada (11 percent). The reversal of positions between the United States and Canada reflects a large number of investment measures listed by the United States in the GATS to accommodate State measures pertaining to financial services.

³⁸ As an example of the competency issue, according to a ruling by the European Court of Justice, the EU does not have exclusive authority to negotiate on behalf of member states for certain areas of trade in services. Specifically, the EU only has competence in cross-border services. For issues related to any of the remaining three categories of trade in services, (consumption abroad, commercial presence, and presence of natural persons), the EU Commission shares competence with the member states. For more information, see USITC, *The Year in Trade 1994*, USITC publication 2894, 1995, p. 78; and U.S. Dept. of State cable, *The European Court of Justice* (continued...)

Cross-industry Measures

Cross-industry measures, which apply to investment in more than one industry, constitute approximately 17 percent of the total number of limitations maintained by OECD countries. The most common cross-industry investment measure is some form of notification process, typically applied to large investments (table 1). Seventeen countries had such requirements, including the United States. A significant number of countries go beyond notification, however, to include a requirement of government authorization or approval prior to investment. This means that there are some circumstances under which investment may be restricted by the government. For example, in countries such as Portugal and Turkey, approval may be contingent upon the findings of an economic needs test or, as with Japan and the European Union, upon the demonstration of reciprocal treatment in the potential investor's country. Such approval processes appear designed to ensure compliance with competition policy by making sure that the investment does not create a situation where a monopoly may arise or competitive forces may become distorted to the detriment of public welfare. Unfortunately, approval processes such as these also may be used to screen out certain investments and thereby protect certain industries or special interests at the discretion of government officials. This is particularly problematic if the approval criteria are not clearly defined or are subjective, as often is the case with economic needs tests.

Industry-specific Measures

On an industry basis, the largest number of investment restrictions identified for OECD members pertain to financial services (37 percent). Investment restrictions relating to transportation services account for 15 percent of all restrictions, while restrictions relating to the media, which includes publishing, broadcasting, and audio-visual production and distribution, account for 8 percent. Taken together,

a natural resources grouping that includes fishing, agriculture, and mining also accounts for 8 percent.³⁹

Financial services

The large number of investment restrictions affecting financial services reflects the complexity of existing financial regulation, which is intended to maintain the safety and soundness of the financial system. An examination of measures restricting investment in financial services reveals that often such investment is subject to a more rigorous process of notification and approval than investment in other industries (table 2). Foreign banks frequently are restricted with respect to the services they can provide through branches or representative offices. Prudential regulations tend to require foreign banks to establish a commercial presence in the form of a subsidiary, which entails a greater commitment of resources and, as a result, may adversely affect competitiveness. Along similar lines, foreign financial service firms are required to fulfill minimum

³⁹ As noted earlier, the investment limitations discussed were compiled from a number of different sources. The sectoral breakdown takes a substantially different form depending upon the source of information. According to the OECD, most of the measures (28 percent) relate to transportation, 16 percent apply to financial services, 15 percent apply across multiple sectors, and 12 percent involve the media. By contrast, the GATS data is much more heavily oriented toward financial services, which account for 73 percent of the measures (evenly split between banking and insurance, with only a few relating directly to securities). Cross-sectoral measures contribute 19 percent, and all other services account for only 8 percent. While the greater emphasis on financial services within the GATS is due primarily to the complexity of regulation that governs these sectors, part of the cause is the fact that major portions of the transportation and telecommunication sectors have not yet been addressed in the agreement (air and maritime transportation and basic telecommunications). When these sectors are incorporated into the GATS, the proportion of investment limitations pertaining to financial services will be reduced. Also of note, the GATS furnished roughly three times as many measures on financial services than were available previously through the OECD instruments, suggesting that the GATS succeeded in providing greater regulatory transparency with respect to financial services.

³⁸ (...continued)
Ruling on WTO Competence – Brief Analysis, USEU Brussels, Nov. 1994.

Table 1
Cross-industry measures identified, by OECD countries

Measures	Australia	Austria	Belgium	Canada	Denmark	European Union	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan	Luxembourg	Mexico	Netherlands	New Zealand	Norway	Portugal	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States
Notification	X	X	X	X		X	X	X				X	X	X	X		X		X	X	X	X					X
Approval/authorization		X		X		X	X	X				X	X	X	X		X			X	X						X
Exclusion/monopoly								X									X							X			
Residency/nationality	X	X		X	X		X										X							X			
Equity cap						X	X					X					X			X					X		
Needs test												X													X		
Reciprocity						X						X			X												
Locally incorporated subsidiary favored or required						X						X															
Subsidies subject to nationality or other conditions			X						X		X	X					X										X
Differential tax treatment				X					X		X																X
Real estate acquisition limited or requires authorization	X	X		X	X		X		X	X	X	X	X		X		X		X	X		X	X				X
Repatriation/remittance approval													X														

Source: Compiled by USITC staff from the OECD's National Treatment for Foreign-Controlled Enterprises series, the General Agreement on Trade in Services Schedules of Services Commitments, the U.S. Trade Representative's Foreign Trade Barriers report, the U.S. Department of the Treasury's National Treatment Study, the European Union's Report on United States Barriers to Trade and Investment, and Country Commercial Guides furnished by the Commerce Department through the National Trade Data Bank.

Table 2

Financial services measures identified, by OECD countries

Measures	Australia	Austria	Belgium	Canada	Denmark	European Union	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan	Luxembourg	Mexico	Netherlands	New Zealand	Norway	Portugal	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States
Approval/authorization	B	BI S		BI		B I					BI						BS			BI	BSI			BSI	BSI	BS	BS
Minimum capital or FX requirements	BS								B					S I									I			I	
Exclusion/monopoly	BI			BSI		I								S I			B	I						BSI		BSI	
Residency/nationality	SI			BSI I		BSI S			BI					I			BSI			BSI		I	BI		BI	BI	
Equity cap	B			BSI							B						BSI			BI							
Needs test		B																		B							
Reciprocity		BI													S		S			BI	BS	BS		BSI	BSI	BSI	BSI
Locally incorporated subsidiary favored or required	BSI			B										S													B
Subsidies/preference to nationals				B				S																			
Limited activities				B											B		BSI			I							B
Differential tax treatment				B																							
Differential reporting requirements				S																							
Real property																											BI

B = Banking
 S = Securities
 I = Insurance

Note: Exclusion/monopoly means at least some of activity is excluded due to a state monopoly, an exception to national treatment, or on prudential grounds.

Source: Compiled by USITC staff from the OECD's *National Treatment for Foreign-Controlled Enterprises* series, the General Agreement on Trade in Services Schedules of Services Commitments, the U.S. Trade Representative's *Foreign Trade Barriers* report, the U.S. Department of the Treasury's *National Treatment Study*, the European Union's *Report on United States Barriers to Trade and Investment*, and Country Commercial Guides furnished by the Commerce Department through the National Trade Data Bank.

capital or foreign exchange requirements within countries such as Greece, Turkey, and Australia.

In an effort to ensure local control, residency or nationality requirements frequently are applied to senior managers of foreign financial service firms, and the amount of equity in financial institutions that may be held by foreigners often is capped at specific percentage levels. Finally, there has been a rising trend in financial services regulation to include some form of a reciprocity measure that would permit local regulators to impose restrictions on foreign financial service firms as retaliation for adverse discriminatory treatment abroad. Several EU members have enacted reciprocity provisions and the United States has considered, but has not passed, similar legislation.⁴⁰ While reciprocity measures have been applied rarely and appear to be merely a means of establishing some negotiating leverage, they run counter to trade liberalization by violating the most-favored nation (MFN) principle.

Media

Investment in various forms of media also is subject to significant restrictions. In particular, equity caps are applied in eleven OECD countries (table 3). These limitations restrict foreign individuals or entities from owning a controlling interest in firms engaged in such media activities as publishing, radio or television broadcasting, cable television, film and video production and distribution, and audio recording. Other restrictions require residency or nationality of senior management and deny subsidies to foreign firms that are available to domestic firms. Subsidies are particularly common in the film industry.

Limitations on the activities of foreign individuals or firms in the media are intended to protect domestic channels of communication from influence by foreign interests and to control the cultural content of the media. For example, Canada recently refused to permit U.S.-owned Borders Books from investing as a minority partner in a Canadian venture on the grounds that control over book purchasing decisions would remain in the United States.⁴¹ It often is asserted that investment policies such as these are prone to be used subjectively to suit political objectives. This presents a major concern to the United States due to the strong global competitive position of U.S. media industries.

Transportation

Investment measures in the transportation sector appear to be the most consistently applied across countries and regions (table 4). In addition to local licensing requirements, foreign investors often must submit to authorization procedures. Nationality or residency often is required in order to register a ship or an airplane; and cabotage, or transportation services provided within national boundaries, typically is reserved to national companies for air and maritime transportation. Limitations on the amount of foreign equity in domestic transportation companies also are quite common, especially with respect to air and maritime transportation companies. State monopolies on air transportation represent another exclusion in countries such as Belgium, the Netherlands, and New Zealand. A typical explanation for such measures is that transportation is perceived as an intermediary service necessary for the efficiency of other economic sectors. Consequently, there is a tendency to limit foreign influence or control over this key sector.

Public sectors and monopolies

Many industries that traditionally have fallen within the domain of the public sector or that are subject to state-sponsored monopolies exclude or restrict investment participation by foreign interests. These industries include telecommunications and other public utilities such as energy, as well as

⁴⁰ However, at the conclusion of GATS financial services negotiations in June 1995, the United States reserved the right to impose reciprocity conditions on foreign financial service providers that wish to establish a presence in the U.S. market, expand current operations, or conduct new activities. U.S. International Trade Commission, "Financial Services: An overview of the World Trade Organization's Negotiations," *Industry, Trade and Technology Review*, USITC publication 2942, Dec. 1995, p. 1.

⁴¹ U.S. Dept. of State cable, "SE Ottawa 000720 -- Canadian Cultural Industry Issues Update," Feb. 13, 1996.

Table 3
Media measures identified, by OECD countries

Measures	Australia	Austria	Belgium	Canada	Denmark	European Union	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan	Luxembourg	Mexico	Netherlands	New Zealand	Norway	Portugal	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States
Authorization	PB			PF R																		B			B	B	B
Equity caps	PB			PB CF				PB PB B									P			B	B	B			B		B
Exclusion/monopoly	P	B			B		PB C										BC BC	BC B							F	B	B
Residency/nationality	B			F																							
Subsidies/preference to nationals	F			PF R										F					BC FR								
Limited activities				F																							
Performance requirements				F																							
Reciprocity conditions				F																							
Local/regional incorporation								PB																		B	
Needs test				P																							B

P = Publishing
 B = Broadcasting
 C = Cable
 F = Film and video production and distribution
 R = Recording

Source: Compiled by USITC staff from the OECD's National Treatment for Foreign-Controlled Enterprises series, the General Agreement on Trade in Services Schedules of Services Commitments, the U.S. Trade Representative's Foreign Trade Barriers report, the U.S. Department of the Treasury's National Treatment Study, the European Union's Report on United States Barriers to Trade and Investment, and Country Commercial Guides furnished by the Commerce Department through the National Trade Data Bank.

Table 4
Transportation measures identified, by OECD countries

Measures	Australia	Austria	Belgium	Canada	Denmark	European Union	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan	Luxembourg	Mexico	Netherlands	New Zealand	Norway	Portugal	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States
Authorization/license				AG			A	M									M			M		A	A				
Nationality/residence	M	M	A	A			M	AM	M		A		A	A	A		G	A			A		A	A		A	
Cabotage reservation	A	A		AG	A		AM	AM	AM	AM		A	A	A	A		AG	A		AG	M	A	AM		A	A	
Equity caps	A	M					M	M	A	AM	A	A	A	A	A		M	M		M	AM			AM	A	A	
Exclusion/monopoly																											
Inland waterways (Rhine Convention)								M	M		M													M			
Other activities limited (e.g., ground handling)														A													
Reciprocity								G																		AM	
Local incorporation																										A	

M = Maritime
A = Air
G = Ground

Note: Some form of authorization or licensing should be assumed for all modes of transportation. In addition, some form of reciprocity should be assumed for bilateral air transport under the Chicago Convention.

Source: Compiled by USITC staff from the OECD's *National Treatment for Foreign-Controlled Enterprises* series, the General Agreement on Trade in Services Schedules of Services Commitments, the U.S. Trade Representative's *Foreign Trade Barriers* report, the U.S. Department of the Treasury's *National Treatment Study*, the European Union's *Report on United States Barriers to Trade and Investment*, and Country Commercial Guides furnished by the Commerce Department through the National Trade Data Bank.

sectors within the health and transportation industries (table 5). Despite recent trends toward privatization, many restrictions remain as a result of the strategic importance of these industries. In the case of basic telecommunication services,⁴² for example, most countries have either a full exclusion due to government monopoly or a partial restriction imposed through limits on equity participation by foreign firms. Similar restrictions apply to the provision of energy or utility services in a number of countries.

Conclusion

The general framework of a multilateral agreement on investment seems to be well established as a result of previous trade agreements and experience. The framework would commit signatory countries to permit the free movement of capital, to grant national treatment and most-favored nation (MFN) status, to ensure that investments are protected from government or civilian actions, and to support a dispute-settlement mechanism that allows investors to appeal directly to the foreign

government. While a framework agreement would be valuable, the immediate level of liberalization achieved will depend upon the number of countries that sign the agreement and the number of exceptions to the framework that are allowed to remain.

A successful agreement on international investment would have substantial beneficial implications for international trade in services. As this article points out, the remaining investment barriers between OECD countries are predominantly focused upon service industries, especially those providing financial, transportation, telecommunication, and media services. An ambitious multilateral agreement could go much further than existing mechanisms toward easing barriers to trade in services by guaranteeing the right of foreign firms to establish a commercial presence through direct investment. Such a guarantee would provide considerable benefits both to companies and countries by facilitating the development of the global services infrastructure, which in turn would reduce costly barriers to doing business and enhance overall economic efficiency.

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⁴² Basic telecommunication services involve the real-time transmission of customer-supplied information (i.e., voice or data) between two or more points without any change in the form or content of the customer's information.

Table 5
Public sector equity cap or exclusion measures identified, by OECD countries

Measures	Australia	Austria	Belgium	Canada	Denmark	European Union	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Japan	Luxembourg	Mexico	Netherlands	New Zealand	Norway	Portugal	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States
Telecommunication ¹	X	X	X	X	X	X		X									X		X	X	X						X
Transportation		X	X														X	X							X		
Energy/utilities		X		X		X											X	X							X		
Health services				X					X																		

¹ Measures restricting telecommunication services are expected to change significantly as a result of ongoing WTO negotiations on basic telecommunications, which are scheduled to conclude on April 30, 1996.

Source: Compiled by USITC staff from the OECD's *National Treatment for Foreign-Controlled Enterprises* series, the General Agreement on Trade in Services Schedules of Services Commitments, the U.S. Trade Representative's *Foreign Trade Barriers* report, the U.S. Department of the Treasury's *National Treatment Study*, the European Union's *Report on United States Barriers to Trade and Investment*, and Country Commercial Guides furnished by the Commerce Department through the National Trade Data Bank.

THE IMPACT OF CUBA'S NEW FOREIGN INVESTMENT LAW

About this article . . .

The recent liberalization of restrictions on foreign investment by the Cuban government, which have resulted in new investments by Canadian, European, Latin American, and Asian firms, had made U.S. firms cautiously optimistic about an eventual easing of U.S. restrictions on trade and investment in Cuba. The U.S. government's relaxed regulations on American travel to Cuba, and criticism by major trading partners of the U.S. embargo, suggested that a relaxation of the U.S. embargo might occur. However, the February 1996 downing of two small U.S. civilian planes by Cuban MiGs appears to have dashed any hopes for near-term improved relations. In the wake of this recent incident, legislation to, among other things, strengthen sanctions and encourage a transition government in Cuba, has been passed by the U.S. Congress and signed by the President. This article describes the new, more liberalized foreign investment law recently approved by the Cuban Assembly, and its implications relative to parallel efforts by the United States to effect change in Cuba's economic and political landscape from a different perspective. This article is based on information from various publications, interviews, and the limited amount of official data that is available.

Since 1959, when Fidel Castro came to power, Cuba has been a quasi-Marxist socialist state. Most domestic and foreign owned commercial assets were seized by the state. Also, investment and all phases of commerce, including agriculture, have been closely regulated by the state. In 1962 the United States imposed an embargo on trade with Cuba,¹ and, initially, Cuba was essentially cut off

from trade with many other nations in the Western Hemisphere. During much of this period, Cuba's principal trading partner was the Soviet Union², which was the predominant buyer of Cuban sugar and a major provider of Cuba's energy and gas needs as well as a supplier of economic assistance.

With the dissolution of the Soviet Union and virtual termination of Soviet assistance, the Cuban economy has undergone numerous changes, and the standard of living for Cuban citizens has substantially deteriorated.³ To help offset the withdrawal of Soviet assistance and to stabilize the

¹ (...continued)

Regulations (Title 31, Part 515 of the U.S. Code of Regulations), which provides the basis for the U.S. embargo, were issued under the Trading with the Enemy Act on July 8, 1963. The regulations remain in force. This legislation was strengthened by the Cuban Democracy Act of 1992.

² The COMECON market was also important for Cuba's economic growth during the period of Cuba's partnership with the Soviet Union. "The Council for Economic Assistance, CMEA or COMECON was established in 1949 ostensibly to create a common market. . . Members normally received some products, particularly oil and gas from the former Soviet Union at below-market prices." U.S. Department of Commerce, Office of Administration, *A Comprehensive Guide to International Trade Terms*, taken from the National Trade Data Bank, July 6, 1995. Underlying nearly all of Cuba's current economic difficulties is the loss of Soviet subsidies and the loss of "captive markets" for its exports of sugar and nickel in COMECON countries.

³ "The abrupt cutoff of Soviet aid has had a devastating impact on the Cuban economy. From 1989 to 1992, the overall economy declined an estimated 45 percent, while imports were cut by 73 percent, from \$8.1 billion to \$2.2 billion. Imports of foodstuffs were down by 41 percent, petroleum by two-thirds, and machinery and equipment by an extraordinary 86 percent." Ernest H. Preeg with Jonathan D. Levine, Exec. Summary in *Cuban and the New Caribbean Economic Order*, (Washington, DC: The Center for Strategic and International Studies, 1993), p. xiv.

¹ U.S. President Eisenhower broke diplomatic relations with Cuba on January 3, 1961; a comprehensive U.S. embargo was implemented in 1962; and the Organization of American States (OAS) voted to expel Cuba in January 1962. The Cuban Assets Control (continued...)

Cuba's Foreign Investment Law

downward drift in the economy,⁴ Cuba enacted the Cuban Foreign Investment Law. The new Law, which was debated by the Cuban assembly⁵ and finally approved on September 5, 1995, substantially opens the Cuban economy to foreign investment in an effort to bring in new foreign capital to help rejuvenate the Cuban economy. During the same period, the United States Congress considered legislation, introduced in February 1995 as the Cuban Liberty and Democratic Solidary (LIBERTAD) Act of 1995, designed to further enforce the U.S. embargo against the government and facilitate democratic objectives in Cuba.⁶

⁴ Although foreign investment in Cuba has increased during the past few years as a result of policy changes by the Cuban government, these changes are regarded as being in response to internal Cuban economic problems, including Cuba's critical need to generate foreign exchange to pay for imported goods rather than a change in economic philosophy. The cost of living and unemployment in Cuba has continued to rise. Several sources report that the current restructuring of the economy may result in the loss of over half a million jobs which the private sector simply cannot absorb. At the same time, although Cuba has experienced several consecutive years of poor sugar and agriculture harvests, GDP is forecast to grow 4% to 5% in 1996 but remain well below the 1989 level. *Caribbean UPDATE: Including Central America, "Cuba,"* 11:12, Jan. 1996, p. 7. According to an independent source, Castro is changing certain policies for his very survival while retaining Socialism as the dominant economic system. These policy changes include: the legalization of hard currency in 1993, permitting self-employment and open farmer's markets, the creation of cooperatives, the implementation of fiscal reforms such as reducing the size of the state and charging for services like electricity and gas, and attracting foreign investment. Ana Julia Jatar, senior fellow at the Inter-American Dialogue, interview with USITC staff, Sept. 10, 1995.

⁵ This debate, presided over by President Fidel Castro, was rather contentious as many hard liners rejected liberalization in any form.

⁶ This legislation, commonly referred to as the Helms/Burton Act, was passed by both the House and Senate on March 12, 1996, and was signed by the President shortly thereafter. Cuban Liberty and Democratic Solidarity (LIBERTAD) Act of 1996, Public Law 104-114, 110 Stat. 785, 22 USC 6021.

Cuba's Foreign Investment Law

The 1995 Foreign Investment Law (Law No. 77)⁷ modifies Law-Decree No. 50.⁸ The law guarantees that investors in Cuba (1) will be protected from expropriation except when required for "public utility or social interest" and third party claims; (2) will be able to sell shares of investment to the state or a third party depending on the initial agreement; (3) will be able to freely transfer profit abroad; and (4) will receive a fair price for investments in joint ventures and economic associations which will be established by the involved parties.⁹ The Law specifically permits joint ventures, international economic association contracts, and companies comprised totally of foreign capital.¹⁰ The banking requirements applicable to foreign investment capital are set out in Chapter IX, which are followed by the tax provisions. Taxes are imposed on: profits,¹¹ the use

⁷ The introduction to law No. 77 states, in part, that, "Cuba... lacks capital, some technologies, and, often, markets, and needs to restructure its industry. Cuba can benefit from the introduction of new and advanced technology, the modernization of its industries. . . and access to specific markets, this on the basis of strict respect for national independence and sovereignty and to safeguard Cuba's achievements." As reprinted in the Foreign Broadcast Information Service (FBIS), Daily Report Supplement, Latin America, *Cuba: Text of Foreign Investment Law*, Oct. 5 1995, p.1.

⁸ Law-Decree No. 50 set out the requirements, benefits, and tax rates applicable to joint ventures. This law required that a Cuban partner must assist in management and that Cuban labor must be used in the majority of positions. For more background on Law-Decree No. 50 as well as changes in law before Law Decree No. 77, see Jorge F. Perez-Lopez, "Odd Couples: Joint Ventures Between Foreign Capitalists and Cuban Socialists," *The North-South Agenda*, No. 16, November 1995.

⁹ FBIS, Chapter III, pp. 2, 3.

¹⁰ *Ibid.*, p. 3.

¹¹ The tax on profits is imposed at a 30 percent rate on the taxable net profit, however, profits reinvested in the country are exempt from the tax. The Executive Committee of the Council of Ministers has the authority to increase the tax on profits up to 50 percent. FBIS, Chapter XII, p. 8.

of the labor force,¹² ground transportation, and various documents. Chapter XV authorizes the creation of free zones¹³ and industrial parks which, "will be governed by the special legislation promulgated to that effect."¹⁴

The new Foreign Investment Law is intended to make foreign investment in Cuba more attractive and easier.¹⁵ Previously, investment was limited to joint ventures, joint accounts, and production agreements. These limitations have been removed, and now even 100 percent foreign-owned enterprises may be approved, albeit in exceptional cases. The time period for approving or rejecting an investment proposal has been reduced to 60 days. Investment is now allowed in most industries, including sugar and real estate; however, defense, public health, and education are still excluded. As noted earlier, guarantees against expropriation have been written into the Law and the free transfer of profits abroad is permitted. Foreigners may even buy homes, offices, and buildings, although they still cannot own land. There are no limitations on who may invest in Cuba; thus, even Americans of Cuban origin may invest.¹⁶ Finally, the law permits foreign-owned businesses to hire their own workers and reward them with bonuses, but all companies

must continue to contract with the state employment agency.

While foreign investment was beginning to flow into Cuba before the Cuban Foreign Investment Act of 1995, its passage has sparked additional interest. According to industry sources, several industries stand out as promising.¹⁷ The most commonly mentioned is tourism. Several European hotel chains have already invested in Cuba, and various cruise lines have announced plans to enter the market. Mining is another potential growth area because Cuba has 27 percent of the world's reserves of nickel and cobalt. The pent-up local demand for consumer goods should also contribute to the growth of light manufacturing and industry.¹⁸ Additional likely areas for investment include biotechnology, distribution, transportation, electronics, construction, and telecommunications.

Foreign Investment in Cuba and the Potential Effects of Cuba's Reintegration into the Regional Economy

Concurrent with the U.S. embargo, European, Latin American, and Asian countries, as well as Canada, have expanded their footholds in the

¹² A 14 percent tax on wages paid is applied toward social security. FBIS, Chapter XII, p. 8.

¹³ For more information on the economic benefits of FTZs, see USITC, "Free Trade Zones: Global Overview and Future Prospects," prepared by Gail Burns, *Industry, Trade, and Technology Review*, Sept. 1995- pp. 35-47.

¹⁴ FBIS, Chapter XV., p. 10.

¹⁵ According to independent sources, the Foreign Investment Law will probably have only a small, indirect benefit for the Cuban workforce. Most Cubans will still be employed by the state; and Cubans cannot hire other Cubans. Cubans are not permitted to purchase or operate businesses. The state will continue to pay all workers' salaries in pesos, while the currency to pay the state for those workers from the foreign business remains in dollars.

¹⁶ This was a hotly debated issue in the Cuban assembly because it revolved around the contentious issue of U.S. exiles. Castro claims he does not fear that an influx of Miami-based, Cuban exile money would negatively affect his regime and the Cuban people. ("Cuba: Immigrants May Be Allowed In As Investors," *NewsEdge*, Sept. 5, 1995.)

¹⁷ It is unclear how the aforementioned February 24th shooting incident will affect investment. Several analysts have indicated that some provisions may force companies to choose between investing in Cuba or in the United States. "Clinton Agrees to Fresh Sanctions on Cuba," *CNN Interactive*, posted at 10:45 p.m., Feb. 28, 1996.

¹⁸ According to industry sources, with a small population, only 10 million, and such a limited per capita income right now, Cuba does not appear to be a promising market for consumer goods; however, several policy makers believe the pent-up demand and Cuba's proximity to the United States make it a likely market for consumer goods. In fact, John Kavulich, president of the U.S.-Cuba Trade and Economic Council, believes many U.S. companies are not solely interested in Cuba for its investment potential, but also simply for exporting to and importing from Cuba. Interview with USITC staff, Jan. 31, 1996.

Cuban market.¹⁹ The current lack of U.S. competition is an added incentive for foreign companies to invest now.²⁰ Likewise, interest in the growing Cuban market by U.S. companies continues to increase despite the embargo. Law offices and consulting firms are beginning to advise clients on how to deal with certain Cuban regulations or how to advantageously position themselves to enter the Cuban market when the embargo is eventually lifted. For example, Days Inns has signed an agreement with Realstar Group, a Canadian franchisee, to develop hotels in Latin America. According to the agreement, "Days Inns will apply to the U.S. Treasury Department's Office of Foreign Assets Control for permission to include Cuba as an 'option area' for development if and when U.S. law permits."²¹ Numerous U.S. executives have made trips to Cuba to set the groundwork for their future entry.²² In 1994, nearly 400 U.S. executives visited Cuba; in 1995, the number of U.S. executives traveling to Cuba increased to over 1,300.²³ Meanwhile, foreign competitors continue to reap

benefits and position themselves to further expand their influence in Cuba.²⁴

As of July 1995, a little over \$2 billion had been directly invested in Cuba from various sources.²⁵ There were approximately 240 joint ventures involved in 32 sectors from more than fifty countries. Mexico, Spain and Canada are the main investors and trading partners, followed by the United Kingdom, Italy, and France. The primary sources of investment in Cuba, and the principal industries and companies involved are noted in Table 1.

One of the most important aspects of the Cuban Foreign Investment Act is its potential to affect trade patterns within the Caribbean region. The Act is expected to attract investment in in-bond assembly for foreign markets (export processing) in the newly created foreign trade zones. According to one industry source in Mexico, "Although most Latin American governments will applaud the trade liberalization measures of Cuba as an important step in the reintegration of Cuba into the hemispheric economy and would be very happy to land any big infrastructure contract. . . they cannot be pleased about having another potential competitor in the hemisphere for export manufacturing activity."²⁶

Many Caribbean countries are reportedly very concerned about possible Cuba's reintegration into the regional economic system.²⁷ The potential exists

¹⁹ A Smith College economist, Andrew Zimbalist, claims that in the next five years, investment in Cuba could reach \$10 billion. Gail DeGeorge et al, "Almost Tasting Trade," *Business Week*, Sept. 19, 1995, p. 32.

²⁰ Ana Julia Jatar, Senior Fellow, Inter-American Dialogue, interview with USITC staff, Sept. 10, 1995.

²¹ Bill Gillette, "Days Agreement Targets Cuba," *Hotel & Motel Management*, Feb. 1995, p. 1.

²² It is important to note that U.S. businesses are legally permitted to do the following in Cuba: register trademarks and patents; provide travel services and air transportation services; execute non-binding letters of intent; implement contracts in the communications, entertainment, medical supply and equipment, pharmaceutical, and telecommunications fields; and have indirect non-controlling investments in Cuba. "The U.S. Department of the Treasury issued an opinion which stated that a U.S. business. . . may make a secondary market investment in a third-country business which has commercial dealings within the Republic of Cuba." U.S. Cuba-Trade and Economic Council, Inc., *Realities of "Market Cuba,"* Issue Paper, based on correspondence from U.S. Department of Treasury, to John Kavulich, March 4, 1994. See also Steve Bergsman, "Life Beyond Castro," *Treasury & Risk Management*, Jan-Feb 1996, p. 28.

²³ John Kavulich, President, U.S.-Cuba Trade and Economic Council, interview with USITC staff, Jan. 31, 1996.

²⁴ According to CEO Bernard J. Ebberts of LDDS Metromedia, "Opportunities may be lost to our competitors from other nations." Gail DeGeorge et al, "Fidel's End Run Around Uncle Sam," *Business Week*, May 9, 1994, p. 47.

²⁵ "Cuba: Emigrants May be Allowed," Sept. 5, 1995.

²⁶ Burt Diamondstein, Philips Consumer Electronics Company, Juarez, Mexico, facsimile regarding New Cuban Foreign Investment Regime provided to USITC staff, Sept. 19, 1995.

²⁷ Larger Latin American nations like Mexico, Chile, and Brazil are less concerned about Cuba's reintegration because their major industries most likely will not directly compete with those in Cuba.

Table 1
Foreign investment in Cuba by country

Country	Total ¹	Committed/delivered	Announced
-----Million dollars-----			
Mexico ²	16	250	2,300
Spain	56	125	350
Canada	31	100	741
Italy	20	87	97
United Kingdom ³	(⁴)	50	75
The Netherlands	9	40	300
Chile	2	30	61
Brazil	3	20	150
South Africa	(⁴)	15	400
Israel	5	7	22
France	13	10	15
Venezuela	6	3	50
Germany	(⁴)	2	10
Australia	1	(⁴)	500

¹ These totals include the number of all investments up through January 1996, and were compiled by U.S.-Cuba Trade and Economic Council, Inc in New York City. Latin America and the Caribbean as a region, have over 80 economic associations (joint ventures, etc) with Cuba.

² The December 1994 joint venture between Grupo Domos and Cuba's telephone company, EmtelCuba, is reportedly to result in investments of \$1.4 billion. Some sources have recently expressed doubts regarding the viability of this joint venture, although the president of Grupo Domos, Javier Garza Calderon, denied such rumors in a January 17, 1996 press report.

³ The United Kingdom and Cuba have signed an Investment Promotion and Protection Agreement to legally protect investments with Cuba. Spain, France, Italy, and Russia have signed similar accords with Cuba; other countries are in the process of negotiation.

⁴ Not Available

Source: Compiled by U.S.-Cuba Trade and Economic Council

based on the large influx of Canadian tourists to Cuba's beaches each winter.²⁸ The Cuban government initially spent its resources to attract the investment in the lower-end (i.e. cheaper) tourism market because Cuba lacked the

infrastructure to accommodate upscale tourism.²⁹ Recently, however, efforts are underway to attract investment from more expensive resorts and to broaden development, rather than focusing on a few resort areas; this may serve to further divert upscale tourist trade from the aforementioned countries.

²⁸ Resort areas potentially affected in this regard include: the Bahamas, Jamaica, Dominican Republic, the Cayman Islands, Cancun, and those in Central America.

²⁹ Kavulich interview, Jan. 31, 1996.

Both Jamaica and the Dominican Republic, in particular, are expected by industry sources to face increased competition for their burgeoning assembly industries³⁰ because of the creation of Cuban foreign trade zones. According to one expert familiar with the Caribbean Basin region, agricultural exports and products of apparel assembly, both of which already face import restrictions³¹ in the United States, are examples of industries in some Caribbean and Central American countries that may eventually face competition from Cuba for access to the U.S. market.³² It is important to note, however, that for these industries, Cuban wage rates may not be as low as those of regional competitors, which could hamper the establishment of a competitive export-processing industry in Cuba.³³

Before Cuba's reintegration into the regional economic system can have any substantial effect, however, U.S. companies with significant resources for investment will need to be both permitted legally to invest and have the desire to do so.³⁴ Several factors are likely to limit investment by U.S. companies (as well as foreign companies) even after the embargo is lifted. For example, Cuba's infrastructure is in need of repair and development. Also, poor transportation and port

facilities, an uneven flow of utilities, and the lack of adequate telecommunications will likely discourage investment, particularly forms of investment that depend on an uninterrupted supply of electricity and on modern telecommunications.³⁵ Currently, electricity blackouts and shortages are common, disrupting most activities from the operation of a factory to the smooth performance of public transportation.³⁶

The question of how well Cuban officials will manage the foreign trade zones and the fairness of the tax regime within the FTZs is also still to be determined. Because existing joint ventures have been almost completely limited to generating export activities with extremely limited access to the domestic market, further foreign investment may be discouraged.³⁷ Several industry sources have expressed concern about the provision requiring companies to contract with the Cuban government, instead of directly hiring the workers,³⁸ as well as the lack of basic worker/human rights on the island. While they view Cuba's new Foreign Investment Law as a step in the right direction, most industry experts feel that it has not gone far enough.

Finally, at the most basic level, Cuba's political and economic system must be stable, and acceptable to U.S. policy makers and businesses, in order for U.S. investors to become active in that country. Claims by U.S. citizens and corporations regarding property and other assets that were expropriated during Cuba's revolution have not been resolved. Even if U.S. restrictions on investment by U.S. citizens in Cuba are relaxed or

³⁰ For further information, see USITC, "Comparison of Production-Sharing Operations in the Caribbean Basin with Those in Mexico and Selected East Asian Countries," prepared by Josephine Spalding-Masgarha, *Industry Trade and Technology Review*, Sept. 1995, pp. 21-29.

³¹ For example, 23 Latin American and Caribbean nations receive annual tariff rate quota (TRQ) allocations for raw sugar that are subject to change, and Mexico and 6 Caribbean nations receive guaranteed access levels (GALs) for many apparel products.

³² Preeg, *Cuba and the New Caribbean Economic Order*, p. 71.

³³ Kavulich interview, Jan. 31, 1996.

³⁴ It should be noted that it will take time before Cuba's foreign trade zones become profitable regardless of political and economic developments. It took approximately twenty years for trade zones in the Dominican Republic to become attractive to investors, and nearly as long for Costa Rica to set up a successful zone program. Richard Bolin, Director, Flagstaff Institute, interview with USITC staff, Jan. 31 1996.

³⁵ Diamondstein, facsimile, p. 2.

³⁶ For a detailed explanation of both the economic and political obstacles to FDI in Cuba consult, Jorge F. Perez-Lopez, "Foreign Direct Investment in the Cuban Economy: A Critical Look," Paper for the Workshop *Cuba: Past, Present, and Future*, sponsored by Shaw, Pittman, Potts & Trowbridge and Oceana Publications, Washington, D.C., Jan. 26, 1996.

³⁷ According to Perez-Lopez, joint ventures cannot compete with similar state enterprises and the goods they produce may only be marketable to foreign tourists because of Cuban restrictions. Perez-Lopez, "Odd Couples: Joint Ventures," p. 22.

³⁸ Perez-Lopez, paper, p. 15.

lifted, some U.S. citizens may prove reluctant to make major investments until these claims are settled. Consequently, "There is great potential in Cuba; however, involvement by the United States is needed to make it happen, mainly because the U.S. market would be best served by such an expansion of foreign trade zones and other types of investment in the region."³⁹

Thus, in order for Cuba to attract a large amount of new investment (i.e., U.S. investment due to geographical proximity and the sheer number of U.S. companies with resources to invest), the Cuban political situation must change to the satisfaction of the United States⁴⁰ and major improvements must be made to the infrastructure. However, according to some experts, Cuba needs the influx of U.S. capital before those two conditions can occur, and the tougher sanctions against Cuba--as reflected in the provisions of the LIBERTAD Act--are not promising for U.S. investment in the short term.

The LIBERTAD Act of 1996

The purpose of the LIBERTAD Act is, "To seek international sanctions against the Castro government in Cuba, to plan for support of a transition government leading to a democratically elected government in Cuba, and for other purposes."⁴¹ The Act states several reasons that its provisions are necessary: the declining health and repression of the Cuban people, the lack of free elections, the belief that the Castro regime continues to threaten international peace, and the U.S. commitment to helping the Cuban people. The Act seeks to more effectively enforce the economic embargo of Cuba, and, in support of this goal specifies opposition to Cuban membership in international lending and economic development institutions such as the International Monetary Fund (IMF), the World Bank, and the Inter-

American Development Bank (IADB).⁴² The Act provides additional measures such as authorizing support for international and human rights observers; withholding assistance to nations that are involved with nuclear plants in Cuba; and extraditing U.S. criminals who reside in Cuba.⁴³

In addition, the LIBERTAD Act outlines a plan for a transitional government that will cultivate a democratic Cuba. A timetable is established for providing food, medicine and medical supplies, and emergency assistance at the time of transition, and for the termination of the embargo. Numerous requirements must be fulfilled by the transition government and the resultant democratically elected government in order to be considered eligible for assistance of any kind.⁴⁴ The provision in the Act regarding the protection of property rights⁴⁵ is considered by many U.S. trading partners as the most controversial because it gives U.S. citizens the right to file in U.S. federal courts to obtain redress for their property claims in Cuba, which, consequently creates a potential legal challenge to foreign investors that own or rent property and land in Cuba that is considered to be the expropriated property of a U.S. citizen.

The LIBERTAD Act has not been received favorably by other countries, especially those with investors hoping to profit from Cuba's new foreign investment laws.⁴⁶ Despite the following concerns

⁴² P.L. 104-114, 110 Stat. 794, 22 USC 6034.

⁴³ P.L. 104-114, 110 Stat. 799, 22 USC 6039; 110 Stat. 800, 22 USC 6041; and 110 Stat. 803, 22 USC 6043.

⁴⁴ Examples of these requirements include: the existence of independent political activity and association; the release of all political prisoners; the establishment of an independent judiciary; the guarantee of free speech and press; the organization of free and fair elections with the participation of various independent parties; taking steps to return or to provide compensation for all U.S. property confiscated during the revolution; and the ouster of Fidel and Raúl Castro from the Cuban government. P.L. 104-114, 110 Stat. 811 and 812, 22 USC 6065.

⁴⁵ P.L. 104-114, 110 Stat. 815-819, 22 USC 6082.

⁴⁶ Canada, one of the leading investors in Cuba (\$841 million committed or announced as noted in table 1), exports about \$137 million in goods to Cuba each year and imports about \$216 million from Cuba.

³⁹ Bolin interview, Jan. 31, 1996.

⁴⁰ As referenced in Section 205 "Requirements and Factors for Determining a Transition Government," Fidel Castro and his brother Raoul must leave administrative and military positions. P.L. 104-114, 110 Stat. 811, 22 USC 6065.

⁴¹ P.L. 104-114, 110 Stat. 785, 22 USC 6021.

about the Act expressed by several U.S. trading partners, the measures contained in the Act are viewed by the United States as consistent with international obligations, including those under the WTO and NAFTA.⁴⁷ Conversely, European Union (EU) representatives have asserted that, "Some of these provisions overtly contravene established principles of international law and the rule of the WTO, and are designed to internationalize the embargo unilaterally."⁴⁸ The Canadian and Mexican governments, as well as those of other interested countries, have raised concerns regarding several provisions in the Act. For example, Canada claims that the requirement that third country companies must comply with the Cuban sanctions is extraterritorial and violates international trade law.⁴⁹ According to the Mexican Government, "Extraterritorial application of U.S. law could prompt other extra-hemispheric countries to consider retaliatory measures which could prove detrimental to the economic and political ties that bind Mexico, the United States, and Canada together as a North American community."⁵⁰ It has

also been suggested that it is impractical to ban entry into the United States of anyone who purchased or rents property in Cuba that was confiscated from U.S. citizens during the revolution.⁵¹ Finally, several foreign policy observers have expressed the view that squeezing Cuba out of the international system is not the best method to force change, but rather that trade and communication will lead to an opening that will foster democracy. The Inter-American Dialogue (IAD), an independent, multi-partisan institute for policy believes that the best approach involves, "encouraging economic and political reforms, offering humanitarian aid, supporting non-governmental organizations, and consistently pressing the Cuban government to open Cuba's political system."⁵² IAD policy analysts believe that, as in China and Vietnam, opening dialogue and trade will lead toward free market reforms; and, therefore, recommend a gradual dismantling of the trade embargo in return for specific concessions from Cuba.

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⁴⁷ Testimony by U.S. Trade Representative Mickey Kantor regarding the World Trade Organization before the U.S. House, Subcommittee on Trade of the House Ways and Means Committee, 104th Congress, March 13, 1996.

⁴⁸ Commission of the European Communities, Communication from the Commission to the Council and the European Parliament, "Relations Between the European Union and Cuba," June 28, 1995, Annex B, p. 14.

⁴⁹ Officials of Canadian government, interview with USITC staff, Jan. 26, 1996.

⁵⁰ May 1, 1995 letter to The Honorable Jesse Helms, United States Senator, from Jesus Silva-Herzog F., Mexican Ambassador to the United States.

⁵¹ As reported by Michael McGuire, "Cubans Scorn U.S. Embargo Bill: Havana Says Tighter Curbs Will Benefit Other Nations," *Chicago Tribune*, Sept. 26, 1995.

⁵² Inter-American Dialogue, *Cuba in the Americas: Breaking the Policy Deadlock*, The Second Report of the Inter-American Dialogue Task Force on Cuba," Washington, DC, September 1995, p. 3.

THE DEVELOPMENT OF INFORMATION TECHNOLOGY IN THE ARAB WORLD

As developing countries grow increasingly interactive in the world economy in terms of trade in goods and services, technology will be a key facilitator. Information technology (IT), which represents the convergence of telecommunications and computer technologies, provides a unique opportunity for developing countries to accelerate economic development and enhance national welfare.¹ In the Middle East, evolving circumstances are generating a need for improved IT to facilitate interactions between local communities, regional neighbors, and world trading partners. Peace accords, first between Israel and the Palestinians, and subsequently between Israel and Jordan, have spawned several economic summits to lay the foundation for peaceful co-existence based on expanded economic relations. Initiatives involving trade liberalization, economic stabilization, and privatization are underway in the region. At the same time, Arab nationals--many educated in the West--are growing increasingly sophisticated in terms of IT knowledge and application despite traditional authoritarian regimes that restrict the free flow of information. Furthermore, an easing of restrictions on trade and business in the Arab world² is generating increased opportunities for U.S. business in the region. In light of these important changes in the political and economic climate in the region, IT development³ in

the Arab countries has taken on particular relevance.

While most Arab nations lack a national IT or informatics policy to support IT development goals, government remains the dominant player. There is little reason to suggest that the political situation will change significantly in the majority of countries, especially given the pervasive and well-entrenched government role in Arab society. For the most part, they are non-democratic and authoritarian; Arab governments control most assets that interplay extensively in IT policy formation, including the infrastructure, the media, the budget, and the institutions. Thus, it appears the most likely means of developing an informatics strategy is through government involvement. Importantly, government leaders in many countries are beginning to realize that to achieve improved integration with the world economy as well as improved national welfare, it is crucial to harness the new technology, formulate appropriate public policies, and develop adequate infrastructure that will facilitate its wider and more profitable use.⁴

There has been some IT advancement in the region, most notably in the Gulf states. But the telecommunications infrastructure of most countries, which is the backbone of IT, is relatively underdeveloped in the Arab world. Of all the Arab countries, the United Arab Emirates (UAE) has the most developed IT infrastructure. The country's small size and oil wealth have enabled it to develop considerably more quickly than the others. Saudi Arabia and Egypt are also relatively progressive in

¹ IT products and services include, but are not limited to, computer hardware, software, services (e.g., systems integration, custom programming, etc.), telecommunications equipment and services, data processing equipment, and semiconductors.

² For purposes of this report, the Arab world is defined as: Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, the Palestinian Authority, Saudi Arabia, Syria, Tunisia, the United Arab Emirates (UAE) and Yemen.

³ The term "informatics" (from the French "informatique") is used alternatively with information technology development -- defined broadly to include both the supply side (i.e. the computer and telecommunications hardware and software, and
(continued...)

³ (...continued)
electronics-based industries) and the demand side (i.e. applications in different sectors, such as economic decision making, information services and management systems, communications, electronic publishing, and automation in manufacturing services), Nagy Hanna, "Informatics and the Developing World," *Finance and Development*, Dec. 1991, p. 45. The terms will be used interchangeably here.

⁴ Hanna, p. 45.

IT development. The regional economic importance of Saudi Arabia, particularly in its leadership role of the Gulf Cooperation Council (GCC)⁵ and as the largest regional oil exporter, helps motivate IT developments. Considered the cultural center of the Arab world, Egypt is also reported to be the center of Arabic software production in the Middle East.⁶ It is also home to the Regional Information Technology and Software Engineering Center (RITSEC), which is the lead IT organization in the region.

It is important to note that while the nations of the Arab world have much in common, such as language, culture, and religion, there are significant differences, most notably in terms of economic stature, that will make it essential to develop unique approaches to IT development. IT development in less well-endowed nations, such as Yemen and Lebanon, or politically-isolated nations, such as Libya and Iraq, is a much greater challenge, but no less necessary.

Expectations among regional leaders that expanded political relations will broaden economic links and intra-regional trade increases the importance of establishing IT infrastructure throughout the region. However, the challenges are great, as much of the Arab world lags behind in terms of production and utilization of IT. Currently, the Middle East accounts for only two percent (\$7.8 billion) of the world's IT market, according to the International Data Corporation (IDC).⁷ This deficiency contributes to a serious lack of basic commercial information infrastructure needed to support the expansion of commerce, trade, and economic integration. According to US-Arab Chamber of Commerce President Richard Holmes

⁵ The GCC is a loose confederation whose main function is to serve as a policy coordination forum for its members: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE.

⁶ Remarks by Jack McPhee, International Trade Administration, Trade Development, during a briefing on Telecommunications and Information Technology in the Middle East and North Africa at the U.S. Department of Commerce, August 4, 1995.

⁷ However, the UAE stands apart from the regional trend as it is growing at about six times the world average growth rate in IT, which is 6-7 percent.

"the major barrier to economic integration is [the lack of] information about partners, potential opportunities, access to databases, and so forth."⁸

This article considers the constraining and promising factors that will influence IT development and dissemination in the Arab world. As the most likely model for the lesser developed Arab nations will involve government intervention, the government-led efforts in Egypt, Saudi Arabia, and the UAE will be examined for insights, including the current state of IT in each country and relevant policies.⁹ Key IT components--including the telecommunications infrastructure, computer services and technologies (hardware and software), IT training and education -- and the state of intellectual property protection are examined. Lastly, the outlook for IT development in other, lesser-developed Arab nations is discussed.

Factors that Affect IT Development in the Arab World

Information technology provides a unique opportunity for the Arab world to accelerate its development efforts and improve the welfare and quality of life of its citizens.¹⁰ However, there are

⁸ *Middle East Economic Digest*, "Middle East: Inadequate Access to Information Is Major Obstacle for Integration," Dec. 5, 1994.

⁹ In the 1970s and 1980s, many countries, including Japan, France, and Great Britain, developed "national computer policies" to guide what is referred to in this paper as IT development. Ben Matley and Thomas McDannold defined national computer policy (NCP) as: "A government-sponsored or -endorsed document (or set of documents) that indicates the "official" role of the computer, and telecommunications in general, in terms of its relationship to the society and its business activities. A national computer policy may be supported by governmental bodies and may be directed to achieving stated goals." *National Computer Policies* (Washington: Computer Society Press of the IEEE, 1987), p. 5.

¹⁰ Specific national socioeconomic objectives may include: Increasing economic efficiency, growth, productivity, and employment; meeting basic needs and access to minimum levels of essential services and ensuring a more equitable income distribution; (continued...)

many difficulties that may continue to hinder the rapid development and effective application of these technologies. Policymakers face a variety of technical issues, including: degree of standardization of software, hardware, databases, telecommunications, etc.; adequacy of service and maintenance facilities, technically qualified personnel, and access to standard software; quality of infrastructure services and working conditions, including power supply and telecommunication facilities; and protection of intellectual property.¹¹

In most Arab countries, the IT infrastructure is very limited beyond urban areas. Telephone density in the region ranges from a low of 1.1 main lines per 100 inhabitants in Yemen to 33.16 per 100 inhabitants in the UAE, as compared to 60.17 lines per 100 inhabitants in the United States, for example (table 1). There is also a serious lack of IT education and professionals. Current IT use is centered among relatively few, well-educated elites, many of whom earned their college degrees abroad, and who appreciate the benefits of IT and have the language skills needed to participate in worldwide net working.¹² More limited basic education is the norm for many citizens, as evidenced by low literacy rates in several countries (table 1).

Privatization of IT-related industries has proven to be very important to IT development in other countries, but is a very sensitive issue in many Arab countries for political, security and financial reasons. Authoritarian traditions in most Arab countries that result in restrictions on the free flow of information are illustrated by state control of communications. Governments typically are

hesitant, for example, to forfeit the revenues generated by state telecommunication companies for the benefit of a one-time revenue gain typical of privatization. There may be little tax revenue to anticipate after privatization because corporate tax rates are generally very low.¹³ Although, new forms of technology, starting with the copy machine, and evolving with the fax machine, electronic mail and now the Internet, have presented new mediums through which to avoid the traditional constraints, the older institutions of Arab governments very often are not equipped to handle technological advances.¹⁴

The large and well-established public sectors in many Arab countries present government leaders with a challenging task to achieve IT implementation, particularly in administration that may require shifting human resources to increase automation and modify entrenched procedures. In Egypt, for example, the public sector represents approximately 70 percent of industrial production.¹⁵ Nevertheless, there has been some movement in this area which will be beneficial to the region's IT advancement. Thus far, Bahrain, Kuwait, and Yemen have all instituted privatization measures in their respective telecommunications sectors. Egypt, Morocco and Saudi Arabia are considering eventual privatization of their Post, Telephone and Telegraph (PTT) ministries, which have traditionally managed the telecommunications sector in most Arab countries.

Intellectual property rights (IPR) protection is another important issue in IT development, yet the Arab world maintains some of the more inadequate records of protection in the developing world. The development of the market for Arabized software¹⁶ reportedly is hampered by pervasive pirating of

¹⁰ (...continued)

maintaining sociopolitical stability, including national security, unity, independence, self-reliance, and integrity of state institutions; preserving cultural heritage and traditions; and protection of the environment. Mohan Munasinghe, ed. *Computers and Informatics in Developing Countries*, Third World Academy of Sciences (London: Butterworth, 1989), pp. 17-25.

¹¹ Ibid.

¹² A.K. Danowitz, Y. Hassef, S.E. Goodman, "Cyberspace Across the Sahara: Computing in North Africa," *Communications of the ACM* (Vol. 38, No. 12), Dec. 1995, p. 24.

¹³ David Butter, "Middle East: Choosing the Path to Privatization," *Middle East Economic Digest*, June 26, 1995.

¹⁴ Dr. Maamoun Fandy, Georgetown University Center for Contemporary Arab Studies, interview with USITC staff, Aug. 2 and 4, 1995.

¹⁵ U.S. Department of State, *Economic Policy and Trade Practices: Egypt*, June 2, 1995.

¹⁶ Arabization of software refers to the conversion of software written in English into a format accessible and readable to those speaking Arabic or using hardware designed for Arabic characters.

Table 1
Middle East and selected country comparison of IT and related data

Country	Population (95e)	GDP (96e) US\$	GDP/cap (96e) US\$	Literacy rate	Mn Lines/ 100 (94)	Tariff rate (hw/sw)	Internet hosts
Middle East							
Algeria	28,539,321	49.6 B	1,751	57% (90)	4.11	7%	16
Bahrain	575,925	4.5 B	8,467	84% (91)	24.77	5%	0
Egypt	62,359,623	153.7 B	2,553	48% (90)	4.26	5%	214
Iran	64,625,455	310.0 B	4,720	66% (91)	6.57	(¹)	224
Iraq	20,643,769	(¹)	(¹)	89% (85)	3.42	(¹)	(¹)
Israel	5,433,134	97.8 B	17,468	95% (92)	39.44	0%	18,464
Jordan	4,100,709	7.2 B	1,663	83% (91)	7.24	0%	0
Kuwait	1,817,397	26.2 B	17,895	74% (85)	22.57	4%	773
Lebanon	3,695,921	7.5 B	1,957	80% (90)	9.26	(¹)	1
Libya	5,248,401	(¹)	(¹)	60% (84)	4.76	(¹)	(¹)
Morocco	29,168,848	35.7 B	1,341	50% (90)	3.75	15%	0
Oman	2,125,089	(93) 11.7	5,801	(¹)	7.61	5%	(¹)
Qatar	533,916	(95) 7.5 B	15,000	76% (86)	21.74	4%	(¹)
S. Arabia	18,196,783	128.4 B	6,600	62% (90)	9.58	12%	18
Syria	14,886,672	(93) 15.0 B	(93) 1,123	64% (90)	4.85	(¹)	(¹)
Tunisia	8,879,845	14.2 B	1,567	57% (89)	5.38	10%	65
UAE	2,924,594	(95) 38.0 B	20,000	71% (85)	33.16	5%	11
Yemen	14,000,000	(93) 12.6 B	(93) 939	38% (90)	1.1	(¹)	(¹)
Selected countries							
U.S.	263,814,032	6.74 T	25,850	97% (79)	60.17	35%	2 M
Brazil	160,737,489	886.3 B	5,580	80% (91)	7.38	30-35/16%	11,576
China	1,203,097,268	2.97 T	2,500	78% (90)	2.29	9-30/9%	1,023

¹ Not available.

M = million

B = billion

T = trillion

hw = hardware

sw = software

Sources: CIA World Factbook (1995), International Telecommunications Union, U.S. Department of Commerce, Internet Domain Survey [<http://www.nw.com/zone/WWW/top.html>], July, 1995.

software from the United States and Europe, and such low-cost or free access to software programs make it difficult for strong, indigenous software industries to develop.¹⁷ Significant outside pressure (particularly by the United States) has resulted in

the establishment of several laws protecting software and a few nations have signed onto the various international conventions, such as the Universal Copyright Convention (UCC) of 1952

¹⁷ Danowitz et al, p. 24.

and the Berne Convention (1886).¹⁸ A few are members of the World Intellectual Property Organization (WIPO), including Egypt, Jordan, Morocco, Saudi Arabia, and Tunisia.¹⁹ The major issue is enforcement, however. Arab governments, just beginning to grasp the importance of the issue, are devoting resources to diminish claims of losses to Western companies, yet clearly there is much work to be done.

Despite these potential constraining factors, moving to an information-based society could have significant positive ramifications for the Arab world. Such an evolution would enable these countries to enhance development of their service sectors and diversify those economies heavily dependent on a few commodities, particularly those in the Gulf which are largely oil-based economies. Also, IT development may help governments develop new work options such as telecommuting, which over time could help increase female participation in the workforce, for example.

There are several factors working in favor of a conducive environment for such change among Arab nations, including continuing economic growth. In many Arab countries, GDP (table 1) has been on the rise, indicating an improving standard

¹⁸ The Berne Convention for literary and artistic works is the most significant and widely accepted convention protecting copyrights, and calls for national treatment of foreign copyrights. It is administered by the World Intellectual Property Organization (WIPO), based in Geneva. The UCC was developed as an alternative to Berne to enable participation of the United States, Soviet Union, China, or other nations whose copyright laws initially were not compatible with Berne standards. The UCC is administered by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). For more information, see *Industry, Trade and Technology Review*, USITC, "Intellectual Property Rights: Worldwide Protection, Current Developments, and Initiatives to Ensure Future Enforcement," October 1993, pp. 21-27.

¹⁹ WIPO is a policy-making body, but has no authority to make binding decisions or to impose sanctions on countries that violate the conventions it administers. In addition to Berne, WIPO also administers the Convention of Paris (1883) that is designed to protect industrial property; it covers patents and trademarks.

of living and the potential of more capital available for IT expenditure. Also, English, the language of advanced IT, is the most common second language in the majority of Arab countries, which will aid in the dissemination of IT use.²⁰ The homogenous nature of Arab culture also will facilitate the dissemination of IT. Societal commonalities could simplify the marketing strategies of IT firms seeking to expand their business in the Middle East. An added benefit is that a common language (Arabic) is spoken by 250 million of the region's inhabitants. This will also aid IT dissemination as long as the strategy developed takes the sensitivities and values of Arab culture into account.

Illustrations of IT and IT Policies in Three Arab Nations

Egypt

General policy framework.--While Egypt does not have an official document outlining the government's informatics strategy, government officials have been extremely vocal in their support for information technology integration into Egypt's development. During the Eighth Middle East Information Technology conference (Infotech '94) held in May 1994, Egypt's Minister of Public Business Sector and Minister of State for Administration, Development and Environment Atef Obaid encouraged the Arab world to be part of the informatics revolution, calling on the private sector to assume the lead. Urging governments to embark on the "IT train" to benefit the citizenry, he emphasized the need to invest heavily in education and training, and develop national training centers with international links.²¹

The Egyptian government has initiated a program of economic reform that makes success in IT development more likely. As a result of an IMF-guided economic austerity program and a structural

²⁰ Due to their colonial legacy, the second language in the North African countries of Algeria, Morocco and Tunisia, is French.

²¹ Indira Chand, "Arab States Urged to Invest in Technological Revolution," *Gulf Daily News*, May 31, 1994.

adjustment loan in 1991, the government made substantial progress on administrative reforms during 1991-93. The goal was to institute reforms that will reduce the role of the state and increase reliance on market mechanisms.²² While the macroeconomic stabilization program has proved highly successful, the government has not launched any significant initiatives in key areas such as trade policy liberalization and privatization. As a result, the economy reportedly has not gained momentum and unemployment has become a growing problem. Nevertheless, Egypt signed on to successor IMF and World Bank plans in 1993 which address these areas.²³

While there is apparently no announced IT plans, there are institutions established to implement IT development strategies. The high-profile Cabinet Information and Decision Support Center (IDSC) is the lead IT-related organization overseen by the Egyptian Cabinet. Its duties are multifold: to provide information for government decisionmakers; to establish information and support centers at different administrative levels (such as ministries and the 26 governates) and link them to ensure access by all; to encourage, stimulate and develop management and technology nationwide, and to link Egypt internationally with different information sources. IDSC runs its operations through five sites, its users are linked with 50 local area networks (LANs), and 26 governates are linked via LANs.²⁴

Leading IT development in Egypt is the Regional Information Technology and Software Engineering Center (RITSEC). Located in Cairo, RITSEC is funded by the United Nations Development Program (UNDP), the Arab Fund for

Economic and Social Development (AFESD), and regional governments. While housed in Cairo, RITSEC operations span the local, regional and international level. It was established to promote productive and competitive information technology, software and software-related industries in the region, as well as to support the efforts of countries in the region to develop policies and programs that will encourage the growth of IT industries. Its four main activities are: information technology and software development, education and training, regional coordination and cooperation, and encouragement of local and regional organizations in the use of IT.²⁵

The Egyptian government has taken legislative initiatives to improve the protection afforded to software. The Egyptian People's Assembly passed amendments to Egypt's 1954 copyright law in 1992, substantially increasing penalties against piracy and giving specific protection to computer software. Additional amendments were passed in 1994 that treat software as a literary work, thus ensuring a term of protection consistent with the Berne Convention, of which Egypt is a signatory.²⁶ Egypt also participates as a member of WIPO. Despite these efforts, copyright piracy in Egypt remains an issue although it has been greatly reduced since 1993.²⁷ The United States Trade Representative (USTR) lowered Egypt to the "watch list" category of IPR protection practices in 1994²⁸ due to improvements in copyright

²² For example, in 1991 Egypt lifted most foreign exchange controls, unified the exchange rate, instituted a sales tax, reduced the budget deficit, freed interest rates and began financing the deficit through treasury bill auctions.

²³ CIA World Factbook, "Egypt," 1995 [<http://www.ic.gov>].

²⁴ Hend El Sineity, American Embassy, Cairo. "The Local Area Network Equipment Market in Egypt," U.S. Department of Commerce, International Trade Administration, *Market Research Reports*, Jan. 1994.

²⁵ RITSEC Regional Development [http://ritsec_www.com.eg/].

²⁶ United States Trade Representative, *1996 National Trade Estimate Report on Foreign Trade Barriers*, Washington, DC, March 1996, p. 84.

²⁷ *Ibid.*, p. 83. The Washington-based Business Software Alliance (BSA), a trade association devoted to combating software piracy worldwide, estimated that 1993 losses in Egypt were \$84 million, with a 93 percent piracy rate.

²⁸ Each year, in accordance with the 1974 Trade Act, as amended by the Special 301 provisions of the 1988 Omnibus Trade and Competitiveness Act, the USTR is required to review the U.S.' trading partners' IPR practices and lists the worst offenders of IPR in three categories: the "watch list," which is considered the least threatening; the "priority watch list," the second

(continued...)

protection. In 1995, the USTR placed Egypt on the list of countries "to be monitored for progress achieved" as the U.S. Government continues to work closely with Egypt to improve IPR protection. Egypt remains on the "watch" list in 1996.²⁹

Telecommunications.—Egypt has undertaken an ambitious plan to upgrade its telecommunications infrastructure. Currently, telecommunications is the sole domain of the Arab Republic of Egypt's National Telecommunications Organization (ARENTO), which is affiliated with the Ministry of Transport, Telecommunications and Civil Aviation. The telecommunications equipment sector is expanding rapidly. Imports of telecommunication equipment are expected to grow at 12 percent annually during the next three years.³⁰

Every year, the Commerce Department lists the top 20 sectors in every foreign country that hold the most promise for U.S. exporters. In 1996, Commerce reported that telecommunications equipment is the most promising sector for U.S. exports and investment in Egypt (table 2), and estimated its value to be \$931 million. U.S. companies hold about 65 percent of the market. The Egyptian government plans to increase the current telephone density of three lines per 100 persons to seven per 100 by the year 2010, requiring the installation of 250,000 lines per year. The government has allocated \$700 million for this purpose in the current five year plan (1992-1997). An increase in demand for telecommunication infrastructure is expected in the near future because of the expected introduction of cellular phones and multimedia equipment to the Egyptian market. A nationwide Global System for Mobiles (GSM) standard cellular telephone system is in the works and ARENTO is studying proposals from five companies to supply the equipment. However,

²⁸ (...continued)

most serious; and the "priority foreign countries," which is the most grave. Inclusion on the "priority watch list" triggers a series of investigative steps that ultimately may lead to U.S. retaliation.

²⁹ Conversation with USTR staff, Apr. 15, 1996.

³⁰ U.S. State Department Cable, "The Telephone Switches Market of Egypt," NewsEDGE/LAN, July 1995.

there is no indication as to when the project will proceed.

Table 2
 Telecommunications equipment in Egypt, 1996(e)

US million dollars	
Market size	931
Local production	144
Exports	72
Imports	859
Imports from the US	600

Source: U.S. Department of Commerce, International Trade Administration, *Country Commercial Guide: Egypt*, 1996.

Computer and software technology.—A 1983 presidential decree stipulated that all government entities should establish computer centers, giving a strong push towards expanding computer use in Egypt. Egypt's tariff on hardware is five percent, relatively low for the region (table 1). The push towards local area networks is largely responsible for increasing demand for computer equipment.³¹ The upgrading of the telephone network has facilitated the use of computers and modems for interconnecting systems as well.³² The U.S. Department of Commerce estimates the computer and peripherals market in Egypt to be valued at \$206 million in 1996 (table 3) and ranks it as the tenth most promising market for U.S. exports and investment. The market is expected to continue its growth at an annual rate of 20-30 percent, and the high reputation of U.S. technology in the region is expected to enhance sales prospects for the U.S. computer industry.³³

As for local production, there is a small computer industry assembling imported computer components. Egypt is also reportedly the center of local software production in the Arab world,

³¹ El Sineity, American Embassy, Cairo, January 1994.

³² U.S. Department of Commerce, International Trade Administration, *Country Commercial Guide: Egypt*, 1995.

³³ Ibid.

Table 3
Computers and peripherals in Egypt, 1996(e)

US million dollars	
Market size	206
Local production	0
Exports	0
Imports	206
Imports from the US	82

Source: U.S. Department of Commerce, International Trade Administration, *Country Commercial Guide: Egypt*, 1996.

especially Arabic language software. Its relatively low labor rates and relatively ample supply of talented programmers have enticed many foreign software companies to locate Arabization centers there.³⁴ RITSEC is involved in various cultural multimedia projects. In addition, Egypt has the largest, most capable and most internationally-oriented computing community in the Arab world, and trained people are among its most important high-tech exports.³⁵

Data communication networks.--Egypt has taken important steps in the area of data communication, having established several networks in recent years. In 1989 it established Egyptnet, the public packet switching data network that covers Cairo, Alexandria and Suez as well as several governates in the Nile Delta and provides access to sites in Europe, North America, Asia, and Africa. Future expansion plans include southern Egypt. Tradenet is a sophisticated networking system that provides a computerized framework for information on prices and market overviews, exchange rates for major currencies, and international trade statistics as well as trade opportunities. It provides on-line local access for various users and organizations. It also connects about 50 trade representative offices in the Egyptian embassies overseas with the Tradenet hub (in Cairo) to exchange trade-related information.

³⁴ McPhee, Aug. 4, 1995.

³⁵ S.E. Goodman and J.D. Green. "Computing in the Middle East," *Communications of the ACM*, (Vol. 35, No. 8), Aug. 1992, p. 21.

The Egyptian National Scientific and Technical Information Network (ENSTINET) provides information in areas related to science and technology through electronic database search and document delivery in addition to electronic-mail bulletin board services. Internet use by Egyptians has also increased as reflected by the number of Internet hosts in Egypt, which skyrocketed from 52 in 1994 to 214 in 1995.³⁶

Saudi Arabia

General policy framework.--Like Egypt, Saudi Arabia does not have a national IT plan per se.³⁷ However, its tremendous oil wealth has enabled the government to exert considerable effort to develop the Kingdom's IT infrastructure as part of its overall development strategy. *The General Objectives and Strategic Bases of the Sixth Development Plan*,³⁸ published by the Ministry of Planning, provides insight, albeit in general terms, about the IT priorities of the government.

Elements pertinent to IT infrastructure development are addressed within the Sixth Development Plan.³⁹ The Plan highlights the need and means to improve economic performance and public services including: utilizing advanced technology; concentrating on technologies that are relevant for the economy; investing in projects using new technologies for which the Kingdom has economic advantages or which are badly needed; and supporting centers and programs for applied research. The plan emphasizes the importance of

³⁶ Internet Domain Survey [<http://www.nw.com/zone/www/top.html>], July 1995.

³⁷ According to an official of the Saudi Embassy in Washington, even if the government did have such a plan it is unlikely it would be published. IT is considered a strategic and thus sensitive issue, precluding extensive public debate about the government's policies. Interview with USITC staff on July 21, 1995.

³⁸ Saudi Arabia's development has been guided by a series of five-year plans which began in 1970. Each five-year plan emphasized different levels of development.

³⁹ The Sixth Development Plan is divided into three sections: (1) Priorities; (2) General Objectives; and (3) Basic Strategic Principles.

encouraging private sector participation and providing opportunities for scientists and researchers with the cooperation of the King Abdulaziz City Center for Science and Technology (KACST).⁴⁰ KACST is on-line with international database information services, including BITNET in the United States. KACST also manages Gulfnet, a research network for the GCC countries consisting of 11 nodes distributed over various parts of Saudi Arabia and Kuwait.

Computer education is strongly emphasized. Minister of Education Ahmed Al-Rasheed announced in January 1996 that his Ministry is currently working to install computers in all classrooms from primary through high school. Also, the Ministry intends to install computer networks in all its departments and educational institutions for administrative purposes.⁴¹

There are various other initiatives and ongoing activities in the Kingdom that suggest IT is a government priority. In 1994, the Jeddah Chamber of Commerce and Industry completed a project to integrate all its information services under the guidance of RITSEC. The Chamber has at least 14 databases with varied foci -- economics, financial, trade flows, trade fairs, and regulations, among others. There will also be training courses and seminars for Saudi businessmen on how they can best make use of the newly-integrated system.⁴² The government, through local chambers of commerce, reportedly encourages all computer companies to take part in several annual computer shows in Saudi Arabia each year. There also exists a quasi-governmental agency called the Saudi Computer Society, although its exact responsibilities are unclear, as well as a Saudi chapter of the Association of Computing Machinery (ACM).

⁴⁰ Ministry of Planning, Kingdom of Saudi Arabia, *General Objectives and Strategic Bases of the Sixth Development Plan, 1415-1420 A.H./1995-2000 A.D.*, 1995.

⁴¹ *Saudi Arabia*, "Computers to Be Installed in All Classrooms," Vol. 13, No. 2, February 1996, p. 4.

⁴² Habib Shaikh, "Jeddah Chamber Updates Information Technology," *Arab News*, July 18, 1995.

Software piracy in Saudi Arabia remains a concern for U.S. companies--the main suppliers of software to the Kingdom--which incur the majority of losses.⁴³ Saudi Arabia was included on the USTR "priority watch list" in 1994, 1995, and 1996.⁴⁴ Along with four other countries, Saudi Arabia will be the subject of out-of-cycle reviews.⁴⁵ However, U.S. Government officials note that Saudi Arabia has made encouraging progress since its accession to the Universal Copyright Convention, in 1994 in terms of enforcement in the software market.⁴⁶ Saudi Arabia passed its first copyright law in 1989, but foreign computer programs and databases first published outside Saudi Arabia by non-Saudi authors are not explicitly protected, a point that has been strongly criticized by both BSA and the International Intellectual Property Alliance (IIPA).⁴⁷ Despite its accession to the UCC, Saudi officials reportedly prefer to study the effects of the 1989 Copyright Law for some time before negotiating other international commitments such as the Berne Convention.⁴⁸

Telecommunications.--The Saudi Post, Telephone and Telegraph (PTT) has monopoly over the telecommunications sector in Saudi Arabia. Its responsibilities entail development, construction, procurement, installation, operation and

⁴³ BSA estimated that losses exceeded \$82 million in 1993; the piracy rate was reported to be 90 percent.

⁴⁴ Conversation with USTR staff, Apr. 15, 1996.

⁴⁵ Initiated in 1993, out-of-cycle reviews enable the Administration to assess foreign IPR practices through the year. If specified deadlines are not met or if there is insufficient progress in IPR protection, the Administration will reconsider the country's status under the Special 301 provisions and determine what further action is appropriate.

⁴⁶ U.S. Department of State Cable, "Saudi Official Reports Fines Levied on Software Shops," *NEWSEGE/LAN*, Apr. 1995.

⁴⁷ IIPA is made up of the Recording Industry Association of America, the Association of American Publishers, the American Film Marketing Association, the Computer Software and Services Industry Association, the Motion Picture Association of America and the National Music Publishers' Association.

⁴⁸ Neal Johnson and J. Cassin, "New Saudi Copyright Law," *Middle East Executive Reports*, Feb. 1990, p. 9.

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maintenance of all aspects of telecommunication systems and networks in conjunction with telephone, telegraph, and telex services. Saudi Telecom is the operating arm of the Saudi PTT which also oversees and administers business and data networks. In 1992, Saudi Arabia reportedly had almost 10 lines per 100 persons. Although on various occasions King Fahd has suggested privatization of the national telephone system and related activities was a possibility, no concrete steps have yet been taken.⁴⁹

The telecommunications equipment market in Saudi Arabia was valued by the U.S. Department of Commerce at \$1.7 billion in 1995 (table 4). Saudi Arabia began a massive expansion of its telecommunications system in 1994, awarding a \$4 billion, 8-year contract to AT&T. The Telephone Expansion Program 6 (TEP 6) will double the number of lines in the Kingdom to 3 million. Total demand is estimated at around 4.5 million. This is reportedly the largest of a series of major contracts awarded by the Kingdom to upgrade its telecommunications service.⁵⁰

Table 4
Telecommunications equipment in Saudi Arabia, 1995

US million dollars	
Market size	1,700
Local production	25
Exports	20
Imports	1,695
Imports from the US	600

Source: U.S. Department of Commerce, International Trade Administration, *Country Commercial Guide: Saudi Arabia*, 1995.

⁴⁹ *The Wall Street Journal*, Special Advertising Section, "A Giant Leap for Telecommunications," Feb. 3, 1995, A-7I.

⁵⁰ Steven Titch, "AT&T's Saudi Windfall," *Telephony*, May 23, 1994, p. 52.

Computer and software technology.--Saudi Arabia is believed to be the largest consumer of computer hardware and software in the Arab world.⁵¹ Organizers of a trade show for computing and business communications equipment held in April, 1995 in Jeddah⁵² forecast market growth of 30-55 percent a year. The organizers say the Kingdom represents over 60 percent of the Gulf market for multimedia and information technology products and services.⁵³ According to the Information and Technology Publishing Co. Ltd. survey released at the Gulf Information Technology Exhibition, Saudi Arabia's data processing market reached \$750 million in 1993. The survey valued Saudi imports of personal computers, minicomputers and mainframes at \$340 million.⁵⁴ Growing integration of communications with personal computers has spurred demand for hardware and software as Saudi users shifted toward smaller systems connected by Local Area Networks (LANs) and Wide Area Networks (WANs). The Commerce Department estimated the market size to be \$229 million in 1996, and ranked it the sixth most promising market for U.S. exports (table 5).

U.S.-sourced software reportedly dominates the market, representing more than 70 percent of the import software market, which is estimated by the Commerce Department to be \$365 million in 1996. It listed this market as the seventh most promising for U.S. exports and investment.

⁵¹ Since the Kingdom does not keep such statistics, assessments about the size and value of the IT market in Saudi Arabia, as in most other developing countries, are based on estimates by various sources.

⁵² Commtel '95, the fourth international business communications and data transfer exhibition, held in conjunction with the Middle East Computing and Business Equipment show April 23-27, 1995 in Jeddah, was organized by Al-Harithy Company. Participation in and the size of this show is widely believed to be an indicator of the degree of progress and investment made by the Kingdom in IT.

⁵³ *Saudi Gazette*, "Prospects Good For Computer Firms," Jan. 2, 1995.

⁵⁴ Thomas Hussain, "Saudi Data Processing Market Hits \$750 Million," *United Press International*, Nov. 1, 1994.

Table 5
 Computers and peripherals in Saudi Arabia,
 1996 (e)

US million dollars	
Market size	229
Local production	0
Exports	0
Imports	229
Imports from the US	84

Source: U.S. Department of Commerce, International Trade Administration, *Country Commercial Guide: Saudi Arabia*, 1996.

Data communications networks--The public sector accounts for 45 percent of the demand for data communication equipment in Saudi Arabia. The banking sector holds more than 40 percent of the market, and the remainder is shared among a number of private and semi-private companies. Some government agencies, such as the Ministries of Interior, Defense and Aviation, and Foreign Affairs, have put in place their own private communication networks.⁵⁵ The Saudi PTT established Al-Waseet in 1989, which consists of a network of three exchange nodes in Riyadh, Jeddah, and Dammam, provides data communication services across the Kingdom and worldwide. The number of Internet hosts increased from one in 1994 to 18 in 1995.⁵⁶

United Arab Emirates

General policy framework--Independent for just 23 years, the UAE has utilized its oil wealth to emerge as the IT leader of the Arab world. The UAE has achieved enormous gains without a stated IT plan, as reflected by the advanced status of the telecommunications sector. One purpose of the UAE's IT foundation is to help the government achieve its stated goal of becoming the regional trade and management hub in the region. The UAE

⁵⁵ Ahmad Al-Khayyat, American Embassy, Riyadh. "The Data Communications Equipment Market in Saudi Arabia," U.S. Department of Commerce, International Trade Administration, *Market Research Reports*, Mar. 1993.

⁵⁶ Internet Domain Survey, July 1995.

visualizes an expanded role in the global arena as well, demonstrated by its accession to the GATT in 1994 and membership in the GATT's successor, the World Trade Organization (WTO).⁵⁷

The UAE passed a copyright law in 1992 with the intention of prohibiting software piracy, and is designing amendments that will follow the Berne Convention and GATT. The USTR reported that the UAE's Minister of Information announced that all businesses had until September 1994 to dispose of all pirated stock and cease illegal activity, lauding the government's efforts thus far.⁵⁸ Despite the progress, the UAE remains on the USTR's "watch list" in 1996.⁵⁹ The State Department reported that a new campaign to crack down on software piracy was announced in 1995, and Microsoft has been working with the Ministry of Information and Culture to eradicate the piracy that exists both in the private and public sector.

Telecommunications--The UAE has one of the most advanced telecommunications systems in the world. The Emirates Telecommunications Corporation (Etisalat), the quasi state-owned telecommunications operating entity, handles all telecommunications services. Etisalat is 60 percent owned by the UAE government and 40 percent by individual UAE citizens. Presently, Etisalat operates a 615,000 line nation-wide telephone system, which will be expanded to 750,000 by 1997. Etisalat is planning a series of expansion programs during the second half of the decade which will offer significant potential for high-tech, state-of-the art hardware and software suppliers and for specialized, innovative, value-added services. The Commerce Department estimated the market size of telecommunications equipment in the UAE to be \$535 million in 1996 (table 6), and

⁵⁷ Other Arab members of the WTO include: Bahrain, Egypt, Kuwait, Morocco, Qatar, and Tunisia. In addition, the governments of Algeria, Jordan and Saudi Arabia have requested to join the WTO. Their applications are currently being considered by accession working parties. (World Trade Organization, Apr. 11, 1996, [http://www.unicc.org/wto/memtab2_wpf.html]).

⁵⁸ USTR, *1995 National Trade Estimate Report on Foreign Trade Barriers*, p. 127.

⁵⁹ Conversation with USTR staff, Apr. 15, 1996.

Table 6
Telecommunications equipment in the UAE,
1996(e)

US million dollars	
Market size	535
Local production	0
Exports ¹	155
Imports	690
Imports from the US	90

¹ Re-exports indicated where total imports exceed market size.

Source: U.S. Department of Commerce, International Trade Administration, *Country Commercial Guide: United Arab Emirates*, 1996.

listed it as the ninth most promising market for U.S. exports and investment..

Etisalat operates a training institute for employees and students in the northern emirate of Sharjah; in 1994 the facility graduated its first class of students with all graduates guaranteed either immediate employment or additional higher studies abroad (mostly in the UK).⁶⁰

There are few indications that privatization of the IT sectors in the UAE is moving with the same degree of urgency as in many neighboring and international markets. This may be attributed to the relatively high degree of efficiency of UAE's telecommunications sector. While there is no shortage of capital, the government considers the telephony sector to be too small to break up into competing units. Also, it is reported that the entrenched bureaucracy at Etisalat is resisting any efforts to strip it of the highly profitable services it controls.⁶¹ The Emirates' telecommunications industry has experienced consistent growth over the last ten years, averaging about \$200 million annually, and Etisalat seeks state-of-the-art

equipment for which it has substantial capital for investment.⁶²

Computer and software technology.--Computer use in the UAE is on the rise and heavy discounting has helped to keep personal computer sales brisk. Both government and business are shifting from mainframes to more flexible, faster and less expensive microcomputers or personal computers in networking environments. U.S. computer manufacturers are considered the market leader in the UAE with a share of 35 percent in 1993, followed by major competitors from Japan, the UK, the Netherlands, Taiwan and Singapore.

Because of its advanced IT infrastructure, liberal financial and trade policies, and geographic location, the UAE has been able to expand its role as a major nexus for international business. In this realm, several U.S. IT companies have relocated Middle Eastern operations to Dubai, including Oracle, which currently has an 80 percent share of the Middle East-North Africa database market and is profiting from its long term exposure to the area. Microsoft, which recently expanded its dealer network, also has established Middle Eastern operations in Dubai. In addition, Sun Microsystems and Compaq have made Dubai the center of Middle Eastern distribution activities. In 1994 U.S. market share rose to 46 percent from 35 percent in 1993.⁶³ The Commerce Department estimated the UAE's computer and peripherals market size to be \$251 million in 1996 (table 7), and listed this market as the eighth most promising for U.S. exports and investment.

During the last decade, the UAE has experienced dynamic growth in demand for computer software. All software applications are easily available through many firms in the Emirates. Government, oil companies, banks, and other private sector firms are the main consumers, although the proportion of private individual demand is growing as well. Computer software is

⁶⁰ U.S. Department of State Cable, "IMI: Etisalat, Telecommunications in the United Arab Emirates," NewsEDGE/LAN, Apr. 1995.

⁶¹ Ibid.

⁶² U.S. Department of Commerce, International Trade Administration, *Country Commercial Guide: United Arab Emirates*, 1995.

⁶³ Ibid.

Table 7
 Computers and peripherals in the UAE, 1996(e)

US million dollars	
Market size	251
Local production	0
Exports ¹	80
Imports	331
Imports from the US	110

¹ Re-exports indicated where total imports exceed market size.

Source: U.S. Department of Commerce, International Trade Administration, *Country Commercial Guide: United Arab Emirates*, 1996.

included in the UAE's official statistics for computer and allied products which were approximately \$101 million in 1990; the U.S. government estimates that 30 percent (\$30 million) of this figure represents software and U.S. companies are believed to supply the UAE with about 60 percent of its software.⁶⁴ However, because millions reportedly are lost to piracy every year, the market size is considered strictly an estimate. Indeed, strong concern about piracy has made U.S. software vendors hesitant to market their products in the UAE. Pirated versions reportedly are readily available as soon as new programs are released.⁶⁵

There is little to no local competition for the predominantly American and European suppliers of IT equipment, especially computer hardware and software. At the end of 1989, the UAE's first PC manufacturing/assembly facility opened in Sharjah. Emitac, the local agent of Hewlett Packard, with an initial capital outlay of \$2 million, now assembles and sells personal computers through Technology Equipment Agencies (TEA), a fully owned subsidiary of Dubai-based Emitac.

⁶⁴ Maeve Fathelldin, American Embassy, Abu Dhabi, "The Software Market in the United Arab Emirates," U.S. Department of Commerce, International Trade Administration, *Market Research Reports*, July 1991.

⁶⁵ Ibid.

Outlook for IT Development in Other Arab Countries

Successful introduction and implementation of IT in any country is dependent on the human processes that control information and communication.⁶⁶ Effective practices can only be adopted if a supportive institutional and policy environment exists to ensure adequate training that reduces personal and institutional resistance. At the national level, public policies to encourage competition, facilitate access to information and information technology, create the necessary physical (telecommunications) infrastructure, and develop human resources are crucial to the wide diffusion of IT in the economy.

In the less well-endowed Arab nations, IT development is taking hold through a series of telecommunications expansion plans and computerization efforts. Like the three country illustrations presented, heavy government involvement is the common denominator. Yet for both the citizens and outsiders seeking business opportunities, the outlook is promising with recognition that adequate resources and appropriate guidance are essential. Significant initiatives currently underway in several other Arab countries, including Jordan, Morocco, Tunisia, and Yemen, follow.

Jordan

Currently in the midst of a four year National Telecommunications Program which began in 1993, Jordan plans to double the size of its telecommunications network by the year 2001, improve quality, and prepare the telecommunications operating entity, TCC, for eventual privatization. Price Waterhouse has been awarded a \$6 million contract to restructure Jordan's telecommunications sector and work towards privatization.

Morocco

In its 1993-1997 expansion and modernization program, the state-run telephone company ONPT aims to increase the number of main lines to 1.7 million. It also plans to increase the actual number of phone subscribers from 654,000 to 1.6 million,

⁶⁶ Hanna, "Informatics and the Developing World," p. 45.

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increase digitalization of the network from 90 percent to 99.5 percent, and install fiber optic interurban networks connecting the major cities. Over the next five years, the government has budgeted \$400 million for improving the telecommunications sector. In May 1995, the government announced a draft law is being prepared to completely privatize the ONPT. If successful, it will raise an estimated \$2 billion for the government and would be the largest privatization effort ever undertaken by an Arab country.

Tunisia

In terms of IT policymaking, Tunisia has made the most progress of any Arab country. The Tunisian government has officially made IT a "privileged sector." In 1988, the *National Informatics Policy* was formulated by the Council for Computing and Telecommunications, chaired by the Prime Minister. Membership on the Council consists of a small number of cabinet ministers and other "key players." The National Informatics Center in Tunis has been Tunisia's lead IT organization since 1975, and is working to implement the policy at the ministries and universities. Its 250-member staff has a wide-ranging agenda: from overseeing the implementation of the Plan to playing a major role in the design and construction of a national data transmission network. The government has also undertaken significant measures to foster the growth of IT in Tunisia. For example, the government recently cut tariffs on computer imports from 50 percent to 10 percent, offered tax breaks, and relaxed import restrictions to spur IT development.⁶⁷

As part of Tunisia's Eighth Development Plan (1992-96), the Directorate General of Telecommunications (DGT) has been expanding the telecommunications network to the rural eastern portion of the country. The plans involve upgrading existing switches and exchanges. The DGT aims to increase the current telephone density of 4.5 percent to around 8 percent by the end of the decade. Furthermore, the DGT is planning an expansion of Tunisia's existing cellular telephone network during 1995-1996. The DGT is also

planning a further 500,000 line expansion in the 1997-98 time frame, as well as a network management system project.⁶⁸

Yemen

Yemen's telecommunications operating entity, the Public Telecommunications Corporation (PTC) has plans to digitalize all trunk exchanges and the transmission network by the end of 1996 and digitalize the local network by the year 2003. Development of the relatively underdeveloped telecommunications infrastructure in long-isolated southern Yemen is also a priority of the Yemeni government. The PTC recently issued a tender for a turnkey project involving 49,200 lines of switching, transmission, civil building works, and line distribution for the Aden area in south Yemen.⁶⁹

Conclusion

It is important for companies seeking business opportunities in the Arab world to recognize that the diffusion of IT in the Arab world has important implications for existing social structures. For this reason, IT development and dissemination is a sensitive issue in the tradition-driven Arab world, because societies must change to adapt to new technologies. This is particularly relevant in developing countries, including many in the Arab world, where religious elements, seeking to maintain the traditional and cultural status quo, are quite influential. IT must be adapted to societal norms so as to demonstrably enhance lifestyles, altering them incrementally. Forcing rapid change through IT without an adequate government-sponsored IT education program is likely to result in substantially limited progress for the Arab countries seeking to accelerate IT development efforts.

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⁶⁷ Danowitz, p. 26.

⁶⁸ "Overview of the Telecom Markets in the Middle East and North Africa," prepared by the Office of Telecommunications, International Trade Administration, U.S. Department of Commerce, for a briefing on Aug. 4, 1995.

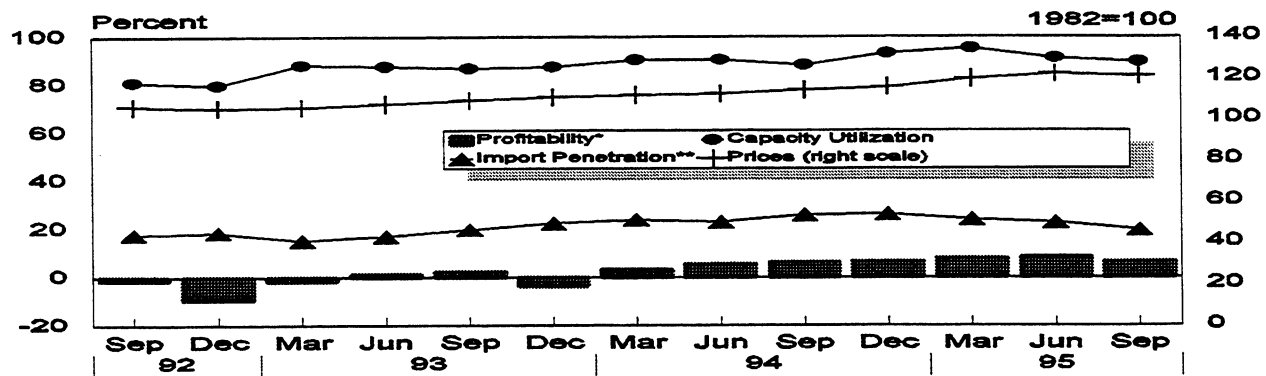
⁶⁹ Ibid.

APPENDIX A
KEY PERFORMANCE INDICATORS OF SELECTED
INDUSTRIES

- STEEL** (Felix Bello, 202-205-3120/bello@usitc.gov)
- AUTOMOBILES** (Laura Polly, 202-205-3392/polly@usitc.gov)
- ALUMINUM** (Karl S. Tsuji, 202-205-3434/tsuji@usitc.gov)
- SERVICES** (Christopher Melly, 202-205-3461/melly@usitc.gov)
- SEMICONDUCTORS** (Douglas Puffert, 202-205-3402/puffert@usitc.gov)

STEEL

Figure A-1
Steel mill products, all grades: Selected industry conditions



* Operating income as a percent of sales for companies representing about 65 percent of production.

** Import share of apparent open market supply.

Source: American Iron and Steel Institute, U.S. Bureau of Labor Statistics

- Demand for steel continued to weaken in the third quarter, reflecting a generally slower economy. Although year-on-year shipments for the three-quarter period rose 3.6 percent to 73.4 million tons on a quarterly basis, shipments have fallen every quarter in 1995. Prices, after a steady rise that began in December 1992, fell 0.9 percent from the second quarter. And for the second consecutive quarter capacity utilization declined, falling 1.6 percent to 89.6 percent. Declining levels of imports and rising levels of exports are further indications of a weakening market.
- Imports in the third quarter fell to 5.3 million tons, a 7.1 and 11 percent drop from the second quarter and the third quarter of 1994, respectively. Imports have now fallen for two consecutive quarters, trending toward historical levels. Import penetration in the third quarter fell to 19.7 percent from 22.7 percent in the third quarter, representing the fourth consecutive fall. At the same time, exports rose for the third consecutive quarter, reaching 2.3 million tons. For the three quarters of 1995, exports have risen 42.6 percent over the same levels reached in the period in 1994, reaching 5 million tons.
- For the third quarter, sales fell 2.4 percent to \$8,559 billion¹, reflecting a generally slower economy. U.S. steelmakers operating income of \$546 million was 25.3 percent lower than the previous quarter. For the three quarters of 1995, sales rose 0.4 percent to \$26 billion from \$25.9 billion in 1994. For the same period, operating income rose to 11.5 percent to \$1.9 billion from \$1.7 billion.

¹ Based on financial data reported to the American Iron and Steel Institute by producers accounting for approximately 65 percent of domestic shipments.

Table A-1
Steel mill products, all grades

Item	September 1995	Percentage change	
		September 1995 from June 1995	January-September 1995 from January-September 1994
Producer's shipments (1,000 short tons)	8,177	-2.3	73,425
Imports (1,000 short tons)	1,606	-21.5	19,569
Exports (1,000 short tons)	886	52.0	4,983
Apparent supply (1,000 short tons)	8,897	-9.4	88,011
Ratio of import to apparent supply (percent)	18.0	-13.1	22.1

¹ Based on unrounded numbers.

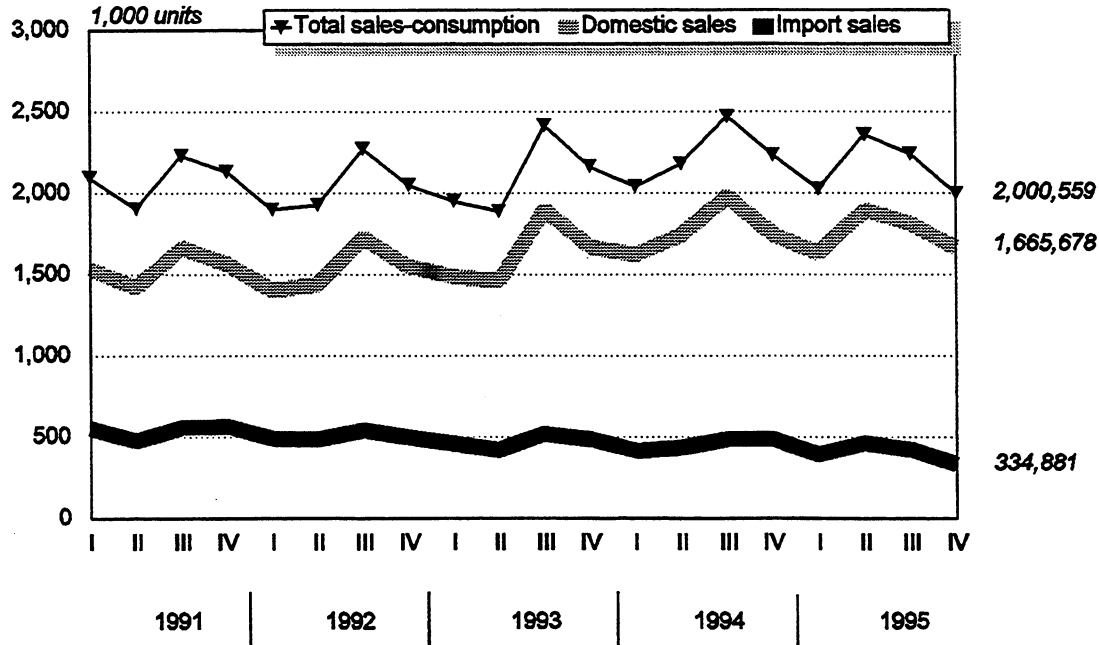
² Percentage point change.

Note.—Because of rounding, figures may not add to the totals shown.

Source: American Iron and Steel Institute.

AUTOMOBILES

Figure A-2
U.S. sales of new passenger automobiles, by quarter



Note.—Domestic sales include all automobiles assembled in Canada and imported into the United States under the United States-Canadian automobile agreement, these same units are not included in import sales.
Source: *Automotive News*; prepared by the Office of Industries.

Table A-2
U.S. sales of new automobiles, domestic and imported, and share of U.S. market accounted for by sales of total imports and Japanese imports, by specified periods, Jan. 1994-Dec. 1995

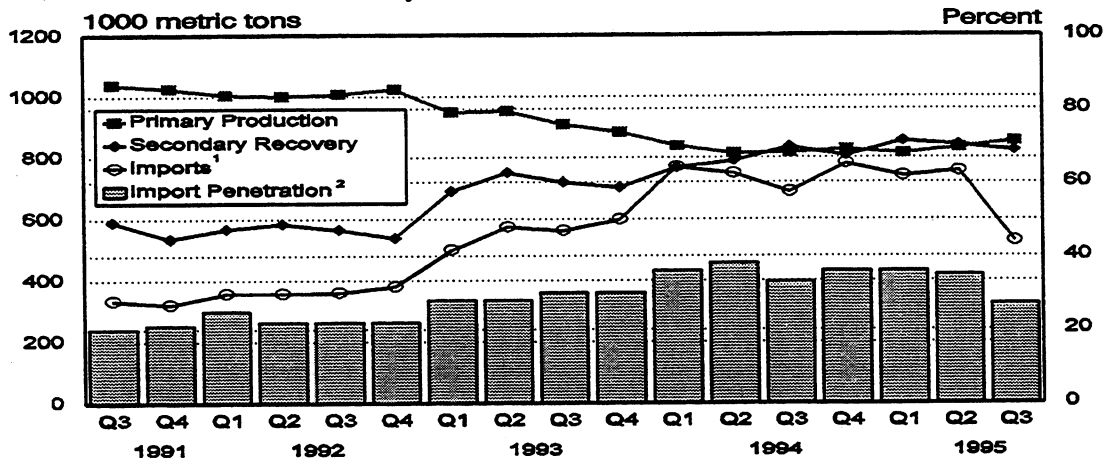
Item	Oct.-Dec. 1995	Jan.-Dec. 1995	Percentage change—	
			Oct.-Dec. 1995 from July-Sept. 1995	Jan.-Dec. 1995 from Jan.-Dec. 1994
U.S. sales of domestic autos (1,000 units) ¹	1,666	7,024	- 8.3	-2.2
U.S. sales of imported autos (1,000 units) ²	335	1,612	-21.5	-10.9
Total U.S. sales (1,000 units) ^{1,2}	2,001	8,636	- 10.8	- 4.0
Ratio of U.S. sales of imported autos to total U.S. sales (percent) ^{1,2}	16.7	18.7	-12.0	-7.2
U.S. sales of Japanese imports as a share of the total U.S. market (percent) ^{1,2}	9.9	10.4	-16.3	-24.3

¹ Domestic automobile sales include U.S.-, Canadian-, and Mexican-built automobiles sold in the United States.
² Does not include automobiles imported from Canada and Mexico.

Source: Compiled from data obtained from *Automotive News*.

ALUMINUM

Figure A-3
Aluminum: Selected U.S. industry conditions

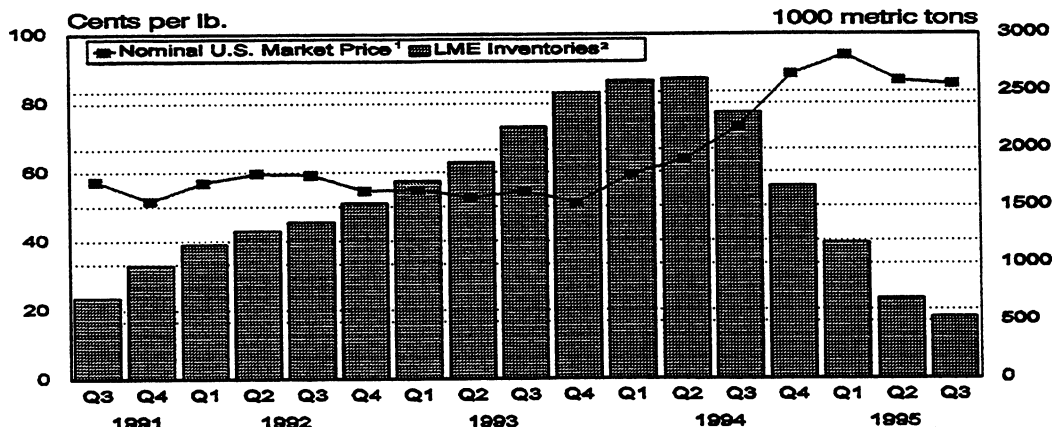


¹ Crude (metals and alloys) and primary (e.g. plates, sheets, and bars) forms for consumption.
² Percent share of imports to apparent domestic supply.

Source: U.S. Bureau of Mines.

- Global conditions in the primary aluminum market remained relatively unchanged for the 3rd quarter 1995. Production limits under the 1994 MOU appeared to be holding, demand was slightly lower, and LME inventories continued to decline, reaching about half a million metric tons through September 1995. Start-up of the Hillside smelter in South Africa contributed to a slight rise in global quarterly production of refined aluminum of 2 percent to 14.6 million metric tons.
- In the U.S. market, output was up slightly to nearly 1.7 million metric tons, spurred in-part by cheaper electric power rates for Pacific Northwest smelters. However, demand for mill products remained weak as end-users reduced inventories of metal ordered earlier in the year in advance of anticipated price rises. Prices of primary aluminum continued to soften through the 3rd quarter 1995; the average market price dropped by just over a penny a pound to an average of 85.4 cents per pound.
- With slightly higher domestic output, weak demand, and increased draw-down of domestic inventories, U.S. imports were 30 percent lower than the previous quarter, falling to 529 thousand metric tons. Import penetration for the 3rd quarter 1995 was 27 percent, a low level not seen since early 1993.

Figure A-4
Aluminum: Price and inventory levels—

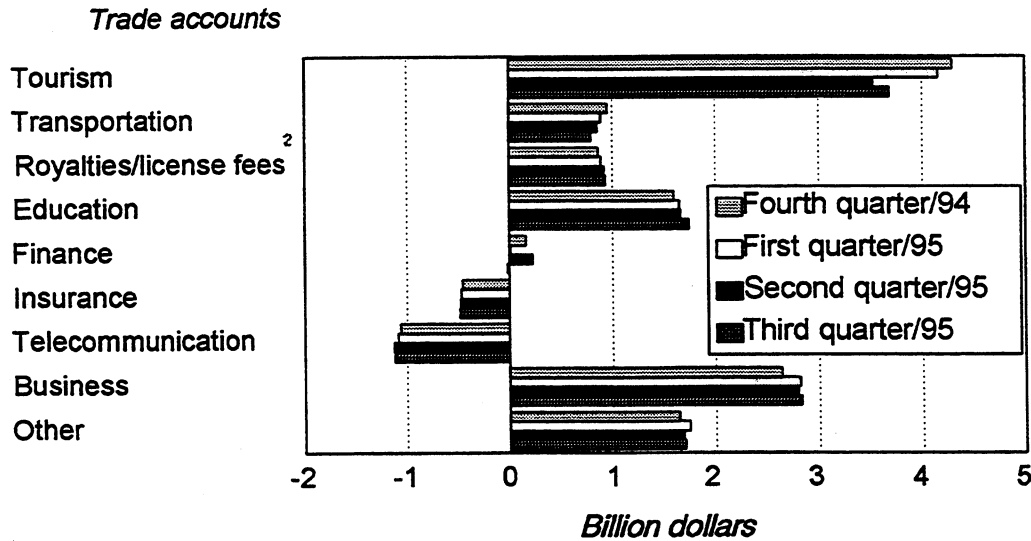


¹ Quarterly average of the monthly U.S. market price of primary aluminum ingots.
² End of quarter inventories.

Sources: U.S. Bureau of Mines, World Bureau of Metal Statistics, Metals Week, and U.S. Bureau of Economic Analysis.

SERVICES

Figure A-5
Balances on U.S. service trade accounts, ¹fourth quarter 1994 through third quarter 1995

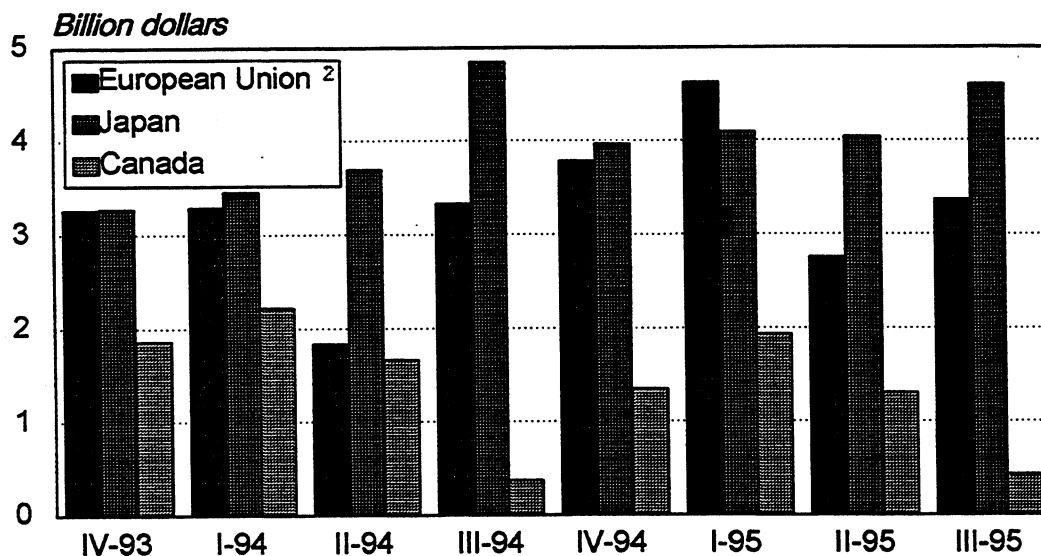


¹ Figures reflect trade among unaffiliated firms only.

² Includes port fees.

Source: Bureau of Economic Analysis, Survey of Current Business.

Figure A-6
Surpluses on cross-border U.S. service transactions with select trading partners, ¹by quarter, 1993-95



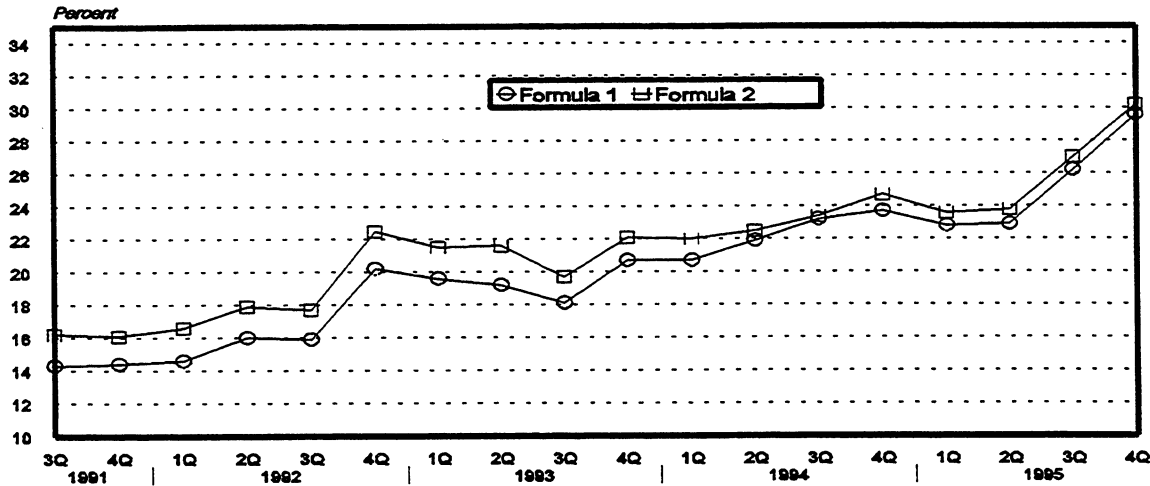
¹ Figures reflect private-sector transactions only; military shipments and other public-sector transactions have been excluded.

² Beginning with the first quarter of 1995, the European Union also includes Austria, Finland, and Sweden.

Source: Bureau of Economic Analysis, Survey of Current Business.

SEMICONDUCTORS

Figure A-7
Foreign market share in Japan under the 1991 U.S.-Japan Semiconductor Arrangement ¹



¹ The initial 1986 Semiconductor Arrangement arose out of U.S. concerns that Japanese companies were selling several types of semiconductor memory devices below fair market value in both the United States and third-country markets while also excluding U.S. manufacturers from access to the Japanese semiconductor market. Under the Arrangement, the United States agreed to suspend antidumping duties and/or investigations for certain product types. In return, Japan agreed to supply data that allowed the United States to monitor Japanese semiconductor exports for possible sales below fair market value, and Japan acknowledged the U.S. expectation that foreign market share in Japan would rise from below 10 percent to at least 20 percent. When this expectation was not met before the expiration of the Arrangement in 1991, the second Arrangement was instituted. Under this Arrangement, which expires July 31, 1996, the United States no longer receives data concerning Japanese trade practices, but the Japanese Government collects this data for U.S. use in the event of a new investigation of alleged unfair trade practices.

Sources: United States Trade Representative and Electronic Industries Association of Japan.

- The market share of foreign-based companies in Japan’s semiconductor market rose by more than three percentage points in the fourth quarter of 1995 over the previous quarter. Observers attributed most of the increase to a rise in Japanese imports from Korea.
- Foreign market share in Japan is a matter of particular interest due to the expectation, expressed in both the 1986 and the 1991 U.S.-Japan Semiconductor Arrangements, that this market share would rise above 20 percent. This expectation was not fulfilled under the 1991 Arrangement, but was fulfilled in the fourth quarter of 1992 and again in every period since the fourth quarter of 1993.
- Two formulas exist for calculating market share: Formula 1 (used by the U.S. Trade Representative) excludes “captive” sales from one unit of a company to another, and formula 2 (favored by Japan’s Ministry of International Trade and Industry) includes such sales. Formula 1 also defines nationality by the headquarters of the company that conducts final assembly whereas formula 2 defines nationality by the brand name under which a device is sold. Under both formulas, semiconductors manufactured in Japan by U.S.-based companies are counted as foreign products. For the fourth quarter of 1995, formula 1 yielded a foreign market share of 29.6 percent and formula 2 a foreign market share of 30.2 percent.
- The Japanese Government and semiconductor industry contend that the recent increase in foreign market share indicates that a new arrangement after the July 31, 1996 expiration is not necessary. The U.S. Trade Representative favors extension of the Arrangement, asserting that foreign market share in Japan is still less than would be the case in an open Japanese market.

