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East Asia: Regional Economic Integration and Implications for the United States

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EAST ASIA:
REGIONAL ECONOMIC INTEGRATION AND IMPLICATIONS FOR THE UNITED STATES

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Prepared in Conformity With
Section 332(g) of the
Trade Act of 1930

PREFACE

On May 4, 1992, the U.S. International Trade Commission received a request from the House Committee on Ways and Means to conduct an investigation under section 332(g) of the Tariff Act of 1930 on the causes and implications for the United States of increasing economic integration in East Asia. In response to the request, the Commission instituted investigation 332-326 on June 30, 1992.

The Committee requested that the Commission study include—

1. An overview of trends in and conditions for trade, investment, and economic integration in East Asia (including intraregional and extraregional trade and investment);
2. Host country policies and factors influencing those trends and conditions;
3. External factors affecting the business activities of major traders and investors in the region (e.g., exchange rate changes; labor shortages and costs; and foreign government programs, such as official development assistance);
4. The relationship between foreign direct investment in the region and the region's trade patterns with the United States and other countries;
5. Energy needs and resources in the region, including the role of the United States and other countries;
6. Environmental conditions, consequences, and opportunities for local and U.S. interests; and
7. Current and proposed regional institutional arrangements.

The Committee also suggested that case studies on several industries in which U.S. trade and investment activity in East Asia is substantial and in which the United States currently faces or is likely to face strong international competition may be a useful way to illustrate the overall trends.

In assessing the implications of such trends, the Commission was asked to seek expert views on questions such as—

- Are the trade and investment trends something about which the U.S. private sector and Government should be concerned?;
- How do U.S. business and Government activities and programs relating to U.S. trade and investment in East Asia compare with those of our major competitors in the region?; and
- Is there more that the U.S. private sector and Government could or should be doing to strengthen U.S. participation in the growing economic integration of East Asia?

Copies of the notice of the investigation were posted at the Office of the Secretary, U.S. International Trade Commission, Washington, DC 20436, and the notice was published in the *Federal Register* (57 F.R. 31386) on July 15, 1992.

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EXECUTIVE SUMMARY

Flows of trade, investment, and aid among the rapidly growing economies of East Asia, and between these economies and Japan, have increased substantially in recent years. As a result, the region's economies have pursued more vigorous efforts to promote economic cooperation through both formal institutions and more informal arrangements.

In May 1992, the House Committee on Ways and Means asked the U.S. International Trade Commission (Commission) to investigate the "causes and implications for the United States of . . . economic integration in East Asia." Some analysts suggest that closer economic ties among East Asian countries could be harmful to U.S. trade interests and policies. Among other things, these analysts argue that U.S. suppliers could lose ground in this fast-growing part of the world through a combination of deliberate policy measures, natural market forces, and benign neglect.

The Commission examined trade, investment, and other economic data, as well as commercial and development policies of East Asian countries and their major trading partners—Japan and the United States—to determine whether recent economic changes and policy measures are effectively merging East Asia's markets for goods, services, capital, and labor. Case studies on three industrial sectors and the energy and environmental sectors were also undertaken to identify factors favoring or standing in the way of economic integration in the region. Finally, the Commission sought the views of people experienced in regional economic and business affairs about the implications of recent trends in East Asia for U.S. trade interests and policy. Following are highlights of the Commission's report.

Country Profiles

- The countries of East Asia—defined for this report as Brunei, China, Hong Kong, South Korea (Korea), Indonesia, Malaysia, the Philippines, Singapore, Taiwan, and Thailand—have recorded significant rates of economic growth for much of the past two decades, and the region currently hosts some of the world's most dynamic economies. Trade and foreign direct investment have often played a key role in this growth.
- Many East Asian nations are seeking to attract foreign investment and secure aid, both to invigorate their export-oriented industrial structures and to finance needed improvements in infrastructure and environmental protection. Among other things, they have eased restrictions on foreign goods and investment and have taken steps to improve political relations.
- Barriers to trade and investment still remain, however, particularly in the less developed but resource-rich countries of the region. The continued presence of state-owned corporations is a major obstacle to further reform in several countries.

Subregional Integration

- The newly industrializing economies (NIEs) of Taiwan, Korea, Hong Kong, and Singapore are becoming more active as investors in the up-and-coming economies of the region, as they search for ways to maintain competitiveness in the face of appreciating currencies, higher wages, and rising land costs.

- Recently, Japan has reduced the share of ODA contracts officially tied to the purchase of Japanese goods and services and increased efforts to include non-nationals in design and subcontracting procurement. Nevertheless, a variety of factors appear to give Japanese firms an advantage in winning prime contracts.

- The Japanese Government has also encouraged movement of industrial facilities to other parts of Asia as part of its overall economic restructuring effort. These policies supplement Japan's longstanding strategy of securing access to the region's natural resources and raw materials through comprehensive trade, aid, and investment ties. Active Government-business cooperation characterizes the Japanese effort.

- The high level of Japanese direct and indirect aid and its comprehensive nature stands in stark contrast to the U.S. experience. U.S. aid to countries in the region accounted for 6 percent of total U.S. foreign aid, or $560 million in 1990. Only two East Asian countries—the Philippines and Indonesia—were among the top 25 U.S. aid recipients, and their selection seems more related to security than to economic considerations.

- U.S. Government aid and export promotion efforts are reported to lack focus and coordination. Business-government cooperation has also been poor. The recent jointly sponsored U.S. Ambassadors' Tour of member countries of ASEAN has been lauded as a step in the right direction.

Case Studies

- The five case studies undertaken by the Commission to illustrate trends in East Asia present a varied picture of the region's integration prospects and the participation by U.S. and Japanese firms in East Asian markets. Three deal with industrial sectors in which U.S. trade and investment activity is substantial. Two respond to the Committee's request for an examination of energy needs and resources in the region and environmental conditions, consequences, and opportunities for local and U.S. interests.

- Japanese-based firms have long dominated *automobile and auto parts* production in East Asia and are now taking some steps to integrate production facilities there. U.S. firms play much more limited roles as investors and producers, and there is concern that this role may not provide a sufficient foothold for pursuing growing demand in the region or for capitalizing on East Asia's production potential as part of an overall global business strategy.

- U.S.-based companies have a strong foothold in the East Asian *computer* market and play an important role in the region's computer production. East Asia continues to be an important manufacturing base for many U.S. computer companies. Whereas Japanese-affiliated producers tend to produce component products in East Asia for export outside the region, U.S.-based companies manufacture many finished products in the region, along with some components. These products are sold in East Asia and other markets. Investment within the region by computer firms from the more developed East Asian countries—Taiwan, Korea, and Singapore—is on the rise, as are their imports from elsewhere in the region.

- U.S. firms are major investors in the development of East Asia's *refining and petrochemical* industries. Total U.S. refining and petrochemical investment in 1991 was estimated at $5 billion, compared with Japanese investment of $1 billion. Current and future expansion plans are aimed at meeting the region's growing demand for fuels and chemicals. Asia's demand for chemicals is now expanding twice as fast as demand in North America and Western Europe. By the year 2000, Asia's market for chemicals is expected to surpass that of North America in size. A desire to retain control over utilization of domestic energy supplies has, however, discouraged integration among East Asian countries.

- The *energy and environmental technology* sectors have been characterized by heavy governmental involvement in the form of ownership, regulation, and subsidies. Both Japanese and U.S. firms offer competitive products in these fields. High levels of growth in East Asia have been accompanied by greater energy demand and environmental degradation. U.S. firms retain the lead in a number of energy and environmental technologies that are of vital interest to the countries of East Asia, although competition from Japanese companies is strong. Unlike the U.S. case, however, firms in Japan, Germany, France, Italy, and the United Kingdom all have access to significant Government-backed financing programs, and these programs are decisive in some contracts. Price, after-sales service, design flexibility, and local market presence are also reported to be advantages offered by U.S. competitors.

Implications for U.S. Trade Interests and Policy

- Many analysts observe that a combination of macroeconomic forces, strategic business decisions, governmental policies, political realism, and other factors are pulling the economies of East Asia closer together. The primary concern expressed by U.S. and Asian business, government, and academic leaders about this phenomenon is that the United States is not participating fully in the region's bustling economic activity.

- Most experts find that a large portion of the increased interdependence occurring in East Asia is driven by market forces and the private sector. Many believe that the need to remain competitive by drawing upon different countries' comparative advantages explains much of the recent expansion in intraregional business activity during the past decade.

- Nearly all experts believe that the region is, and will continue to be, dynamic, export-oriented, and fairly open to inflows of foreign investment and goods. Japan and the United States are seen as likely to play major roles in the region's future.

- Given its continued reliance on the United States and on other non-Asian markets, the region is seen as having a major stake in the multilateral trading system and in liberalizing trade and investment generally.

- At the same time, as they grow in size and confidence, the countries in the region can be expected to become more active in trade and economic forums, making it necessary for the United States to adjust negotiating strategies. The blurring of boundaries within East Asia, and between it and Japan, may make bilateral trade a less appropriate focus of U.S. negotiating efforts and render administration of U.S. trade laws more difficult, the experts observe.

- Numerous analysts say that it is vital to the long-term competitiveness of U.S. industry as well as to U.S. commercial interests and policy for the United States to play an active role in the continued transformation of the fastest growing and most populous region of the world. Analysts note that Asia is now the hub of key industries such as electronics and is an increasingly important source of new technologies and products.

- Many regional experts caution that fighting the region's integration is neither necessary nor possible. Rather, active U.S. participation in shaping regional institutional arrangements, more coherent and substantial efforts to promote U.S. business, and sustained efforts to prevent or remove discriminatory barriers may be warranted, the experts suggest, especially in areas where Japan's official policies and more substantial on-the-ground presence could foreclose future U.S. opportunities.

- Lack of familiarity by U.S. business and preoccupation with opportunities closer to home receive much of the blame for the untapped U.S. potential in Asian markets. A number of business representatives who are already doing business in East Asia called for more vigorous pursuit of market opportunities in the region by their U.S. colleagues.

GLOSSARY

AFTA	***ASEAN Free Trade Area:*** A pact among the six ASEAN nations to phase out tariffs on selected items over a 15-year period beginning Jan. 1, 1993.
APEC	***Asia-Pacific Economic Cooperation:*** A 15-member regional forum established in 1989 and aimed at promoting cooperation among the economies of the Asia-Pacific. Australia, Brunei, Canada, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, Taiwan, Thailand, and the United States are members.
ASEAN	***Association of Southeast Asian Nations:*** A regional political and economic organization founded in 1967. Six nations (Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand) are members.
EAEC	***East Asian Economic Caucus:*** A regional consultative forum proposed by Malaysia in late 1990 under the name of East Asian Economic Grouping. Participation would be limited to Asian nations.
EC	***European Community:*** Among other things, an economic integration scheme launched in 1958 to ensure the free movement of goods, capital, services, and people and now counting 12 countries as members: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom.
FDI	***Foreign direct investment:*** FDI involves whole or partial ownership of a firm in one country (the host country) by residents of, or by a firm located in, another country (the home country) with the intention of management control or participation.
GATT	***General Agreement on Tariffs and Trade:*** A multilateral trade agreement and organization founded in 1947 and currently counting 106 countries as members, the GATT is the primary forum for resolving trade disputes and the accepted norm for the conduct of international commerce.
GSP	***Generalized System of Preferences:*** A tariff preference scheme for developing countries intended to support their economic advancement by spurring exports of manufactured goods.
JICA	***Japan International Cooperation Agency:*** The Japanese Government agency charged with administering grants and technical assistance provided under the country's foreign aid program.
MITI	***Ministry of International Trade and Industry (Japan):*** The Japanese Government agency charged with developing and executing Japan's industrial and trade policies.
NAFTA	***North American Free Trade Agreement:*** An agreement reached in 1992 among the United States, Canada, and Mexico to remove tariffs and other barriers among their economies over a 15-year period starting Jan. 1, 1994. The agreement is awaiting ratification by the three signatories.

NIEs	***Newly Industrializing Economies:*** For purposes of this report, the more advanced developing countries in East Asia: Hong Kong, Korea, Singapore, and Taiwan.
ODA	***Official Development Assistance:*** Foreign aid whose primary purpose is the furthering of economic development by recipients. Military aid is not included.
OECD	***Organization for Economic Cooperation and Development:*** An organization founded in 1960 to promote cooperation on and the advancement of knowledge about economic issues. Twenty-four advanced industrial countries are members.
OECF	***Overseas Economic Cooperation Fund:*** The Japanese Government agency charged with administering foreign aid given directly to beneficiaries (bilateral aid).
PBEC	***Pacific Basin Economic Council:*** A private sector group organized in 1967 to promote regional trade and investment and now comprising some 900 corporations and 14 national membership committees.
PECC	***Pacific Economic Cooperation Council:*** A nongovernmental organization founded in 1980 and aimed at promoting cooperation in the Asia-Pacific region. Members are drawn from 20 countries and territories: Australia, Brunei, Canada, Chile, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, Mexico, New Zealand, the Pacific Islands, Peru, the Philippines, Russia, Singapore, Taiwan, Thailand, and the United States.
SIJORI	***Singapore-Johor-Riau growth triangle:*** A subregional economic grouping composed of the nation of Singapore, the Malaysian State of Johor, and Indonesia's Riau Province.
Uruguay Round	A multilateral negotiating effort launched in 1986 by GATT members in an effort to further lower barriers to manufactured goods, expand the GATT's coverage to new areas such as services, and improve rules over issues such as agriculture.
USAID	***U.S. Agency for International Development:*** The U.S. Government agency with prime responsibility for formulating foreign aid policy and administering U.S. ODA programs.

CHAPTER 1
Introduction

Purpose of the Report

In a May 4, 1992 letter, the House Committee on Ways and Means requested the U.S. International Trade Commission (Commission) to evaluate the nature and extent of economic integration occurring in the East Asian region, including the roles played by the United States and Japan in this process. The letter also asked the Commission to seek expert views on the implications of East Asian economic integration for U.S. trade interests and policy. (See appendix A.) On June 30, 1992, the Commission instituted a factfinding investigation focused on 10 East Asian countries: Brunei, China, Hong Kong, Indonesia, South Korea (Korea), Malaysia, Singapore, the Philippines, Taiwan, and Thailand.[1] This report presents the findings of the Commission's study.

Economic Integration in East Asia

The literature suggests that economic integration is made possible by the progressive removal of policy and other barriers segmenting markets for goods, services, capital, and labor, so that resource flows approximate what would be expected without policy or other constraints. Full economic integration is the effective merging of markets for goods, services, capital, and labor.

Steps toward integration may be taken unilaterally or in conjunction with other nations and can take the forms of trade and investment liberalization, regulatory harmonization, political cooperation on economic matters, and improvements in transportation and communication systems. In addition, firms can contribute to integration by rationalizing production across national borders.

For the past two decades the 10 East Asian nations examined in this study have experienced good-to-spectacular growth and have enjoyed rapid economic development. In recent years they also have moved markedly toward increased economic integration, despite their tremendous differences in language, culture, resource endowments, and levels of income. Flows of trade, investment, and aid within the region, as well as between it and Japan, have grown substantially. Discrete actions by private firms and individuals appear to be a driving force in this phenomenon, as businesses in the region strive to retain competitiveness in the wake of appreciating currencies, rising wages and land costs, and technological change.[2] Government actions at a variety of levels have supported these moves. Already characterized by outward orientations and policies to attract foreign investment, many East Asian governments have unilaterally liberalized their markets for goods and capital somewhat in recent years. Fears of being shut out of other markets in the wake of increased regionalization elsewhere are invigorating efforts to establish regional institutional ties.[3] Although these efforts are not as comprehensive or as developed as those undertaken by the European Community (EC)—which has used elaborate institutions as well as Community-wide rules and policies to achieve greater economic integration—they represent a new direction for the region.

The effect that East Asia's deliberate (and de facto) moves toward integration will have on the United States is contingent on two key variables. The first is whether the integration taking place in East Asia involves raising formal and informal barriers to nonparticipants, or whether the conditions and actions causing integration to occur are more neutral in their implications for countries outside the region. Even though intraregional trade and activity by regional trading groups have expanded considerably in recent years, such developments do not necessarily come at the expense of U.S. access to and influence in the region. If it involves a lowering of trade and

[1] 57 F.R. 31386 (July 15, 1992).

[2] Two recent articles emphasize the role of the private sector in the integration increasingly evident in East Asia. Andrew Tanzer writes, "Not by bureaucratic or military design but by spontaneous human action, Japan is remaking the face of Asia. The question is: where are the Americans?" Andrew Tanzer, "What's Wrong With This Picture?" *Forbes*, Nov. 26, 1990, p. 154. Paul Maidment writes, "If there is a Pacific Community in the making, it is a smaller place, and is now being shaped more by the daily decisions of the region's several million businessmen than anyone else." Paul Maidment, "The Yen Block," *The Economist*, July 15, 1989, p. 1.

[3] Concern in East Asia about the prospect of discrimination as a result of the North American Free Trade Agreement and the European Community's single-market integration (1992) program has been widely reported. For two recent examples see "Fortress Asia," *The Economist*, Oct. 24, 1992, p. 35-36, and Gary R. Saxonhouse, University of Michigan, Ann Arbor, *Trading Blocs, Pacific Trade and Pricing Strategies of East Asian Firms*, paper delivered to World Bank and CEPR Conference on New Dimensions of Regional Integration, Apr. 2-3, 1992.

investment barriers, for example, regional integration could conceivably improve the business environment for all potential suppliers—including those from the United States. Intensified intraregional ties might exist side-by-side with active trade and investment relations with other partners and with support for the multilateral trading system.[4] Moreover, to the extent that integration represents a natural outgrowth of market forces, it is both less likely to harm outsiders and less susceptible to countervailing policy influences.[5]

The second variable is Japan's role in East Asia's economic activity. Since the 1985 Plaza Accord, which realigned currencies among the major industrialized nations, the yen's appreciation has led Japan to invest heavily in East Asia's manufacturing industries. The investment built on Japan's already extensive presence in the region's resource development.[6] Intraregional production and tariff reduction schemes are attracting interest by Japanese companies, such as Toyota and Nissan, that are seeking to rationalize their operations in East Asia and integrate them with facilities in Japan.[7] Small and medium-size Japanese enterprises are active players, sometimes investing in East Asia to serve facilities established by larger Japanese manufacturers in the region.[8] These firms have often benefited from the extensive support services of government and industry associations, and it appears that until recently much of their investment in East Asia has been export-oriented.[9] The rest of Asia is figuring prominently in Japan's industrial and foreign policies.[10] Japan is also East Asia's largest supplier of foreign aid. In fact, East Asian patterns of integration are often referred to in Japan under the rubric of a "flying geese pattern" in which Japan is the head "goose" in a V-shaped formation of other countries that follow in, and learn from, its development path. For its part East Asia has increased its imports from Japan significantly over the past decade. In addition, it now counts Japan as its second largest export market after the United States. Not only is Japan an important source of capital, but its technology and know-how are playing key roles in the development of East Asian industries such as consumer electronics and auto parts.[11]

There are some experts who worry that, for both practical and political reasons, a failure by the U.S. Government and private sector to participate actively in the integration increasingly evident in East Asia may effectively limit U.S. policy and business options, to the detriment of U.S. commercial interests. Although some analysts have suggested that Japan's increasing influence in the region carries with it potential adverse

[4] Director-General of the GATT Arthur Dunkel, in a speech before a conference on "open regionalism," held in San Francisco on Sept. 24, 1992, argued that regionalism and global economic cooperation are not two alternative approaches to trade relations, but "two different but interdependent parts of the same system. . . . The one cannot prosper without the other or at the expense of the other" (p. 4 of pre-delivery draft).

[5] For example, Paul Krugman of the Massachusetts Institute of Technology makes the case that the creation of three major trading blocs centered on the European Community, the United States, and Japan will present fewer problems from a global welfare perspective if these blocs are limited to countries that already are "natural trading partners" because of geographic proximity and the associated reduction in transportation and communications costs. Paul Krugman, "The Move Toward Free Trade Zones," *Federal Reserve Bank of Kansas City: Economic Review*, Nov./Dec. 1991.

[6] Ryutaro Komiya and Ryuhei Wakasugi note that until the 1970s, Japanese foreign direct investment in Asia was concentrated in resource development—for example, iron ore in Malaysia, copper ore in the Philippines, natural gas in Brunei, and oil in Indonesia. In the 1970s Japan invested heavily in textile and electronic machinery production. Ryutaro Komiya and Ryuhei Wakasugi, "Japan's Foreign Investment," *Annals of the American Academy of Political and Social Science*, vol. 513 (Jan. 1991), p. 57.

[7] For an account of these strategies see Andrew Tanzer, "What's Wrong With This Picture?," pp. 154-163. For a fuller discussion of the role Japanese firms are playing in East Asia's automotive sector, see chapter 7 of this report.

[8] Komiya and Wakasugi note that "small- and medium-sized firms were particularly active in FDI in the manufacturing industry of Asian countries," accounting for 53.9 percent of the cases of new acquisition of foreign companies' stocks and bonds during 1981-85, and for 69.8 percent of the cases in 1986-87. Komiya and Wakasugi, "Japan's Foreign Investment," p. 57.

[9] Pasuk Phongpaichit, *The New Wave of Japanese Investment in ASEAN* (Singapore: Institute of Southeast Asian Studies), 1990. For example, on pp. 48-50 he reports that "[i]n Thailand, the Board of Investment approved 260 Japanese investment projects between 1986 and May 1988. Of these 206, or 79 percent, were classified as export-oriented, namely projects which exported at least 80 percent or more of their products." Such statistics may be inflated, given Thai Government incentives to export-oriented firms.

[10] In a 1989 survey, *The Economist* detailed how East Asia fits into Japan's overall industrial and foreign policies, noting that the development of the rest of Asia is now considered a priority by Japan's economic planners as a means of expanding and diversifying markets for Japan's goods, ensuring access to needed material and labor inputs, and permitting Japanese manufacturers to move up-market while retaining a role in the production of lower technology goods elsewhere in Asia. Asia is, meanwhile, a region in which Japan hopes to exert a leadership role, the article continues, although how it will do so remains a matter of debate. Paul Maidment, "The Yen Block," p. 6.

[11] For a discussion on the role of investment by Japan and the United States in the development of East Asian economies and industries, see Noriyoshi Tamaru, Kanji Masaoka, and Shujiro Urata, "The Mechanism of Economic Growth in Pacific Asia," *Waseda Journal of Asian Studies*, vol. 14, 1992; Shujiro Urata, "Foreign Direct Investment and Economic Development in Pacific Asia," paper prepared for the PAFTAD Conference in Washington, DC, Sept. 10-12, 1992; Robert E. Lipsey, "Direct Foreign Investment and Structural Change in Developing Asia, Japan and the United States," ch. in Eric D. Ramstetter, ed., *Direct Foreign Investment in Asia's Developing Economies and Structural Change in the Asia-Pacific Region* (Boulder, CO: Westview Press), 1991.

consequences for U.S. interests,[12] many see fallout not as a result of Japan's actions, but rather U.S. inaction. The pace of expansion of U.S. investment in the region has been much slower than Japan's, and U.S. business is widely perceived as being less aggressive in pursuing the region's market and strategic potential.[13] The U.S. Government, meanwhile, currently provides little foreign aid to East Asia and is scaling back its political and security presence there. Some have questioned what kind of influence the United States will be able to maintain over East Asian political stability and security in a world in which economic factors have joined military ones in the determination of overall national interests.[14] Whether these concerns are warranted, and to what extent, are crucial subjects addressed by this report.

12 For example, Kenneth A. Froot and David B. Yoffie of Harvard University have argued that with Japanese expansion in East Asia, North American and European firms may increasingly lack both trade and investment access to the entire East Asian bloc. Kenneth A. Froot and David B. Yoffie, "Trading Blocs and the Incentives to Protect: Implications for Japan and East Asia," paper presented at the National Bureau of Economic Research (NBER) Conference, Apr. 2-5, 1992. At the same conference, Richard Doner of Emory University argued that Japanese investment is accompanied by certain institutional and behavioral contributions, such as creating supply networks biased toward Japanese firms, that have worsened the U.S. position in the region. Richard Doner, "Japanese Foreign Investment and the Creation of a Pacific-Asian Region," paper presented at NBER Conference, Apr. 2-5, 1992.

13 For example, Andrew Tanzer claims that an Asian trade bloc is forming and intraregional trade is booming but, "[d]isturbingly, American business is playing a diminishing role in this epochal economic transformation. . . . America's diminished presence, if it continues at its present level, has implications for the global competitiveness of American corporations. The western Pacific region is the fastest-growing market for everything from cars and steel to electric appliances, computers and telecommunications equipment." Andrew Tanzer, "What's Wrong With This Picture?" p. 154.

14 Some analysts, such as Richard P. Cronin of the Congressional Research Service, have argued that "[e]specially in the context of a widely perceived decline in the Soviet military threat and rising trade friction between the United States and its Asian trading partners—most notably with Japan—Tokyo's expanding economic role and influence raise fundamental questions about the future structure of Asian-Pacific economic, political, and security relationships." Richard P. Cronin, *Japan's Expanding Role and Influence in the Asia-Pacific Region: Implications for U.S. Interests and Policy*, Congressional Research Service, Sept. 7, 1990, CRS report No. 90-432 F., p. 3. Observing the still tense state of the world in the wake of the Soviet Union's dissolution, others note that historic animosities and alliances will continue to play a critical role in determining national interests, and that the threat or use of military power is certainly not obsolete. See Marcus W. Brauchli, *Wall Street Journal*, Mar. 31, 1993, p. A-10.

Organization of the Report

To examine the major issues surrounding East Asia's economic integration, this report both describes the present economic situation and presents case studies to illustrate regional trends. Chapter 2 reviews the economic conditions and policies of the 10 countries surveyed, in an effort to identify those that may support or limit economic integration in the region. Chapter 3 looks at emerging patterns of subregional integration in which a confluence of high rates of business activity, governmental arrangements, ethnic ties, and expanded investment and trade are linking formerly segregated areas. Chapter 4 reviews the status of efforts to formulate regional institutional arrangements, including the roles being played by the United States and Japan. Chapter 5 delineates the levels and composition of trade and investment flows among the countries of East Asia, as well as between the region and the rest of the world. Chapter 6 provides an overview of foreign aid offered to the region by Japan and the United States, and discusses the extent to which such aid supports each country's commercial interests in East Asia.

Chapter 7 examines the actions and strategies of private businesses in three sectors: autos, computers, and petrochemicals. Case studies on two sectors characterized by heavy governmental involvement—energy and environmental activities—are presented in chapter 8 and serve to illustrate the interplay of host country and exporting country policies on integration prospects. Finally, chapter 9 presents the views of various experts and policymakers concerning the implications of economic integration in the region for the United States and appropriate U.S. responses.

Methodology

In analyzing these topics, the Commission drew upon the extensive body of work published on various aspects of this subject, conducted fieldwork in East Asia, sought assistance from U.S. Embassies and private sector organizations in the region, consulted with U.S. and foreign government officials, and analyzed statistical data. The Commission also solicited written comments and scheduled a public hearing.

Information gathered from the literature is footnoted as such, and Commission style is to present citations immediately following the appropriate material. If the citation pertains to an entire paragraph, the footnote is presented at the end of the paragraph.

The Commission also sought the views of persons whose professional responsibilities or expertise would be particularly useful in assessing the issues examined in this study. Persons interviewed by Commission staff were requested to provide frank and personal opinions rather than official or formal positions of the governments, agencies, associations, or firms by which they were employed. The Commission obtained their views on a not-for-attribution basis, recognizing that

this would be the best method of obtaining the candid views desired. The report therefore employs a minimal level of attribution of these interviews to protect the confidentiality of participants. However, some identification of the group or background of individuals expressing a particular view has been provided when such delineations are possible and meaningful.

CHAPTER 2
East Asia: National Economic Strategies and Performance

Introduction

East Asia has been one of the fastest growing regions of the world in recent years, with annual real gross domestic product (GDP) growth for the period of 1985 to 1990 averaging 8.6 percent in the newly industrializing economies (NIEs), namely, Singapore, Taiwan, Hong Kong, and Korea; 6.8 percent in the ASEAN 4 (Indonesia, Malaysia, Thailand, and the Philippines); and 7.9 percent in China. This rapid growth contrasts with world growth of 2.9 percent, U.S. growth of 2.8 percent, and Japanese growth of 4.7 percent over the same period. East Asian countries have a combined GDP that is roughly 6 percent of the world total. Just under 80 percent of this GDP is divided more or less evenly between China (with a population of 1.2 billion) and the NIEs (with a population of 72 million). If Japan is added, the region has about 19 percent of total world GDP, compared with 28 percent for the North American Free Trade Agreement (NAFTA) countries (the United States, Canada, and Mexico) and 24 percent for the European Community (EC).

The countries of East Asia (figure 2-1) represent a diverse collection of economic and political systems, and a broad range of indigenous resources (tables 2-1 and 2-2). Each has struggled to modernize and develop its economy, often with the aid of some form of long-term planning or industrial policy. While national priorities and political differences have shaped strategies, the overall trend for East Asia in recent years has been away from import substitution, in which domestic industries are fostered behind trade barriers to serve markets that would otherwise be supplied by imports. Now, most countries in the region are moving toward export-led growth and investment liberalization.

Factors do exist, however, that could constrain future investment and growth. Infrastructure has generally not kept pace with economic development, and serious bottlenecks in communication and power systems, roads, ports, and services are occurring. While tariffs on thousands of products have been reduced, the reductions were made from very high levels and have generally not been applied to sensitive items. Nontariff barriers still hinder commerce in the region, and protection of intellectual property rights is still regarded as lax in certain countries. Investment performance requirements, shortages of trained middle managers and engineers, and the absence of long-term capital markets essential for large-scale financing are also constraints.

A brief overview of the 10 East Asian countries' individual development strategies, economic performance, and other factors that could affect the prospects for regional integration follows. Specifically examined are growth and production trends, development strategies, recent changes in economic policy, remaining barriers to trade and investment, and political factors. For purposes of analysis, the countries were divided into three groups based on their level of economic development and factor endowments (i.e., land, labor, capital, and entrepreneurship): the NIEs; the East Asian developing economies (Malaysia, Indonesia, Thailand, Brunei, and the Philippines); and China, which, because of its political and economic structure, is distinct from the other two groups.

The Newly Industrializing Economies

East Asia's NIEs are currently in a phase of economic restructuring. Rising land and labor costs, currency appreciations, loss of preferential trade status under the U.S. Generalized System of Preferences (GSP) scheme in 1989, and the desire to shift toward capital- and skill-intensive manufacturing have prompted all four countries to increase the pace of economic liberalization and transfer less competitive, labor-intensive industries to East Asian neighbors. This trend is expected to continue, but political and economic factors could slow the pace of reform.

Korea

Economic Strategy and Performance

Korea is a densely populated country with few natural resources and subject to an ongoing security threat from the Democratic People's Republic of Korea (DPRK), or North Korea. In a span of only three

Figure 2-1
The East Asia region

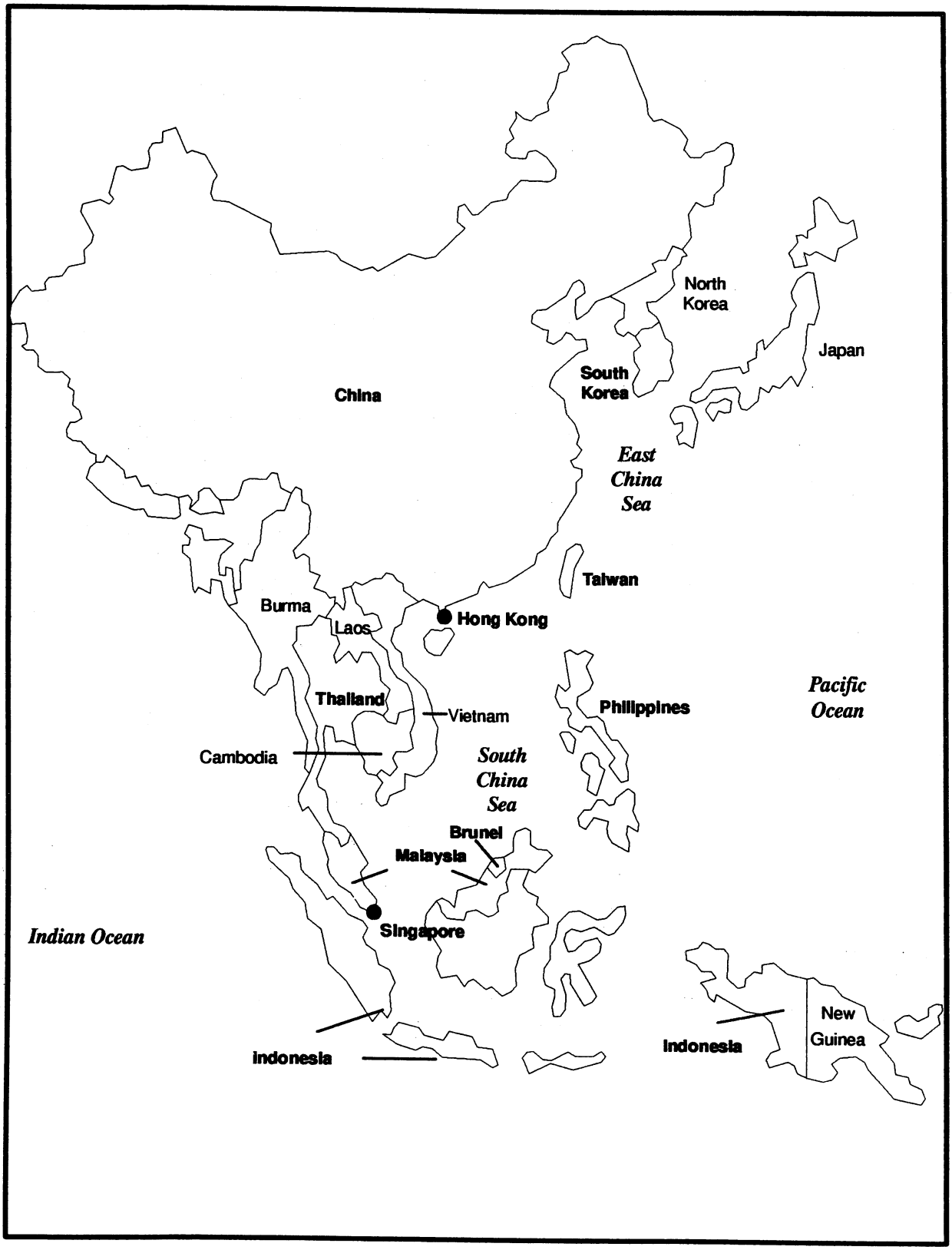


Table 2-1
East Asia: Political, geographic, social, and industrial statistics

Country	Type of government	Geographic size	Population	Industries
		km²	*Millions*	
Brunei	Constitutional sultanate	5,770	0.4	Petroleum, natural gas, construction.
China	Communist party-led state	9,596,960	1,151.5	Iron, steel, coal, machine building, armaments, textiles, petroleum
Hong Kong	U.K. territory; scheduled to revert to China in 1997	1,040	5.9	Textiles, apparel, tourism, electronics, plastics, watches.
Indonesia	Republic	1,919,440	193.6	Petroleum, textiles, mining, cement, fertilizers, plywood, rubber.
Korea	Republic	98,480	43.1	Textiles, footwear, food processing, chemicals, steel, electronics, autos, ship-building.
Malaysia	Federation	329,750	18.0	Rubber, lumber, palm oil, rice, agricultural processing, petroleum.
Philippines	Republic	300,000	65.8	Textiles, pharmaceuticals, chemicals, wood products, electronics assembly, fishing.
Singapore	Republic	632.6	2.6	Petroleum refining, electronics, entrepot trade, finance.
Taiwan	Republic	35,980	20.7	Electronics, textiles, chemicals, food processing, ship-building, cement, plywood.
Thailand	Constitutional monarchy	514,000	56.8	Tourism, textiles, tobacco, electronics, plastics, light manufacturing.

Source: Central Intelligence Agency (CIA), *The World Factbook 1992.*

Table 2-2
East Asia: Country economic profiles and statistics

Country	GDP (1990)	Total 1990 exports as share of GDP	Total 1990 imports as share of GDP	Top 3 export markets (1991)	Top 3 import sources (1991)	Top 3 foreign investors
	Billion dollars	*Percent*				
Korea	236.4	31.6	32.2	U.S. Japan Hong Kong	Japan U.S. UK	N/A
Taiwan	156.5	42.5	34.7	U.S. Hong Kong Japan	Japan U.S. Hong Kong	U.S. Japan Hong Kong Data-1991
Hong Kong	64	136.8	131.4	China U.S. Germany	China Japan Taiwan	Japan U.S. Netherlands Data-1990
Singapore	34.6	189.9	183.9	U.S. Malaysia Japan	Japan U.S. Malaysia	Japan Netherlands U.S. Data-1989
Indonesia	94	25.9	25	Japan U.S. Singapore	Japan U.S. Germany	Taiwan Japan Singapore Data-1991
Malaysia	42.4	77.9	78.1	Singapore U.S. Japan	Japan Singapore U.S.	Taiwan Japan Indonesia Data-1990
Philippines	43.9	27.8	33.4	U.S. Japan Germany	U.S. Japan Taiwan	Japan U.S. Korea Data-1991
Thailand	80.2	37.6	40.8	U.S. Japan Singapore	Japan U.S. Singapore	Japan Hong Kong Singapore Data-1991
Brunei[1]	3.3	58.2	45.5	Japan Korea UK	Singapore UK U.S.	N/A
China	364.9	18.2	14.6	Hong Kong Japan U.S.	Hong Kong Japan U.S.	Hong Kong Taiwan Japan Data-1991

[1] Data for Brunei are based on 1989 figures presented in CIA, *The World Factbook, 1990*, and International Monetary Fund (IMF), *Direction of Trade Statistics Yearbook*.

Source: Data on GDP from IMF, *International Financial Statistics*; data on imports and exports from IMF, *Direction of Trade Statistics Yearbook* (Taiwan data from *Taiwan Statistical Data Book, 1991*); investment data from individual countries.

decades, however, Korea has gone from being one of the poorest nations in Asia to the threshold of joining the advanced industrial nations.[1] Recent economic performance has been impressive, with real GDP growing by an annual average of over 9.2 percent during 1980-91.[2]

The first significant phase in Korea's economic development occurred after the military government of General Park Chung Hee took control in 1961. After 2 years of poor economic performance, the Park government reversed the country's previous course favoring import substitution and introduced a 5-year plan based on a more outward-oriented strategy.[3] The state continued to play a major role in the economy, however, with export targets being formulated in considerable detail. The Government encouraged the establishment of general trading companies along the lines of Japan's general trading companies (sogo shosha), and giant industrial conglomerates similar to Japan's keiretsu,[4] known as chaebol.[5]

Korea's reliance on exports and state intervention was eased somewhat after an unsuccessful attempt to promote heavy and chemical industries during the 1970s. Under the Fifth Five-Year Plan (1982-86), the Government reversed its previous course of promoting strategic industries, and introduced measures for trade and financial liberalization.[6] This emphasis was continued under the Sixth Five-Year Plan (1987-91), which expanded the process of import liberalization. The simple average of tariff rates declined from 31.7 percent in 1982 to 23.7 percent in 1983 and 21.8 percent in 1984. Tariffs were further reduced to an average 12.7 percent in 1989 and an average 10.1 percent in 1992 (figure 2-2).[7]

[1] Australian National Korea Studies Centre, *Korea to the Year 2000: Implications for Australia*, Commonwealth of Australia, Department of Foreign Affairs and Trade, East Asia Analytical Unit, 1992, p. 9.

[2] Asian Development Bank, *Key Indicators of Developing Asian and Pacific Countries, 1992*, Oxford University Press, July 1992.

[3] Bela Balassa, *Economic Policies in the Pacific Area Developing Countries* (New York: NYU, 1991), p. 47.

[4] Keiretsu are organizations of companies that supply one another and use the same trading companies, creating a close-knit, family-like relationship between buyers and sellers. Keiretsu membership generally revolves around banks or trading companies, and members often have crossholdings of stock in other keiretsu-affiliated firms. These connections are said to result in flexibility, dependability, and access to strong distribution channels. Imai Ken'ichi, "The Legitimacy of Japan's Corporate Groups," *Japan Echo*, no. 3, (1990), p. 24, and Dick K. Nanto, "Japan's Industrial Groups, the Keiretsu," in *Japan's Economic Challenge*, p. 76.

[5] Marcus Nolan, *Pacific Basin Developing Countries, Prospects for the Future*, Institute for International Economics (IIE), Washington, DC, 1990, p. 40.

[6] Balassa, *Economic Policies in the Pacific Area Developing Countries*, p. 51.

[7] U.S. Department of State, "1993 Country Trade Act Report for Korea," message reference No. 12812, prepared by U.S. Embassy, Seoul, Dec. 8, 1992.

The structure of the Korean economy has undergone tremendous change. Agriculture as a share of total output declined from 43.4 percent in 1963 to 16.9 percent in 1980 and 10.2 percent in 1990. Manufacturing, on the other hand, has increased from a 14.7 percent share of GDP in 1963 to 33.7 percent in 1980 and 34.6 percent in 1990.[8] Trade has also come to play a central role. Between 1965 and 1990, exports as a share of GDP rose from 8.6 percent to roughly 31.6 percent, with imports showing a similar increase from 16.0 percent to 32.2 percent.[9] The United States is Korea's most important export market, while Japan dominates Korea's imports (figure 2-3). Korea registered an overall trade deficit of $338 million in 1991. On a bilateral basis, Korea had a trade deficit of $872 million with the United States in 1991, and a deficit of $9.1 billion with Japan.[10]

Foreign direct investment has not played a major role in Korea's export-related industries.[11] Most foreign investment in Korea took the form of commercial loans rather than of direct investment, and inflows of foreign capital were small compared with such countries as Taiwan.

Recent economic problems experienced by Korea include declining industrial competitiveness, sluggish export markets in the United States and Europe, an inflation rate of near 10 percent in 1991, and a slowdown of GNP growth to only 4.9 percent in 1992.[12] Because of appreciation of the won since the mid-1980s,[13] and rising land and labor costs, Korea is undertaking serious efforts at economic restructuring. One indication of this trend has been Korea's rapidly expanding overseas direct investment. Between 1986 and 1991, the total stock of Korea's direct investment in other countries climbed by nearly 600 percent, with North America and Asia the primary destinations.[14] Significant investment ties have also been established with developed countries such as the EC member states. These investments are centered on foreign trade and large-scale manufacturing.[15]

[8] World Bank, *World Tables, 1992*, Johns Hopkins University Press, Baltimore, May 1992.

[9] Ibid.

[10] International Monetary Fund (IMF), *Direction of Trade Statistics Yearbook*, 1992.

[11] Larry Westphal and Kwang Suk Kim, "Korea" in Bela Balassa and associates, *Development Strategies for Semi-Industrial Economies* (Baltimore: Johns Hopkins, 1982).

[12] U.S. Department of State, "Korean Economy Continues To Slow in the First Half of 1992," message reference No. 12420, prepared by U.S. Embassy, Seoul, Nov. 25, 1992. Estimate of 1992 gross national product growth from Bank of Korea.

[13] The Korean won appreciated from an exchange rate of 881.45 won per US$1 in 1986 to 733.35 won per US$1 in 1991.

[14] U.S. Department of State, "Background on Korean Investment Overseas," message reference No. 11291, prepared by U.S. Embassy, Seoul, Oct. 23, 1992.

[15] Ibid.

Figure 2-2
Korea, trade and investment environment

General

State role in the economy:

Private ownership predominates, but the Government maintains an active profile in the economy through development plans, regulatory policies, and financial market controls.

Exchange rate policy:

Controls of foreign exchange flows in and out of Korea are pervasive. The won/U.S. dollar exchange rate fluctuates daily within a predetermined band, which is gradually widened to prepare the shift to a floating exchange rate system by 1996. The won began a noticeable appreciation relative to the dollar after 1986.

Intellectual property rights (IPR):

Korea was upgraded to the U.S. Trade Representative's "priority watch list" in April 1992 for inadequate enforcement of its IPR legislation, under the provisions of Section 301 of the 1988 Omnibus Trade and Competitiveness Act. Korea's patent laws are generally satisfactory, but enforcement is inadequate. Trademark and copyright violations are widespread.

Foreign trade

Tariffs:

Korea's second tariff-reduction plan (1989 to 1993) was suspended for 1 year to offset revenue cuts resulting from the elimination of the national defense tax. The date for completion is now January 1, 1994. The average non-trade-weighted tariff rate in 1992 was 10.1 percent. For agricultural products it was 18.5 percent. For some items, such as fresh fruit, juices, soybean and cottonseed oil, tariffs are quite high. The average tariff rate for agricultural items is scheduled to be reduced to 17.8 percent by 1993 and 16.6 percent by 1994.

Import restrictions:

Entry of raw materials and equipment needed for exports is facilitated, but entry of imported consumer goods is severely restricted. Under GATT and U.S pressure, Korea has reduced its import barriers. However, many impediments remain. All imports are subject to licensing; a license is granted automatically for 95 percent of imports.

Import bans:

Korea maintains quotas and bans for 5 percent of imports. This group includes high value-added agricultural and fishery products. Under a 1989 agreement, Korea is committed to eliminating all agricultural nontariff restrictions by 1997. The ban on rice imports is one of the most contentious issues. Other import barriers include restrictions on credit for imports; a "frugality campaign" that discourages consumer good imports; health, phytosanitary, and other standards that impede imports; and special "rules-of-origin" markings. Under a separate agreement relating to Korea's GATT balance of payments measures, an additional 283 items (mostly agricultural and fishery products) have been scheduled for liberalization between 1992 and 1997.

Export subsidies:

Korea is a signatory of the GATT code on subsidies and countervailing duties. In response to growing trade deficits, however, the Government is strengthening its export support measures after having eliminated several subsidies in the 1980s. Support measures include customs duty rebates for material used in exports, corporate income tax benefits for exporters, special depreciation allowances, and short-term financing for small and medium-size exporters. Streamlining Korea's complex import clearance procedures is an important topic in U.S.-Korean economic discussions. The Korean Government is now implementing recommendations reached under the U.S.-Korea Presidents' Economic Initiative (PEI) talks for improvement of customs procedures.

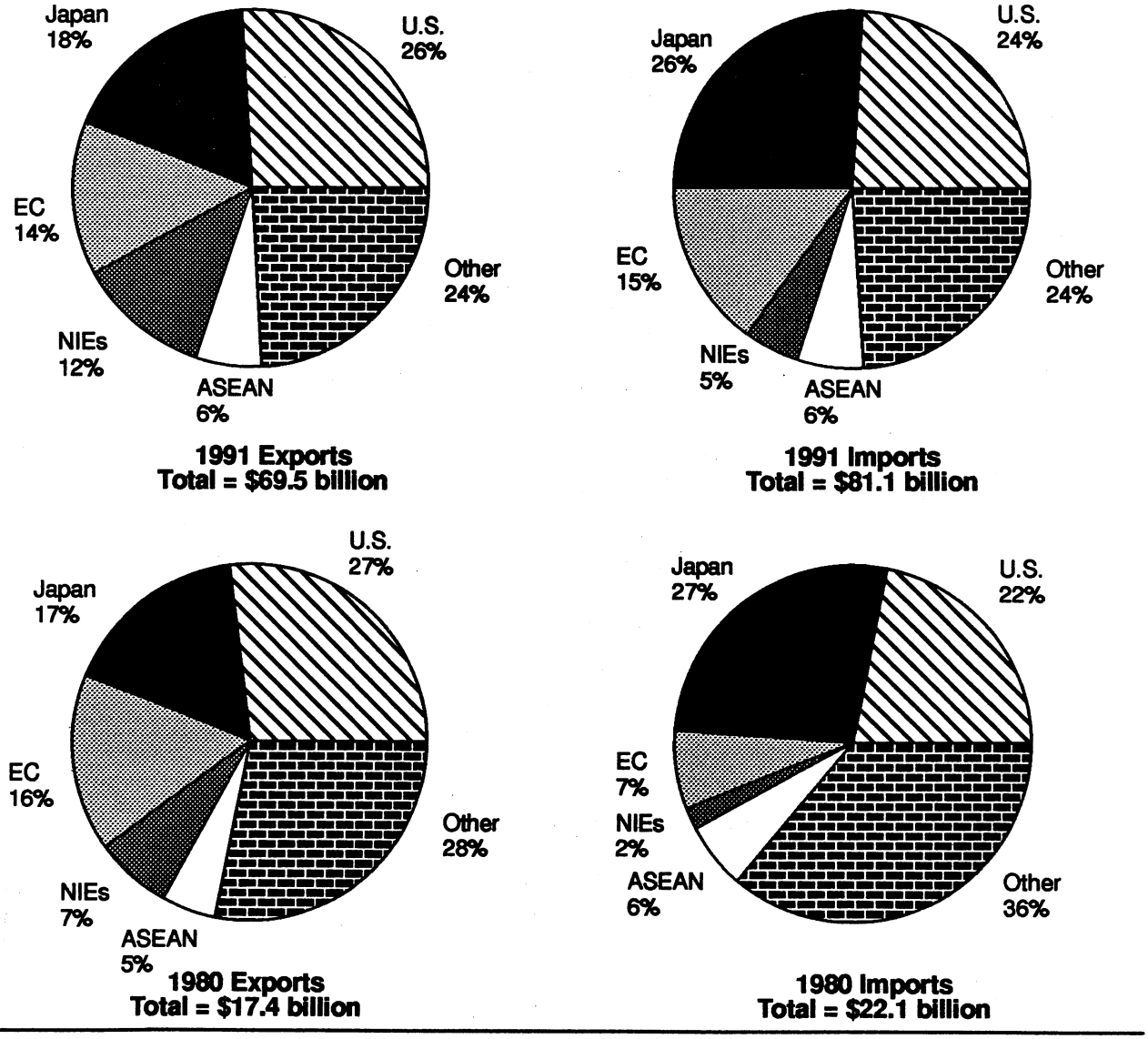
Figure 2-2—Continued
Korea, trade and investment environment

Foreign Investment

Korea is gradually opening its markets to foreign investment. As of January 1, 1993, 82 percent of the sectors in Korea's standard industrial classification system were open to foreign equity investment. The Korean Government currently prohibits foreign investment in 57 industrial sectors and restricts investment in another 181 categories. In manufacturing, foreign investment is directed to priority development sectors. In addition to foreign exchange controls, several restrictions are in effect for foreign entities. Korea denies national treatment to foreign financial entities, especially banks and securities brokers, although treatment of such entities has become less discriminatory in the past 2 years.

Source: Office of the United States Trade Representative (USTR), *1993 National Trade Estimate Report on Foreign Trade Barriers,* 1993.

Figure 2-3
Korea, exports and imports, by major markets, 1980 and 1991



Note.—NIEs include Taiwan, Singapore, and Hong Kong. ASEAN includes Brunei, Indonesia, Malaysia, the Philippines, and Thailand.

Source: IMF, *Direction of Trade Statistics Yearbook,* 1992.

Factors Affecting Integration

A variety of factors could affect Korea's prospects for closer economic integration with the rest of East Asia. Historically, Korea's contact with other nations in Northeast Asia has not been favorable. Neighboring China has been seen as a threat to the independence of the Korean peninsula, and Korea has only recently established diplomatic relations with China. In response to this diplomatic shift, Taiwan severed relations with Korea and announced that all preferential economic and trade treatment granted to Korea in the past would be phased out.[16] Further, Japan's occupation of Korea between 1910 and 1945 created an animosity that endures to this day. Concern over Japanese investment, for example, has reportedly been a factor in the relatively slow liberalization of Korea's foreign investment regime.[17] Reunification with North Korea will continue to be a crucial issue on Korea's political and economic agenda.

Although Korea has made notable progress in removing formal barriers to imports, more subtle barriers have effectively prevented genuine liberalization. Standards, testing, labeling, and certification requirements have reportedly been used to block the entry of goods in such sectors as agriculture, cosmetics, chemicals, and electronics. Korean safeguard regulations permit the Government to impose special "emergency tariffs" of up to 100 percent on imported goods to protect domestic industries—a measure that was reportedly used with increasing frequency in 1992.[18] Continued use of such "emergency" measures, together with the strong presence of nontariff barriers, could place limits on Korea's economic links with East Asian neighbors.

In addition to the barriers mentioned above, Korea has also undertaken several "frugality campaigns" in recent years, designed to curb imports and consumption of luxury goods. The Government of Korea has consistently denied taking a role in such campaigns, maintaining that anti-import campaigns are grass-roots efforts designed to reduce both conspicuous consumption and Korea's external deficit. The United States, in particular, has expressed concern over Korea's frugality campaigns, fearing that they might simply be a new form of protectionism.[19]

Despite these impediments, several factors are leading Korea toward closer links with the region. For example, economic restructuring and consequent direct investment flows to countries in East Asia have resulted in closer economic links between Korea and such countries as Indonesia and China. Korea's direct investment in Asia is mostly concentrated in labor-intensive industries.[20]

Korea's reaction to the proposed NAFTA and other regional groupings is also an important factor. A recent report prepared by the Korean Institute for Economic Policy (KIEP), for example, reflects the Korean Government's concern over rising protectionism in the global trading system and the emergence of regional trading arrangements. The report suggests promoting economic cooperation in the region as a way to remain competitive. The country does not appear to be pursuing regional integration to the exclusion of other ties, however. Stronger investment in NAFTA countries, and in the EC in the wake of the single market program, is also a part of Korean business strategy.[21]

Taiwan

Economic Strategy and Performance

Taiwan has few resources other than a well-educated and hard-working labor force. Nevertheless, Taiwan's economic performance during the past decade has been strong, with a real average annual GDP growth rate of 7.7 percent between 1980 and 1991.[22] Taiwan is currently one of the richest nations in East Asia, with a per capita GDP estimated at $10,087 in 1992 and foreign exchange reserves totaling $82.4 billion at the end of 1991.[23]

Taiwan's early postwar efforts at industrialization combined fairly heavy trade protection for domestic manufactures with an overvalued currency. The state also became involved in a number of heavy industries, such as chemicals. Small businesses played an important role, particularly in the more successful export sectors such as textiles and electronics. The program began to falter in the 1950s because of the small domestic market and inefficiencies in the protected industries. During 1958-61, Taiwan authorities introduced a reform program that included trade liberalization, a currency devaluation, and export promotion measures. Free trade zones were established in 1965. Accompanying these reforms were

[16] U.S. Department of State, "Taiwan's Reaction to Break in Relations: Economic Actions," message reference No. 06095, prepared by the American Institute in Taiwan, Taipei, Aug. 26, 1992.

[17] "U.S. and Korea Agree on Trade and Investment Measures," *International Economic Review*, USITC, Nov. 1992.

[18] U.S. Department of State, "1993 Country Trade Act Report for Korea."

[19] USITC, *The Year in Trade, 1991*, USITC publication No. 2554, Aug. 1992, pp. 121-22.

[20] U.S. Department of State, "Background on Korean Investment Overseas."

[21] U.S. Department of State, "NAFTA and Its Impact on the Korean Economy," message reference No. 12840, prepared by the U.S. Embassy, Seoul, Dec. 8, 1992.

[22] U.S. Department of State, "Investment Climate Statement—Taiwan 1992," message reference No. 07329, prepared by American Institute in Taiwan, Taipei, Oct. 15, 1992.

[23] U.S. Department of State, "Economic Trends Report for Taiwan," message reference No. 06224, prepared by the American Institute in Taiwan, Taipei, Sept. 1, 1992.

efforts to promote strategic industries through preferential loans, tax exemptions, and special tax holidays.[24]

Trade has played a crucial role in Taiwan's economic development. Between 1963 and 1988, exports and imports as a share of GDP rose from 17.8 and 18.9 percent to 57.0 and 47.4 percent, respectively.[25] The structure of Taiwan's economy has also undergone considerable change. Between 1953 and 1987, agriculture's share of GDP fell from 38.3 percent to 6.1 percent, while that of manufacturing climbed from 17.7 percent to 47.5 percent. Traditionally, Taiwan's manufacturing activity has been concentrated in labor-intensive industries, such as footwear and apparel.

Taiwan's spectacular export success and high savings rate translated into mounting foreign exchange reserves and inflationary pressures by the mid-1980s. The United States strongly urged Taiwan to revalue its currency and to liberalize outward flows of capital. The ensuing appreciation of the New Taiwan dollar after 1987 and increases in wages made Taiwan's labor-intensive industries less competitive relative to other East Asian countries, such as China, Thailand, Indonesia, Malaysia, and the Philippines. The loss of trading privileges under the U.S. GSP scheme in 1989 accelerated this process. Traditional labor-intensive industries are now being phased out or transferred offshore and are being replaced by more capital- and skill-intensive industries, such as electronics.[26]

Taiwan's pattern of trade reflects its industrial structure. Over 90 percent of Taiwan's exports are manufactured goods, and trade is concentrated on developed countries. The United States accounted for 32.0 percent of Taiwan's total exports in 1991, followed by the EC with 18.4 percent, and Japan with 12.5 percent (figure 2-4).[27] This marks a reversal of the role played by the United States and Japan some 30 years earlier. In 1963, Japan was Taiwan's largest export market, accounting for 32.1 percent of the total, whereas the United States was the leading source of Taiwan imports with 42.9 percent of the total. In 1991, however, Japan was the leading source of Taiwan imports, with roughly 28.5 percent of the total, followed by the United States with 20.6 percent, and Hong Kong with 6.2 percent. Exports to Hong Kong were also sizeable, although a good portion were re-exported to China. Taiwan's trade with other NIEs and the East Asian developing economies has been relatively modest. Taiwan registered an overall trade surplus of $11.7 billion in 1991, which included a surplus of $11.0 billion with the United States and a deficit of $8.8 billion with Japan.

[24] Balassa, *Economic Policies in the Pacific Area Developing Countries*, p. 41.

[25] Nolan, *Pacific Basin Developing Countries*, pp. 32-33.

[26] U.S. Department of State, "Economic Trends Report for Taiwan."

[27] IMF, *Direction of Trade Statistics Yearbook*, 1992.

Foreign investment, in a variety of forms and from different sources, has played an important role in Taiwan's economic development. Japanese firms invested in Taiwan during its colonization in the early 1900s. During the 1950s, the chief source of capital inflow was concessional aid from the United States. In the 1960s, foreign investment, principally from the United States and Japan, played a role in the shift to labor-intensive export manufacturing. Nevertheless, foreign direct investment in the 1950s through the 1970s never amounted to more than 10 percent of total manufacturing investment.[28] Foreign investment surged during the 1980s, reflecting new investor confidence following the ending of martial law in 1987, expectation of further appreciation of the New Taiwan dollar, and the partial lifting of exchange controls.[29]

Overseas Chinese[30] accounted for roughly 29 percent of foreign direct investment in the 1960s and 1970s, but dropped to an average of 10 percent during 1981-88. Japan is the leading non-Chinese investor in Taiwan, accounting for approximately 32.7 percent of total approved foreign investment during 1951-91, compared with 30.2 percent for the United States and 17.4 percent for Europe.[31] In general, non-Chinese investment is concentrated in manufacturing, particularly the electronics industry.

Factors Affecting Integration

There are several important macroeconomic and policy-related factors to consider with regard to Taiwan's integration with other countries in East Asia. First, although Taiwan has made great progress in opening its economy to the world market, significant barriers to imports remain (figure 2-5). Agriculture and some manufacturing industries are still highly protected, and Taiwan maintains an import ban on 242 categories of products. Tariffs, an import licensing system, restrictive standards (particularly for agricultural products), and lack of intellectual property protection still hinder imports. Additionally, the state continues to play a dominant role in such sectors as power and telecommunications. Taiwan also maintains a "negative list" of industries not open to foreign investment.

These barriers pose an obstacle to closer economic integration with other countries in East Asia. Recent developments indicate, however, that Taiwan is likely to pursue trade and investment liberalization as part of its overall strategy for continued development and growth. Concern over falling levels of both domestic

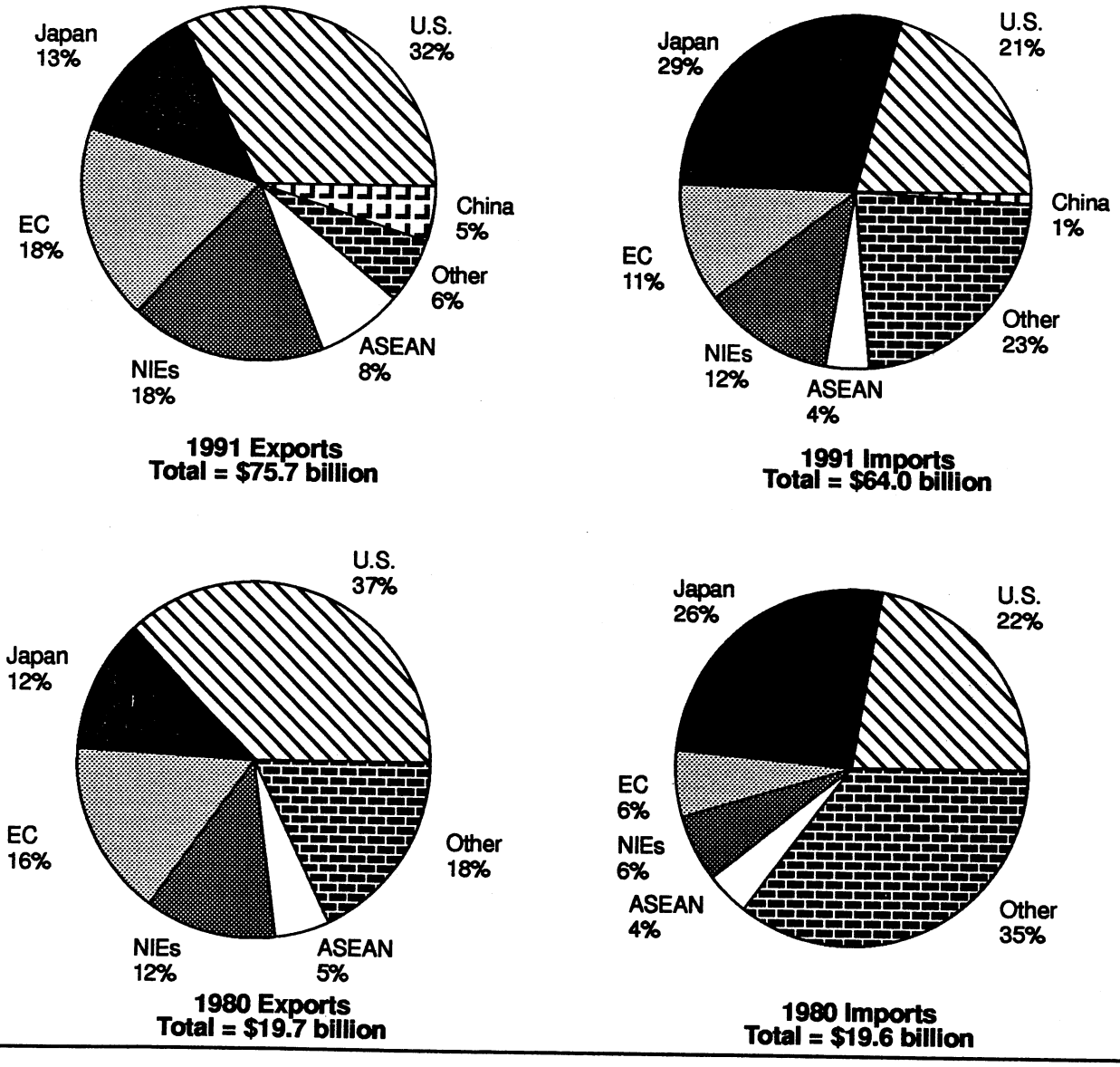
[28] Linda Y.C. Lim and Pang Eng Fong, *Foreign Direct Investment and Industrialisation in Malaysia, Singapore, Taiwan and Thailand* (Paris: OECD Development Centre, 1991), p. 64.

[29] Ibid., p. 66.

[30] Overseas Chinese are ethnic Chinese not residing in mainland China.

[31] Republic of China Ministry of Economic Affairs, *Statistics on Overseas Chinese and Foreign Investment—Technical Cooperation—Outward Investment—Outward Technical Cooperation*, Dec. 31, 1991.

Figure 2-4
Taiwan, exports and imports, by major markets, 1980 and 1991



Note.—NIEs include Korea, Hong Kong, and Singapore. ASEAN includes Brunei, Indonesia, the Philippines, Malaysia, and Thailand.

Source: IMF, *Direction of Trade Statistics Yearbook*, 1992.

and foreign investment has prompted Taiwan economic authorities to take steps to improve the investment climate. In May 1992, authorities streamlined the application procedure—drastically cutting the processing time for both inward and outward investment. Additionally, Taiwan authorities set aside approximately $10 billion in low-interest foreign currency loans to encourage local industries to acquire sophisticated foreign capital goods and technology.[32] Progress in lowering trade barriers is expected as Taiwan enters negotiations for accession to the General Agreement on Tariffs and Trade (GATT).[33]

Concern about isolation and a desire to cement its role in any future Asian trading arrangement have led Taiwan to quietly overcome many of the official obstacles to trade and investment with China. Representatives from China and Taiwan met in

[32] U.S. Department of State, "Economic Trends Report for Taiwan."

[33] U.S. Department of State, Washington, DC, "Revision of 1992 National Trade Estimate Report—Taipei," message reference No. 004245, Jan. 7, 1993

Figure 2-5
Taiwan, trade and investment environment

General

State role in the economy:

Taiwan is generally a market economy. However, state-run enterprises supply some one-third of the GDP, influencing prices for key commodities, including power, water, petroleum products, transportation, sugar, and steel. A 6-year economic plan (1991-96), aiming principally at infrastructure development, is in effect. Taiwan is also seeking membership in the GATT. Its request coincides with that of China.

Exchange rate policy:

Taiwan has a floating exchange rate system in which rates are set independently by bankers and customers. However, the largest banks authorized to manipulate foreign exchange rates are controlled by the authorities. Foreign exchange transactions related to trade in goods and services have been free since 1987. However, there are restrictions on non-trade-oriented inward and outward capital flows.

Intellectual property rights (IPR):

Since 1989, Taiwan has remained on the United States' "watch list" under the Special 301 section of the 1988 Omnibus Trade and Competitiveness Act. In 1992, Taiwan was placed on the "priority watch list." The signing of bilateral copyright agreement resulted in the removal of Taiwan from the list in June 1992. Taiwan has made other efforts to improve IPR protection, and the Government is considering revised versions of its patent, copyright, and trademark laws.

Foreign Trade

Tariffs:

In early 1989, Taiwan implemented a Trade Action Plan (TAP) intended to reduce its trade surplus with the United States. The TAP includes a 3-year schedule of tariff reductions, which was to lower the average nominal tariff rate to 8.1 percent on nonagricultural products by 1991. Agriculture and some manufacturing industries are still highly protected. In 1991, the average tariff rate on agricultural products was 23.2 percent; one-third of agricultural items have 40 to 50 percent rates. Duties on industrial products averaged 7.2 percent, but for automotive products, for example, they averaged 30 percent.

Import bans:

Taiwan maintains an import ban on 242 categories of products under the Harmonized System (HS) including weapons, drugs, and several agricultural items. Some agricultural items, including rice, peanuts, fresh potatoes, sugar, certain poultry and pork products are, in principle, subject to import licensing, but in reality are banned.

Import licensing:

In October 1992, 66 percent (5,990 HS categories) of total imports were exempt from import permits. The remaining categories are either banned or require import licenses. The process of obtaining import permits for agricultural items, medicines, and some cosmetic products remains complicated. In January 1993, the Legislative Yuan passed a measure that provides for replacing the import licensing system with a simplified "negative list" that would reduce the number of items subject to licensing. Local authorities were to draw up the list by mid-1993.

Export subsidies:

The China External Trade Development Council actively promotes exports by extending financing, reportedly below market rates, to Taiwanese companies. Exports of rice and sugar are indirectly subsidized through guaranteed purchase prices that are higher than world prices. A tax rebate system to imported components for re-export is gradually being phased out.

Figure 2-5—Continued
Taiwan, trade and investment environment

Foreign Trade—Continued

Government procurement:

All public enterprises and administrative agencies must procure locally if acceptable substitutes are available or if the cost of local procurement is not more than 5 percent higher than the import price. A 5 percent price preference is given to domestic bidders. Japanese companies are banned from tendering bids on major construction projects.

Foreign investment

Barriers:

In an attempt to upgrade Taiwan's industries, the authorities replaced the export-oriented "statute for encouraging investment" with a new "statute for upgrading industries." This new policy, effective in 1991, provides tax incentives for investment in R&D and high technology industries. Foreign investors are allowed to invest in all industries except in agriculture, power generation, petroleum refining, railroads, trucking, telecommunications, and defense-related industries.

Financial services:

There are restrictions on foreign investment in banking, insurance, publishing, and certain public utilities. A law enacted in January 1992 provides for the establishment of new domestic insurance companies and gives the Ministry of Finance the authority to liberalize market entry for foreign insurance companies. A law passed in June 1992 allows foreign brokerage firms to open branch offices for the purpose of futures trading, and new domestic insurance companies will be allowed to operate beginning in 1993.

Source: Office of the United States Trade Representative (USTR), *1993 National Trade Estimate Report on Foreign Trade Barriers,* 1993.

Singapore in April 1993 for their first set of serious discussions on political and economic issues since the 1940s, and more talks are expected to follow in the near future.[34] The same concern has also prompted Taiwan to become a member of the Asia-Pacific Economic Cooperation forum (APEC), together with China and Hong Kong, under the name Chinese Taipei.

Officials on Taiwan are not without some fear of economic domination by Japan, however. Recent concern over bilateral trade imbalances with Japan has prompted Taiwan authorities to take a more preferential approach to trade with the United States and the EC.[35]

[34] Jeremy Mark, "China, Taiwan Bury Hatchet to Hold Talks," *The Wall Street Journal,* April 27, 1993.

[35] U.S. Department of State, "EY Approves Temporary Tariff Revision for 37 Imports," message reference No. 07313, prepared by the American Institute in Taiwan, Taipei, Oct. 15, 1992; "Taiwan's Reaction to Break in Relations: Economic Actions," message reference No. 06095, prepared by the American Institute in Taiwan, Taipei, Aug. 26, 1992.

Hong Kong

Economic Strategy and Performance

Hong Kong is strategically located along international trade routes and possesses a fine natural harbor and an industrious labor force. Trade is the territory's lifeline. Hong Kong is devoid of natural resources and almost entirely dependent on imports to meet the raw material needs of its industries. Exports generate the foreign exchange to pay for these imports. Hong Kong's success has relied principally on encouraging foreign direct investment and free trade. Recent economic performance has been impressive, with real GDP growth averaging 6.5 percent during 1980-91.[36]

Hong Kong is undoubtedly one of the most laissez-faire economies in the world. The Government

[36] Asian Development Bank, *Key Indicators of Developing Asian and Pacific Countries, 1992.*

maintains no manufacturing operations, imposes few business regulations, and maintains virtually no controls on international trade (figure 2-6). The Government has largely limited its role to maintaining physical infrastructure, such as transportation, ports, and housing, and to providing social services, such as education and health care.

The principal challenge facing Hong Kong has been to shift from the production and export of labor-intensive products, such as textiles and apparel, to more capital- and skill-intensive goods, such as electronics. While the share of total exports occupied by textiles and apparel has remained relatively steady during the 1980s (39.7 percent in 1983 and 39.6 percent in 1988),[37] there has reportedly been a continual upgrading of goods within this sector to a higher value-added level. Most of Hong Kong's manufacturing activities, however, are still concentrated in light industries, such as electrical and electronic products, toys, and watches and clocks.[38]

China is currently Hong Kong's most important trading partner, reflecting the key role played by Hong Kong as a conduit for trade between China and the rest of the world (figure 2-7). Total two-way trade between Hong Kong and China amounted to an estimated $64 billion in 1991, compared with overall U.S.-Hong

[37] Hong Kong Census and Statistics Department, *Hong Kong in Figures, 1989 Edition*, Feb. 1989.

[38] U.S. Department of State, "1992 Hong Kong Investment Climate Statement," message reference No. 11314, prepared by U.S. Embassy, Hong Kong, Oct. 23, 1992.

Figure 2-6
Hong Kong, trade and investment environment

General

State role in the economy:

Hong Kong is one of the world's most open economies. Free market price-setting prevails, although Government-sanctioned monopolies control some aspects of telecommunications and aviation-related services. The Government encourages export diversification and increased imports from the United States.

Exchange rate policy:

There are no multiple exchange rates or foreign exchange controls. The Hong Kong dollar is fully convertible. To encourage stability, the Hong Kong dollar was linked with the U.S. dollar in 1983 at approximately 7.8 to 1, and continues at this rate today.

Intellectual property rights (IPR):

IPR protection in Hong Kong is among the strongest in the world and does not act as a barrier to trade and investment.

Foreign Trade

Trade barriers:

There are no import bans, import licensing requirements, export subsidies, or any barriers interfering with merchandise trade. No duties are levied on imports. Tobacco, cosmetics, liquors, methyl alcohol, and some hydrocarbons are taxable, whether the item is domestic or imported. There are some restrictions on the use of legal or medical foreign professional services.

Export controls:

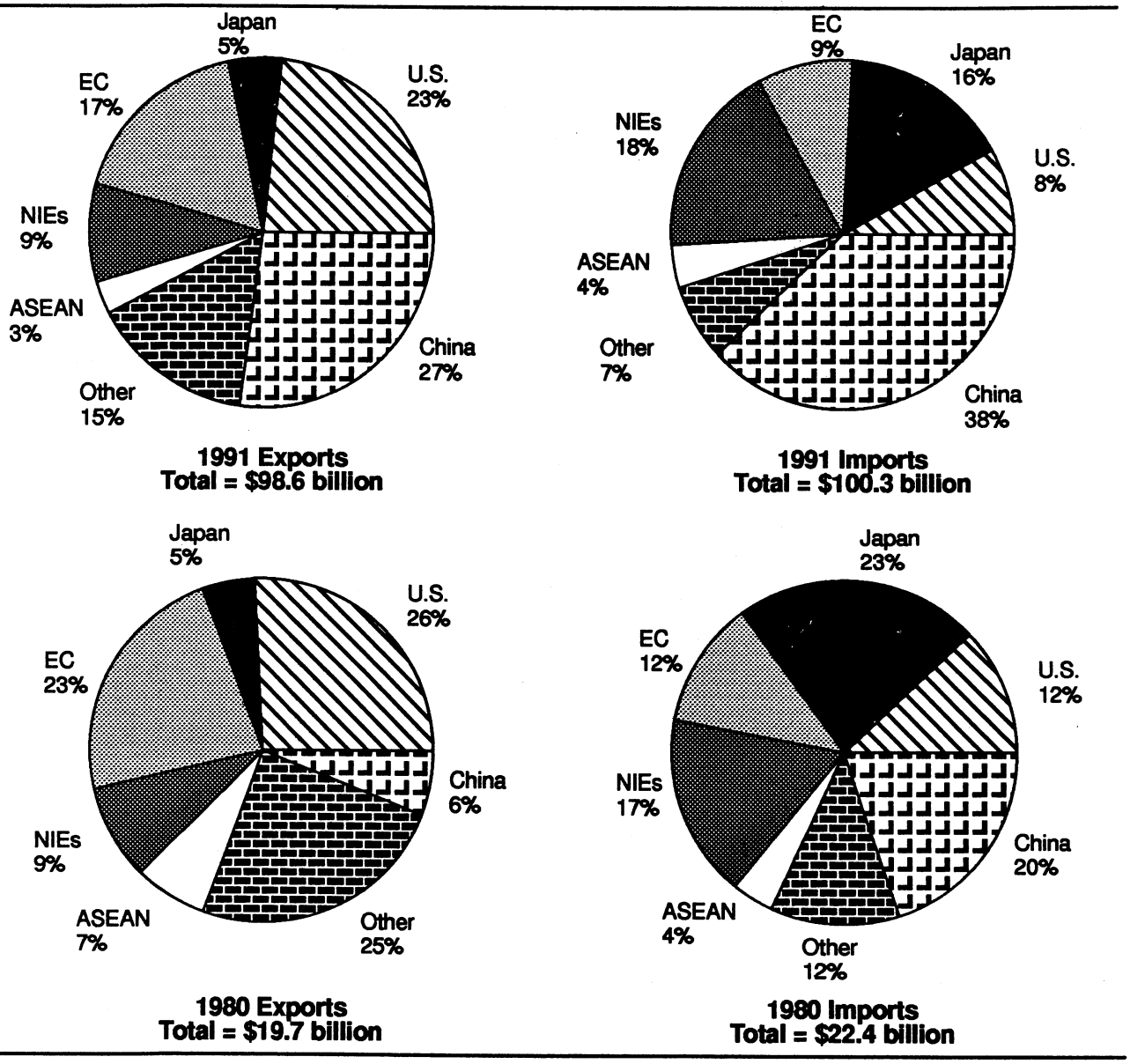
In accordance with its obligations to restrain exports of certain textiles and apparel under bilateral agreements, the Trade Department of Hong Kong administers an export control system.

Foreign Investment

Foreign investment is encouraged. Foreign and domestic companies are treated equally.

Source: Office of the United States Trade Representative (USTR), *1993 National Trade Estimate Report on Foreign Trade Barriers*, 1993.

Figure 2-7
Hong Kong, exports and imports, by major markets, 1980 and 1991



Note.—NIEs include Taiwan, Korea, and Singapore. ASEAN includes Brunei, Indonesia, Malaysia, the Philippines, and Thailand.

Source: IMF, *Direction of Trade Statistics Yearbook*, 1992.

Kong trade of $30 billion.[39] Commercial links have surged since China introduced economic liberalization and special economic zones in 1979, particularly with China's Guangdong Province. Estimated at $5.8 billion in 1991, commodity trade between Taiwan and China through Hong Kong has been increasing rapidly in recent years.[40]

Foreign direct investment has played a critical role in Hong Kong's development. Hong Kong welcomes foreign investment, and no official distinction is made between investments by foreign companies and those controlled by local interests.[41] Estimates on cumulative foreign direct investment in Hong Kong manufacturing place Japan as the leading investor in 1990, followed by the United States, China,

[39] Ibid. These data are consistent with trade figures reported by Hong Kong to the IMF.

[40] Ralph N. Clough, "Legislative Election in Taiwan May Pose Problems for United States and China," *Asia-Pacific Issues: Analysis From the East-West Center*, Honolulu: University of Hawaii, No. 3, Dec. 1992.

[41] Hong Kong Industry Department, as cited in U.S. Department of State, "1992 Hong Kong Investment Climate Statement."

and the United Kingdom.[42] Foreign corporations (especially from the United States and Japan) are reportedly attracted by Hong Kong's role as a future capitalist enclave within China.[43]

Factors Affecting Integration

Hong Kong is a major regional trade and financial center and plays a key role in East Asian banking, investment, shipping, and communications. The economic boundary between Hong Kong and China has already begun to disappear because of increasing trade and investment flows and economic reforms within China.[44] Hong Kong and China are now locked in a web of bilateral investments so tight that progress toward the union of the two countries, scheduled for 1997, is considered well under way.[45] Recent initiatives include the formation of a new investment consortium in Hong Kong, which includes business leaders from Hong Kong, Singapore, and Taiwan, and representatives of various Chinese ministries.[46] Nevertheless, uncertainty about Hong Kong's economic future after 1997 persists, making the question of closer integration with East Asia difficult to assess.

Singapore

Economic Strategy and Performance

Like Hong Kong and Taiwan, Singapore has few natural resources besides an excellent port and an industrious work force. Nevertheless, the city-state has developed into a key manufacturing and financial center in Southeast Asia and exerts considerable influence on regional economic issues. Singapore's economic performance has been especially strong during the past decade, with real GDP growing by an average of 7.0 percent during 1980-91.[47]

Shortly after gaining independence in 1959, Singapore launched a program of industrialization based on import substitution. This process was intensified during Singapore's 2-year federation with Malaysia (1963-65), but the policy soon proved infeasible because of the small size of Singapore's domestic market. After Singapore broke with Malaysia in 1965, trade liberalization measures were taken and export subsidies introduced to equalize incentives among different economic activities. The government of Prime Minister Lee Kuan Yew (1959-90) also played a major role in the development of Singapore's economy through the creation of an environment favorable to business and foreign investment, particularly through tough domestic labor laws and generous tax incentives for investors. Roughly 91 percent of imports enter Singapore duty-free, and the remaining 9 percent face duties of about 5 percent. The last remaining import quota was removed in 1988 (figure 2-8).

Trade is clearly the dominant force in Singapore's economy. In 1991, Singapore's total exports (including re-exports) amounted to $59.1 billion, or roughly 1.7 times its GDP. Singapore imported $66.3 billion worth of merchandise during that same year. Japan was Singapore's primary source of imports, whereas the United States constituted its largest single export market (figure 2-9).[48] Other NIEs have grown in importance as trading partners. Shipments to Hong Kong, Taiwan, and Korea increased from 3.1 percent of total exports in 1963 to 10.9 percent in 1980 and 13.1 percent in 1991. Imports from these countries climbed from 4.0 percent of the total in 1963 to 5.6 percent in 1980 and 9.9 percent in 1991.[49]

The Government of Singapore has played a major role in the nation's development. Since the 1960s, the challenge has been to promote the transition from an economy based solely on entrepot trade to one based on manufacturing, finance, and export of domestically produced goods. Foreign investment has been key in providing sophisticated technology and managerial expertise. Labor law revisions, tax incentives, and other measures were designed to promote inward direct investment. As a result, the foreign presence in Singapore has grown steadily since the 1960s. This is especially the case in manufacturing, where foreign firms regularly account for more than 80 percent of net investment. According to data provided by the Singapore Economic Development Board, the United States had the largest direct investment position in Singapore's manufacturing sector in 1990, accounting for roughly 32.7 percent of the total. Japan followed with 31.5 percent, and the EC with 27.9 percent.[50]

[42] Ibid.

[43] Bela Balassa and John Williamson, *Adjusting to Success: Balance of Payments Policy in the East Asian NICs*, IIE, Washington, DC, Apr. 1990, p. 31.

[44] U.S. Department of State, "China Resources Holdings Report Concludes Economic Border Between China and Hong Kong Disappearing," message reference No. 11758, prepared by U.S. Embassy, Hong Kong, Nov. 5, 1992.

[45] John Frankenstein, "China's Asian Trade," in *China's Economic Dilemmas in the 1990s: The Problems of Reforms, Modernization, and Interdependence*, study papers submitted to the Joint Economic Committee, U.S. Congress, vol. 2, Apr. 1991

[46] U.S. Department of State, "New Investment Consortium in Hong Kong: State Council's Hong Kong and Macao Affairs Office to Coordinate PRC Participation," message reference No. 10897, prepared by U.S. Embassy, Hong Kong, Oct. 9, 1992.

[47] Asian Development Bank, *Key Indicators of Developing Asian and Pacific Countries, 1992*.

[48] U.S. Department of State, "Investment Climate Statement—Singapore 1992," message reference No. 10017, prepared by U.S. Embassy, Singapore, Nov. 25, 1992

[49] IMF, *Direction of Trade Statistics Yearbook*, 1992.

[50] U.S. Department of State, "Investment Climate Statement—Singapore 1992."

Figure 2-8
Singapore, trade and investment environment

General

State role in the economy:

Economic policy is outward-looking and export-oriented. The trade and investment environment is open; the regulatory framework is pro-business. The state has played a major role in creating a pro-business environment, particularly through labor laws and investment incentives.

Exchange rate policy:

The Singapore dollar is freely convertible. There are no exchange rate controls and no restrictions on inward or outward remittances. The Singapore dollar has consistently appreciated against the U.S. dollar in the past few years, threatening the competitiveness of Singapore's exports, but making imports from the United States cheaper.

Intellectual property rights (IPR):

Singapore's IPR protection is improving. Comprehensive copyright legislation was enacted in 1987 and a new trademark law was enacted in 1991. While IPR legislation is now generally adequate, IPR enforcement, especially the wide availability of "copy watches," pirated software, and "copycat" drugs, remains a concern.

Foreign Trade

Tariffs:

About 95 percent of imports enter duty-free. However, Singapore currently maintains tariff bindings on less than 1 percent of its tariff lines, in comparison with the United States, which has bound 98 percent of its tariff lines. Some items, such as tobacco, alcoholic beverages, and petroleum products, are dutiable. Notable is a 45 percent duty on automobile imports.

Other import barriers:

Other import barriers are virtually nonexistent: no import licenses are required, customs procedures are minimal, and the standards code is reasonable.

Service barriers:

Local certification of professional service providers (lawyers, doctors, architects, etc.) is restricted, and foreign banks do not enjoy full-market access. Foreign law firms can set up offices in Singapore only to advise clients on U.S. or international law. The Government of Singapore has determined that the local insurance market is saturated, resulting in a de facto ban on the issuance of new licenses for foreign and domestic firms seeking access to Singapore's insurance market. Foreign penetration of the Singapore banking system is high compared to most countries, but the Government does impose some restrictions.

Export Subsidies:

The Government offers tax incentives to exporters and reimburses certain trade promotion costs. There are no other major policy tools to subsidize exports. Singapore is not a signatory of the GATT subsidies code. In the Uruguay Round, Singapore argued that the use of subsidies was a "sovereign prerogative."

Foreign Investment

Incentives:

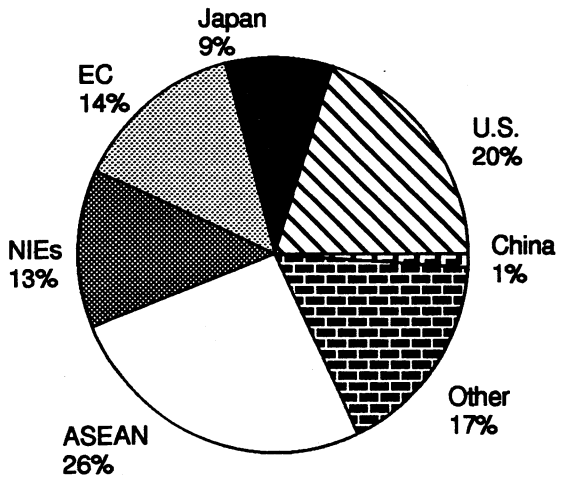
All foreign investment is screened by the Economic Development Board (EDB). The EDB grants numerous tax incentives to attract foreign investment, almost always in the area of export industries.

Barriers:

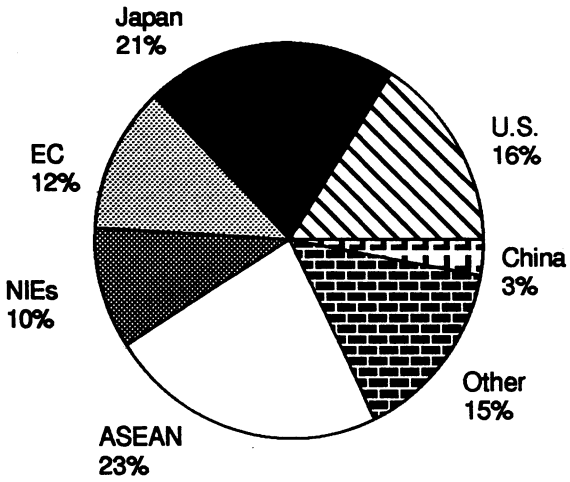
Barriers exist mostly in the service area. In banking and financial services, national treatment of foreign firms is denied. Although foreign presence in this area is high, foreign banks cannot open new branches or freely relocate existing ones. Foreign insurance companies are also admitted selectively, and there have been no new entrants for several years. Domestic professionals are discouraged from working for foreign service providers.

Source: Office of the United States Trade Representative (USTR), *1993 National Trade Estimate Report on Foreign Trade Barriers,* 1993.

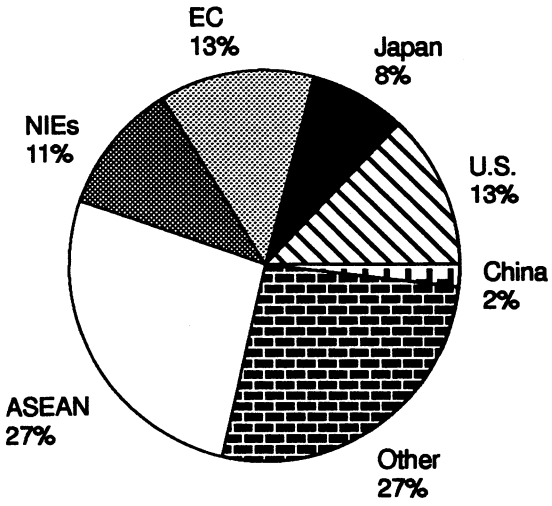
Figure 2-9
Singapore, exports and imports, by major markets, 1980 and 1991



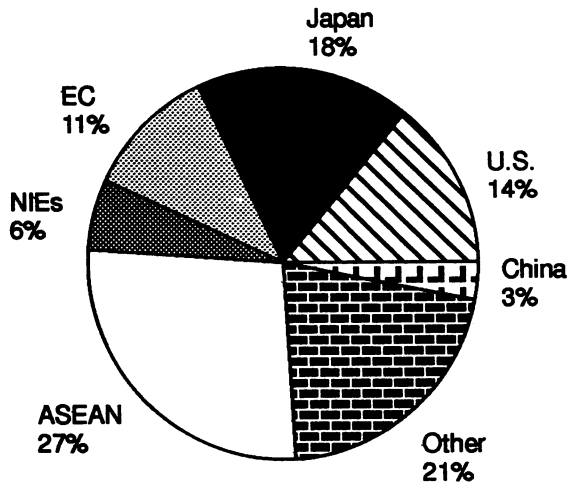
1991 Exports
Total = $59.2 billion



1991 Imports
Total = $66.3 billion



1980 Exports
Total = $19.4 billion



1980 Imports
Total = $24.0 billion

Note.—NIEs include Taiwan, Korea, and Hong Kong. ASEAN includes Brunei, Indonesia, Malaysia, the Philippines, and Thailand.

Source: IMF, *Direction of Trade Statistics Yearbook*, 1992.

Foreign investment will continue to play a major role in Singapore's economy as the nation works to upgrade its industrial structure in the face of rising relative labor costs.

Factors Affecting Integration

Singapore has been an active supporter of both regional and subregional integration schemes, but only insofar as these arrangements are nonexclusive. Singapore has shown evidence of being a firm supporter of the multilateral approach to economic liberalization as seen in the GATT. Notably, Senior Minister Lee Kuan Yew recently expressed strong criticism of NAFTA as detrimental to the economies of Southeast Asia.[51] Singapore officials have expressed concern that NAFTA could cause a diversion of investment flows away from Southeast Asian countries to Mexico.

Because of its relatively high income and low barriers to trade and investment, Singapore has been an advocate of using regional integration schemes to lower—rather than raise—barriers to the outside. Singapore is an active proponent of the ASEAN Free Trade Area (AFTA), and has been the principal force behind the formation of the Singapore-Johor-Riau growth triangle (SIJORI), whose goals include promoting new trade and inward investment rather than erecting outward barriers.[52] Singapore's aggressive promotion of the growth triangle is a first step in its plan to move Singapore firmly into the ranks of the developed countries by wisely investing in labor-intensive manufacturing abroad, and billing Singapore as an ideal location for multinationals to establish regional headquarters.

The East Asian Developing Economies

The developing economies of East Asia have made remarkable progress in terms of growth and economic liberalization in recent years. Although these countries had fairly extensive experience with import substitution strategies, each has made a transition to a greater outward orientation. Trade has come to occupy an increasingly large share of GDP for these countries, and foreign investment (particularly from Japan and the NIEs) has played a significant role in industrialization. However, all of these countries still maintain relatively complex barriers to trade and investment. The continued presence of state-owned corporations is a major obstacle to further reform. The poor infrastructure in many of these countries also could impede foreign investment, threatening the pace of economic growth and prospects for further integration.

[51] U.S. Department of State, "Economic News From Singapore—November 1992," message reference No. 10377, prepared by U.S. Embassy, Singapore, Dec. 8, 1992.

[52] AFTA is discussed in greater detail in ch. 4 of this report. The Singapore-Johor-Riau growth triangle is examined more fully in ch. 3.

Indonesia

Economic Strategy and Performance

The Indonesian archipelago contains approximately 13,500 islands and has the world's fourth largest population. Indonesia was colonized by the Portuguese in the 16th century, conquered by the Dutch in the 17th century, and occupied for a brief period by the Japanese during World War II. The archipelago is rich in natural resources, including substantial deposits of oil and gas, rubber, and tin. As a colony, Indonesia's economy was based on the production and export of these resources, along with such cash crops as tobacco and coffee. Many of Indonesia's efforts at economic development since gaining independence in 1949 have been directed at reducing its reliance on such primary goods.

Indonesia's initial post-independence strategy for economic development, largely under the control of then President Sukarno, revolved around the rapid development of heavy industry under a highly statist program. Foreign enterprises were nationalized and new state-run companies were established to implement Sukarno's plan. Although this strategy was initially successful in rebuilding the industrial capacity lost during the World War II, the program began to falter after 1959. Poor economic performance and falling per capita income was eventually followed by political instability and an attempted coup in 1965. With the economy at the brink of collapse, Sukarno was replaced with Major General Suharto, who has served as president since 1966.

Several significant changes have been made to Indonesia's strategy for economic development under Suharto, but much of the statist economic structure remains intact. Suharto has worked to reshape the Indonesian economy through a series of 5-year plans. The latest of these plans, Repelita V (1989-93), emphasizes private sector development of nonoil industries.[53] Reversing the trend set by his predecessor, Suharto adopted a favorable attitude toward foreign direct investment and encouraged private activities. However, Suharto also maintained protective policies that led to an inefficient domestic industrial structure and a slowdown in growth by the late 1970s, when the possibilities for import substitution[54] began to run out.[55]

[53] Balassa, *Economic Policies in the Pacific Area Developing Countries*, p. 122.

[54] In Indonesia and most other developing economies in Southeast Asia, import substitution was successful in increasing industrial output in the short-term, but after that the rate of growth was limited to the growth in internal demand.

[55] Ibid.

The slowdown led planners to place greater emphasis on exports. Beginning in 1978, export subsidies were granted to offset tariffs and taxes on imported inputs and, in 1983, export-import procedures were simplified. Subsequent years have seen an accelerating trend toward trade and investment liberalization. From 1987 to 1992, yearly deregulation packages have sought to reduce overall tariff levels, simplify the tariff structure, remove import restrictions for export-oriented manufacturing, replace nontariff barriers with more transparent tariffs, and encourage foreign and domestic private investment (figure 2-10).[56]

Suharto's liberalization programs have been rewarded with strong economic performance. Private sector investment has surged, with foreign investment approvals reaching a record $10 billion in 1992. Real GDP growth averaged just over 5.8 percent between 1983 and 1990, and Indonesia's exports have both grown and diversified. Total Indonesian exports grew from $21.9 billion in 1980 to $29.1 billion in 1991, an increase of roughly 33 percent. In comparison, Indonesia's total imports jumped by 138.7 percent, from $10.8 billion to $25.9 billion during the same period.[57] Overall, exports of goods and nonfactor services[58] as a share of GDP rose from 5.5 percent in 1965 to 33.0 percent in 1980, and then declined to 25.9 percent in 1990. Imports showed a similar pattern, rising from 5.9 percent of GDP in 1965 to 24.0 percent in 1980, and then dropping slightly to 23.1 percent in 1990.[59]

The structure of Indonesia's economy has also changed. As recently as 1986, the oil and gas sector (including refining) contributed roughly 14 percent of GDP, 56 percent of export earnings, and 39 percent of Government domestic revenues. In 1992, despite higher oil prices, oil and gas accounted for 12 percent of GDP, 30 percent of exports, and 32 percent of revenues. Nonoil manufacturing is currently the leading growth sector, averaging about 11 percent annual growth, with an estimated 17 percent share of GDP. The most important export-related manufactures have included textiles and garments, footwear, and plywood.[60]

Indonesia's direction of trade has also shifted over the past three decades. Between 1963 and 1980, Western Europe and the United States were replaced by Japan as the leading source of imports. By 1991, Japan accounted for roughly 24 percent of Indonesia's total imports, compared with a 31 percent share for the EC and the United States combined (figure 2-11). Exports also showed a dramatic shift, with Japan's share of Indonesia's exports climbing from 8.5 percent in 1963 to a high point of 50.1 percent in 1982, and then dropping to 36.9 percent in 1991.[61] Trade with the East Asian NIEs has also increased considerably, while the importance of other ASEAN members as trading partners has declined.

Foreign investment has become increasingly important to the Indonesian economy. Most foreign investment in Indonesia must be in the form of a joint venture, generally with a minimum of 20 percent Indonesian equity, which should increase to 51 percent within 20 years. Recently, however, these regulations have changed to permit 100 percent foreign equity with relaxed divestiture requirements in certain export-related sectors.[62] Japan has shown particular interest in Indonesia as a site for investment. According to statistics provided by the Japanese Ministry of Finance, Japan's cumulative direct investment flows to Indonesia between 1967 and March 1992 were $12.7 billion, making Indonesia the leading East Asian recipient. In terms of annual flows, the NIEs have also been among the top investors in recent years. The United States, while maintaining a strong position in terms of cumulative direct investment in Indonesia (particularly in the oil sector) was relegated to sixth place in terms of direct investment flows in 1991, behind Taiwan, Japan, Singapore, Korea, and Hong Kong.[63] Japan and the NIEs have reportedly been the major sources of export-oriented investments in recent years (76 percent in 1986-89, according to one estimate).[64] This phenomenon is at least partly due to "push" factors in Japan and the NIEs such as currency appreciation and rising labor costs, but is also due to such "pull" factors as Indonesia's shift toward manufactured exports.[65]

Factors Affecting Integration

Indonesia has made some progress in liberalizing its trade and investment regimes in recent years, but its economy is still far from open. Additionally, after 5 years of dismantling market barriers, Indonesian

[56] U.S. Department of State, Washington, DC, "Revision of 1992 National Trade Estimate," message reference No. 408668, Dec. 19, 1992.

[57] IMF, *Direction of Trade Statistics Yearbook*, 1992.

[58] Exports/imports of goods and nonfactor services consists of transactions of residents of a given country with the rest of the world, and covers insurance, merchandise, transportation, travel, and other nonfactor services such as government transactions and various fees but excludes dividends, interest, and other investment income receipts or payments, as well as labor income.

[59] World Bank, *World Tables 1992*.

[60] U.S. Department of State, "Foreign Economic Trends Report for Indonesia," message reference No. 15477, prepared by U.S. Embassy, Jakarta, Dec. 17, 1992.

[61] IMF, *Direction of Trade Statistics Yearbook*, 1992.

[62] U.S. Department of State, "1992 Investment Climate Statement: Indonesia," message reference No. 15620, prepared by U.S. Embassy, Jakarta, Dec. 21, 1992.

[63] Based on figures from Indonesia Financial Statistics, Indonesia Investment Coordinations Board.

[64] Mari Pangestu, "Foreign Firms and Structural Change in Indonesia," in Eric D. Ramstetter, ed., *Direct Foreign Investment in Asia's Developing Economies and Structural Change in the Asia-Pacific Region* (Boulder, CO: Westview, 1991), p. 56.

[65] Ibid., p. 57.

Figure 2-10
Indonesia, trade and investment environment

General

State role in the economy:

The Government controls the oil industry through Pertamina, the state-run oil and gas company. State enterprises hold dominant positions in oil refining, petrochemicals, fertilizers, steel, aluminum, cement, basic chemicals, capital-goods manufacturing, and ship-building. In most other industries, the Government generally refrains from direct intervention, but has established floor and ceiling prices for certain food items (e.g., rice) and has prohibited exports of goods in short supply.

Exchange rate policy:

Indonesia does not use any foreign exchange restrictions.

Intellectual property rights (IPR):

Though its IPR laws are improving, Indonesia remains on the USTR's Special 301 "watch list" under the provisions of the 1988 Omnibus Trade and Competitiveness Act. An improved trademark law was passed in August 1992 and is expected to provide a legal basis for protection of service and collective marks by April 1, 1993. Indonesia's first patent law came into effect in August 1991. Concerns about the new law remain, including a relatively short term of protection (14 to 16 years), and noncoverage of specific products, such as food and drink products and processes, biotechnology, and integrated circuits.

Foreign Trade

Tariffs:

Tariffs range from 0 percent (raw materials) to 200 percent (sedans and station wagons). Indonesia also imposes 5 to 35 percent surcharges on 255 items (including food, steel, chemical, and pharmaceutical items).

Quotas and licenses

Strict quotas restrict the importation of certain fruits and vegetables, meats, confectionery items, and alcoholic beverages. Licensing requirements remain for some agricultural commodities, alcoholic beverages, and iron and steel products.

Distribution:

While wholesale distribution is permitted by joint ventures, retail distribution is closed to foreign investors. Furthermore, in several industries, foreign companies are allowed to choose only a single agent to cover the entire country.

Government procurement:

International competitive bidding practices are followed for most large projects. However, bidding firms are often required to offer concessional financing. Foreign bidders may also be required to purchase and export Indonesian goods equivalent to the contract amount. Government procurement regulations favor locally produced goods and services by a price margin of 15 percent.

Foreign Investment

Foreign ownership:

A May 1992 Investment Regulation permits 100 percent foreign equity in three types of new investments: (1) projects worth at least $50 million; (2) projects located in one of Indonesia's 14 less developed provinces, with divestiture to a maximum of 80 percent foreign ownership within 20 years; and (3) projects in bonded zones that will export 100 percent of production, but must be divested to 95 percent within 5 years. For other industries, foreign investment is limited to joint ventures, usually with a minimum foreign investment of $1 million and a maximum foreign stake of 80 percent to be divested over 20 years to no more than 49 percent ownership. Foreigners are not allowed to own land. The Capital Investment Coordinating Board is responsible for approving all investment in Indonesia. Its chairman has announced plans to reduce the number of sectors closed to foreign investment.

Figure 2-10
Indonesia, trade and investment environment

Foreign Investment—Continued

Repatriation of profits:

Indonesia has a long-standing policy of free repatriation of profits, royalties, fees, loan principal and interest, and costs associated with expatriate workers.

Service barriers:

Service trade barriers exist in most sectors. Indonesia has begun to loosen restrictions in the financial sector, allowing foreign banks, security firms, and insurance companies to form joint ventures with local firms. However, these joint ventures are subjected to much higher capitalization requirements than domestic firms. Indonesia strictly limits the practice of foreign lawyers, accountants, advertisers, and express delivery firms. A quota limits the number of foreign films that can be distributed within Indonesia. In addition, films can be imported only by a restricted number of local firms. However, a Government decree that will increase the number of companies permitted to import U.S. films and videos is expected to be implemented in early 1993.

Source: Office of the United States Trade Representative (USTR), *1993 National Trade Estimate Report on Foreign Trade Barriers*, 1993.

reformers are encountering increased resistance.[66] Large state-owned corporations are linked to Indonesia's politico-military regime, and efforts to expose these industries to market forces may thus be hampered. The most recent package of reforms (announced July 1992), for example, lowered tariffs, removed some nontariff barriers, eased land-use regulations and restrictions on foreign workers, but did not include badly needed measures to liberalize the automobile industry or break up Government monopolies on commodities, such as soybeans.[67]

Failure to make genuine progress on liberalizing key sectors could act as an obstacle to closer economic integration with the rest of Asia. In recent negotiations for the finalization of the ASEAN Free Trade Area (AFTA),[68] Indonesia announced that it would place 20 percent of the relevant tariff items on its exclusion list and gave no indication as to what measures will be taken to comply with the agreement's requirement that quantitative restrictions and nontariff barriers be eliminated within 15 years.[69]

The recent investment surge by Japan and the NIEs has overwhelmed the nation's relatively underdeveloped power, transportation, communications, and waste management facilities. Failure to address these problems could result in a slowdown in foreign direct investment flows, particularly as Indonesia already faces stiff competition for capital.

The official Indonesian reaction to NAFTA has been relatively subdued, although the prospect has reportedly induced some to call for a greater commitment to regional integration schemes and to improved efficiency of Indonesian companies.[70] NAFTA has, however, resulted in increased Indonesian attention to Mexico. Trade between the two countries has grown steadily over the past 3 years, and a few Indonesian companies already have investments in Mexico. Reportedly, both Indonesian and Mexican officials expect trade and investment ties to increase even further.[71]

Thailand

Economic Strategy and Performance

Thailand was the only nation of Southeast Asia to avoid colonization. Although Thailand has some coal, oil, natural gas, and tin, its most important natural resource has been its rich agricultural land. Government policy in the postwar era, however, has clearly placed emphasis on manufacturing. During the past four decades, Thailand has experimented with both import substitution and export promotion

[66] Adam Schwarz, "Biting the Bullet: Indonesian Technocrats Urge Faster Pace of Economic Reform," *Far Eastern Economic Review*, July 23, 1992, p. 34.

[67] Ibid. Notably, however, the reform package did lift the monopoly on steel imports, originally erected to protect state-owned PT Krakatau Steel.

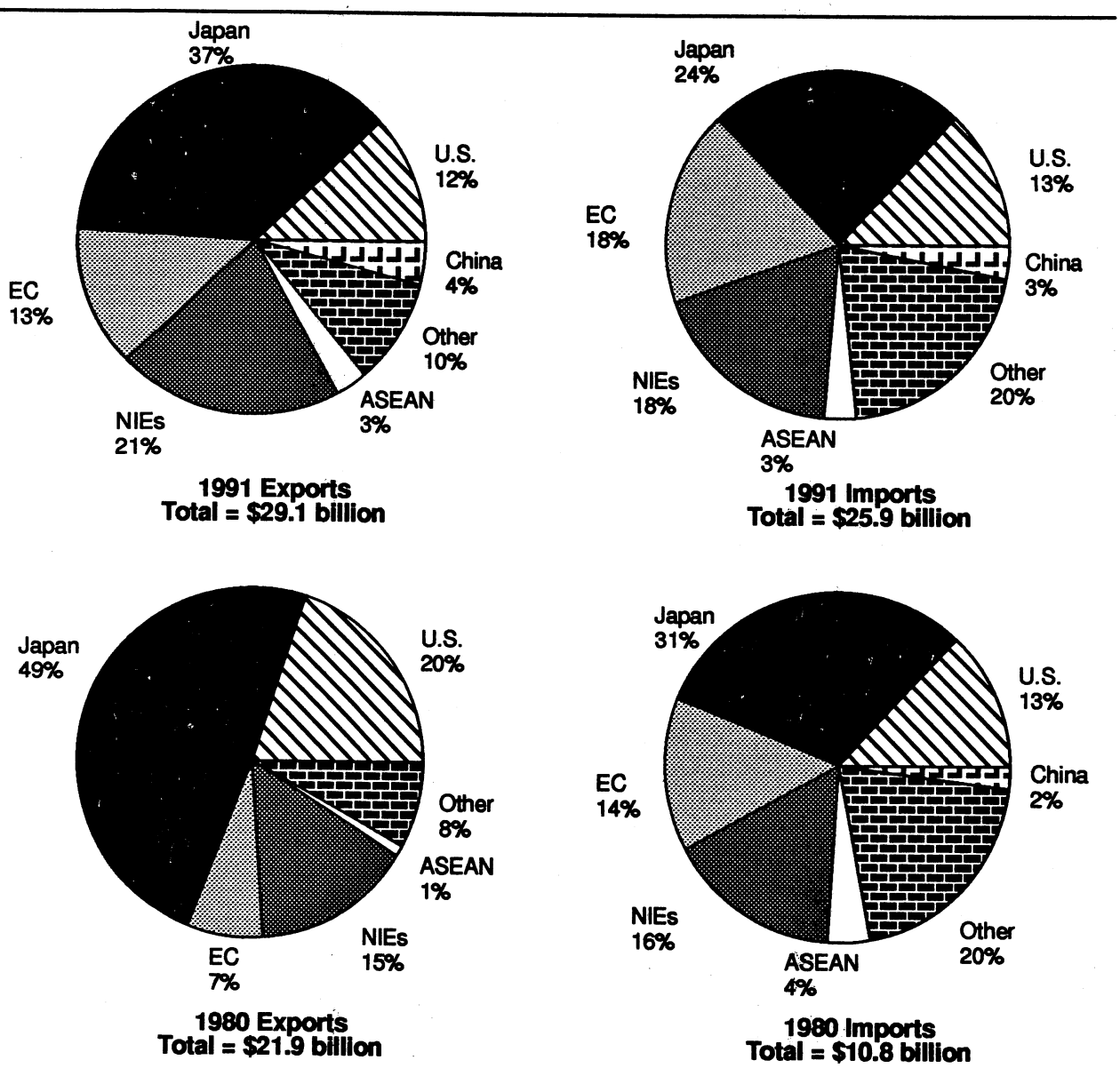
[68] AFTA is discussed in greater detail in ch. 4 of this report.

[69] U.S. Department of State, "Indonesia Gears Up for AFTA," message reference No. 15765, prepared by U.S. Embassy, Jakarta, Dec. 24, 1992.

[70] U.S. Department of State, "Indonesian Response to NAFTA Fairly Calm," message reference No. 10821, prepared by U.S. Embassy, Jakarta, Aug. 26, 1992.

[71] U.S. Department of State, "Indonesia Concerned, but Not Hysterical, About NAFTA," message reference No. 12408, prepared by U.S. Embassy, Jakarta, Sept. 30, 1992.

Figure 2-11
Indonesia, exports and imports, by major markets, 1980 and 1991



Note.—NIEs include Taiwan, Korea, Hong Kong, and Singapore. ASEAN includes Brunei, Malaysia, the Philippines, and Thailand.

Source: IMF, *Direction of Trade Statistics Yearbook*, 1992.

strategies. The overall result has been rapid economic development, with real GDP growth averaging 7.8 percent during 1980-90.[72] Although the investment regime is relatively open, significant trade barriers remain.

Thailand's manufacturing sector received its first real boost shortly after the end of World War II, when the government of Field Marshall Luang Pibulsonggram created a variety of state-owned enterprises to produce cement, paper, sugar, tobacco, and a number of other consumer products. Because of poor management and corruption, however, most of these enterprises failed, and by the mid-1950s emphasis had begun to shift to encouraging private manufacturing activities. This trend received further

[72] U.S. Department of State, "Investment Climate Statement—Thailand," message reference No. 43798, prepared by U.S. Embassy, Bangkok, Sept. 28, 1992. Figure for GDP growth based on data from Asian Development Bank, *Key Indicators of Developing Asian and Pacific Countries, 1992*.

impetus under the government of Field Marshall Sarit Thanarat. Fiscal incentives to promote capital-intensive manufacturing activities were combined with substantial trade protection as part of an import substitution strategy. This program boosted the share of manufacturing in total output, but because the protected industries were not very efficient, the entire strategy was largely supported by continued exports of primary products.[73]

Impressed with the performance of the export-oriented NIEs, the Thai Government in the 1970s adjusted its strategy to place more emphasis on promoting manufactured exports. Under the Third National Economic and Social Development Plan (1972-76), tax exemptions on imported inputs were granted to producers of manufactured exports, and a committee was established to coordinate export incentives. The export promotion policy was expanded under the Fourth (1977-81) and Fifth (1982-85) National Economic and Social Development Plans.[74]

Import liberalization has been a very recent phenomenon. During the past 2 years, the Thai Government has overhauled the country's import tax regime and eliminated a number of trade-related investment measures. In October 1990, duties on most types of machinery were reduced from between 30 and 40 percent to 5 percent. In July 1991, similar reductions were made on duties for imported computers and computer components, as well as for automobiles and auto parts. The Thai Government announced plans to lower some duties on steel and chemical products beginning January 1, 1993 (figure 2-12).[75]

Statistics on Thailand's export structure clearly reflect the Government's efforts to increase manufacturing activity and encourage exports. Exports as a share of GDP have climbed from 18.3 percent in 1965 to 24.3 percent in 1980 to an estimated 37.6 percent share in 1990. Imports also showed an impressive climb over the same period, increasing from 19.5 percent in 1965 to 30.6 percent in 1980 and 40.8 percent in 1990.[76] The share of total exports occupied by nonfuel primary products dropped from 96.5 percent in 1963 to 71.8 percent in 1980 to a record low of 34.9 percent in 1990. This decrease in primary product exports was accompanied by a surge in manufactured goods exports—from 1.8 percent of the total in 1963 to 28.1 percent in 1980 to 64.3 percent in 1990.[77]

Thailand's most important export markets in 1991 were the United States and Japan, accounting for 21.6 percent and 18.3 percent, respectively, of total Thai exports for that year (figure 2-13). This compares with a 12.7 percent share for the United States and a 15.1 percent share for Japan in 1980. The United States' share of total Thai imports dropped from 14.5 percent to 10.7 percent during the same period, while Japan's share increased from 21.2 percent to 28.8 percent. The NIEs' share of Thai exports declined between 1963 and 1980, dropping from 19.4 percent to 14.9 percent of the total, but recovered slightly to a 15.8 percent share in 1991. Imports from the NIEs surged over the past three decades, however, rising from 6.1 percent of total Thai imports in 1963 to 11.7 percent in 1980 and 20.3 percent in 1991. The other members of the ASEAN 4 (Malaysia, Indonesia, and the Philippines) declined as export markets during the same period, dropping from 15.9 percent of total Thai exports in 1963 to 8.6 percent in 1980 and 3.1 percent in 1991. Imports from these countries, as a share of total imports, also declined.[78]

Thailand encourages foreign direct investment, but specifies under the Alien Business Law and the Alien Occupation Law the sectors and occupations in which foreigners are permitted to invest.[79] Between 1970 and 1986, the United States was the most important source of annual investment inflow, with approximately 30 percent of total investment. Japan was the second most important investor, with roughly 25 percent.[80] Since 1986, foreign investment in Thailand has increased considerably, with the biggest surge coming from Japan and other East Asian countries. Investment proposals involving Japanese ownership (many figure in joint ventures with Thai partners) more than tripled between 1987 and 1988.[81] On the basis of annual net flows of foreign investment, Japan was the leading investor in Thailand between 1986 and 1991. Other important investors during this period were Hong Kong, Taiwan, and the United States.[82] Most new Japanese projects are export-oriented ventures in industries such as electrical appliances, machinery, transportation equipment, food processing, and chemicals. Japanese firms supplying parts and components to the Japanese automobile and electrical appliance industries are also investing in Thailand to remain competitive.[83] Much the same pattern can be seen with regard to traditional labor-intensive industries from Taiwan and Hong Kong.

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[73] Nolan, *Pacific Basin Developing Countries*, p. 69.
[74] Ibid., p. 70.
[75] U.S. Department of State, "Revision of 1992 National Trade Estimate Report—Bangkok," message reference No. 408763, prepared by U.S. Embassy, Bangkok, Dec. 19, 1992.
[76] IMF, *Direction of Trade Statistics Yearbook*, 1992.
[77] World Bank, *World Tables, 1992*.
[78] IMF, *Direction of Trade Statistics Yearbook*, 1992.
[79] Lim and Pang, *Foreign Direct Investment and Industrialisation*, p. 47.
[80] U.S. Department of State, "Investment Climate Statement—Thailand."
[81] Lim and Pang, *Foreign Direct Investment and Industrialisation*, p. 49.
[82] U.S. Department of State, "USITC Investigation on Economic Integration in East Asia," message reference No. 46562, prepared by U.S. Embassy, Bangkok, Oct. 19, 1992
[83] Pasuk Phongpaichit, "Decision-Making on Overseas Direct Investment by Japanese Small and Medium Industries in ASEAN and the Asian NICs," *ASEAN Economic Bulletin*, Mar. 1988.

Figure 2-12
Thailand, trade and investment environment

General

State role in the economy:

Although the state was involved in setting up manufacturing facilities in earlier decades, its role has more recently focused on creating a favorable business climate and promoting exports. Recent Thai Governments have advocated privatization of selected state enterprises, such as utilities and the national airline. A private vendor under Government contract recently expanded the phone system. The Government has passed legislation to allow private companies to manage new power plants and is considering private management of ports and toll roads. The Thai Government has traditionally been the most important source of employment for educated Thais.

Exchange rate policies:

Since May 1990, Thailand has reduced its restrictions on international transactions. It raised the ceiling on money transfers and on foreign spending by Thai businesspersons and tourists. It has also simplified foreign exchange reporting requirements, and allowed banks to offer foreign currency accounts.

Intellectual property rights (IPR):

Though Thailand has made recent improvements in its IPR enforcement, it remains listed on the USTR's Special 301 "priority watch list" under the provisions of the 1988 Omnibus Trade and Competitiveness Act. In February 1992, the Parliament passed changes in the patent law that would increase the length of protection to 20 years and would extend protection to include food and beverages, pharmaceuticals, and agricultural machinery. However, the law does not provide protection for existing patented products that have not yet been marketed in Thailand and contains broad authority to issue compulsory licenses, which could effectively result in establishing local manufacturing requirements. Thailand's trademark law was amended in September 1991 to increase penalties for infringement and to add protection for service, certificate, and collective marks. Piracy of American books, records, cassettes, and movies remains extensive in spite of recent enforcement efforts.

Foreign Trade

Tariffs:

Thailand's Government imposes tariffs that range from 0 to 100 percent on imported goods; tariffs account for over 20 percent of the Thai Government's revenue. Thailand's average tariff level was estimated at 8.5 percent in fiscal year 1992. Tariff levels are extremely unpredictable, in part because only 12.2 percent of the duty levels are "bound," and in part because of an arbitrary customs valuation system. The Thai Government is planning a broad reduction of tariffs in 1993 in line with the AFTA.

The Government recently liberalized its import regime by reducing duties on most types of machinery, computers, and automobiles. The Government also announced plans to lower duties on certain steel and chemical products in January 1993. The Government has also been considering reforms to the customs system and the adoption of a simplified, three-tier tariff system: 0 to 5 percent for raw materials, 10 percent for intermediate goods, and 20 percent for finished goods.

Import licensing:

Ministry of Commerce licensing requirements remain for certain raw material, petroleum, industrial, textile, and agricultural products. In the food products area, import licensing requirements remain for soybeans, powdered milk, fresh citrus fruit, fresh potatoes, and coffee. Import licensing was removed for a number of items (mainly machinery and paper products) in 1992.

Export subsidies:

Thailand is not a signatory to the GATT subsidies code and maintains several programs that subsidize exports: an export promotion fund, subsidized credit on some government-to-government sales of Thai rice, rebates of taxes and duties on inputs for exported products, and packing credits for exporters.

Figure 2-12—Continued
Thailand, trade and investment environment

Foreign Trade

Customs practices:

Arbitrary customs valuation procedures constitute a barrier to foreign exports. Thai customs practices can result in the overvaluation and unfair taxation of imported products, making them less competitive.

Foreign Investment

Treatment of U.S. companies:

As a result of a bilateral Treaty of Amity and Economic Relations signed by Thailand and the United States in 1968, American companies enjoy national treatment in Thailand, except in activities involving the exploitation of land and/or natural resources, and in the communications, transportation, fiduciary, and banking industries. Foreign companies are allowed to buy shares of the national airline, Thai Air.

Banking, insurance, and securities:

Thai policy prohibits foreign banks from establishing branch offices, including off-site automatic teller machines. In addition, foreign banks are limited to 25 percent ownership of Thai banks. The Thai Government has indicated that it may allow foreign bank branches during the next 2 to 6 years, but has not yet taken implementing steps. Foreign ownership of Thai security companies is also limited to 25 percent. Although a number of foreign firms were grandfathered, companies with more than 40 percent foreign ownership cannot obtain a seat on the Securities Exchange. Current regulations limit foreign equity in new local insurance firms to 49 percent. A Ministry of Commerce proposal would reduce this ceiling to 25 percent.

Source: Office of the United States Trade Representative (USTR), *1993 National Trade Estimate Report on Foreign Trade Barriers*, 1993.

Factors Affecting Integration

Thailand has demonstrated a desire to keep economic links with the outside world balanced. The recent surge of Japanese direct investment, coupled with the belief that Japanese business practices do not always benefit the host population, is seen by some in Thailand as a potential threat and has reportedly revived economic nationalism in some circles. A reluctance by Japanese companies to transfer technology and management expertise to Thai employees has caused complaints and has apparently provoked suggestions that Japanese investment should be curbed.[84] Such fears have also caused Thailand to welcome foreign investors of other nationalities.

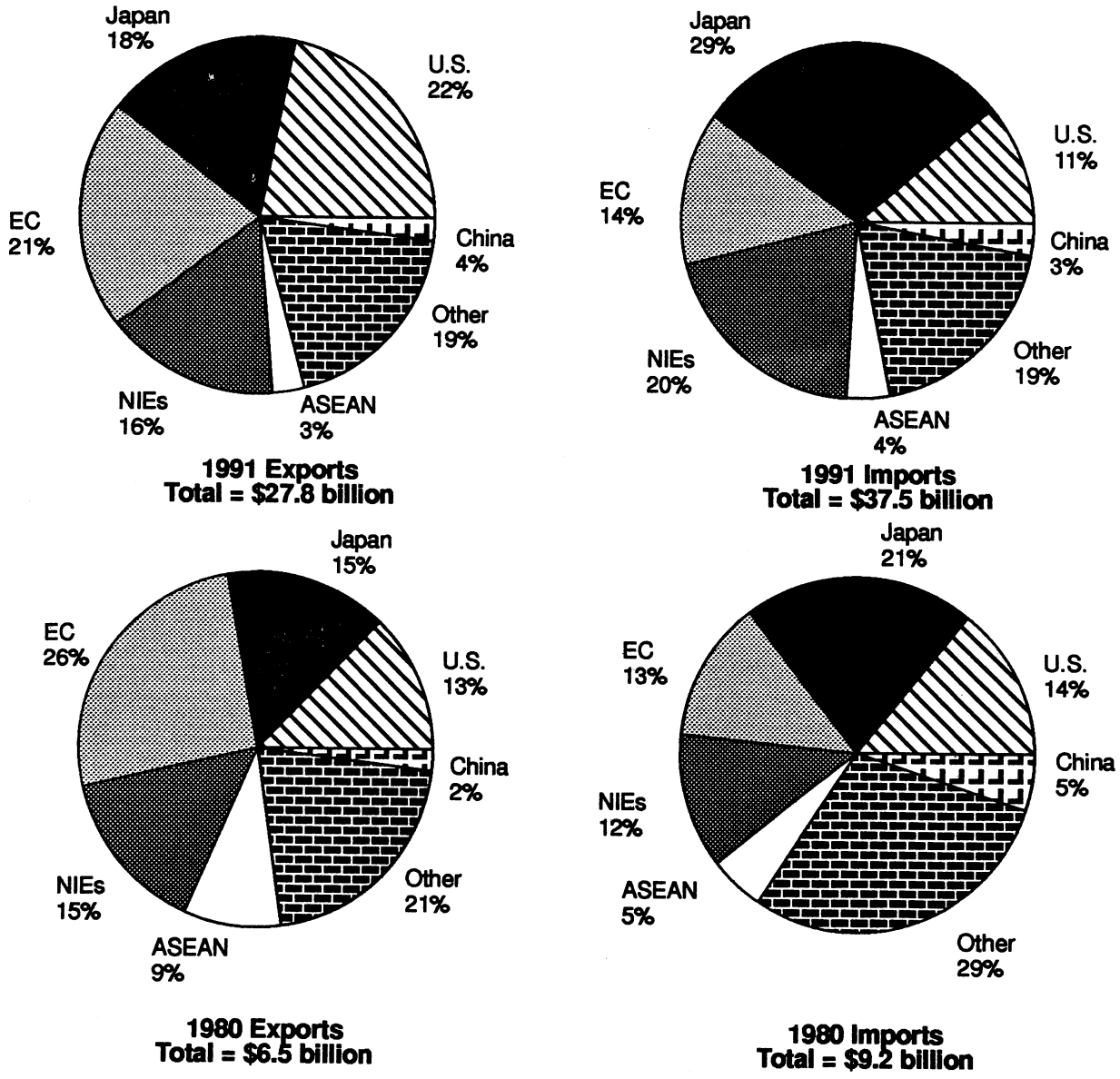
Infrastructure bottlenecks could impede economic growth, foreign investment, and regional integration prospects for Thailand in the future. Rapid development of the Bangkok area has reportedly led to severe strains on local infrastructure. In response to this growing problem, the Thai Government has undertaken efforts to disperse economic activity away from the Bangkok area and, at the same time, has been using foreign aid money to finance the construction of industrial parks outside Bangkok.[85]

The desire by Thailand to pursue regional integration has thus far been balanced by its support for the multilateral trade negotiations under the GATT, and by aspirations to forge closer economic links with Vietnam, Laos, and Cambodia. Thai officials have recognized the need to restructure Thailand's import regime in anticipation of a successful conclusion to the Uruguay Round, and that continuing a protectionist policy against the global trend toward economic liberalization would only hurt Thailand.[86] Nonetheless, creating a free trade area among the ASEAN member states would, in the view of some Thai officials, put the region in a better position to compete for investment capital.[87] This is a particularly important point in light of U.S. investors' apparent interest in Eastern Europe and the possibility of investment diversion to Mexico as a result of NAFTA.

In addition to fear of Japanese economic domination and concern over exclusion from regional trading arrangements, Thailand apparently has its own agenda for regional economic integration. Specifically,

[84] Lim and Pang, *Foreign Direct Investment and Industrialisation*, p. 46.
[85] Nolan, *Pacific Basin Developing Countries*, p. 71.
[86] U.S. Department of State, "AFTA—Recent Perspectives From Bangkok," message reference No. 55987, prepared by U.S. Embassy, Bangkok, Dec. 17, 1992.
[87] Ibid.

Figure 2-13
Thailand, exports and imports, by major markets, 1980 and 1991



Note.—NIEs include Taiwan, Korea, Singapore, and Hong Kong. ASEAN includes Brunei, Malaysia, Indonesia, and the Philippines.

Source: IMF, *Direction of Trade Statistics Yearbook*, 1992.

the government of former Prime Minister Chatichai[88] vigorously encouraged Thai business to invest in neighboring socialist countries, such as Burma, Laos, Cambodia, and Vietnam,[89] to create a "Greater Thailand" sphere of influence that would ensure Thailand's access to these countries' abundant natural resources and cheap labor.[90] Thailand's own plans for economic expansion in neighboring Indochina may thus have an effect on how the nation proceeds with AFTA and other regional integration schemes.

[88] The Chatichai government was toppled by a coup in February 1991.

[89] A report by the Nomura Research Institute recently pronounced the South China economic zone (Hong Kong, Taiwan, and China's Southern Provinces) as the new "gateway" for foreign investment in Indochina. FBIS, *Daily Report*, Jan. 6, 1993, p. 1.

[90] Lim and Pang, *Foreign Direct Investment and Industrialisation*, p. 47.

Malaysia

Economic Strategy and Performance

Malaysia is a federation of 13 states. Eleven of these states are in the Malay peninsula and collectively make up West Malaysia, where approximately 85 percent of the population resides. The other two states, Sabah and Sarawak, are located on the northern part of the island of Borneo—roughly 400 miles east across the South China Sea. Although Singapore was briefly a part of Malaysia, political and economic differences led to the separation of the two states in August 1965. Malaysia is rich in natural resources, including rubber, palm oil, tropical forests, tin, natural gas, and oil. Malaysia's population comprises Malays (54 percent), Chinese (35 percent), and Indians (11 percent). Balancing the power and wealth of these ethnic groups continues to have a major impact on Malaysia's economic and political policies. Recent economic performance has been strong, with real GDP growth averaging 6.2 percent during 1980-91.[91]

A priority for the Malaysian Government after gaining independence was to shift the economy away from its heavy reliance on agriculture and natural resource extraction to manufacturing. Priority firms were established in a wide variety of industries, including food products, wood manufactures, textiles, petroleum and coal products, chemicals, and metal products.[92]

The Government of Malaysia introduced a number of import duties and quantitative restrictions in the late 1960s to protect infant industries. Nonetheless, the tariffs imposed were moderate and levied on a temporary basis.[93] By the early 1970s, the Government introduced a number of export promotion measures such as the establishment of free trade zones (FTZs). Benefits to firms locating in the FTZs included: duty-free imports of raw materials, parts and components; streamlined customs formalities; infrastructure facilities; and tax exemptions. By the late 1980s, the FTZs accounted for more than half of Malaysia's manufactured exports.[94]

In an effort to ease tensions between ethnic Malays (or bumiputras) and its Chinese population, the Government of Malaysia in 1971 introduced the New Economic Plan (NEP), which established the target of 30 percent ethnic Malay ownership of all commercial enterprises by 1991. As part of the NEP, the Government also established a significant number of nonfinancial public enterprises (NFPEs), designed to hold in trust newly acquired wealth until such a time as ethnic Malays were able to control it themselves. In June 1991, the Malaysian Government announced its new National Development Policy (NDP), successor to the expired NEP. Unlike its predecessor, the NDP lacks numerical targets for the distribution of equity among ethnic Malays, Chinese, and foreigners.[95]

In the early 1980s, the Malaysian Government embarked on the promotion of heavy manufacturing establishments, including petrochemicals, methanol, cement, automobiles (the Proton Saga), and steel as part of its "look East" policy modeled on the Japanese experience. With the possible exception of the Proton automobiles, these parastatal industries have been largely unsuccessful and have suffered considerable losses. The relatively poor performance of these NFPEs has been attributed to weak management and overexposure to foreign currency liabilities (particularly yen-denominated loans). In response to some spectacular failures, the Government of Malaysia is now reorienting industrial policy away from heavy industry and products related to import substitution, and toward building on the natural resource base.[96]

Malaysia's trade composition has changed dramatically over the past three decades. The share of total exports occupied by manufactures rose from 2.9 percent in 1963 to 19.0 percent in 1980 to 43.9 percent in 1990, with the greatest increases seen in engineering products, wood products, and textiles and apparel. Malaysia's exports of fuels also rose from 4.1 percent of the total in 1963 to 15.8 percent in 1990. Trade has come to play an important role in Malaysia's economy, with exports of goods and nonfactor services as a share of GDP increasing from 43.8 percent in 1965 to 57.5 percent in 1980 to an estimated 77.9 percent in 1990. Imports showed a similar trend, rising from 39.9 percent of GDP in 1965 to 55.0 percent in 1980 and to 78.1 percent in 1990. East Asia has emerged as an increasingly important part of Malaysia's overall trade. Between 1980 and 1991, the share of Malaysia's exports destined for Singapore, Hong Kong, Korea, and Taiwan jumped from 24.8 percent to 33.7 percent, while imports from these countries rose from 17.2 percent to 25.9 percent (figure 2-14).[97] In contrast, the share of exports to the United States increased only slightly during the same period, while imports remained around 15 percent of the total. The share of exports to Japan decreased from 23 percent to 16 percent, while Japan's share of total imports has increased from 23 percent to 26 percent.

The failure of many of the NFPEs, the recession of 1985-86, and large Government budget and balance of payment deficits have led to the creation of more investment incentives for both domestic and foreign entrepreneurs. The 1986 Investment Incentives Act provided tax exemptions for companies engaged in manufacturing new products or undertaking modernization, expansion, or diversification.[98]

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[91] Asian Development Bank, *Key Indicators of Developing Asian and Pacific Countries, 1992.*

[92] Balassa, *Economic Policies in the Pacific Area Developing Countries*, p. 144.

[93] Ibid., p. 145.

[94] Ibid., p. 146.

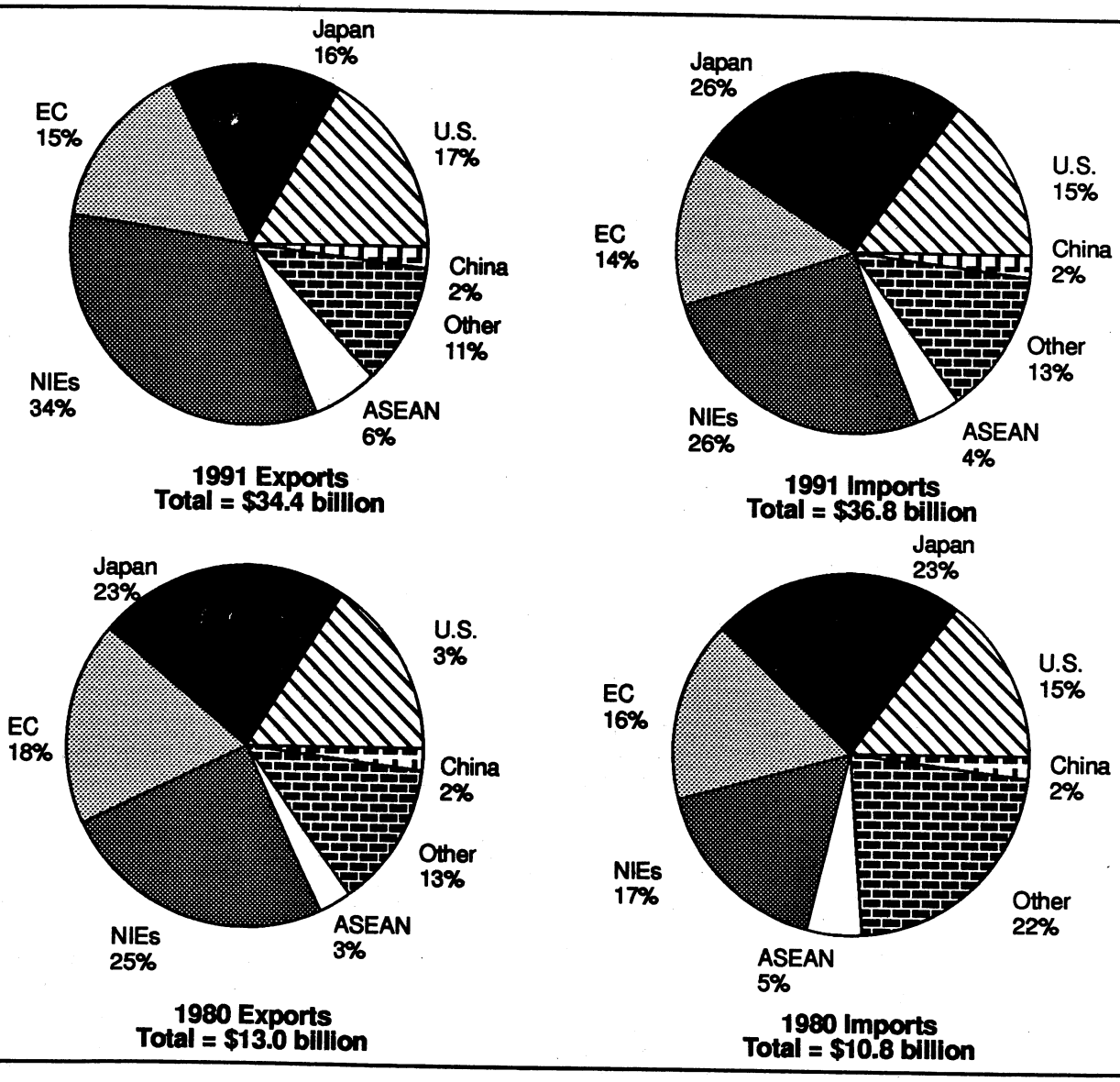
[95] U.S. Department of State, Washington, DC, "Revision of 1992 National Trade Estimate Report—Kuala Lumpur," message reference No. 408770, Dec. 19, 1992.

[96] Nolan, *Pacific Basin Developing Countries*, p. 58.

[97] IMF, *Direction of Trade Statistics Yearbook*, 1992.

[98] Lim and Pang, *Foreign Direct Investment and Industrialisation*, p. 40.

Figure 2-14
Malaysia, exports and imports, by major markets, 1980 and 1991



Note.—NIEs include Hong Kong, Korea, Taiwan, and Singapore. ASEAN includes Brunei, Indonesia, the Philippines and Thailand.

Source: IMF, *Direction of Trade Statistics Yearbook*, 1992.

According to investment approval statistics reported by the Malaysian Government, the U.S. share of approved foreign investment flows fell from around 12 percent in 1985 to just over 3 percent in 1990—behind Taiwan, Japan, Indonesia, Singapore, the United Kingdom, and Korea.[99] U.S. investment was largely in chemicals and petroleum products, and later in electronics. Japanese investment has recently shifted from import-substituting industries to export-oriented industries, including motorcycle engines, fiberboard, and petroleum products.[100] Electronics companies from Singapore have expanded production in Malaysia in recent years, and firms from Korea and Taiwan have also increased their investment presence.

Factors Affecting Integration

Malaysia's economy relies on international trade and the inflow of foreign direct investment to maintain high growth. Malaysia is a member of the GATT, and has shown strong support for global and regional trade liberalization (figure 2-15). Although barriers to

[99] Malaysia Industrial Development Authority.

[100] Lim and Pang, *Foreign Direct Investment and Industrialisation*, p. 41.

Figure 2-15
Malaysia, trade and investment environment

General

State role in the economy:

The economy is generally open and market-oriented. However, Government-controlled entities account for some one-third of the economy. Privatization of key public sector operations (electric power, telecommunications, and transportation) continues.

Exchange rate policy:

The foreign exchange regime is open. Transactions above US$3,984 require licenses, which are routinely granted. Malaysia encourages countertrade as payments for its imports.

Intellectual property rights (IPR):

Malaysia's Patent Act of 1983 and its Copyright Act of 1987 has strengthened IPR protection. Malaysia was cited on the U.S. Government's "watch list" under the Special 301 provision of the 1988 Omnibus Trade and Competitiveness Act as having deficient IPR protection. In 1991, Malaysia was taken off the watch list as a result of joining international IPR accords and is now considered to have one of the region's strongest regimes for protecting intellectual property rights.

Foreign Trade

Tariffs:

Malaysia maintains a short list of prohibited manufactured imports designed to protect its "pioneer industries." Malaysian market barriers are generally minimal compared with those of most other developing countries. The average tariff rate is less than 15 percent. However, tariffs are high on some items, including wine, beer, alcoholic beverages, and leaf tobacco and tobacco products. Agricultural trade is highly distorted by significant tariff and nontariff barriers. Duties are also high on fresh fruit and high value-added processed food products, and have been raised recently on breakfast cereals.

Quantitative import restrictions:

Imports of flue-cured Virginia leaf tobacco are restricted by quotas. A few manufactured items are subject to import licensing (e.g., electrical products, telephone equipment). Imports of rice are the monopoly of the National Rice Authority, which accords preferential treatment to Asian suppliers, notably Thailand. Also, since 1983, a ban exists on chicken parts (the ban was extended to U.S. chicken parts in 1991).

Service barriers:

Foreign lawyers, architects, and other professionals are generally not allowed to practice in Malaysia. T.V. commercials must be produced with Malaysian performers unless an exception is obtained.

Government procurement:

There are price incentives for local procurement. In addition, most Government tenders require foreign bidders to offer countertrade as an alternative method of compensation.

Export subsidies:

Export subsidies are relatively insignificant. The Central Bank operates an export credit refinancing scheme, which finances exports at a 6 percent rate. Tax incentives to exporters are also being used.

Foreign Investment

Promulgated in 1971, Malaysia's New Economic Policy (NEP) created a significant investment barrier by restricting foreign equity in local projects. The Malaysian Industrial Development Authority published new foreign equity guidelines in 1992. New manufacturing investment projects that export between 50 and 80 percent of their output can be 100 percent foreign-owned only if the project either exceeds M$50 million (US$18 million) or ensures 50 percent value-added. Foreign investment is vigorously encouraged by the Malaysian Government, and repatriation of profits and principal is freely permitted.

Figure 2-15
Malaysia, trade and investment environment

Foreign investment

Barriers to investment in services:

Foreign financial service investments (in banking, insurance, and securities) are subject to restrictions. For example, foreign banks are not allowed to open new branches or establish off-site automatic teller machines. All foreign banks must incorporate locally by 1994. Foreign participation of more than 30 percent in insurance firms requires Government approval. Despite restrictions, foreign participation in financial services is considerable.

Source: Office of the United States Trade Representative (USTR), *1993 National Trade Estimate Report on Foreign Trade Barriers*, 1993.

imports of certain agricultural products remain relatively high, Malaysia's overall level of protection remains low compared with most developing countries.

In December 1990, Prime Minister Mahathir Mohamad proposed formation of the East Asian Economic Grouping (EAEG), a trade group to be composed of East Asian countries. Exclusion of the United States and the EC from membership led to criticism that the group could develop into a regional trading bloc.[101] Mahathir and other officials declared that the EAEG would be consistent with GATT principles and become a forum for reducing trade barriers. The proposed grouping was subsequently renamed the East Asian Economic Caucus and described as a forum for consultation among member countries. Nevertheless, the proposal has thus far failed to win support from most of Malaysia's neighbors.[102]

Philippines

Economic Strategy and Performance

The Philippines consists of approximately 7,100 islands with a population of 65.8 million. Originally colonized by Spain for a period of over 300 years, it was ceded to the United States in 1898, briefly occupied by Japan during World War II, and achieved independence in 1946. Although possessing an excellent educational system, fertile land, and abundant natural resources, the Philippines' economic performance has not kept pace with other developing economies in East Asia, with real GDP growing by an average of only 1.4 percent during 1980-91.[103] Economic mismanagement, uneven income distribution, political corruption, and a failure to liberalize trade and investment regimes have all received some measure of blame.

The immediate strategy for economic development following independence was an import substitution policy that involved foreign exchange and import controls. Consumer goods industries were subsidized by means of these barriers and received further assistance by exemptions from taxes and customs duties on inputs. Tariffs ranged up to 100 percent, with lower rates imposed on capital goods and industrial materials.[104] Agriculture was essentially neglected, with little or no land redistribution taking place.

The Philippines' manufacturing sector expanded rapidly during the 1950s, but the nation continued to have major balance of payments problems because the growth of manufacturing depended upon imported capital goods and industrial materials. Exchange rate and most import controls were removed between 1960 and 1962, but the protective tariff structure remained intact—averaging 70 percent for consumer goods, 55 percent for inputs into construction, 27 percent for intermediate goods, and 16 percent for capital goods in 1965.[105]

Beginning in the late 1960s, various incentives were introduced to encourage nontraditional exports, including partial duty drawbacks, a bonded warehouse system, and export-processing zones. This outward economic orientation was reversed in 1972, when the Marcos regime declared martial law. Tariffs on final goods were raised, encouraging the expansion of capital-intensive industries, including paper, industrial chemicals, rubber, and metals. Productivity performance, however, was poor. The situation was exacerbated by an overvalued peso and by considerable

[101] Far Eastern Economic Review, *Asia 1992 Yearbook*, 32nd edition, Dec. 1991, p. 153.
[102] The EAEG is examined in greater detail in ch. 3 of this report.
[103] Asian Development Bank, *Key Indicators of Developing Asian and Pacific Countries, 1992*.
[104] Balassa, *Economic Policies in the Pacific Area Developing Countries*, p. 165.
[105] John H. Power, "The Structure of Protection in the Philippines," in Bela Balassa, ed., *The Structure of Protection in Developing Countries* (Baltimore: Johns Hopkins, 1971).

borrowing from abroad for nonproductive prestige projects. By the beginning of the 1980s, the Philippines had entered a severe economic crisis, which culminated in a debt-repayment moratorium and the conclusion of a 1985 standby agreement with the IMF.[106]

An overhaul of the trade regime was initiated in 1980 to correct the adverse effects associated with the 30-year legacy of import substitution. Average nominal tariffs were reduced from 42 percent in 1979 to 24 percent in 1992.[107] The tax system was reformed between 1983 and 1984 to equalize the sales tax on imported and domestic goods, and the process of liberalizing quantitative restrictions was started. Continuing the reform process, a July 1991 Executive Order instituted a tariff reduction, restructuring, and simplification program that will be phased in over a 4-year period. If successful, the program will result in average nominal tariff rates of 20 percent (figure 2-16).

Between 1950 and 1970, the commodity composition of Philippine exports remained relatively unchanged, with the 10 principal exports (mainly agricultural commodities and basic minerals) accounting for 75 to 85 percent of total exports. Export composition did begin to change after 1970, however, as a result of the Government's emphasis on heavy industry. The share of total exports occupied by traditional products dropped from 78.5 percent in 1970 to 39.2 percent in 1988. The share of nontraditional, manufactured exports (principally electronic equipment and garments) climbed from 6.1 percent to 56.1 percent during the same period.[108] More recent data indicate that the share of total exports occupied by manufactures may have reached 73.8 percent in the first three quarters of 1992.[109]

The Philippines ran a trade deficit of roughly $3.9 billion in 1991 and is expected to register an even larger deficit in 1992 because of a strong peso and falling demand in the United States, Japan, and other major markets. The Philippines' pattern of trade over the past decade reflects the growing importance of East Asia for both imports and exports. The United States and Japan continue to be the Philippines' largest trading partners, accounting for 26.5 and 19.7 percent, respectively, of total trade in 1991 (figure 2-17). The NIEs, however, collectively accounted for 16.7 percent of total trade (20.2 percent of total imports and 12.0 percent of total exports) in 1991.[110] This compares with a collective share of 9.1 percent of total trade in 1980 (8.1 percent of total imports and 10.5 percent of total exports).

The Government of the Philippines has also recently enacted measures to open the economy to more foreign investment. Philippine regulation of investment lessened considerably when the Foreign Investment Act of 1991 went into effect. The act sharply increased the number of industries in which foreigners can take up to 100 percent equity without prior Government approval.[111] Foreign investment in the Philippines is now regulated by a transitional "negative list" that stipulates limitations on foreign equity and, reportedly, reflects those industries deemed adequately served by Filipinos. The Government expects to produce another, more limited negative list by November 1994.[112]

Although the Philippines has not received the same degree of investment attention as other ASEAN nations, it has not been completely cut off from the wave of investment flowing from Japan and the NIEs during the latter half of the 1980s. According to data from the Philippine Securities and Exchange Commission (SEC), for example, total foreign investment during 1989-91 was roughly five times the amount during 1981-83.[113] The other noticeable trend during the 1980s was related to the source of direct investment inflows. According to the Philippine SEC, the United States accounted for 41 percent of incoming funds during 1981-83, but only 13 percent during 1989-91. During the same two periods, Japanese investment rose from an estimated 6 percent to 33 percent of the total inflow. Taiwan and Hong Kong also made a strong showing, with their combined share climbing from 7 to 19 percent of total inflows over the course of the decade.[114] In terms of cumulative foreign direct investment, however, the United States remains the largest investor in the Philippines.

Factors Affecting Integration

The greatest impediment to the Philippines' closer integration with the rest of East Asia lies in its own economic and political instability. Although some progress has been made in liberalizing the economy and stabilizing macroeconomic conditions, the Philippines has shown much less progress than its ASEAN counterparts. The continued presence of import barriers and restrictive regulations on some areas of foreign investment could impede integration.

[106] Romeo M. Bautista, "Impediments to Trade Liberalization in the Philippines," Thames Essay No. 54, London, Trade Policy Research Centre, 1989.

[107] U.S. Department of State, Washington, DC, "Revision of 1992 National Trade Estimate Report—Manila," message reference No. 408769, Dec. 19, 1992.

[108] Nolan, *Pacific Basin Developing Countries*, p. 91.

[109] U.S. Department of State, "Philippines' Foreign Trade Gap Widens 42 Percent to US$3.43 Billion in September," message reference No. 00543, prepared by U.S. Embassy, Manila, Jan. 8, 1993.

[110] IMF, *Direction of Trade Statistics Yearbook*, 1992.

[111] The act has reportedly not had the intended effect of boosting FDI thus far. The first quarter of 1992 actually saw even less FDI than in previous years, as investors took a "wait and see" stance pending the outcome of the May 11 general elections.

[112] U.S. Department of State, "Revision of 1992 National Trade Estimate Report—Manila."

[113] U.S. Department of State, "Foreign Investment in the Philippines—A Look at Recent Numbers and Trends," message reference No. 20470, prepared by U.S. Embassy, Manila, Aug. 5, 1992.

[114] Ibid.

Figure 2-16
Philippines, trade and investment environment

General

State role in the economy:

The Philippine Government's trade liberalization and privatization efforts have been hampered by trade and budget deficits, and by resistance from both the Central Bank and the Senate.

Exchange rate policy:

The Philippine foreign exchange system can be described as a "managed float," with monetary authorities intervening through a combination of interest rate adjustments and direct intervention. A somewhat overvalued peso in favor of the U.S. dollar has traditionally been maintained to support high demand for imports and high debt service costs. The Central Bank recently liberalized exchange controls. An active parallel market serves those who do not want to justify their purchases under foreign exchange and tax regulations.

Intellectual property rights (IPR):

Reflecting the lack of progress in IPR enforcement, in April 1992 the Philippines was placed on the USTR's Special 301 "priority watch list" under the provisions of the 1988 Omnibus Trade and Competitiveness Act. Enforcement remained problematical, and trademark counterfeiting widespread. The main problem with Philippine patent law related to the working of the patent, compulsory licensing, and technology transfer regimes. Enforcement against patent violations has been weak. Philippine copyright law allows broad reproduction, adaptation, and translation of published works without the owner's authorization, in addition to allowing the original publisher only a royalty of 2 percent of the foreign list price. Textbook publishers are required to issue reprint licenses. Software privacy continues to be a problem. Overall, enforcement of Philippine copyright law is lax. On April 16, 1993 the United States and the Philippines signed an IPR agreement intended to rectify such problems.

Foreign Trade

Tariffs and customs:

As part of its trade liberalization program, the Government reduced average nominal tariff rates from 42 percent in 1979 to 24 percent in 1992. The Government is currently implementing a plan that will, by 1995, compress the current 7-tier structure to a 4-tier structure of 3, 10, 20, and 30 percent tariffs. In July 1992, as part of the implementation of this plan, tariffs on goods in the highest 50 percent tier were reduced to a 40 percent tariff. However, some 208 products identified as "strategic" will continue to attract 50 percent tariff rates (e.g., rice, sugar, fruits, alcohol, tobacco). Effective March 1, 1993, a new duty of 50 percent was imposed on feed wheat (the United States does not export this product to the Philippines). The Government has imposed preshipment inspection of imports valued over $2,500 from Japan, Hong Kong, Korea, Taiwan, Macau, and the ASEAN nations. In December 1991, the Government expanded this program to cover all imports valued over $5,000 shipped from all nations.

Quotas and licenses:

As of March 1993, nearly 96 percent (2,770 items) of all import categories targeted under the import liberalization program have been liberalized. In the first 10 months of 1992, 280 items, including economically sensitive products, were deregulated. License requirements will remain for 116 items (such as rice, corn, pesticides, firearms, chemicals used for explosives). Commodity imports financed through foreign credits also require prior licensing.

Service barriers:

The practice of foreign lawyers is strictly limited. Film importers are hampered by a requirement that theaters show domestic films at least 30 percent of the time, and by caps on proceeds collected from distribution. Advertising agencies are limited to 30 percent foreign ownership, whereas public utilities can have 40 percent foreign ownership. Foreign bank branches have been denied entry since 1948. Foreign participation is now limited to no more than 30 percent (40 percent with presidential approval) of voting stock in existing domestic banks. The Government is currently considering allowing limited entry of additional foreign banks, as well as increasing the maximum level of foreign participation in domestic banks. The Government opened the life and nonlife insurance sectors to new entrants in March 1992.

Figure 2-16
Philippines, trade and investment environment

Foreign Trade—Continued

Government procurement:

Government procurement policies do not generally discriminate against foreign companies. However, preferential treatment is given to infrastructure projects using locally manufactured iron and steel products, rice, and medicines. Government agencies must also procure petroleum products from Government-owned sources. To qualify for infrastructure and construction projects, a bidder must be at least 75 percent Philippine-owned.

Export subsidies:

The Philippine Government offers tax credits for imported raw materials used for export packaging. In addition, Philippine businesses registered with the Board of Investments are eligible for income tax holidays and tax and duty exemptions for capital equipment and raw materials.

Foreign Investment

National ownership requirements:

The Foreign Investment Act of 1991 increased the number of industries in which foreigners may purchase up to 100 percent ownership. There remains, however, a long "negative list" of industries (including retail, rice and corn, rural banking, and mass media) in which foreign investment is prohibited. Foreign ownership shares are strictly limited in a number of industries for recruitment firms, construction companies with Government contracts, savings and loan associations, development banks, and advertising agencies, cooperatives, banking, insurance, defense, public security, education, public utilities, shipping, and the exploration, development, and utilization of natural resources.

Repatriation of profits

Under the January and August reforms of 1992, remittance of profits and repatriation of investment are allowed immediately and in full, regardless of the size of the investment or type of industry. The new laws also lifted mandatory surrender of foreign exchange earnings from nontrade transactions, and removed previous restrictions on purchases and sales of foreign exchange, opening of foreign exchange accounts, and withdrawal of foreign exchange for investment or deposit abroad.

Source: Office of the United States Trade Representative (USTR), *1993 National Trade Estimate Report on Foreign Trade Barriers,* 1993.

Additionally, some observers are predicting that foreign investment and economic growth could slow because of inadequate infrastructure.[115] Nevertheless, the Philippines is actively courting foreign investment from all sources, including Japan.[116]

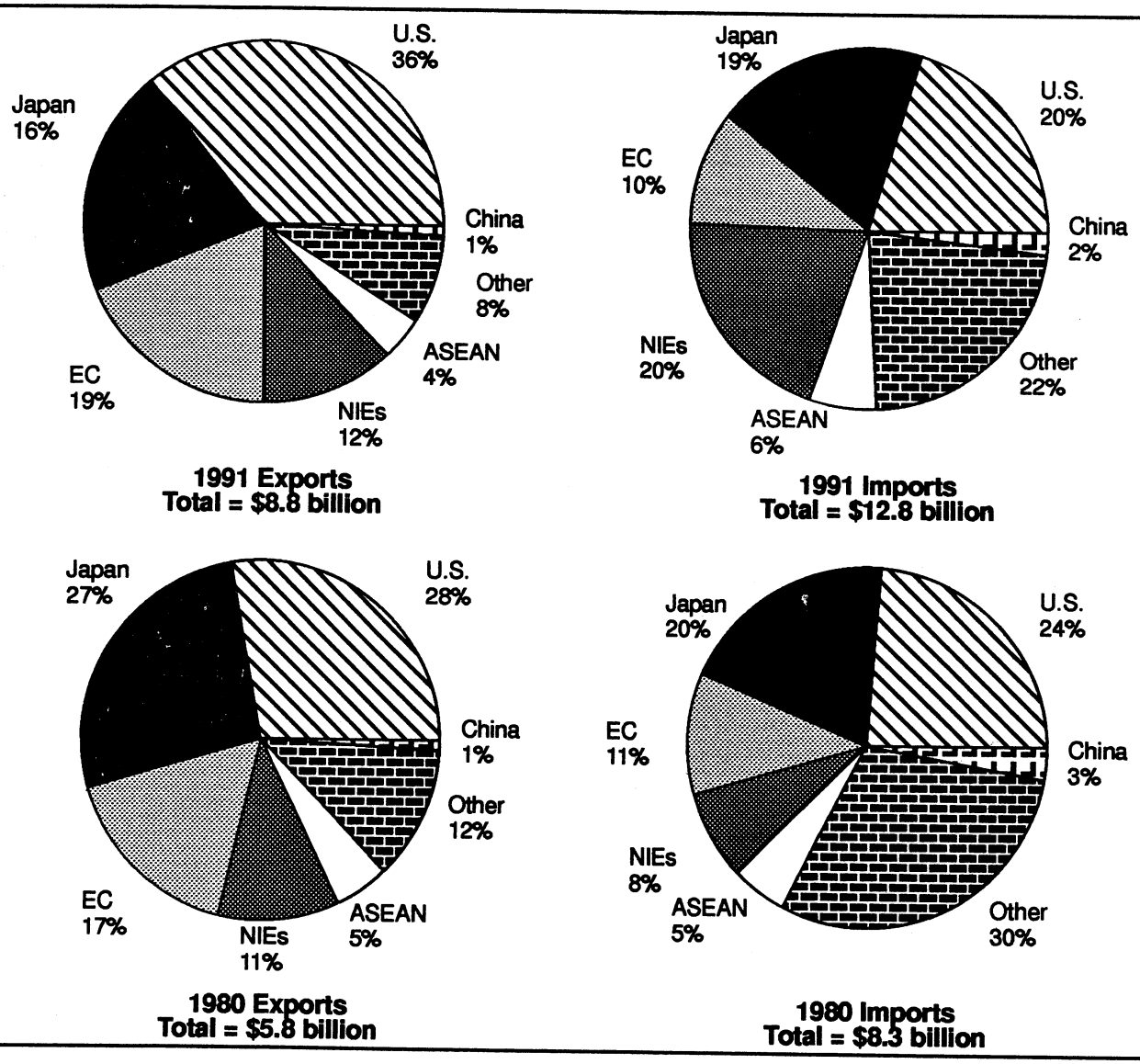
The Philippines has been one of the least active members of ASEAN. Nevertheless, the country has taken a more constructive interest in the regional grouping and the proposed AFTA during the past year, and has participated in other regional organizations, such as the Asia-Pacific Economic Cooperation forum (APEC) and the Pacific Economic Cooperation Conference (PECC). From trends seen thus far, it seems that the Philippines is much more supportive of a nondiscriminatory approach to liberalization than any exclusive arrangement. The Philippines depends on access to developed country markets for foreign exchange earnings and for inflows of much-needed investment capital, technology, and management know-how.

Brunei

Brunei's development has been based primarily on exploitation of vast oil resources. Although the Government of Brunei has undertaken measures to diversify the economy after the drop in oil prices during the 1980s, the economy is still mainly based on exports of petroleum and petroleum products. Something of an anomaly in East Asia, Brunei has an extremely high per capita income and sizeable offshore reserves of foreign exchange built up during the 1970s. The Government maintains a liberalized trade regime, with imports categorized into three tiers, dutiable at 0, 10, and 20 percent (figure 2-18). Brunei's largest trading partners are Japan, Singapore, and the EC (figure 2-19). As part of its overall goal of

[115] Nolan, *Pacific Basin Developing Countries,* p. 84.
[116] U.S. Department of State, "Japanese Trade Minister Visits the Philippines," message reference No. 23955, prepared by U.S. Embassy, Manila, Sept. 9, 1992.

Figure 2-17
Philippines, exports and imports, by major markets, 1980 and 1991



Note.—NIEs include Taiwan, Korea, Singapore, and Hong Kong. ASEAN includes Brunei, Malaysia, Indonesia, and Thailand.
Source: IMF, *Direction of Trade Statistics Yearbook*, 1992.

diversifying the economy away from the oil industry, the Government of Brunei encourages foreign investment into such priority sectors as agriculture and fisheries. There are currently no specific restrictions on foreign ownership in Brunei, although participation by Brunei Malays is encouraged.

China

Economic Strategy and Performance

China is the only nonmarket economy covered in this report. Possessed with the world's largest population and significant natural resources, China experienced a turbulent period of postwar economic development. While China's efforts to modernize since 1949 have brought the vast country from abject poverty to the ranks of the middle-income developing nations, recent policies have resulted in enormous disparities among different provinces. Political and foreign policy considerations have played a crucial role in shaping China's approach to economic development and will likely continue to do so. Nonetheless, China's officials have long recognized the importance of trade as an engine of economic growth.[117]

[117] James T.H. Tsao, *China's Development Strategies and Foreign Trade* (Lexington, MA: D.C. Heath, 1987), p. 81.

Figure 2-18
Brunei, trade and investment environment

General

State role in the economy:

Roughly half of the labor force is employed by the Government; another 5 percent work for Brunei Shell, a joint venture between the Government and Royal Dutch/Shell. The third largest industry, domestic construction, is largely dependent on the Government and the petroleum industry.

International Trade

Brunei maintains a liberal trade regime. Goods are categorized into three tiers, dutiable at 0, 10, and 20 percent.

Foreign Investment

Investment policy:

Created in January 1989, Brunei's Ministry of Industry and Primary Resources is responsible for encouraging private investment in order to develop a more diversified economy. Brunei allocated almost US$2 billion on development from 1986 to 1990. Agriculture and fisheries are sectors that have been selected for highest priority.

National ownership requirements:

Though there are no specific retrictions on foreign ownership, participation by Brunei Malays is encouraged.

National hiring requirements:

It is possible to hire foreigners. However, the Government issues work permits to foreigners only for short periods.

Source: U.S. Embassy, Bandar Seri Begawan.

State industries and central planning dominated China's economy for most of the postwar era, with little or no room for private enterprise. Although this strategy was successful in organizing China's productive resources and meeting basic needs, the economy began to stagnate by the late 1950s and was dealt another serious setback by the Cultural Revolution of the 1960s. Deng Xiaoping and other leaders who took control after the death of Mao Zedong in 1976 believed that the survival of the Chinese Communist Party depended on raising living standards. Deng began China's economic reform effort in the late 1970s with an opening to the United States and other Western economies, as well as a series of measures designed to give more autonomy to managers of state enterprises and to encourage private sector activities. Other measures included agricultural reform, the establishment in 1980 of special zones in South China in which foreign investment would be encouraged, decentralization of economic planning, and an expansion of foreign trade.

The Chinese economy achieved impressive results after the reform process was initiated, with real GNP growth averaging 8.6 percent during 1980-90. This rapid economic growth was accompanied by periods of macroeconomic imbalance and high inflation, with the most serious episode taking place in 1988.[118] China's leadership had failed to control soaring inflation, increasing corruption, and a deteriorating trade balance.[119] A comprehensive austerity program was introduced in late 1988 to cool the economy and curb inflation, and GNP growth consequently declined to about half the average annual rate of the previous 10-year period. By early 1990, however, concerns over declining output, state enterprise losses, and growing unemployment gave rise to efforts by Chinese officials to rejuvenate the economy by loosening investment and credit controls somewhat.

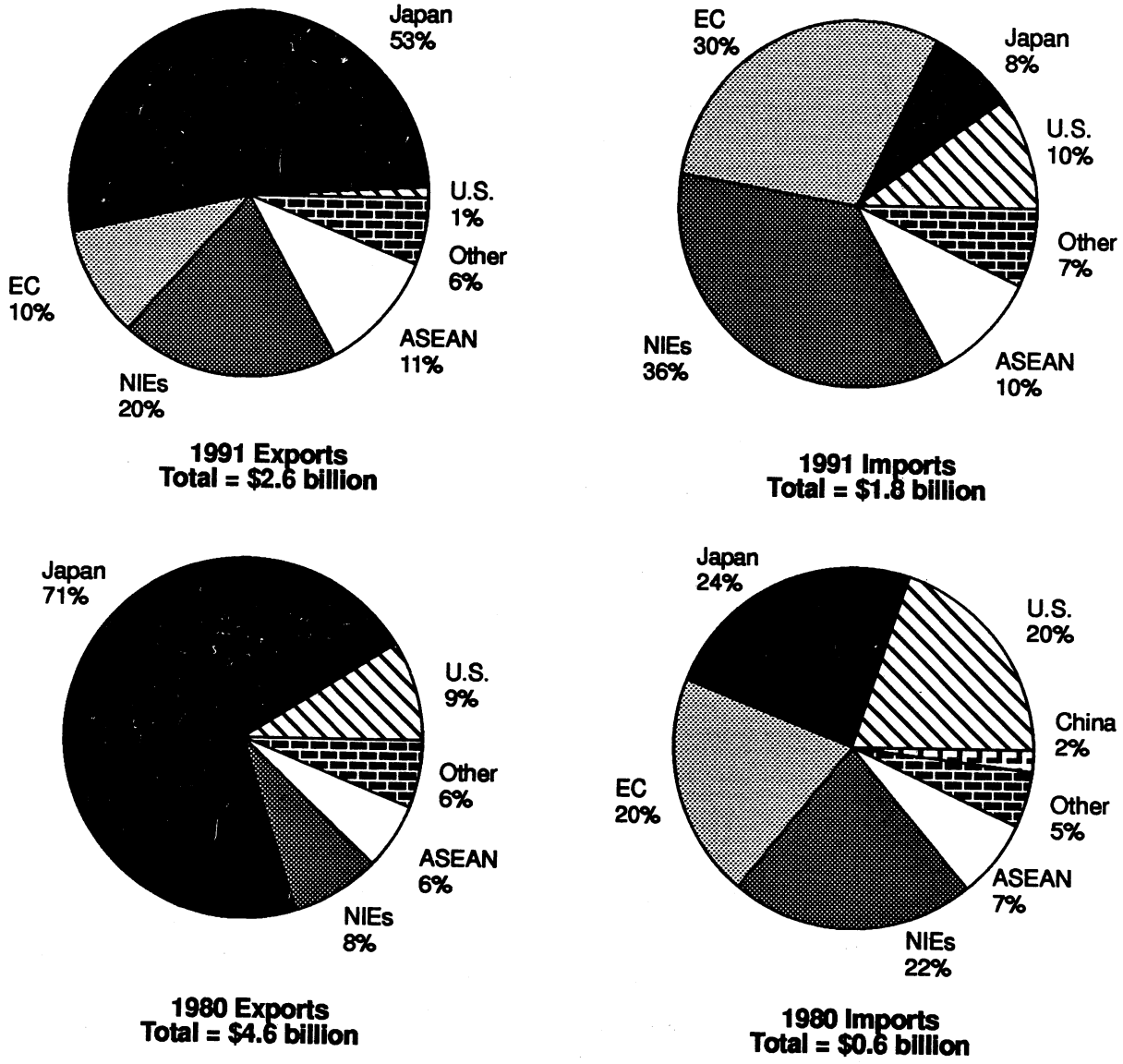
The Chinese economy has been growing at a fairly rapid pace since the last quarter of 1990, with GNP growth estimated at 12.8 percent during 1992.[120] Emphasis is now being placed on resolving the problems of low efficiency and financial losses of state-run enterprises through greater autonomy in

[118] Asian Development Bank, *Asian Development Outlook, 1992*, p. 97.

[119] U.S. Central Intelligence Agency, *The Chinese Economy in 1988 and 1989: Reforms on Hold, Economic Problems Mount*, EA 89-10023, Aug. 1989.

[120] State Statistical Bureau of the PRC, *Statistical Communique on the 1992 National Economic and Social Development*, Feb. 18, 1992.

Figure 2-19
Brunei, exports and imports, by major markets, 1980 and 1991



Note.—NIEs include Taiwan, Korea, Singapore, and Hong Kong. ASEAN includes Thailand, Malaysia, Indonesia, and the Philippines.

Source: IMF, *Direction of Trade Statistics Yearbook*, 1992.

management, distribution, and personnel decisions. Recent policy statements indicate that free markets may soon officially replace central planning as the basis of the country's economic system.[121] Further, the Government is stressing the role of foreign trade and investment in promoting structural reform, with the special economic zones and the dynamic coastal and southern provinces being a model for the development of the interior provinces.[122]

The importance of trade to the overall structure of the Chinese economy has increased during the past two decades. Between 1969 and 1990, trade in goods and nonfactor services as a share of GDP climbed from 5.8 percent to 32.8 percent.[123] Exports climbed from 3.4

[121] U.S. Department of State, "Draft 1993 Trade Act Report: People's Republic of China," message reference No. 35122, prepared by U.S. Embassy, Beijing, Nov. 4, 1992.

[122] Ibid.

[123] IMF, *Direction of Trade Statistics Yearbook*, 1992.

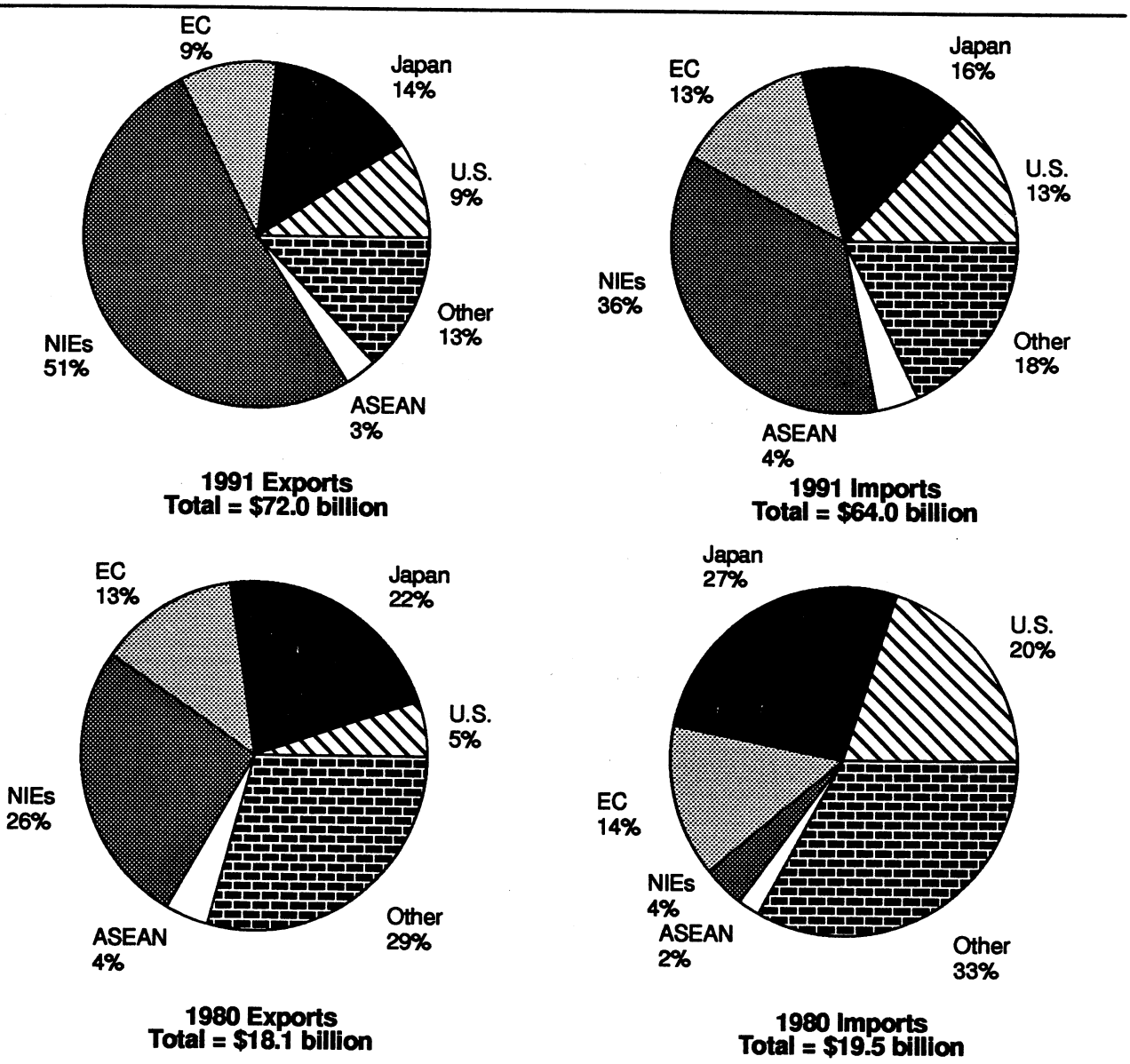
percent of GDP in 1969 to 6.7 percent in 1980 and 18.2 percent in 1990, while imports increased from 2.5 percent to 6.7 percent and 14.6 percent during the same period.[124] Between 1980 and 1991, China's total exports increased from $18.1 billion to roughly $72.0 billion. Imports during the same period climbed from $19.5 billion to $64.0 billion, resulting in a trade surplus of roughly $8 billion in 1991.

China trades more with Asia than with any other region. Hong Kong was China's most important trading partner during 1980-91 because of the crucial role it played through entrepot trade.[125] Behind Hong Kong, which accounted for 44.6 percent of total Chinese exports in 1991, China's most important export markets were Japan, with 14.3 percent of the total, and the United States, with 8.6 percent (figure 2-20). The same pattern holds for China's imports,

[124] World Bank, *World Tables 1991*.

[125] Hong Kong plays a particularly important role as a conduit for China-Taiwan trade and investment.

Figure 2-20
China, exports and imports, by major markets, 1980 and 1991



Note.—NIEs include Singapore, Korea, Taiwan, and Hong Kong. ASEAN includes Brunei, Indonesia, Malaysia, the Philippines, and Thailand.

Source: IMF, *Direction of Trade Statistics Yearbook*, 1992.

Figure 2-21
China, trade and investment environment

General

State role in the economy:

Since 1978, China has been introducing market forces in its centrally planned economy. The current 5-year plan (1991-95) continues to emphasize the primacy of state ownership, but promotes reforms toward the Communist Party's stated goal to achieve a "socialist market economy." Instead of the large-scale privatizations in many other nations, an important approach in China is granting greater autonomy in decision making to state-owned enterprises.

The two principal areas of past liberalization efforts are (1) agriculture and (2) foreign trade. China now has a market economy in food as a result of free prices and the replacement of farming communes by family farms. Results have been excellent: in 1992, China was expected to see its 4th straight bumper harvest. With the removal of the central Government's monopoly over foreign trade, and the establishment of 4 "special zones," China benefits from export-led growth. Also, Chinese industry is reducing the dominance of the state. In 1978, state-owned firms accounted for 78 percent of the total; the current comparable share is somewhat above 50 percent.

Exchange rate policy:

China administers a managed, floating official exchange rate linked to a trade-weighted basket of currencies. China also established free adjustment centers (so-called "swap centers") in 1986 to accomodate parallel market rates. The Government is apparently following a strategy of incremental devaluations of the renminbi to eventually unify the official rate and the free market rate.

Intellectual property rights (IPR):

China made some progress in recent years in enacting IPR legislation. Nonetheless, the United States instituted a special Section 301 investigation on China in May 1991 for failing to provide adequate IPR protection. The investigation was resolved in January 1992, when the United States and China reached an agreement and signed a Memorandum of Understanding (MOU) on IPR. In the MOU China pledged to upgrade its IPR regime by amending its patent law, joining the Berne convention, and enacting trade secret legislation.

Foreign Trade

GATT membership:

China's application for GATT membership is under active consideration. Under an October 1992 U.S.-China MOU, China is committed to significantly reducing its multilayered web of import restrictions between 1993 and 1997. The accord was prompted by a huge U.S. trade deficit vis-a-vis China.

Transparency:

Under the MOU with the United States, and in accordance with the GATT, China is committed to making its trade regime transparent by publishing its heretofore unavailable decrees, rules, and regulations, and halting the use of internal directives on foreign trade.

Tariffs:

China adopted the harmonized system for customs classification and statistics, effective January 1, 1992, while at the same time reducing duties on 225 items. In April 1992, China eliminated its import taxes. On January 1, 1993, China's most ambitious tariff cuts to date became effective. The cuts, while generally moderate, covered 3,371 items, over half of the goods in China's tariff schedule.

Import restrictions:

China's import licensing system covers 53 broad categories of goods or about half of China's imports by value. Some 75 percent of all import licensing requirements, quotas, and other restrictions will be eliminated by the end of 1994 under the MOU with the United States. In addition to a variety of U.S. industrial exports, import controls on key U.S. agricultural exports, including wheat, other grains, edible oils, and fruits will be eliminated. China also agreed to discontinue those standards and testing requirements that serve mainly as trade barriers, i.e., those that do not apply to comparable domestic products.

Figure 2-21—Continued
China, trade and investment environment

Foreign Trade

Export subsidies:

China abolished direct subsidies for exports on January 1, 1991. However, manufactured exports receive many forms of indirect subsidies, including guaranteed provision of energy and raw materials, preferential financing, tax rebates, and duty exemptions on imported inputs. China's swap markets allow exporters to exchange foreign exchange at better than official rates.

Foreign investment

General policy:

China now stresses the role of foreign investment in promoting structural reforms for the economy. China is reportedly considering measures to attract multinational corporations into the infrastructure, raw material production, and high-technology product development. In 1991, the United States ranked second in China's overall foreign direct investment, behind Hong Kong.

Presently, China does not provide national treatment to foreign investors who are under strong pressure to export, locate in specified areas, and use domestic versus imported components. Foreign investors may repatriate profits, as long as they have the foreign exchange to cover the funds to be remitted. Some foreign investors have been permitted to set up their own marketing or service organizations, but most must rely on Chinese state-owned operations.

Services:

China generally does not allow foreign firms in the service sector, including banking, insurance, construction, accounting, and legal services. U.S. lawyers and accountants must largely limit their activities to servicing foreign firms. Recently, however, China began allowing some foreign investors, on an experimental basis, to establish joint ventures in accounting, insurance, and legal services.

Source: Office of the United States Trade Representative (USTR), *1993 National Trade Estimate Report on Foreign Trade Barriers,* 1993.

with Hong Kong leading at 27.3 percent of the total, Japan at 15.7 percent, and the United States at 12.5 percent in 1991.[126] China's trade with the ASEAN member states has been modest, despite growing political relations with the region.

Despite China's stated goal of reforming and liberalizing trade, China still maintains a multilayered system of import restrictions (figure 2-21). China's import licensing system covers 53 broad categories, or about half of China's imports by value. Another formidable barrier has been a lack of transparency. Many of China's trade rules and regulations have heretofore been unavailable to foreign exporters. On October 10, 1992, in response to a Section 301 investigation of China's import barriers by the U.S. Trade Representative's Office, the United States and China signed a memorandum of understanding (MOU) wherein China committed to reduce its nontariff barriers by December 31, 1997. Such reform is a prerequisite to China's accession to the GATT.[127]

Recent remarks by Government officials and the Chinese media indicate that new policies are being developed to liberalize China's investment regime and attract foreign capital.[128] New policies under consideration include "open cities" in the border regions and Yangtze River valley, and the loosening of restrictions on sectors previously closed to foreign investors. Foreign direct investment in China has increased significantly in recent years. Estimates indicate that 1991 was a record year for foreign investment in China, with official figures showing a total of almost $12 billion committed in new contracts—an increase of 85.6 percent over 1990. The five most important investors in China are Hong Kong, Taiwan, Germany, Japan, and the United States. Although the United States maintains the second largest investment stake in China (behind Hong Kong),

[126] IMF, *Direction of Trade Statistics Yearbook,* 1992.

[127] U.S. Department of State, "Draft 1993 Trade Act Report."

[128] U.S. Department of State, "New Foreign Investment Policies in the Wind in China: The View From Beijing," message reference No. 19788, prepared by U.S. Embassy, Beijing, July 8, 1992.

it dropped to fifth place in terms of investment flows in 1991.[129]

Most foreign investment in China is in the coastal and urban areas. A wide variety of U.S. firms have established operations or joint ventures, and have reportedly found production of consumer products for the domestic market especially profitable. Japanese investment, which totaled $4.4 billion between 1951 and 1991, has tended to concentrate on East and Northeast China. Much of Japanese investment continues to be in the form of light industrial production such as consumer electronics, but recent reports indicate that Japanese investors are considering larger scale projects[130] and expansion of automobile and motorcycle production in China.[131] Foreign investment from Taiwan and Hong Kong is concentrated in the dynamic southern and coastal provinces, such as Guangdong, Fujian, and Jiangsu, but there are also indications that Hong Kong is taking the lead in moving into the inland provinces.

Factors Affecting Integration

A variety of factors—political, economic, and cultural—could have an effect on China's prospects for closer integration with other East Asian countries. China has shown a distinct tendency toward isolationism when confronted with political or economic pressures. Further, tension between China and Japan and a number of issues left unresolved from World War II continue to have an effect on bilateral relations.

The Chinese economy is regarded as being at a crossroads, and prospects for continued reform are in question. Growing areas of the economy appear ready to turn further toward market forces, and the Chinese leadership seems ready to support this trend. Nevertheless, China is still a socialist economy burdened by an ailing state sector, a rapidly growing budget deficit, aging and inadequate infrastructure, and uncertainty over the medium-term political future.[132] While market forces may indeed be poised to play a larger role, inefficient, state-owned corporations are still the paramount force in China's industrial system and continue to receive political support.[133]

This structural dilemma has implications for China's potential integration with the regional and world economies. Failure to make genuine progress on economic reform and liberalization would imply going against regional and worldwide trends—making China a less attractive candidate for increased trade and investment links. On the other hand, continued economic reform and decentralization could further exacerbate the division between the dynamic coastal provinces and the relatively backward interior. Reform also carries with it a considerable risk because allowing market forces to play a greater role in the economy implies a reduction in Beijing's level of political control.

The reform process currently under way in China seems to be geared less toward a regional arrangement than multilateral liberalization. Although economic links with Hong Kong, Taiwan, and Japan are already very strong, the pace of trade and investment reform in China will most likely be dictated by negotiations for accession to the GATT. Further, China's dependence on exports of consumer products to such developed economies as the United States and Western Europe and the need for investment capital from these same countries may well work to ensure that China does not turn exclusively toward Asia in future years.

National Policies and Integration

As the preceding analysis demonstrates, economic growth and structural reform have been the primary engines for closer links among nations in East Asia. Obstacles to continued growth, such as infrastructure bottlenecks and lingering barriers, could jeopardize prospects for integration.

The NIEs face sizeable political and economic obstacles in the near future. Long a center for East Asian trade and finance, Hong Kong's future is dependent upon how the merger with mainland China will be managed in 1997. The flight of human and financial resources out of Hong Kong in recent years is indicative of the prevailing uncertainty over the future of the former British territory. Taiwan's economic future is also bound up with that of mainland China. China has already become an important economic hinterland for Taiwan's labor-intensive industries and an outlet for foreign investment, and relations between the two countries could have an impact on their prospects for growth.

Korea also faces serious impediments to integration. Although Korea has come to recognize the importance of trade and investment links with the rest of the region, Korean officials are clearly reluctant to open key sectors of the economy to foreign influence. The recent failure of the Korean Government to make progress on liberalizing its foreign investment regime under bilateral discussions with the United States is evidence of this concern, as is the continued presence of state-owned corporations.

Singapore has linked its future growth to further integration with the region. The island-state's ambition to become a regional hub for trade, technology, and financial services rests on the assumption that regional

[129] U.S. Department of State, "Foreign Direct Investment in China: Business Is Booming," message reference No. 22201, prepared by U.S. Embassy, Beijing, July 23, 1992.

[130] One of the larger projects recently announced was Mitsubishi's $120 million cement plant joint venture in Shandong.

[131] Ibid.

[132] U.S. Department of State, "Economic Trends Report on China for May 1992," message reference No. 21154, prepared by U.S. Embassy, Beijing, July 16, 1992.

[133] U.S. Department of State, "Draft 1993 Trade Act Report: China."

integration and cooperation will continue. Further, reform of Singapore's own industrial structure and the shift out of labor-intensive manufacturing operations will depend on forging closer economic links with neighboring Malaysia and Indonesia.

Indonesia, Thailand, Malaysia, and the Philippines also face significant barriers to further integration. Trade and investment barriers are still relatively high in these countries, and lack of infrastructure is clearly becoming an obstacle to foreign investment flows. Although economic reform in these countries has made great progress in recent years, further efforts at liberalization and privatization will most likely encounter stronger resistance as the process moves closer to politically sensitive sectors.

China's future economic and political prospects are uncertain. China could emerge as a stabilizing or destabilizing factor in East Asia. China has become increasingly integrated with the other nations of East Asia because of its high economic growth and maintenance of an open-door policy over the past decade. Still, China is not yet a stable component of the region because of its own internal divisions and an incomplete leadership transition. Additionally, it remains to be seen whether the present trend toward a more open economy will continue and whether the increased emphasis on market forces in the allocation of resources will be carried through in still-dominant heavy and basic industry as promised at the Fifth Party Plenum in October 1992.

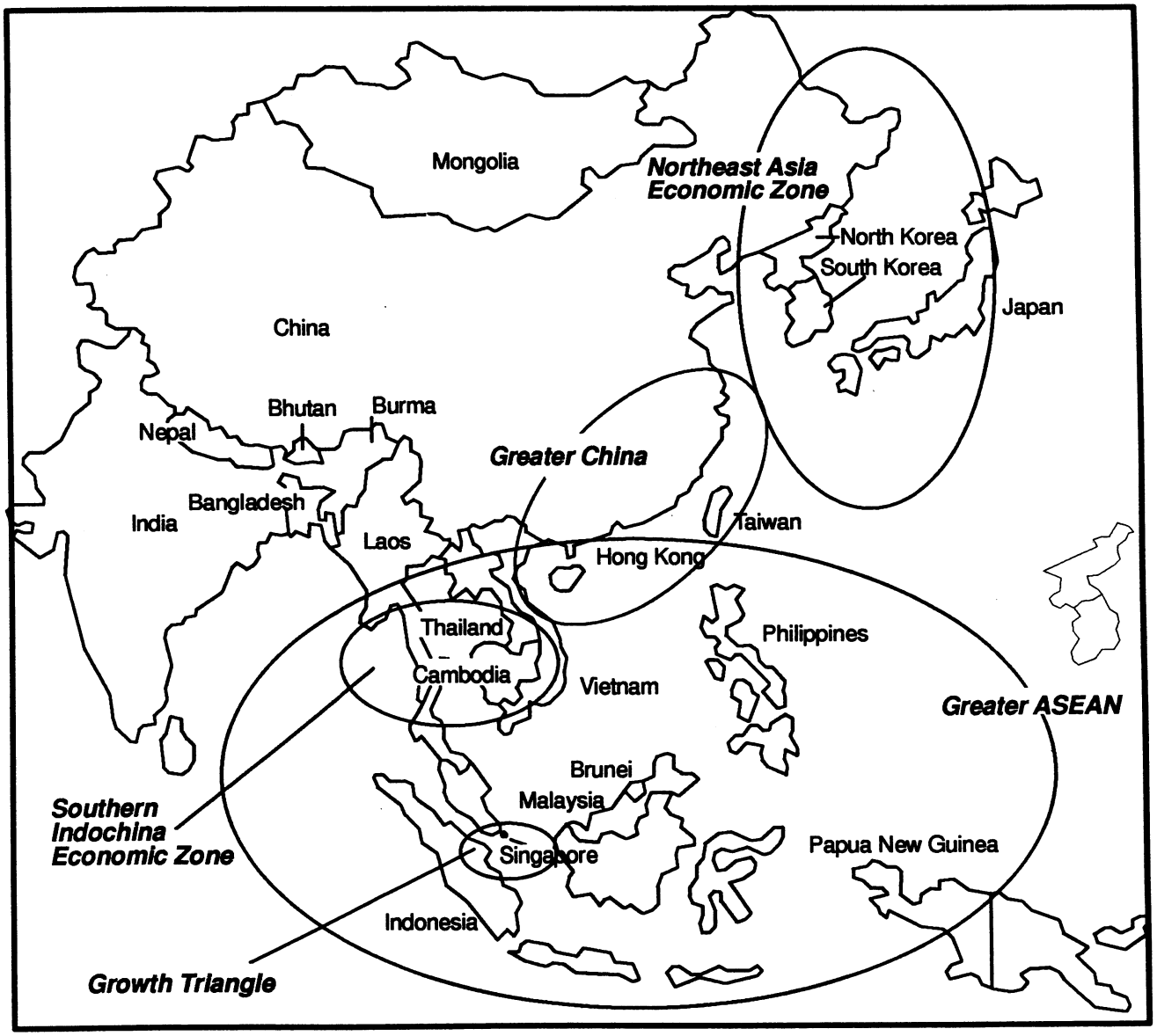
CHAPTER 3
Subregional Integration

Introduction

In addition to more organized and well-known regional institutions, "poles" of economic growth in East Asia and associated subregional economic zones are emerging as a potential force for integration, most notably the Singapore growth triangle and the Greater China area (figure 3-1). These two subregional growth zones are discussed below.[1] Also, the role of ethnic Chinese business networks, a well-established commercial force in East Asia, is briefly examined.

[1] Other potential growth zones include the Southern Indochina Economic Zone or "Bhat Zone," Greater ASEAN, and the Northeast Asia Economic Zone.

Figure 3-1
East Asian subregional economic zones



The Singapore-Johor-Riau Growth Triangle

One example of integration taking place at the subregional level is the so-called growth triangle (SIJORI) forming around Singapore, Indonesia's Batam Island and Riau Province, and the Malaysian state of Johor. The growth triangle does not constitute a common market or free-trade area, and the three governments involved have shown no indication of moving in that direction in the near future. Indeed, the term "triangle" is something of a misnomer insofar as SIJORI remains mainly bilateral rather than trilateral, with Singapore at the core. The economic rationale behind SIJORI is that it capitalizes on resource complementarity within the subregion and is more attractive to foreign investors than its separate parts.[2]

The first link in the triangle emerged in 1978 when the Government of Indonesia designated Batam, an island in Riau Province, as a bonded area for export-oriented manufacturing. Shortly thereafter, Indonesia concluded a bilateral agreement with Singapore to attract small, labor-intensive industries to Batam. In 1989, Singapore's Prime Minister Lee Kuan Yew met with Indonesian President Suharto in an effort to expand the agreement. Indonesia agreed to waive certain foreign investment restrictions, allowing 100 percent foreign ownership of enterprises for the first 5 years and 95 percent for the life of the project. By April 1992, 27 multinational corporations had set up operations at the newly created Batam Industrial Park, employing more than 6,000 workers.[3]

Exports from Batam in 1990 totaled almost $150 million—roughly three times the 1989 figure. Total foreign investment in Batam was estimated at approximately $1 billion. Singapore is the dominant investor, accounting for 45 percent ($450 million) of total foreign investment. Other major investors are the United States with $178 million, Japan with $92 million, Hong Kong with $89 million, and Europe with $86 million.[4]

In August 1992, Indonesia and Singapore agreed to extend the joint development concept beyond Batam to the entire Riau Province—an area containing 3,214 islands with a total land area of 95,000 square kilometers. In addition to tourist and industrial projects, the two countries plan to develop the Karimun Islands, southwest of Singapore, for the oil and ship-building industries.

[2] Chia Siow Yue and Lee Tsao Yuan, "Subregional Economic Zones: A New Motive Force in Asia-Pacific Development," paper presented at the 20th Pacific Trade and Development Conference, Washington, DC, Sept. 10-12, 1992, p. 16.

[3] U.S. Embassy, Singapore, "The Growth Triangle: Singapore-Johor-Riau (A Guide for U.S. Investors)," May 1992, p. 2.

[4] Ibid.

Because of geographical proximity, Singapore's ties with the State of Johor on the Malaysian mainland have always been close. Most of Singapore's food and water enters by way of Johor, and as many as 40,000 Johoreans every day cross the causeway to work in Singapore. Despite these important ties, however, the formation of the Singapore-Johor arm of the SIJORI triangle emerged along much less formal lines than those of Singapore-Riau. During the 1980s, a cross-border economy began to develop similar to the *maquiladora* plants found along the Texas-Mexico border. Factors driving this move were: 1) rising wages and scarce manpower in Singapore, exacerbated by the appreciation in the value of the Singapore dollar; 2) shortage of space for new industrial development in Singapore; and 3) the U.S. decision to remove Singapore from the Generalized System of Preferences (GSP) as of January 1, 1989 (Malaysia still benefits from the GSP). Although primarily textile, furniture, rubber, and food processing operations moved to Johor in the mid-1980s, electronics firms also began to make the move northward as early as 1988.

In 1988, the Singapore Manufacturers Association led an investment mission to Johor. The trip eventually led to the establishment of a joint committee on business cooperation in conjunction with the Johor State Economic Development Corporation.[5] Although Prime Minister Mahathir had endorsed the SIJORI concept, Malaysian Federal Government support for Johor's participation is not as enthusiastic as Indonesia's support for Riau. The Johor State Government, however, is reportedly a strong advocate of the bilateral linkage.

SIJORI's participants have specific comparative advantages. Singapore's strength lies in its managerial and professional expertise and in its well-established financial, transportation, and telecommunications infrastructure. Riau and Johor offer land and relatively cheap labor. While economic complementarity in the Singapore-Johor and the Singapore-Riau arms of the growth triangle are strong, Riau and Johor are actually more competitive than complementary, and thus the linkages on this arm of SIJORI are comparatively weak.[6]

For Singapore, the SIJORI arrangement will reportedly help achieve the following objectives: 1) economic restructuring; 2) a higher value-added service economy and a hub city for the region; 3) promotion of the regionalization and internationalization of Singapore enterprises; and 4) economic advancement of, and integration in, the ASEAN (Association of Southeast Asian Nations) region.[7] Progress on trade and investment liberalization within

[5] Ibid., p. 5.

[6] Chia and Lee, "Subregional Economic Zones," p. 18.

[7] Ibid., p. 19.

ASEAN has been slow. Promotion of smaller scale integration schemes such as SIJORI could build momentum toward larger integration plans such as the ASEAN Free Trade Area (AFTA).

Greater China

Greater China, or the South China Economic Zone, includes South China, Hong Kong, and Taiwan. Taiwan and Hong Kong have recently invested heavily in South China. Factors such as close proximity, inexpensive and abundant land and labor (even in comparison to the Southeast Asian nations), and cultural similarities among overseas and mainland Chinese, especially those of the same dialect groups such as Cantonese, Hakka, and Hokkien, encourage investment in Southern China. With investments in China of $22 billion by approximately 17,000 enterprises, Hong Kong companies employ as many as 2 million Chinese and account for up to 70 percent of total foreign investment in the country.[8]

Over the past 10 years, Hong Kong investors have apparently grown less concerned about the risks associated with investment in China. These concerns were further diminished during a January 1992 visit to Guangdong Province by Deng Xiaoping, who spoke of China emulating the Four Little Dragons (Hong Kong, Taiwan, Singapore, and Korea) and of "the Pearl River Delta becoming a Fifth Dragon."[9] Several provincial governments (especially Guangdong) have also begun to promote foreign direct investment through such programs as tax holidays, seminars and exhibitions on investment, free land leases for 1 or 2 years, and secure long-term land leases.[10]

Most Hong Kong investment in China is conducted by small and medium-size enterprises that focus on low value-added manufacturing and assembly operations, such as electronics, textiles, and toys that require limited capital. In most cases, raw materials or semifinished goods are shipped from Hong Kong into China, and the finished products are shipped back to Hong Kong for export to other countries.

Hong Kong investment occurs primarily in the three Special Economic Zones (SEZs) located in Guangdong Province: Shenzhen (situated just north of the territory on the Hong Kong-China border), Zhuhai, and Shantou. Significant Hong Kong investment has also taken place in Xiamen, which is located in Fujian Province, and Hainan Island. Investment is also growing in the Pearl River Delta of Guangdong Province, which was designated by the Central Government in 1985 as one of the "Large Open Coastal Economic Zones." Hong Kong investors are attracted by the close geographic proximity and by the common language and culture. Indeed, a large number of Hong Kong investors are of Cantonese descent and have family located in Guangdong Province.

Taiwan is also a sizeable investor in China, but its investment is a relatively recent phenomenon. Taiwan investment in China started to gain momentum only 3 to 4 years ago as land and labor costs increased, adversely affecting Taiwan's international competitiveness in lower value-added products. Around this time, contacts between Taiwan and China began to improve, and Taiwan nationals were first allowed to visit the mainland. But, because diplomatic relations still do not exist and no official contact is permitted, Taiwan corporations must set up affiliated corporations in Hong Kong through which most investment in China must be channeled.

Approved Taiwan investment in China has reached an annual level of around $3.5 billion, but this figure may considerably understate actual levels of investment because some Taiwan companies invest in China under other passports.[11] Actual levels of investment are not known, but may be as much as $10 billion annually.[12] One source estimated that at least 3,000 Taiwan companies are currently operating in China. Much of Taiwan's investment occurs in the Xiamen SEZ, located only 100 miles from Taiwan across the Formosa Straits. Other costal cities in Fujian Province also receive substantial Taiwanese investment. Fujian Province is a prime target for investment by the Taiwanese business community because of shared language and culture.

Most Taiwan investment in China is conducted by small and medium-size enterprises, with very few projects exceeding $20 million. The risks associated with large-scale investment are considered too great by some of the larger Taiwan corporations, especially by those investing stockholders' funds. This situation is not likely to change until an effective legal framework is established and stringent legal protection for foreign investment is developed in China. Without formal contact between Taiwan and Chinese authorities, Taiwan investors do not have the support or the advocacy of their own Government in the areas of investment promotion and dispute resolution. Many Taiwan firms are delaying any sizeable investments in China while awaiting further improvements in political relations.

Taiwan authorities are concerned that increasing levels of investment in China may be interpreted as an acceptance of the legitimacy of the Beijing Government, in direct contrast to official Taiwan

[8] Sally Stewart, Michael Tow Cheung, and David W.K. Yeung, "The Latest Asian Newly Industrialized Economy Emerges," Columbia Journal of World Business, summer 1992, p. 31.

[9] *China Daily Business Weekly*, Jan. 19-25, 1992, p. 2.

[10] A Hong Kong official stated that Guangdong Province contributes more in tax revenues to the Central Government than any other province. Consequently, the inhabitants are granted a certain degree of autonomy, as the Government does not want to impede these revenue flows. Government official, Hong Kong, interview by USITC staff, Sept. 17, 1992.

[11] Researcher, Taipei, Taiwan, interview by USITC staff, Sept. 23, 1992.

[12] Ibid.

policy. Accordingly, authorities attempt to restrict each Taiwan corporation's investment exposure in China to modest levels. However, this policy may be changing. In a 1991 yearend speech, Taiwan's President Lee Teng-hui suggested that Taiwan's investment laws should be further liberalized, particularly in the areas of trade finance and manufacturing.[13] In October 1992, for example, Taiwan authorities announced that enterprises would be allowed to invest up to $1 million in China through third country financial intermediaries, instead of through subsidiaries in third countries.[14]

Chinese Networks in East Asia

According to many researchers, ethnic Chinese businesses (mainly small to medium-size family businesses) in East Asian countries also contribute to the increasing levels of intraregional trade and investment, and may rival Japan by the early part of the next century in terms of their economic influence in the region. While statistical information on the presence of ethnic Chinese in the region is limited, some information on their activities exists.

Outside China, the three areas with ethnic Chinese majorities are Hong Kong, Singapore, and Taiwan (often referred to as the "Chinese NIEs"). These economies have experienced rapid growth over the past 10-15 years and made substantial direct investments abroad. In the mid-1980s, these three areas, in addition to investments in China, directed their foreign investments to ASEAN countries, such as Malaysia, Indonesia and Thailand, where overall conditions for investment, including land and labor costs, were quite favorable and where the local governments aggressively sought foreign investment to promote development. Most of the relocated manufacturing or assembly operations exported their products to traditional markets in North America and the European Community.

In every year from 1986 through 1991, the Chinese NIEs invested more in Malaysia than Japan; the differential became nearly twice as large in 1991, with the Chinese NIEs investing $820.7 million and Japan investing $422.5 million. Japan invested more in Thailand in each year between 1986 and 1991, but this differential narrowed considerably in 1990 and 1991. Over the same period, the Chinese NIEs, led by Taiwan and Hong Kong, generally invested more in the Philippines than Japan, with 1986 and 1991 the two exceptions. Japan invested more in Indonesia over this period in each year except 1988 and 1991. These statistics suggest that the three Chinese NIEs in aggregate invested at a level similar to that of Japan between 1986 and 1991.

Ethnic Chinese communities control a disproportionately large share of the private sector businesses in ASEAN countries relative to their representation in the total population (table 3-1). Despite the large size of the ethnic Chinese presence in the region, formal networks through which ethnic Chinese channel some or all of their investment funds generally do not exist. While several interviewees noted the importance of ethnic ties or loyalties that extend across borders, other scholars claim that these are not the overriding factor affecting commercial activities:

> Ethnic networks are often more apparent than real, since long distances of time and space, and language and experience gaps separate Chinese communities. Old links have changed and disappeared, as have many traditions. Today, the Chinese in Southeast Asia tend to be loyal first to their adoptive country, and secondly to their race and culture. They are now more at home with the local cultures, customs, language and cuisine than with those of the now-communist "motherland" which their ancestors left generations ago and most have never seen.[15]

While the majority of the ethnic Chinese cross-border investment in East Asia is motivated by economic interests, some of the investment is also being made for political or security reasons. During the mid to late 1980s, large sums of Hong Kong funds were moved out of the territory and into such economies as Taiwan and Singapore as investors became concerned about the management of the colony when it reverts to China on July 1, 1997. Fears have abated somewhat, and the capital flight is not nearly as rapid as it was in earlier years. Taiwan investors also maintain assets in other countries because of long-standing security threats from China.

Over the next 10 years, the management and investment patterns of Chinese businesses may change. The wealthiest families in East Asia will experience a generational change through which the management of the family companies will shift from the control of the family patriarch (in many cases the founder of the enterprise) to the sons of the family or to an outsider's management. Some suggest that this transference of management could weaken traditional ties by bringing in more of an objective, and internationally directed, management perspective.[16]

[13] Russell Flannery, "Taiwan: Common Market Dreams," *Asian Business*, Jan. 1992, p. 15.

[14] U.S. Department of State, "Taiwan to Allow Investments in the PRC Through Third Country Financial Intermediaries," message reference No. 07737, prepared by American Institute in Taiwan, Taipei, Nov. 2, 1992.

[15] Linda Lim, "The Emergence of a Chinese Economic Zone in Asia?", *Journal of Southeast Asia Business*, winter 1992.

[16] U.S. businessman, Hong Kong, interview by USITC staff, Sept. 17, 1992.

Table 3-1
Distribution of overseas Chinese in East Asia

Country	No. of Chinese	Share of population[1]	Share of private business[2]	Main dialect
	Millions	*Percent*		
Taiwan	20.0	100	95	Mandarin/ Hokkien
Hong Kong	5.5	99	90	Cantonese
Singapore	2.0	75	50	Hokkien/ Mandarin[3]
Malaysia	6.0	35	65	Hokkien/ Cantonese/ Hakka/ Mandarin[3]
Philippines	3.0	5	40	Hokkien
Thailand	5.0	10	80	Teochew
Indonesia	5.0	3	80	Hokkien
Total	46.5			

[1] Percentages of populations are approximate, especially in Philippines and Thailand because of high intermarriage.

[2] Shares of private business are best guesses. They exclude the large state and foreign enterprise sectors.

[3] Mandarin is increasingly spoken in Malaysia and Singapore because of educational changes. The Chinese populations are not native Mandarin speakers.

Source: Linda Y.C. Lim, "The New Ascendence of Chinese Business in Southeast Asia: Political, Cultural, Economic & Business Implications" (Ann Arbor, Michigan: University of Michigan, Mar. 1991).

Conclusion

Economic activity within East Asia appears to be intensifying at the subregional level. Changing economic circumstances and natural comparative advantage appear to be the driving forces behind this phenomenon. Cultural, linguistic, and family ties also appear to play a role. The most notable point about emerging subregional economic integration schemes and the activities of the Chinese business networks is that they are based on almost purely economic interests rather than on a political agenda. Mini-blocs such as Greater China or the growth triangle, while certainly acting as forces for closer ties among East Asian countries, are primarily instruments for promoting economic interests through the exploitation of different factor endowments (land, labor, capital, and entrepreneurship). The process of economic restructuring going on in the NIEs naturally directs the attention of firms in those countries to the possibilities offered by less developed, labor-abundant East Asian neighbors.

Perhaps because this subregional integration is generally recognized as a natural outgrowth of the interplay of market forces, it receives a broad-based support in the region. Many East Asian leaders, seeing that tangible benefits are to be gained, such as employment and technology transfer, higher foreign investment inflows, and increased infrastructural development, have welcomed this subregional integration as a step toward eventual integration on a larger scale. Further, as the zones become more developed in terms of infrastructure, industry, and employment, the effects of economic development could spread.[17]

With a growing number of East Asian countries seeking foreign direct investment as a means of promoting economic development, intensified competition could lead to the formation of more subregional economic zones to maximize attractions for investors. Whether this competition will evolve into a force against regionwide integration or for greater specialization among the subregional zones is difficult to assess at the present time.

It is clear that ethnic Chinese businesses located in Hong Kong, Singapore, Taiwan, and other countries throughout East Asia have contributed to the overall economic integration of the region, and this trend appears likely to continue. Indeed, taken as a whole, by early in the next century, overseas Chinese businesses will likely acquire a larger share of total direct foreign investment in the region than in any

[17] Chia and Lee, "Subregional Economic Zones," p. 41.

single country. Furthermore, as China continues to grow and businesses there increase outward investment, the ethnic Chinese networks may play an even larger role in East Asia. It is important to note, however, that cross-border investment by ethnic Chinese businesses is not centrally managed and is made on a company-by-company basis. Moreover, the investment appears to be based on pragmatic business decisions, not on loyalty to clan or ethnic origin.

CHAPTER 4
Regional Institutions and Integration Schemes

In recent years countries in East Asia have looked to regional organizations as a focal point for furthering common economic interests. A wide spectrum of organizations and proposals are now aimed at forging closer political or economic ties in the Asia-Pacific[1] region. These range from the loose governmental forum known as Asia-Pacific Economic Cooperation (APEC) to Malaysia's proposal for the formation of an East Asian trade group. This chapter will provide a brief summary of the history and purposes of such organizations, recent developments affecting these organizations, and some perspective on the roles played by the United States and Japan.

ASEAN

The Association of Southeast Asian Nations (ASEAN) was established in 1967 in Bangkok. Its major purposes are to promote economic growth, expand trade, promote regional peace and stability, and improve transport and communications. The original signatories were Indonesia, Malaysia, the Philippines, Thailand, and Singapore. Brunei joined the association in 1984. Vietnam, Cambodia, Laos, and Burma may join at some point in the future.[2] ASEAN is considered by many to be the most successful regional organization of its kind in the developing world. It has been suggested, however, that part of ASEAN's success is related to the association's emphasis on promoting regional peace and prosperity rather than economic integration because ASEAN governments have always accorded top priority to pursuing economic goals at the national level.[3]

ASEAN's creation in 1967 was largely a response to hostile external developments in Asia, such as the Vietnam war and China's cultural revolution.[4] Throughout the 1970s and particularly after the fall of South Vietnam, ASEAN's focus was on preserving peace and countering Communism in the region.[5] This focus on dealing with external threats was reflected in the dominance of the organization by member-state foreign ministers, which led to an initial neglect of economic cooperation.[6]

In 1976, ASEAN's emphasis began to shift from a purely political purpose to an economic one. The prior neglect of economic priorities was corrected by the first official meeting of the ASEAN economic ministers and the signing of the Declaration of ASEAN Accord. ASEAN member countries decided to focus on expanding productivity by establishing regional manufacturing facilities, cooperating on basic commodities and production processes, enacting preferential trading arrangements, and harmonizing trade and investment policies.[7]

The belated support for cooperation on economic issues did not, however, bring about a significant expansion of intra-ASEAN economic cooperation, although several market sharing or production cooperation schemes have been attempted. There has been increasing interest in these programs in the past several years, particularly among Japanese firms in the region:

- In 1977, ASEAN states agreed to Preferential Trading Arrangements (PTAs) which included incentives to expand trade and investment in member countries. PTAs provided for tariff reductions, preferential trade financing and government procurement practices, and the liberalization of nontariff barriers. It has been estimated that PTAs cover only 5 percent of intra-ASEAN trade.

[1] Most commonly includes the countries of ASEAN (Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Brunei), China, Hong Kong, Korea, Taiwan, Japan, Australia, and New Zealand. Some of the organizations discussed in this report also include the United States, Canada, Peru, Chile, and Mexico.

[2] Vietnam and Laos have recently expressed interest in joining ASEAN and it was considered somewhat of a surprise that they were denied admission at the January 1991 Ministerial. "Southeast Asians Sign Accords on Free-Trade Zone," *Washington Post*, Jan. 29, 1992.

[3] Linda Y.C. Lim, "The Role of the Private Sector in ASEAN Regional Economic Cooperation," prepared for Research Programme on Globalization and Regionalisation, OECD Development Centre, Paris, Aug. 1992.

[4] Hans H. Indorf and Patrick M. Mayerchak, *Linkage or Bondage, U.S. Economic Relations With the ASEAN Region* (Westport, CT: Greenwood Press, 1989), p. 14.

[5] Robert L. Curry, "Regional Economic Co-operation in Southern Africa and Southeast Asia," *ASEAN Economic Bulletin*, vol. 8, No. 1 (July 1991), p. 18.

[6] Indorf and Mayerchak, *Linkage or Bondage*, p. 92.

[7] Ibid. See also "Spotlight Is on the ASEAN Countries as Tenth ASEAN-U.S. Dialogue Begins," *Business America*, June 17, 1991, pp. 16-21.

- The ASEAN Industrial Complementation (AIC) scheme provides for the coproduction of final products and components under preferential tariff conditions. The AIC was implemented for automotive parts and components under a scheme approved in 1988, which Malaysia, Thailand, and the Philippines have joined.[8] The scheme benefits mainly Japanese auto producers, allowing them to exchange parts among different local subsidiaries at reduced duties. The program was expanded in 1991 to include services and infrastructure products.

- The ASEAN Industrial Projects (AIPs) are large-scale, capital-intensive, public-private companies in which member countries share 40 percent of the equity. The output of these firms enters other member countries duty-free. Thus far, only two firms have been formed: urea plants established in Indonesia and Malaysia with the assistance of Japanese financing and technology.[9]

- The ASEAN Industrial Joint Venture (AIJV) program was established in 1983 to promote small-scale projects in the private sector. Preferential tariff rates are applied to trade from joint ventures involving two or more ASEAN countries. Non-ASEAN partners may not hold more than 60 percent ownership.[10] As with the AIC and AIP schemes, the results of AIJVs have been meager. As of July 1991, only 18 AIJV projects had been approved.

It would seem that, given ASEAN's traditional focus on external threats, the area with the greatest potential for intra-ASEAN economic cooperation is joint action in global trade forums.[11] ASEAN has already had some success in this area, having lobbied for increased aid flows from Japan and supported the inclusion of the United States in APEC. ASEAN has also begun to emerge as a pressure group in trade negotiations, such as those sponsored by the General Agreement on Tariffs and Trade (GATT), having already been successful in inducing the European Community (EC) to modify its trade preference system. This role as a pressure group in multilateral forums is likely to solidify in the future as ASEAN seeks to strengthen its identity in the face of such emerging regional organizations as APEC.

[8] Lim, "The Role of the Private Sector in ASEAN Regional Cooperation," p. 11.

[9] Ibid.

[10] Ibid., pp. 20-21.

[11] Marcus Noland, *Pacific Basin Developing Countries: Prospects for the Future* (Washington, DC: Institute for International Economics, 1990), p. 141.

AFTA

One recent example of growing economic cooperation among the ASEAN member states is the formation of the ASEAN Free Trade Area (AFTA). At the most recent summit of the ASEAN heads of state, held in January 1992, the six ASEAN countries signed a framework agreement to further economic cooperation. The member states also signed the Common Effective Preferential Tariff (CEPT)[12] agreement that will lead toward the AFTA.

The AFTA is a somewhat weaker version of a 1991 Thai proposal and will phase out tariffs over 15 years. In explaining the reasons for his proposal, Thai Prime Minister Anan Panyarachun said, "ASEAN countries had no other choice but to integrate or become a small player in a large playing field."[13] Final negotiations on the free trade area were completed in late December 1992.

Under the AFTA, tariff reductions were applied to manufactured goods and processed agricultural products beginning in January 1993. In the first stage, which is expected to last 5 to 8 years, duties on goods currently subject to tariffs of more than 20 percent will be reduced to a maximum of 20 percent. The rate at which the decrease is made will be left to the individual member states. The second stage, lasting 7 to 10 years, will involve a further reduction of tariffs to between 0 and 5 percent.

Tariff cuts will be accelerated for 15 product categories, including cement, chemicals, pharmaceuticals, fertilizer, vegetable oils, and plastics. These goods comprise approximately $10 billion of intra-ASEAN trade each year, or about one-third the total. For specific products, tariffs currently exceeding 20 percent will be reduced to no more than 5 percent within 10 years. Significantly, each country has the right to temporarily exclude certain products from tariff reductions.

The lowering of high tariffs among AFTA member states is expected to enable companies to employ a more rational production and sourcing strategy in serving ASEAN markets. However, implementation is likely to be slow, and its effectiveness dependent upon the number of items each country continues to protect under the exclusion lists.[14] As of late December 1992, more than 3,600 items were on exclusion lists.[15]

[12] The CEPT scheme was proposed by Indonesia as a method for reducing tariffs on manufactured goods to between 0 and 5 percent

[13] Foreign Broadcast Information Service (FBIS), "Fourth ASEAN Summit Opens in Singapore 27 Jan," *Daily Report: East Asia*, Jan. 28, 1992, p. 1

[14] Former Government official, interview by USITC staff, July 20, 1992, and representative of U.S. private sector association, interview by USITC staff, July 21, 1992.

[15] Mark Magnier, "ASEAN Nations Detail Products To Be Excluded From Accord," *Journal of Commerce*, Dec. 24, 1992.

APEC

The Asia-Pacific Economic Cooperation forum represents one of the larger organizations promoting regional economic cooperation and is emerging as one of the United States' chief vehicles for relations with the Pacific Rim as a whole. APEC was established at a 1989 ministerial conference in Canberra, Australia, and at the time included ASEAN, the United States, Korea, Japan, Canada, Australia, and New Zealand.[16] The conferees recognized the need for an effective means of strengthening the multilateral trading system, of providing an opportunity to assess trade and investment in the Asia Pacific region, and of identifying common economic interests. The "Three Chinas" (China, Taiwan, and Hong Kong) joined APEC at its third annual ministerial held in Seoul during November 1991,[17] bringing total membership to 15 economies and making APEC the only governmental forum to include all three Chinas.

Until September 1992, APEC did not have an institutional framework.[18] Apparently, members wished to keep the organization's form loose and its activities broad so that they could gauge its potential usefulness. However, moves toward a North American Free Trade Agreement (NAFTA) and economic integration in the EC sparked an interest in developing a more formal arrangement. At the Seoul ministerial, the issue of establishing a permanent secretariat was raised. However, because of concerns among ASEAN countries about the potential for APEC becoming too powerful, a decision was postponed.[19] At APEC's 1992 ministerial in Bangkok, the organization agreed to locate and fund a secretariat in Singapore—a step widely perceived as marking the transition of the organization from an experimental stage to one of a full-fledged and viable institution.

The substantive work of APEC is carried out by 10 working groups which cover broad areas of economic, educational, and environmental cooperation. In addition, APEC has two ad hoc groups covering regional trade liberalization and economic policy. The duties of the 10 working groups are as follows:

1) **Trade and investment data**—develops consistent and reliable data in merchandise trade, trade in services, and investment.

2) **Trade promotion**—exchanges information and promotes economic and trade missions among member states.

3) **Investment and technology transfer**—promotes investment through such activities as an investment and technology information network for the Asia-Pacific region.

4) **Human resources development**—seeks ways to exchange information among member states in such areas as business administration, industrial training and innovation, project management, and development planning.

5) **Regional energy cooperation**—develops cooperative projects, such as a regional database on energy supply and demand, and exchanges views on issues such as exploration and development.

6) **Marine resource conservation**—exchanges information on and develops recommendations for dealing with marine pollution problems and coastal zone planning.

7) **Telecommunications**—compiles documents on telecommunications development activities, including a description of each member state's telecommunications environment. Explores ways to develop regional networks and exchanges information on regulatory developments.

8) **Transportation**—studies and recommends ways to improve infrastructure, facilitate movement of passengers and freight, collect and exchange data, and enhance safety and security.

9) **Tourism**—studies the region's tourism industry, focusing on data exchange, barriers to expansion, training programs, and current projects in APEC economies.

10) **Fisheries**—surveys cooperation to develop fisheries resources, and complements the work of existing organizations in promoting cooperative relations among APEC participants.[20]

APEC's evolution as a vehicle for regional economic cooperation will depend on both internal and external factors. Thus far, APEC has proved useful as a gathering point for Pacific Rim economies wishing to discuss regional economic issues. Some members apparently see a much larger role for APEC in the future, however, including the possibility of shaping it into an Asia-Pacific version of the Organization for Economic Cooperation and Development (OECD). Indeed, APEC could go much further as an institution—helping to manage rapid growth and modernization and to address Asia-Pacific economic issues under the framework of "open regionalism."

[16] APEC has held two ministerial meetings and one trade ministers meeting since 1989. FBIS, "Goals, Progress of APEC Trade Bloc Reviewed," *Daily Report: East Asia*, Aug. 27, 1991, p. 23.

[17] FBIS, "Expanded Regional Economic Cooperation Planned," *Daily Report: East Asia*, Oct. 18, 1991, p. 25

[18] FBIS, "APEC Activities, Goals Viewed," *Daily Report: East Asia*, Sept. 18, 1991, pp. 2-3.

[19] "Asia Pacific Forum To Address Framework," *Journal of Commerce*, Oct. 15, 1991.

[20] U.S. Department of State, Bureau of Public Affairs, "Fact Sheet: Asia Pacific Economic Cooperation (APEC)," Sept. 10, 1992.

Open regionalism is not a precisely defined concept, but implies the lowering of trade and investment barriers on a regional level without the erection of any new barriers to countries outside the region, and in a manner consistent with the GATT. Working groups, through timely exchanges of information, have already pinpointed where investments need to be made to avoid infrastructure bottlenecks.[21] Some observers believe that APEC is being invigorated through the setting-up of its headquarters, the inclusion of new members, and its interest in linking itself to NAFTA.[22] Others, however, believe that APEC's main role is to serve as a counterweight to more exclusionary proposals.[23]

Some member economies have shown reluctance to make APEC into a larger, more powerful organization, feeling that it is already unwieldy.[24] ASEAN members and others are also concerned that new regional organizations such as APEC do not create a forum for pressure politics and that their interests could be subordinated to those of the larger powers. Having long enjoyed an institutional monopoly, ASEAN is reluctant to be marginalized by APEC. Such issues could lead to real competition between the two organizations in the future.[25]

The country that hosts and chairs APEC's annual ministerial plays a key role in shaping the group's agenda throughout the year. The United States is host of the 1993 ministerial. Issues facing the group include how to successfully bring recently added members into the fold, how to focus and streamline the organization's activities, and how to secure a vital role for the private sector in APEC work. An eminent-persons group, composed of leading academics, business representatives, and former government officials, has been set up to develop a vision for the organization's future activities, and some thought is being given to broadening the mandate of the regional trade liberalization group. Current projects of the group include the promotion of cooperation among member economies' customs services, an investment survey to analyze the investment procedures and investment environment in each country, and a project to establish a database on the trade regime of each member economy—including information on existing tariff and nontariff barriers. Member economies are agreed, however, that APEC is not intended to be a negotiating forum.

[21] Andrew Elek, "Trade Policy Options for the Asia-Pacific Region in the 1990s: The Potential of Open Regionalism," *American Economic Review*, vol. 82 (May 1992).

[22] "Keeping Cool on Trade," *Far Eastern Economic Review*, Oct. 31, 1991, p. 23.

[23] "Asian Nations Have Yet To Mold Form of Regional Trade Pact," *Journal of Commerce*, Nov. 12, 1991.

[24] Shim Jae Hoon, "Growing-Up Pains: Formalisation of APEC Grouping To Loom Large at Talks," *Far Eastern Economic Review*, Nov. 14, 1991.

[25] Donald Crone, "The Politics of Emerging Pacific Cooperation," *Pacific Affairs*, vol. 65, No. 1, Spring 1992, p. 80.

PBEC

The Pacific Basin Economic Council (PBEC) is a private sector group organized in 1967. The members of PBEC are business leaders from throughout the Pacific Basin who share an interest in promoting regional trade and investment. Member companies are affiliated with PBEC through its 14 member committees in the United States, Canada, Japan, Australia, New Zealand, Korea, Taiwan, Hong Kong, Malaysia, the Philippines, Fiji, Mexico, Chile, and Peru. PBEC also has active organizing committees in China, Columbia, Indonesia, Russia, and Thailand that are applying for membership status. The principal role of the committees is to assist their corporate members in expanding trade and investment opportunities by facilitating meetings with business counterparts and key government officials.

PBEC serves as a forum for strengthening economic and business relations among its members, who generally support the elimination of trade barriers and the promotion of regional economic cooperation. Approximately 900 corporations belong to PBEC, most of them through membership in affiliated business organizations in their respective countries. A wide variety of companies are PBEC members, representing services, manufacturing, and natural resource industries.

PECC

The Pacific Economic Cooperation Council (PECC) was initiated by the Prime Ministers of Japan and Australia in 1980. PECC began as a series of regular meetings among Asia-Pacific government and business officials in their private capacities along with academic/institutional leaders. While PECC is a nongovernmental organization, PECC task forces receive government funding and, in many countries, its members are government-appointed. The organization seeks to facilitate regional cooperation and has formulated regional positions for the Uruguay Round. PECC members include Australia, Brunei, Canada, China, Indonesia, Japan, Korea, Malaysia, New Zealand, the Pacific Islands, the Philippines, Singapore, Taiwan, Thailand, and the United States. Chile, Hong Kong, Mexico, Russia, and Peru became members in 1991.[26]

In many ways, PECC has been the private sector counterpart and natural predecessor to APEC. Because of its nonofficial status, PECC often acts as a sounding-board for policies and measures later taken up in APEC. Much like APEC, the substantive work of PECC is carried out by a series of task forces whose aims are to examine trade policy issues within each sector and recommend ways to expand markets, productivity, and infrastructure. The current task forces are: Pacific economic outlook, trade policy,

[26] *Pacific Basin Economic Council International Bulletin*, June 25, 1991.

financial services and foreign investment, agriculture, fisheries, minerals and energy, science and technology, environment and pollution control, telecommunications, and transportation and tourism.

General meetings are held every 18 months.[27] In September 1992, PECC held its ninth general meeting in San Francisco. In addition to discussing the progress of various working groups, the conference focused on such regional trade groupings as the EC, NAFTA, and AFTA. Delegates examined the impact that these groupings might have on the international trading system and proposed "open regionalism" as an alternative to exclusive trading arrangements.

EAEG

The proposed East Asian Economic Grouping (EAEG) was originally formulated by Malaysia's Prime Minister Mahathir Mohamad in December 1990 in the wake of a major setback in the Uruguay Round, and was envisioned as a forum where representatives from East Asian countries could discuss and develop a common position on economic and trade issues.[28] Another reason for proposing EAEG, according to Prime Minister Mahathir, was that "the EAEG combined market will be too attractive for Europe and America not to negotiate with" and that it would give participants more leverage in international negotiations.[29] The EAEG would include ASEAN, Japan, China, and Korea. The group, however, would not include the United States, leaving Japan as the dominant economic power.[30]

The United States, Japan, China, and Indonesia opposed the EAEG proposal, arguing that, because the EAEG would duplicate APEC's functions, it was unnecessary.[31] Thailand, Singapore, the Philippines, and Brunei offered reserved support for the proposal.[32] Indonesia was reportedly resentful of Prime Minister Mahathir's efforts because it has traditionally taken the leadership role in ASEAN's relations with other countries.[33] At the ASEAN postministerial conference held in July 1991, U.S. Secretary of State James Baker discouraged members from supporting the EAEG proposal.

[27] Ibid.

[28] Michael Vatikiotis, "Time for Decisions," *Far Eastern Economic Review*, Jan. 16, 1992, p. 24.

[29] FBIS, "Mahathir Emphasizes Dominant Stand on EAEG," *Daily Report: East Asia*, Sept. 27, 1991, p. 29.

[30] "Southeast Asians Inch Toward Developing Regional Trade Bloc," *Christian Science Monitor*, July 25, 1991, p. 4.

[31] FBIS, "Mahathir Emphasizes Dominant Stand on EAEG," p. 29. See also "Intra-ASEAN Cooperation Urged," *Daily Report: East Asia*, June 25, 1991, p. 52.

[32] "The Eye on Japan," *The Economist*, Feb. 1, 1992, pp. 36-37.

[33] Peter Kandiah, "Economics Becoming ASEAN Raison d'Etre," *Nikkei Weekly*, Jan. 1, 1992, p. 1.

At the ASEAN economic ministers meeting in October, the name EAEG was changed to the East Asian Economic Caucus (EAEC) to address concerns that a closed regional trading bloc was being proposed. The EAEC is a more moderate version of the EAEG proposal, without references to financing or coordination among members.[34]

In December 1991, Prime Minister Mahathir visited Japan and Korea in an unsuccessful attempt to win support for his proposal before President Bush's visit to the region. At the ASEAN summit meeting in January, no consensus was reached on the EAEC proposal, reflecting the differing views of member states. Indonesia, by suggesting that the proposal be clarified, effectively put it on hold.[35] According to one ASEAN representative, "Mahathir's EAEC proposal has been put on the backburner for the moment and ASEAN is hoping it will die away."[36] However, interviewees in the region said there is continued support in Malaysia and within Japan's business community for a regional grouping such as EAEC.

Japan's Relationship With Regional Institutions

ASEAN

Japan has traditionally supported ASEAN's goals and has attempted to maintain a "partnership relationship" with the organization. In 1977, for example, Japan pledged an increase in foreign aid, economic assistance to joint ventures in ASEAN, and in Japan's imports from ASEAN countries. In 1981, Japan's Prime Minister Zenko Suzuki called for the "politics of harmony" between Japan and ASEAN. In 1986, the Abe doctrine renewed Japan's partnership with ASEAN.[37]

At an ASEAN summit meeting in December 1987, Japan's Prime Minister Yasuhiro Nakasone announced a 3-year, $2 billion plan to recycle Japan's trade surplus through untied aid to the ASEAN countries through the Japan-ASEAN Development Fund. The Japan-ASEAN Investment Company (JAIC), which was established in 1981 by large Japanese banks and trading companies, was to provide $200 million in financial support, and the Overseas Economic Cooperation Fund and the Japan Export-Import Bank were to provide $1.8 billion. While only government institutions are permitted to borrow funds, the main purpose of the JAIC is to channel funds to the private

[34] "Keeping Cool on Trade," p. 23.

[35] "The Eye on Japan," p. 37; Charles P. Wallace, "6 Asian Nations Agree To Form Free-Trade Zone," *Los Angeles Times*, Jan. 29, 1992, p. A4.

[36] ASEAN representative, interview by USITC staff, July 21, 1992.

[37] Marie Doherty, "Japan and ASEAN: Political and Economic Relations," *Japan Economic Institute Report*, Apr. 10, 1987, p. 2.

sector.[38] As ASEAN countries have become more dependent on Japan for capital investments and other assistance, they have also grown more cautious about their relations with Japan. There is some fear that there would be no counterweight to Japan if the region were forced to turn inward in response to EC 92 and NAFTA.[39]

Although ASEAN member states have shown considerable trepidation over an increased security role for Japan, they have apparently been more receptive to the image of Japan as a regional economic leader. At the ASEAN summit in January 1992, Japan was urged to play a greater role in promoting regional economic cooperation and to continue investing in the region.[40] The Japanese restated their position that any regional economic integration should be based on principles of free trade.[41]

In January 1993, the ASEAN countries were visited by Japanese Prime Minister Kiichi Miyazawa. The visit provided an opportunity for the prime minister to promulgate what many referred to as the "Miyazawa doctrine," for Japan's policy toward Asia. Miyazawa specifically focused on several areas where Japan and ASEAN could form a new cooperative relationship: securing peace and stability in the region, ensuring that the Asia-Pacific region continues to develop in an open and dynamic manner, promoting democratization, pursuing development in tandem with environmental conservation, and bringing peace and prosperity to Indochina.[42] Miyazawa also pledged to increase funding for ASEAN development over the next 5 years and to host a meeting on Indochinese development in 1993.[43]

Significantly, Miyazawa recognized the need to avoid protectionism and to avoid the formation of regional trade blocs, and spoke in favor of expanding regional cooperation through APEC.[44] ASEAN member-states' reactions to the Miyazawa doctrine have been favorable thus far, but, to clear away lingering suspicions about its intentions, a number of analysts and diplomats have called for Japan to substantiate its promise of partnership with ASEAN on political and security matters through concrete actions.[45] Working to bring about a lasting peace in Cambodia would certainly add to Japan's credibility in this regard.

APEC

Japan's views of, and relations with, APEC have evolved along with the organization itself. Although Japan was one of the founding members of APEC, it was primarily Australia and the United States that pushed for the establishment of the regional forum. This is in contrast to Japan's more active role in promoting the creation of PECC in 1980.[46] Upon the establishment of the APEC work program in 1990, Japan agreed to participate in several of the project areas, including the creation of a data bank for trade and investment, technology transfers, and human resource development. During that same year, however, in addressing how APEC's structure and scope would take shape, Japan's Minister of International Trade and Industry, Kabun Muto, stated that Tokyo preferred APEC to be a loose convention.[47]

More recently, Japan has apparently taken a greater interest in APEC as a regional institution. In response to calls for Japan to assume a greater leadership role in the Asia-Pacific, a number of prominent individuals and institutions in Japan have endorsed APEC as a means for regional policy coordination and economic cooperation. Hisashi Owada, Japan's Vice-Minister for Foreign Affairs, for example, in a statement on prospects for Asia-Pacific cooperation, specifically called for further invigorating the activities of APEC on the basis of open regionalism.[48] Japan's Economic Planning Agency, in a recent White Paper on the world economy, endorsed APEC as a means of increasing regional cooperation—particularly as an alternative to more exclusive proposals like the EAEG.[49] APEC also occupied an important position in the Miyazawa doctrine, elaborated in January of this year.

Reportedly, some officials in Japan's Ministry of Foreign Affairs view APEC as a regional organization that could rival the OECD as a vehicle for information exchange and policy coordination.[50] Japan's role as a

[38] Maria Socorro, H. Gochoco, and Ruperto P. Alonzo, "Cooperation and Competition Between Japan and the United States: Possible Impacts on the ASEAN Region," in Harry H. Kendall and Clara Joewono, eds., *Japan, ASEAN, and the United States* (Berkeley, CA: Institute of East Asian Studies, U. CA, 1991), pp. 152-53.

[39] Peter J. Katzenstein and Martin Rouse, "Japan as a Regional Power: Influence and Response in Pacific Asia," National Bureau of Economic Research Inc., Conference on the U.S. and Japan in Pacific Asia, Apr. 2-5, 1992, p. 11.

[40] FBIS, "ASEAN Wants Japan Involved in Cooperation," *Daily Report: East Asia*, Nov. 22, 1991, p. 1.

[41] Ibid.

[42] FBIS, "Miyazawa Gives Asia Policy Speech," *Daily Report: East Asia*, Jan. 19, 1993, pp. 5-8.

[43] "Thailand—Paper Praises Miyazawa's Response to Proposed Role," *Pacific Rim Intelligence Report*, translated from *Matchon*, in Thai, Jan. 19, 1992.

[44] FBIS, "Miyazawa Gives Asia Policy Speech," *Daily Report: East Asia*, Jan. 19, 1993, pp. 5-8.

[45] FBIS, "Miyazawa's Bangkok Speech Marks Asian Policy 'Shift'" *Daily Report: East Asia*, Jan. 19, 1993, p. 1.

[46] Barbara Wanner, "Pacific Economic Cooperation: Washington's New Asian Strategy?," *Japan Economic Institute Report*, No. 44A, Nov. 17, 1989.

[47] Margo Grimm, "Second APEC Meeting Takes Small Steps Toward Solidifying Forum," *Japan Economic Institute Report*, No. 32B, Aug. 17, 1990.

[48] Hisashi Owada, "Prospects for Cooperation in the Asia-Pacific Region," *IHJ Bulletin*, summer 1992.

[49] U.S. Department of State, "Japanese Government White Paper and the EAEC," message reference No. 20211, prepared by U.S. Embassy, Tokyo, Dec. 9, 1992.

[50] Charles Smith and Louise de Rosario, "Empire of the Sun," *Far Eastern Economic Review*, May 3, 1990, p. 46.

leader in APEC, however, may be tempered by concern that a high diplomatic profile would resurrect fears of Japanese dominance. Nevertheless, in the view of one scholar, APEC could provide a framework through which Japan can move toward a position of shared policy leadership with the United States in the Asia-Pacific region.[51]

EAEG

Japan, like most other countries in the region, has not shown great official interest in the EAEG or in its less exclusive form as an economic caucus. Concern over emerging trade blocs, such as the EC and NAFTA, has prompted Japan to look more seriously at regional integration, but with an emphasis on schemes that maintain an outward orientation. In November 1991, Japan reportedly proposed that the EAEC be folded into APEC as a "nonstanding consultative organ" in which ministers would hold discussions during APEC meetings. Japan reportedly wanted the EAEC to "play the role of an organ monitoring the EC and NAFTA so that they will not increase their natures as exclusive," and it wanted also to make sure that the EAEC itself would not become exclusive.[52]

Because of Japan's growing relations with Malaysia the Japanese Government has been reluctant to categorically dismiss the EAEC. Recently, however, with Japan apparently taking a more active position on Asia-Pacific economic integration under the framework of open regionalism, a more explicit policy on the EAEC seems to be taking shape. A recent White Paper produced by Japan's Economic Planning Agency, for example, states:

> In the midst of this kind of [trading bloc] situation, there are moves in East Asia for aiming at artificial integration, as seen in the EAEC (East Asian Economic Consultative Group) concept, advocated by Prime Minister Mahathir. If this were to come into confrontation with European and American regionalism and were to foster protectionist-type trends, it would not be desirable. In order to hold down the risk of the bloc-ization of regional economic zones, it is important to lead the GATT Uruguay Round, now under way, to a successful conclusion, and to strengthen the reliability of the global free trade structure.[53]

During his tour of the ASEAN countries in January of this year, Japanese Prime Minister Miyazawa downplayed the idea of the EAEC. After meeting with Prime Minister Mahathir, who again tried to interest Miyazawa in the formation of a regional consultative caucus, Miyazawa reportedly labeled the proposal "a warning, an expression of his [Mahathir's] concern" and went on to say that there was no need to exclude the United States and other countries from regional cooperation. Instead, Miyazawa reaffirmed Japan's support for the APEC process.[54]

The United States' Relationship With Regional Institutions

ASEAN

The United States has long been supportive of ASEAN as a beneficial arrangement for maintaining peace and stability in Southeast Asia. The United States and the ASEAN member states basically agree on most political and security issues, but there is reportedly some concern in ASEAN that the United States places relations with major nations such as Japan and China ahead of ASEAN's interests.[55]

ASEAN has served as the chief institutional focal point for the U.S. Government in pursuing its diplomatic interests and in offering reassurances on security matters in Southeast Asia. In 1989, the U.S.-ASEAN Initiative proposed a number of ways in which trade, investment, and economic relations could be enhanced.[56] In 1990, ASEAN agreed that implementation of the initiative would be contingent upon the conclusion of the Uruguay Round.

On December 21, 1990, the United States signed a Memorandum on Trade and Investment with ASEAN, which established a Trade and Investment Cooperation Committee (TICC) to monitor trade and investment relations and to identify trade and investment opportunities. In October 1991, the United States signed a Trade and Investment Framework Agreement (TIFA) with Singapore in accordance with the memorandum.[57] Within ASEAN, the United States has also signed a TIFA with the Philippines, and an agreement is currently under negotiation with Brunei.

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[51] Peter Drysdale, "Open Regionalism: A Key to East Asia's Economic Future," Pacific Economic Papers No. 197, Australia-Japan Research Centre, Australian National University, Canberra, Australia, 1991.

[52] U.S. Department of State, message reference No. 21163, prepared by U.S. Embassy, Tokyo, Nov. 25, 1991.

[53] U.S. Department of State, "Japanese Government White Paper and the EAEC," message reference No. 20211, prepared by U.S. Embassy, Tokyo, Dec. 9, 1992.

[54] "Miyazawa Urges Support U.S.-Backed APEC, Rejecting Malaysian Call for Asia Bloc," *International Trade Reporter*, Jan. 27, 1993, p. 134.

[55] Charles E. Morrison, *Japan, the United States, and a Changing Southeast Asia* (Lanham, MD: University Press of America, 1985), p. 32.

[56] *ASEAN-U.S. Initiative: Assessment and Recommendations for Improved Economic Relations, Joint Final Report*, Institute of Southeast Asian Studies, Singapore, and The East West Center, Honolulu, 1989.

[57] "Southeast Asia Trade Opening Up," *The Globe and Mail (Toronto)*, Oct. 14, 1991, p. B13.

One example of U.S. private sector cooperation with ASEAN is the Private Investment and Trade Opportunities Project. The project is intended to provide a support system to encourage U.S. and ASEAN businesses to expand ties. USAID provides funding through a grant, with contributions from other sources in the United States and ASEAN. Businesses or exporters are given technical and training support through missions to the region, seminars, referrals to potential partners, and other information.[58] The program, especially its overseas component, has encountered difficulties in getting up and running, partially because of a shortage of trained personnel. Its overseas activities, such as private trade missions, have often had to be supported by U.S. Embassies in the ASEAN countries.

APEC

The United States, in conjunction with Australia, was one of the original proponents of APEC, and U.S. support for the organization has been maintained up until the present day. It can be argued that APEC is particularly important insofar as it represents an ongoing test of the United States' commitment to the Asia-Pacific, and a barometer of U.S. interest in the region from a nonmilitary perspective.

When the notion of an Asia-Pacific economic entity first surfaced in 1989, some observers marked it as indicative of a new U.S. strategy toward the region—both as a counterweight to the European Community, and as a method of containing Japan's growing influence.[59] Although APEC was originally the initiative of Australian Prime Minister Bob Hawke, the United States was quick to follow up on the proposal, with former Secretary of State James Baker speaking of a "new Pacific partnership" taking shape. Significantly, the United States avoided imposing its own blueprint on the emerging forum, looking instead for a structure based on consensus-building among the core members.[60] While calling for the members to "deepen regional cooperation" and to "build a consensus for free trade and investment" in the Asia-Pacific, the United States was not aggressive in pushing for institutionalization and concrete results from APEC.

Interest in APEC has grown steadily through the past year, and a number of U.S. officials reportedly now view the forum as one of the nation's "best bets" for maintaining an active official presence in the Asia-Pacific. As noted by Richard Solomon, Assistant Secretary for East Asian and Pacific Affairs, in early 1992:

> Our objective for the future economic architecture of the Asia-Pacific region is APEC, the governmental counterpart to the robust private sector economic ties across the Pacific. APEC was formed less than three years ago but is rapidly becoming the institutional vehicle of our multilateral economic engagement in the region. APEC . . . will encourage greater regional integration and growth throughout the Pacific Basin. APEC holds the promise of fostering a true sense of Asia-Pacific community.[61]

U.S. involvement with APEC is now at what is regarded to be a critical juncture. Before leaving his post as Acting Secretary of State, Lawrence Eagleburger described the challenge for the United States regarding APEC and the opportunity presented by the United States' assumption of the chairmanship of the organization in 1993:

> I believe you are going to witness . . . a determined commitment on our part to APEC and to making APEC an effective instrument of our common purpose. This is not a question of inclination or choice but of facts—geographic, political, and economic—facts which will require us to continue assuming our responsibilities as an Asian power no matter what political party governs in Washington, DC. We must now move beyond the phase of institutionalizing APEC to making it operational; we must move, in short, from rhetoric to results.[62]

APEC may well hold considerable potential as a vehicle for U.S. policy in the Asia-Pacific, but the development of the forum into a genuine regional economic organization will require attention. The current U.S. chairmanship should offer an opportunity for the United States to influence APEC's emerging agenda. Members of the Clinton administration have already indicated the importance of APEC as part of overall U.S. policy toward Asia. U.S. Trade Representative Mickey Kantor, for example, in a hearing before the Trade Subcommittee of the House Ways and Means Committee, stated:

> The Pacific Basin and the Asian Pacific area is critical to us, I believe, in our future economically. We would like to use our chairmanship of APEC, as I indicated, as a way to build a framework around that organization to begin to address trade issues.

[58] U.S.-ASEAN Council for Business and Technology, Inc., "PITO Private Investment and Trade Opportunities Project," 1992.

[59] Barbara Wanner, "Pacific Economic Cooperation: Washington's New Asian Strategy?."

[60] Richard H. Solomon, Assistant Secretary of State for East Asia and Pacific Affairs, testimony before the Senate Foreign Relations Subcommittee on East Asia and Pacific Affairs, Sept. 21, 1989.

[61] Richard H. Solomon, Assistant Secretary for East Asian and Pacific Affairs, speaking before the Pacific Rim Forum, San Diego, CA, May 15, 1992, as cited in *U.S. Department of State Dispatch*, May 25, 1992, p. 414.

[62] Lawrence Eagleburger, Acting Secretary of State, speaking before the APEC Senior Officials Meeting, Washington, DC, Dec. 2, 1992, as cited in *U.S. Department of State Dispatch*, Dec. 7, 1992, p. 868.

What that leads to, we hope, is more open trade with all the nations of the Asian Pacific region.[63]

PECC

The United States has supported PECC through government contributions to an international PECC Fund and through the membership of senior administration officials and Members of Congress in the United States National Committee for Pacific Economic Cooperation. It has encouraged U.S. businesses to participate in PECC, particularly in cases that give rise to interactions with APEC.

In recognition of the market forces that drive regional economic integration, the United States has encouraged the development of PECC as a means of involving businesses in regional trade and development policy issues. PECC task forces are viewed as complementary to APEC working groups because PECC draws upon ideas and support from businesses and think tanks. This, and the fact that PECC is the only private organization to hold official observer status in APEC, has led the United States to encourage coordination and mutual support between the two bodies, a process made easier by the fact that each has its international secretariat in Singapore.

The U.S. National Committee for Pacific Economic Cooperation is supported through a grant from USAID and private contributions. As in the case of APEC, U.S. governmental support for PECC is widely viewed in East Asia as a measure of American interest and commitment to regional economic cooperation.

Conclusion

The current period of self-assessment occurring within East Asia against the backdrop of multilateral and regional trade talks will probably continue for the short term. Although the process of economic and political cooperation has progressed little until recently, the pace could quicken under certain conditions. For example, if the Uruguay Round negotiations fail or if moves in the EC or North America toward free trade and integration are perceived as a threat to the export interests of East Asian countries, the region could turn inward—although at a great cost to regional economies.

Whether or not they turn inward, East Asian countries may decide that they can better promote their interests by presenting their views from the standpoint of regional groupings. To the extent that these relatively small economies believe they can achieve efficiencies through combined markets and free trade, an incentive to strengthen ties may also exist. Pressures may also increase the need to focus on regional security issues in response to declining U.S. involvement in the region, as well as to such other concerns as North Korea's nuclear program.

The United States and Japan can be expected to continue to play major roles within regional organizations and behind the scenes. The EAEC seems currently to be in limbo largely because of opposition from the United States, as well as the reluctance of its putative members to support a possibly divisive institution.

Some observers have suggested that Japan could play a constructive role in a regional economic grouping as long as the purpose was to promote global trade and investment. Japan has officially opposed the formation of exclusive trading blocs in forums such as the OECD and has encouraged other Western countries to increase their relations with countries in East Asia.[64] However, there have been some indications by Japanese officials that they recognize the importance of East Asia to Japan and are interested in playing a leadership role in any regional grouping.

In June 1991, then Deputy Prime Minister Miyazawa proposed that Tokyo "lead the 'Asian economic bloc' " consisting of ASEAN, Korea, and Japan.[65] He said that Japan should try to provide greater economic aid to Asian countries in order to 'outdo' NAFTA and EC 92.[66] More recent moves by Miyazawa indicate the new importance Japan is attaching to the "open regionalism" approach pursued by such organizations as PECC and APEC. As with the United States, however, whether recent pledges of support can be transformed into genuine leadership in building a Pacific community is an issue that all countries in the region will be watching with considerable interest.

[63] U.S. Trade Representative Mickey Kantor, statement before a hearing of the Trade Subcommittee of the House Ways and Means Committee, April 21, 1993.

[64] FBIS, "Japan To Oppose Trade Bloc at OECD Session," *Daily Report: East Asia*, May 21, 1991, p. 5.

[65] FBIS, "Miyazawa Asks Japan To Lead Asian Economic Zone," *Daily Report: East Asia*, June 7, 1991, p. 60.

[66] Ibid.

CHAPTER 5
East Asia's Trade and Investment Patterns

The 1980s were a period of rapid growth in world trade, and East Asia was a strong participant in this trend. The dollar value of East Asia's total trade (exports plus imports) more than tripled from 1980 to 1991, and East Asia's share of world trade nearly doubled over the same period. Intraregional trade grew in both absolute and relative terms. The United States was the key export market for East Asian goods and an important source of imports. In fact, the rate of U.S. export growth in East Asia was faster than that of overall U.S. exports. Japan continued to be the region's major source of imports and a growing, but relatively smaller, market for its exports.

Inflows of foreign direct investment (FDI) also grew substantially during the decade, particularly from Japan as many Japanese companies moved their labor-intensive operations to lower cost East Asian countries. U.S. investment in the region grew, but at a less spectacular pace than Japan's. East Asia's newly industrializing economies (NIEs) also became major investors in the lesser developed countries of the region.

The relationship between FDI and trade is a matter of debate.[1] In some cases the establishment of overseas subsidiaries, such as manufacturing facilities, can substitute for exports from the home country. In other cases, such as in wholesale distribution or parts assembly, FDI can enhance export opportunities. Foreign affiliates can be a source of information about overseas market opportunities and affiliates may be a source of demand for home-country-produced capital goods.

Companies from both the United States and Japan have established affiliates in East Asia to conduct labor-intensive assembly for export to markets outside East Asia. Companies from both countries also have affiliates in East Asia engaged in manufacturing for local consumption and resource extraction, among other activities, which are not necessarily export-enhancing. In any event, any relative weakness in U.S. FDI in East Asia has not prevented the share of U.S. exports going to East Asia from rising from 11 percent of total U.S. exports in 1980 to 15 percent in 1991 (table 5-1).

A more detailed picture of recent trends in East Asian trade and investment follows.

[1] There is an extensive literature on the question of whether foreign production is a substitute for or a complement to international trade activities. For a discussion of this literature, see Seiji Naya and Eric D. Ramstetter, "Multinationals and Structural Change: Implications of the Asia-Pacific Experience," in Eric D. Ramstetter, ed., *Direct Foreign Investment in Asia's Developing Economies and Structural Change in the Asia-Pacific Region*, (Boulder, CO: Westview Press, 1991), pp. 304-306.

Table 5-1
U.S. and Japanese trade, exports to and imports from East Asia as a share of total U.S. and Japanese exports and imports, 1980-91

(Percent)

Year	United States		Japan	
	Exports	Imports	Exports	Imports
1980	11.2	12.2	25.8	24.7
1981	10.5	13.3	24.2	24.9
1982	11.8	14.1	23.3	25.6
1983	12.5	16.0	24.8	24.9
1984	12.3	16.2	24.2	26.6
1985	11.9	15.8	24.1	27.0
1986	12.2	16.7	22.7	26.4
1987	13.0	18.8	25.0	29.3
1988	14.6	19.4	27.3	29.4
1989	14.6	19.3	28.3	29.0
1990	14.4	19.0	29.6	27.1
1991	15.2	20.1	32.1	29.6

Source: Derived from International Monetary Fund, *Direction of Trade Statistics*, by USITC staff.

Trade Patterns in East Asia

The United States and Japan

Trade with East Asian countries is important for the United States and Japan and has been growing in importance in recent years. In 1991, U.S. exports to East Asia exceeded U.S. exports to any individual country except Canada (table 5-2). In the same year, U.S. imports from East Asia exceeded U.S. imports from any individual country, exceeding U.S. imports from Japan by $7 billion. U.S. exports to East Asia amounted to 15 percent of total U.S. exports in 1991, up from 11 percent in 1980 and 12 percent in 1985 (table 5-1). U.S. imports from East Asia amounted to 20 percent of total U.S. imports in 1991, up from 12 percent in 1980 and 16 percent in 1985.

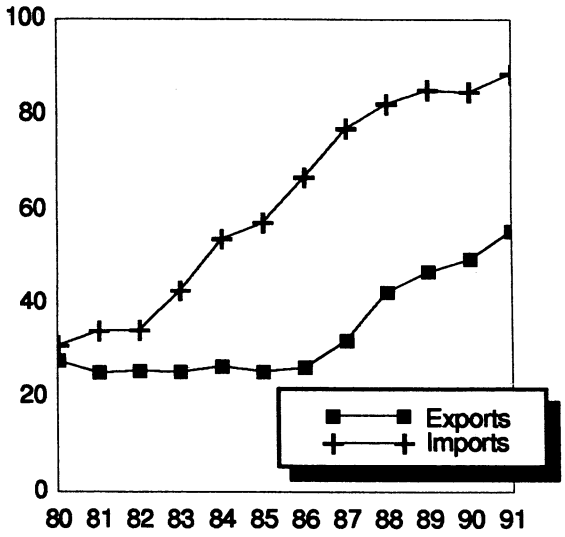
Japanese exports to East Asia exceeded Japanese exports to any individual country in 1991, exceeding exports to the United States by $9 billion. The same pattern was also true for Japanese imports from East Asia, with such imports exceeding those from the United States by $16 billion (table 5-2). The share of total Japanese exports going to East Asia was 32 percent in 1991, up from shares of 26 percent in 1980 and 24 percent in 1985 (table 5-1). The share of total Japanese imports originating in East Asia was 30 percent in 1991, up from shares of 25 percent in 1980 and 27 percent in 1985.

The volume of U.S. imports from East Asia rose steadily over the period from 1980 to 1991, as illustrated in figure 5-1, with especially strong increases from 1983 through 1987.[2]

[2] Figure 5-1 is the dollar value of U.S. exports and imports with East Asia deflated by U.S. export and import price indices for all U.S. exports and imports as reported in International Monetary Fund (IMF), *International Financial Statistics*.

Figure 5-1
U.S. trade with East Asia, 1980-91

Billions of 1985 dollars



Source: Derived from International Monetary Fund, *Direction of Trade Statistics* and *International Financial Statistics* by USITC staff.

The volume of U.S. exports to East Asia was generally flat through 1986 and rose strongly thereafter, more than doubling in both volume and nominal value by 1991.

The volume of Japanese imports from East Asia generally rose over the period, with notably strong increases in 1984, 1987-89, and 1991, as illustrated in figure 5-2.[3] The volume of Japanese exports to East Asia generally also rose, with drops in 1982 and 1986 and sustained strong growth from 1987 onward.

[3] Data in figure 5-2 represent the yen value of Japanese exports and imports with East Asia, deflated by Japanese export and import price indices for all Japanese exports and imports as reported in IMF, *International Financial Statistics*. See appendix B for further discussion.

Table 5-2
U.S. and Japanese trade, total exports and imports, and exports and imports with top three trading partners and East Asia, 1991

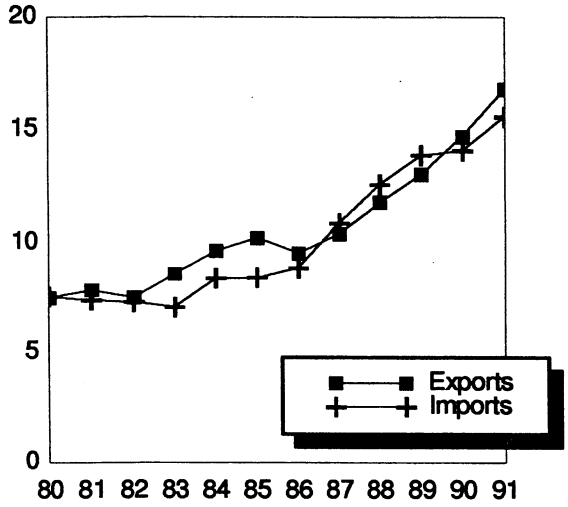
(Millions of U.S. dollars)

	Exports		Imports	
Reporting country	**Partner**	**Value**	**Partner**	**Value**
United States	World	421,755	World	509,300
	Canada	85,146	**East Asia**	**102,334**
	East Asia	**63,928**	Japan	95,010
	Japan	48,147	Canada	93,736
	Mexico	33,276	Mexico	31,866
Japan	World	314,892	World	236,633
	East Asia	**101,037**	**East Asia**	**69,948**
	United States	92,200	United States	53,634
	Germany	20,631	China	14,248
	Korea	20,088	Indonesia	12,783

Note.—Exports are f.o.b. port of exit. Imports are c.i.f. See appendix B for a discussion of trade statistics.
Source: International Monetary Fund, *Direction of Trade Statistics*.

Figure 5-2
Japanese trade with East Asia, 1980-91

Trillions of 1985 yen



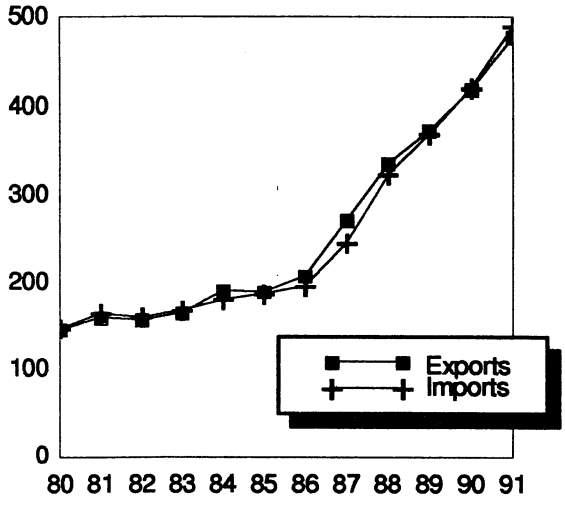
Source: Derived from International Monetary Fund, *Direction of Trade Statistics* and *International Financial Statistics* by USITC staff.

Total East Asian Trade

Total East Asian trade has increased tremendously since 1980, especially in the years after 1985, as can be seen in figure 5-3. In 1991, total East Asian exports and imports were both more than 3 times their 1980 dollar values, and roughly 2.5 times their 1985 values.[4] More significantly, the East Asian share of world trade (exports plus imports) nearly doubled from 1980 to 1991, from around 7.5 percent of world trade to nearly 14 percent. Among East Asian subregions, the NIEs accounted for over 60 percent of total East Asian exports and imports in 1991 (table 5-3).

Figure 5-3
East Asian trade with the world, 1980-91

Billions of U.S. dollars



Source: Derived from International Monetary Fund, *Direction of Trade Statistics* and *International Financial Statistics* by USITC staff.

East Asian Trade With the United States and Japan

The share of East Asian exports going to the United States reached a peak in 1986 at 30 percent of total East Asian exports and subsequently fell to 21 percent in 1991, which was close to the share in 1980 (table 5-4). The share of East Asian exports going to Japan fell from 22 percent in 1980 to 14 percent in 1991, with an intervening plateau around 15 percent to 16 percent from 1986 to 1989.

The share of East Asian imports coming from the United States has fluctuated within the narrow range of 15 percent to 18 percent between 1980 and 1991, with a slight downward trend. The share of East Asian imports coming from Japan rose erratically from around 24 percent in 1980 to a peak under 27 percent in 1986, and then dropped to about 22 percent in 1991.

East Asian Intraregional Trade

East Asian intraregional trade has increased from 22 percent of total East Asian trade (imports plus exports) in 1980 to nearly 35 percent in 1991, with intraregional imports of $164 billion in 1991. Although this 57 percent increase in the intraregional share is significant, much of the increase in intraregional trade is a result of rapid growth in the economies of East Asian countries and their increased importance in global commerce, as evidenced by the 82 percent increase in the East Asian share of world trade from 1980 to 1991.

Several analysts have addressed the possibility that a trade bloc centered on Japan is developing in East Asia, whether as a natural development, as a reaction to emerging North American and European trade blocs, or even as a result of a concerted, but hidden, effort on the part of Japan to dominate the region.[5] The concern

[4] The nominal value trade flows presented in figure 5-3 are not necessarily comparable with the volume of trade flows shown in figures 5-1 and 5-2. Data necessary for computing a volume series for East Asia are not readily available for all East Asian countries.

[5] Peter Petri, "The East Asian Trading Bloc: An Analytical History," paper presented at the National Bureau of Economic Research Conference on the United States and Japan in Pacific Asia, Del Mar, CA, Apr. 1992 (NBER conference); Jeffrey A. Frankel, "Is Japan Creating a Yen Bloc in East Asia and the Pacific?" paper presented at NBER conference, and Gary Saxonhouse, "Trading Blocs, Pacific Trade and the Pricing Strategies of East Asian Firms," paper presented at the World Bank and CEPR Conference on New Dimensions in Regional Integration, Washington, DC, Apr. 2-3, 1992.

Table 5-3
East Asian trade: Total exports and imports, by selected subregions, China, and total, 1980-91
(Millions of U.S. dollars)

Year	NIEs	ASEAN 5[1]	China	Total
Exports:				
1980	76,216	51,747	18,139	146,102
1981	86,364	52,332	21,476	160,172
1982	85,600	50,112	21,865	157,577
1983	93,338	49,941	22,096	165,375
1984	112,078	54,384	24,824	191,286
1985	113,966	48,675	27,329	189,971
1986	132,518	44,254	31,367	208,138
1987	178,079	54,265	39,464	271,808
1988	223,670	65,123	47,663	336,455
1989	243,951	76,835	52,914	373,700
1990	266,429	88,717	64,500	419,646
1991	302,973	102,808	71,986	477,767
Imports:				
1980	88,067	39,739	19,505	147,311
1981	99,710	43,870	21,631	165,210
1982	94,783	46,793	18,920	160,497
1983	98,693	48,462	21,313	168,468
1984	109,852	45,236	25,953	181,041
1985	107,119	37,793	42,480	187,391
1986	116,766	36,582	43,247	196,595
1987	156,705	46,128	43,222	246,055
1988	209,163	59,760	55,352	324,275
1989	233,604	77,094	59,140	369,838
1990	267,016	99,283	54,449	420,748
1991	311,607	114,662	63,957	490,226

[1] ASEAN 5 includes Brunei, Indonesia, Malaysia, the Philippines, and Thailand.

Source: International Monetary Fund, *Direction of Trade Statistics.*

Table 5-4
East Asian trade, exports to and imports from selected countries and regions as a share of total East Asian exports and imports, 1980-91
(Percent)

	Exports to				Imports from			
Year	United States	Japan	East Asia	Rest of World	United States	Japan	East Asia	Rest of World
1980	20.4	21.5	23.0	35.1	17.3	23.9	21.0	37.7
1981	21.0	20.5	24.0	34.5	16.9	24.1	21.3	37.7
1982	21.7	20.4	26.2	31.7	17.8	21.7	23.9	36.6
1983	25.6	18.2	26.4	29.8	16.9	23.1	24.1	35.9
1984	27.9	18.2	25.0	28.9	17.2	24.5	24.3	33.9
1985	28.6	17.6	26.4	27.4	15.7	25.6	24.4	34.4
1986	30.2	15.4	25.0	29.4	15.2	26.6	24.9	33.3
1987	29.0	15.4	26.8	28.8	15.0	25.2	27.9	31.8
1988	26.4	15.6	29.4	28.6	16.3	23.8	28.5	31.4
1989	25.3	15.5	30.9	28.2	16.3	23.0	29.5	31.3
1990	23.0	14.7	33.0	29.3	15.5	22.0	31.3	31.2
1991	21.2	14.0	35.5	29.3	15.1	22.4	33.5	29.0

Source: Derived from International Monetary Fund, *Direction of Trade Statistics,* by USITC staff.

addressed by these analysts is that an East Asian trade bloc might erect formal or informal barriers to U.S. trade and investment.

Given that East Asian countries have very dynamic, rapidly growing, diverse economies, it is natural that East Asian trade flows would have grown rapidly during the 1980s. The issue is not whether East Asian trade flows have grown rapidly during this period, but whether trade within East Asia has grown more rapidly than, in some sense, it "should" have, given the rates of economic growth in each East Asian economy, distances between trading partners, activities in which each economy possesses a comparative advantage, and each economy's pattern of trade with the rest of the world.

Two conclusions can be drawn about East Asian intraregional trade, based on work by the above-cited analysts and analysis developed in the course of this investigation (see appendix C for details). First, there is evidence that East Asian trade has been biased toward its trading partners within the region. This finding is not unusual since other regions, such as North America and the European Community also show an intraregional trade bias. (See table C-2 in appendix C.) Second, even though East Asian trade has been biased toward intraregional trade, this bias is lower in recent years than it was in 1980 and earlier. Computations of trade bias for the years 1980-91, assembled in the course of this investigation, show a marked downtrend prior to 1984, and no discernible trend since. (See appendix C.)

East Asian Sectoral Trade[6]

Statistics on East Asian sectoral trade are presented in tables 5-5 and 5-6. The sectoral composition of recent East Asian trade is discussed first; then the changes in the sectoral composition of East Asian trade over roughly the past decade are considered.

Recent Sectoral Composition of East Asian Trade[7]

Three 1-digit SITC (Standard International Trade Classification) categories stand out in exports from East Asia and two of these three stand out in imports to the region. Basic manufactures (SITC 6), machines and transport equipment (SITC 7), and miscellaneous manufactured goods (SITC 8) typically accounted for 10 percent or more of each country's total exports, and SITC 6 and SITC 7 accounted for 10 percent or more of each country's imports. The pattern appears to have been similar for Taiwan. Among 2-digit SITC categories, three categories stand out: electrical machinery (SITC 72), clothing (SITC 84), and nonelectric machinery (SITC 71).[8] Sectors having exports or imports exceeding 10 percent of the respective totals are highlighted in the "value" sections of tables 5-5 and 5-6.

Changes in East Asian Sectoral Trade[9]

The most prominent changes in East Asian sectoral trade involved mineral fuels, etc. (SITC 3), and machines, transport equipment (SITC 7), and its subsector, electrical machinery (SITC 72). The change in SITC 3 was largely a result of the drop in petroleum prices from the high levels of the early 1980s.

All of the countries in the region, except Indonesia, saw the share of their exports accounted for by machinery and transport equipment rise by 5 percentage points or more—much more in most cases. This surge was generally led by increases in the share of exports accounted for by electrical machinery. There was a similar surge in imports of machinery and transport equipment. Imports of both electrical and nonelectric machinery led this surge.

Sectors having changes in export or import shares exceeding 5 percentage points are highlighted in the "share of all commodities" sections of tables 5-5 and 5-6.

United States and Japanese Sectoral Trade with East Asia

Table 5-7 shows U.S. and Japanese trade with East Asia by selected sectors. Sectors having exports or imports exceeding 10 percent of the respective totals are highlighted in the "value" section of table 5-7.

[6] Data presented in this section are taken from the United Nations Trade Data System (UNTD), with the exception of data from Taiwan. The U.N. does not report statistics collected by Taiwan. Taiwanese data are taken from Taiwan Government statistics. Data are presented for the period 1980-91 for Hong Kong, Indonesia, Korea, Singapore, and Thailand. Data were not readily available for the entire period for the other East Asian countries. Table 5-5 covers East Asian countries except Taiwan, which is covered in table 5-6. Table 5-5 shows total exports and imports at the 1-digit SITC (Standard International Trade Classification) level and in selected 2-digit categories. The commodity-level breakdown in table 5-6 was as reported in Taiwan Government statistics. Brunei is excluded from the discussion in this section since data are available for a limited number of years, and its trade is relatively small and not typical of other countries in the region.

[7] The discussion that follows is in terms of the most recent year in which data are available for each country.

[8] The UNTD reports data in terms of SITC revision 1, which places electronic components and products in electrical machinery (SITC 72), and computers in nonelectric machinery (SITC 71). More recent revisions have more appropriate categories for electronics and computers.

[9] The discussion that follows is in terms of the change in total East Asian exports and imports between 1980 (or 1984 in the case of China) and the most recent year for which data were readily available.

Table 5-5
East Asian trade with world, by countries, selected sectors, and selected years

SITC	Description	Brunei				China				Hong Kong			
		Exports		Imports		Exports		Imports		Exports		Imports	
		1980	1985	1980	1985	1984	1991	1984	1991	1980	1991	1980	1991
		Value *(millions of U.S. dollars)*											
	All commodities	4,519	2,972	565	610	24,871	71,842	26,185	63,791	19,703	98,577	22,027	100,255
0	Food and live animals	2	5	**68**	**89**	**3,088**	**7,388**	2,169	2,965	447	1,991	2,318	5,146
1	Beverages and tobacco	0	2	15	32	105	529	116	200	81	1,765	318	2,071
2	Crude matls excl fuels	1	1	7	8	2,283	3,400	2,404	5,058	701	1,925	1,076	2,490
3	Mineral fuels etc	**4,456**	**2,927**	11	11	**5,726**	4,675	132	2,105	84	734	1,217	2,112
4	Animal, vegetable oil, fat	0	0	2	4	137	150	77	719	11	69	75	155
5	Chemicals	4	1	46	44	1,301	3,990	**4,005**	**9,498**	674	5,831	1,597	7,777
6	Basic manufactures	14	5	**137**	**132**	**4,801**	**14,755**	**6,945**	**10,431**	3,302	17,246	6,724	23,485
65	Textile yarn, fabric etc	0	0	6	9	**3,502**	**7,993**	913	3,637	1,770	9,598	2,966	11,817
67	Iron and steel	10	1	**72**	41	123	1,669	**4,124**	2,694	56	807	687	1,839
7	Machines, transport equip	21	25	**228**	**208**	1,428	**13,809**	**7,092**	**25,943**	**3,697**	**23,865**	**4,868**	**27,230**
71	Machinery, nonelectric	14	21	**127**	**99**	406	3,521	**3,523**	**12,000**	900	7,225	1,579	7,370
72	Electrical machinery	1	2	37	43	501	4,858	1,703	**6,418**	**2,475**	**15,460**	**2,318**	**16,996**
73	Transport equipment	5	3	**64**	**66**	521	5,431	1,865	**7,525**	322	1,179	971	2,865
8	Misc manufactured goods	21	5	39	**66**	**4,477**	**22,409**	1,142	**6,655**	**10,448**	**44,521**	**3,720**	**29,400**
84	Clothing	0	0	4	7	**2,526**	**12,749**	6	3,173	**4,949**	**17,994**	693	8,757
85	Footwear	0	0	2	4	242	2,320	2	11	168	3,105	127	2,673
86	Instrmnts, watches, clocks	21	4	14	19	217	1,490	806	1,513	**2,048**	6,074	1,618	5,765
89	Misc manufctrd goods n.e.s.	0	0	14	24	1,177	4,706	287	1,829	**2,665**	**13,629**	1,025	9,101
9	Goods not classd by kind	0	1	12	17	1,528	737	2,103	217	257	632	114	389
		As a share of all commodities *(percent)*											
	All commodities	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0	Food and live animals	0.0	0.1	12.1	14.6	12.4	10.3	8.3	4.6	2.3	2.0	**10.5**	**5.1**
1	Beverages and tobacco	0.0	0.1	2.6	5.3	0.4	0.7	0.4	0.3	0.4	1.8	1.4	2.1
2	Crude matls excl fuels	0.0	0.0	1.2	1.3	9.2	4.7	9.2	7.9	3.6	1.9	4.9	2.5
3	Mineral fuels etc	**98.6**	**98.5**	1.9	1.8	**23.0**	**6.5**	0.5	3.3	0.4	0.7	5.5	2.1
4	Animal, vegetable oil, fat	0.0	0.0	0.4	0.6	0.5	0.2	0.3	1.1	0.1	0.1	0.3	0.1
5	Chemicals	0.1	0.0	8.2	7.2	5.2	5.5	15.3	14.9	3.4	5.9	7.3	7.8
6	Basic manufactures	0.3	0.2	24.2	21.6	19.3	20.5	**26.5**	**16.3**	16.8	17.5	**30.5**	**23.4**
65	Textile yarn, fabric etc	0.0	0.0	1.0	1.5	14.1	11.1	3.5	5.7	9.0	9.7	13.5	11.8
67	Iron and steel	0.2	0.0	**12.7**	**6.7**	0.5	2.3	**15.8**	**4.2**	0.3	0.8	3.1	1.8
7	Machines, transport equip	0.5	0.8	**40.3**	**34.1**	**5.7**	**19.2**	**27.1**	**40.7**	**18.8**	**24.2**	**22.1**	**27.2**
71	Machinery, nonelectric	0.3	0.7	**22.5**	**16.1**	1.6	4.9	**13.4**	**18.8**	4.6	7.3	7.2	7.3
72	Electrical machinery	0.0	0.0	6.5	7.0	2.0	6.8	6.5	10.1	12.6	15.7	**10.5**	**16.9**
73	Transport equipment	0.1	0.1	11.3	10.9	**2.1**	**7.6**	7.1	11.8	1.6	1.2	4.4	2.9
8	Misc manufactured goods	0.5	0.2	6.8	10.8	**18.0**	**31.2**	**4.4**	**10.4**	**53.0**	**45.2**	**16.9**	**29.3**
84	Clothing	0.0	0.0	0.6	1.1	**10.2**	**17.8**	0.0	5.0	**25.1**	**18.3**	**3.1**	**8.7**
85	Footwear	0.0	0.0	0.4	0.6	1.0	3.2	0.0	0.0	0.8	3.1	0.6	2.7
86	Instrmnts, watches, clocks	0.5	0.1	2.4	3.2	0.9	2.1	3.1	2.4	10.4	6.2	7.3	5.8
89	Misc manufctrd goods n.e.s.	0.0	0.0	2.4	3.9	4.7	6.5	1.1	2.9	13.5	13.8	4.6	9.1
9	Goods not classd by kind	0.0	0.0	2.2	2.8	6.1	1.0	**8.0**	**0.3**	1.3	0.6	0.5	0.4

Footnote at end of table.

Table 5-5—Continued
East Asian trade with world, by countries, selected sectors, and selected years

SITC	Description	Indonesia				Korea				Malaysia			
		Exports		Imports		Exports		Imports		Exports		Imports	
		1980	1991	1980	1991	1980	1991	1980	1991	1980	1988	1980	1988
		Value *(millions of U.S. dollars)*											
	All commodities	21,909	28,997	10,834	25,869	17,483	71,672	22,228	81,251	12,939	21,110	10,735	16,232
0	Food and live animals	1,291	2,537	**1,285**	1,080	1,153	2,138	1,788	3,923	466	1,089	**1,108**	1,461
1	Beverages and tobacco	61	154	42	74	124	116	85	227	13	32	102	80
2	Crude matls excl fuels	**3,569**	2,358	491	2,024	333	986	**3,634**	**8,885**	**4,193**	**4,746**	484	693
3	Mineral fuels etc	**15,743**	**11,170**	**1,754**	2,338	33	1,471	**6,638**	**12,757**	**3,199**	**3,334**	**1,627**	875
4	Animal, vegetable oil, fat	285	562	9	41	13	2	118	244	**1,439**	**2,203**	14	102
5	Chemicals	84	847	**1,255**	**3,529**	780	3,234	1,835	**8,227**	79	466	953	**1,822**
6	Basic manufactures	615	**6,549**	**2,053**	**4,277**	**6,236**	**16,225**	**2,436**	**13,518**	**1,686**	1,717	**1,766**	**2,746**
65	Textile yarn, fabric etc	46	1,786	217	885	**2,198**	**7,304**	409	2,443	161	245	298	592
67	Iron and steel	19	289	967	1,475	1,651	4,004	987	4,615	17	192	617	839
7	Machines, transport equip	109	651	**3,634**	**11,568**	**3,446**	**27,528**	**4,975**	**27,531**	**1,485**	**5,763**	**4,169**	**7,349**
71	Machinery, nonelectric	4	81	**1,855**	**7,059**	369	5,225	**2,319**	**14,172**	101	600	**1,418**	**2,255**
72	Electrical machinery	97	391	749	2,122	**1,924**	**14,299**	1,606	**10,226**	1,281	**4,970**	**1,677**	**4,255**
73	Transport equipment	8	178	1,030	2,387	1,153	**8,003**	1,050	3,133	102	193	**1,074**	839
8	Misc manufactured goods	120	**4,167**	285	860	**5,303**	**19,072**	689	4,596	343	1,694	452	1,054
84	Clothing	98	2,307	3	19	**2,947**	**7,507**	13	186	150	832	34	50
85	Footwear	1	981	2	4	875	3,679	1	25	41	50	7	14
86	Instrmnts, watches, clocks	4	76	132	487	307	853	369	2,429	62	184	173	432
89	Misc manufctrd goods n.e.s.	13	347	124	306	869	5,698	289	1,714	70	545	206	510
9	Goods not classd by kind	33	4	27	78	64	901	29	1,342	37	67	61	49
		As a share of all commodities *(percent)*											
	All commodities	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0	Food and live animals	5.9	8.8	**11.9**	**4.2**	6.6	3.0	8.0	4.8	3.6	5.2	10.3	9.0
1	Beverages and tobacco	0.3	0.5	0.4	0.3	0.7	0.2	0.4	0.3	0.1	0.1	0.9	0.5
2	Crude matls excl fuels	**16.3**	**8.1**	4.5	7.8	1.9	1.4	**16.3**	**10.9**	**32.4**	**22.5**	4.5	4.3
3	Mineral fuels etc	**71.9**	**38.5**	**16.2**	**9.0**	0.2	2.0	**29.9**	**15.7**	**24.7**	**15.8**	**15.1**	**5.4**
4	Animal, vegetable oil, fat	1.3	1.9	0.1	0.2	0.1	0.0	0.5	0.3	11.1	10.4	0.1	0.6
5	Chemicals	0.4	2.9	11.6	13.6	4.5	4.5	8.3	10.1	0.6	2.2	8.9	11.2
6	Basic manufactures	**2.8**	**22.6**	18.9	16.5	**35.7**	**22.6**	**11.0**	**16.6**	13.0	8.1	16.4	16.9
65	Textile yarn, fabric etc	**0.2**	**6.2**	2.0	3.4	12.6	10.2	1.8	3.0	1.3	1.2	2.8	3.6
67	Iron and steel	0.1	1.0	8.9	5.7	9.4	5.6	4.4	5.7	0.1	0.9	5.8	5.2
7	Machines, transport equip	0.5	2.2	**33.5**	**44.7**	**19.7**	**38.4**	**22.4**	**33.9**	**11.5**	**27.3**	**38.8**	**45.3**
71	Machinery, nonelectric	0.0	0.3	**17.1**	**27.3**	**2.1**	**7.3**	**10.4**	**17.4**	0.8	2.8	13.2	13.9
72	Electrical machinery	0.4	1.3	6.9	8.2	**11.0**	**19.9**	**7.2**	**12.6**	**9.9**	**23.5**	**15.6**	**26.2**
73	Transport equipment	0.0	0.6	9.5	9.2	6.6	11.2	4.7	3.9	0.8	0.9	10.0	5.2
8	Misc manufactured goods	**0.5**	**14.4**	2.6	3.3	30.3	26.6	3.1	5.7	**2.6**	**8.0**	4.2	6.5
84	Clothing	**0.4**	**8.0**	0.0	0.1	**16.9**	**10.5**	0.1	0.2	1.2	3.9	0.3	0.3
85	Footwear	0.0	3.4	0.0	0.0	5.0	5.1	0.0	0.0	0.3	0.2	0.1	0.1
86	Instrmnts, watches, clocks	0.0	0.3	1.2	1.9	1.8	1.2	1.7	3.0	0.5	0.9	1.6	2.7
89	Misc manufctrd goods n.e.s.	0.1	1.2	1.1	1.2	5.0	7.9	1.3	2.1	0.5	2.6	1.9	3.1
9	Goods not classd by kind	0.1	0.0	0.3	0.3	0.4	1.3	0.1	1.6	0.3	0.3	0.6	0.3

Footnote at end of table.

Table 5-5—Continued
East Asian trade with world, by countries, selected sectors, and selected years

SITC	Description	Philippines				Singapore				Thailand			
		Exports		Imports		Exports		Imports		Exports		Imports	
		1980	1988	1980	1988	1980	1991	1980	1991	1980	1991	1980	1991
		Value *(millions of U.S. dollars)*											
	All commodities	5,788	7,074	8,295	8,729	19,375	58,871	24,003	65,982	6,505	28,416	9,450	37,408
0	Food and live animals	**1,402**	**1,057**	572	[1]**788**	939	1,752	1,363	2,684	**2,899**	**7,511**	332	1,767
1	Beverages and tobacco	32	32	52	97	73	1,065	129	901	68	133	74	220
2	Crude matls excl fuels	**1,446**	**709**	323	457	**2,200**	1,457	1,599	1,209	**933**	1,424	483	2,198
3	Mineral fuels etc	50	144	**2,355**	**1,153**	**4,882**	**10,005**	**6,882**	**9,294**	41	284	**2,876**	3,475
4	Animal, vegetable oil, fat	573	425	20	20	512	418	468	491	11	7	74	29
5	Chemicals	90	268	814	1,138	1,375	3,874	1,341	4,716	48	718	**1,081**	3,568
6	Basic manufactures	[1]**534**	[1]**688**	**1,068**	**1,326**	1,602	4,252	**3,368**	**8,672**	**1,413**	**3,596**	**1,346**	**8,722**
65	Textile yarn, fabric etc	75	71	149	331	367	1,088	847	1,893	330	1,117	174	998
67	Iron and steel	49	64	429	520	212	530	867	2,039	50	169	522	2,962
7	Machines, transport equip	131	[1]**694**	**1,978**	**1,735**	**5,105**	**28,191**	**7,053**	**29,155**	389	**6,222**	**2,341**	**14,621**
71	Machinery, nonelectric	15	39	**1,018**	[1]**717**	1,158	**13,897**	**2,511**	**11,588**	30	2,692	**984**	**7,413**
72	Electrical machinery	78	[1]**637**	401	644	**3,121**	**13,050**	**2,895**	**13,962**	335	**3,163**	679	**5,006**
73	Transport equipment	38	19	560	374	827	1,243	1,647	3,604	24	367	679	2,202
8	Misc manufactured goods	**610**	953	191	195	1,283	**7,099**	1,488	**8,113**	445	**8,180**	240	1,964
84	Clothing	279	442	3	11	426	1,740	147	1,055	267	**3,686**	3	36
85	Footwear	67	45	0	1	36	87	48	200	17	882	1	6
86	Instrmnts, watches, clocks	28	9	107	79	258	1,638	553	2,413	22	479	123	812
89	Misc manufctrd goods n.e.s.	146	247	72	98	473	3,346	631	3,939	92	2,394	103	1,051
9	Goods not classd by kind	[1]**920**	[1]**2,103**	[1]**921**	[1]**1,821**	1,404	758	312	747	259	341	603	844
		As a share of all commodities *(percent)*											
	All commodities	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0	Food and live animals	**24.2**	**14.9**	6.9	9.0	4.8	3.0	5.7	4.1	**44.6**	**26.4**	3.5	4.7
1	Beverages and tobacco	0.5	0.4	0.6	1.1	0.4	1.8	0.5	1.4	1.0	0.5	0.8	0.6
2	Crude matls excl fuels	**25.0**	**10.0**	3.9	5.2	**11.4**	**2.5**	6.7	1.8	**14.3**	**5.0**	5.1	5.9
3	Mineral fuels etc	0.9	2.0	**28.4**	**13.2**	**25.2**	**17.0**	**28.7**	**14.1**	0.6	1.0	**30.4**	**9.3**
4	Animal, vegetable oil, fat	9.9	6.0	0.3	0.2	2.6	0.7	1.9	0.7	0.2	0.0	0.8	0.1
5	Chemicals	1.5	3.8	9.8	13.0	7.1	6.6	5.6	7.1	0.7	2.5	11.4	9.5
6	Basic manufactures	9.2	9.7	12.9	15.2	8.3	7.2	14.0	13.1	**21.7**	**12.6**	**14.2**	**23.3**
65	Textile yarn, fabric etc	1.3	1.0	1.8	3.8	1.9	1.8	3.5	2.9	5.1	3.9	1.8	2.7
67	Iron and steel	0.8	0.9	5.2	6.0	1.1	0.9	3.6	3.1	0.8	0.6	5.5	7.9
7	Machines, transport equip	**2.3**	**9.8**	23.8	19.9	**26.3**	**47.9**	**29.4**	**44.2**	**6.0**	**21.9**	**24.8**	**39.1**
71	Machinery, nonelectric	0.3	0.5	12.3	8.2	**6.0**	**23.6**	**10.5**	**17.6**	**0.5**	**9.5**	**10.4**	**19.8**
72	Electrical machinery	1.3	9.0	4.8	7.4	**16.1**	**22.2**	**12.1**	**21.2**	**5.1**	**11.1**	**7.2**	**13.4**
73	Transport equipment	0.7	0.3	6.8	4.3	4.3	2.1	6.9	5.5	0.4	1.3	7.2	5.9
8	Misc manufactured goods	10.5	13.5	2.3	2.2	**6.6**	**12.1**	**6.2**	**12.3**	**6.8**	**28.8**	2.5	5.3
84	Clothing	4.8	6.3	0.0	0.1	2.2	3.0	0.6	1.6	**4.1**	**13.0**	0.0	0.1
85	Footwear	1.2	0.6	0.0	0.0	0.2	0.1	0.2	0.3	0.3	3.1	0.0	0.0
86	Instrmnts, watches, clocks	0.5	0.1	1.3	0.9	1.3	2.8	2.3	3.7	0.3	1.7	1.3	2.2
89	Misc manufctrd goods n.e.s.	2.5	3.5	0.9	1.1	2.4	5.7	2.6	6.0	**1.4**	**8.4**	1.1	2.8
9	Goods not classd by kind	[1]**15.9**	[1]**29.7**	[1]**11.1**	[1]**20.9**	**7.3**	**1.3**	1.3	1.1	4.0	1.2	6.4	2.3

[1] Philippine exports and imports in SITC 9 fall in an unexplained "Special category." When trade in the special category is disregarded, trade in the marked categories exceeds 10 percent of the respective totals.

Note.—Bold value statistics denote sectors with 10 percent or more of total. Bold share statistics denote sectors with a change of five percentage points or more. UNTD does not report statistics from Taiwan. UNTD did not report data for the full time series (1980-91) for Brunei, China, Malaysia, or the Philippines.

Source: United Nations Trade Data System (UNTD) and computations by USITC staff.

Table 5-6
Taiwan trade with the world, by sectors, 1980 and 1990

Sector	Value				Share of total			
	Exports		Imports		Exports		Imports	
	1980	1990	1980	1990	1980	1990	1980	1990
	Millions of U.S. dollars				Percent			
Total	19,811	67,214	19,733	54,716	100.0	100.0	100.0	100.0
Agriculture, forestry, hunting, and fishery products	492	556	2,504	3,018	2.5	0.8	2.7	5.5
Minerals	7	25	**4,676**	4,914	([1])	([1])	**23.7**	**9.0**
Food, beverage, and tobacco preparations	1,333	2,323	537	2,024	6.7	3.5	2.7	3.7
Textile, leather, wood, paper, and related products	**6,153**	**13,838**	657	3,559	**31.1**	**20.6**	3.3	6.5
Nonmetallic mineral products	383	1,114	103	547	1.9	1.7	0.5	1.0
Chemicals and pharmaceutical products	811	3,001	**2,716**	**8,166**	4.1	4.5	13.8	14.9
Base metals	397	1,366	**2,384**	**6,232**	2.0	2.0	12.1	11.4
Metal products	862	4,049	137	594	4.4	6.0	0.7	1.1
Machinery	745	4,232	**2,395**	5,388	3.8	6.3	12.1	9.8
Electrical machinery and apparatus	**3,599**	**17,889**	1,931	**7,654**	**18.2**	**26.6**	9.8	14.0
Transportation equipment	643	3,434	734	3,861	3.2	5.1	3.7	7.1
Others	**4,386**	**15,387**	959	**8,759**	22.1	22.9	**4.9**	**16.0**

[1] Less than .5 percent.

Note.—Bold value statistics denote sectors with 10 percent or more of total. Bold share statistics denote sectors with a change of five percentage points or more.

Source: Republic of China, Council for Economic Planning and Development, *Taiwan Statistical Data Book, 1991* and computations by USITC staff.

Table 5-7
Japanese and U.S. trade with East Asia, by selected sectors, 1980 and 1991

SITC	Description	Japan				United States			
		Exports		Imports		Exports		Imports	
		1980	1991	1980	1991	1980	1991	1980	1991
		Value *(millions of U.S. dollars)*							
	All commodities	33,396	100,785	34,626	69,825	23,640	60,431	31,207	102,248
0	Food and live animals	488	899	3,191	**10,381**	**3,627**	3,701	1,457	3,587
04	Cereals and preparation	152	167	64	431	**3,084**	1,816	16	174
1	Beverages and tobacco	5	137	31	94	383	937	58	93
2	Crude matls excl fuels	737	1,302	**6,038**	6,304	**3,992**	**6,054**	1,251	1,304
24	Wood lumber and cork	10	13	3,078	2,233	132	611	61	71
26	Textile fibers	379	590	280	444	2,075	1,669	42	104
3	Mineral fuels etc	196	1,076	**18,840**	**16,729**	357	1,498	**5,873**	1,526
33	Petroleum and products	145	1,027	**14,914**	**9,698**	258	1,085	**5,820**	1,522
34	Gas natural and manufct	0	4	**3,808**	6,601	3	29	54	3
4	Animal, vegetable oil, fat	36	32	141	225	163	60	393	277
5	Chemicals	**3,354**	9,197	753	2,493	**2,567**	**7,950**	280	1,773
6	Basic manufactures	**10,635**	**19,501**	2,511	**9,793**	1,974	4,836	**3,953**	9,853
67	Iron and steel	**5,569**	8,257	371	2,715	261	808	460	966
7	Machines, transport equip	**14,903**	**55,689**	820	**8,257**	**9,733**	**29,830**	**6,643**	**36,423**
71	Machinery, nonelectric	**6,104**	**24,090**	119	2,871	**3,600**	**10,190**	949	**14,479**
72	Electrical machinery	**4,939**	**23,165**	655	4,968	**3,451**	**10,883**	**5,455**	**19,375**
73	Transport equipment	**3,859**	8,434	46	418	**2,683**	**8,757**	240	2,569
8	Misc manufactured goods	2,645	**11,464**	2,080	**14,572**	696	3,641	**10,884**	**45,952**
84	Clothing	48	208	1,055	**7,072**	23	73	**5,083**	**17,988**
89	Misc manufctrd goods n.e.s.	1,108	5,489	485	3,619	310	1,820	2,600	**13,983**
9	Goods not classd by kind	398	1,488	221	978	148	1,924	415	1,461
		Share of all commodities *(percent)*							
	All commodities	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0	Food and live animals	1.5	0.9	**9.2**	**14.9**	**15.3**	**6.1**	4.7	3.5
04	Cereals and preparation	0.5	0.2	0.2	0.6	**13.0**	**3.0**	0.0	0.2
1	Beverages and tobacco	0.0	0.1	0.1	0.1	1.6	1.5	0.2	0.1
2	Crude matls excl fuels	2.2	1.3	**17.4**	**9.0**	**16.9**	**10.0**	4.0	1.3
24	Wood lumber and cork	0.0	0.0	**8.9**	**3.2**	0.6	1.0	0.2	0.1
26	Textile fibers	1.1	0.6	0.8	0.6	**8.8**	**2.8**	0.1	0.1
3	Mineral fuels etc	0.6	1.1	**54.4**	**24.0**	1.5	2.5	**18.8**	**1.5**
33	Petroleum and products	0.4	1.0	**43.1**	**13.9**	1.1	1.8	**18.6**	**1.5**
34	Gas natural and manufct	0.0	0.0	11.0	9.4	0.0	0.0	0.2	0.0
4	Animal, vegetable oil, fat	0.1	0.0	0.4	0.3	0.7	0.1	1.3	0.3
5	Chemicals	10.0	9.1	2.2	3.6	10.9	13.2	0.9	1.7
6	Basic manufactures	**31.8**	**19.3**	**7.3**	**14.0**	8.3	8.0	12.7	9.6
67	Iron and steel	**16.7**	**8.2**	1.1	3.9	1.1	1.3	1.5	0.9
7	Machines, transport equip	**44.6**	**55.3**	**2.4**	**11.8**	**41.2**	**49.4**	**21.3**	**35.6**
71	Machinery, nonelectric	**18.3**	**23.9**	0.3	4.1	15.2	16.9	**3.0**	**14.2**
72	Electrical machinery	**14.8**	**23.0**	**1.9**	**7.1**	14.6	18.0	17.5	18.9
73	Transport equipment	11.6	8.4	0.1	0.6	11.3	14.5	0.8	2.5
8	Misc manufactured goods	7.9	11.4	**6.0**	**20.9**	2.9	6.0	**34.9**	**44.9**
84	Clothing	0.1	0.2	**3.0**	**10.1**	0.1	0.1	16.3	17.6
89	Misc manufctrd goods n.e.s.	3.3	5.4	1.4	5.2	1.3	3.0	**8.3**	**13.7**
9	Goods not classd by kind	1.2	1.5	0.6	1.4	0.6	3.2	1.3	1.4

Note.—Bold value statistics denote sectors with 10 percent or more of total. Bold share statistics denote sectors with a change of 5 percentage points or more.

Source: United Nations Trade Data System and computations by USITC staff.

There were three 1-digit SITC categories in which the sectoral shares of U.S. exports to East Asia changed by more than 5 percentage points from 1980 to 1991. Two of these sectors saw their shares fall: food and live animals (SITC 0), and crude materials, excluding fuels (SITC 2). The former was led by cereals and preparations (SITC 04), and the latter was led by textile fibers (SITC 26). The export share of machines and transport equipment (SITC 7) rose over the period.

There were three 1-digit SITC categories in which the sectoral shares of U.S. imports from East Asia changed by more than 5 percentage points from 1980 to 1991. Mineral fuels, etc. (SITC 3) saw its share fall, led by petroleum and products (SITC 33). The import shares of two sectors rose: machines and transport equipment (SITC 7), and miscellaneous manufactured goods (SITC 8). The former was led by nonelectric machinery (SITC 71), and the latter was led by miscellaneous manufactured goods n.e.s. (SITC 89).

There were two 1-digit SITC categories in which the sectoral shares of Japanese exports to East Asia changed by more than 5 percentage points from 1980 to 1991. The export share of basic manufactures fell (SITC 6), led by iron and steel (SITC 67). The export share of machines and transport equipment rose (SITC 7), led by nonelectric machinery (SITC 71) and by electrical machinery (SITC 72).

There were six 1-digit SITC categories in which the sectoral shares of Japanese imports from East Asia changed by more than 5 percentage points from 1980 to 1991. The largest drop in import share occurred for mineral fuels, etc. (SITC 3). The largest increase in import share occurred for miscellaneous manufactured goods (SITC 8).

Foreign Direct Investment Patterns in East Asia

Foreign direct investment patterns are more difficult to analyze than trade patterns because governments do not report FDI data on a consistent basis. The United States, Japan, and the East Asian countries report FDI in a number of ways that are generally not comparable, and trends and patterns may be exaggerated or obliterated by the method of reporting. Problems with FDI data are discussed further in appendix B.

Despite the data problems, it is possible to document several basic trends in FDI: (1) the strong presence of U.S. companies as direct investors in East Asian countries; (2) the rapid expansion of worldwide Japanese FDI throughout the mid-1980s and its drop following 1989; (3) robust, but not spectacular, growth of worldwide U.S. FDI over the period 1982-91; (4) patterns of U.S. and Japanese FDI in East Asia that track the respective overall trends; and (5) the increasing importance of the NIEs, especially Taiwan, as sources of FDI in other parts of East Asia starting in the late 1980s. In this section data have been chosen for presentation that provide what we think is the best means of illustrating the above points, given the data available.

Japan and the United States[10]

According to data compiled in the UN's *World Investment Directory 1992* from individual country statistics, the stock of U.S. FDI exceeded the stock of Japanese FDI in five of nine host countries reported in 1987, 1988, or 1989 (Hong Kong, Singapore, Taiwan, the Philippines, and China), and the U.S. share was increasing in the three countries where Japanese FDI has been historically dominant (Korea, Indonesia, and Malaysia), as shown in table 5-8.[11] This is indicative of the strong presence of U.S. FDI in East Asia, but data in the table also show the increase in the relative presence of Japanese FDI in the region.

Japanese FDI

The behavior of Japanese FDI flows in East Asia has been broadly consistent with worldwide trends in Japanese FDI flows. The rapid rise in the flow of Japanese FDI worldwide began in Japan fiscal year (JFY) 1984 (starting April 1, 1984) and reached a peak in JFY 1989 nearly five times higher than levels of the early 1980s, as shown in figure 5-4.[12] There was a sharp drop after JFY 1989, with FDI being about 40 percent lower in JFY 1991 than in JFY 1989, or somewhat less than three times the levels of the early 1980s.

[10] As noted above and detailed in appendix B, data on FDI are reported by governments in a variety of ways and data from different countries are seldom comparable. Japanese statistics on FDI by country are readily available only on what is known as an "approval" basis. These statistics represent intended FDI by Japanese companies approved by host governments. They can differ from actual (or realized) investment flows because actual investment may occur in a fiscal year after the year of approval and because intention and approval of an investment do not guarantee its realization. Japanese statistics on FDI on an approval basis are published by the Japanese Ministry of Finance (MOF) in U.S. dollars. We have chosen to report these statistics in yen, using the MOF basic rates for yen/dollar conversion (as reported in U.S. Department of State, "USITC Investigation of East Asia Economic Integration," message reference No. 14168, prepared by U.S. Embassy, Tokyo, Aug. 1992), in order to minimize distortions caused by the rapid fall in the U.S. dollar's value between 1985 and 1988.

[11] Conceptually, the FDI stock in a country is the value of foreign holdings at a given time. The FDI stock shares reported in table 5-8 are consistently reported for each country, but the methods of compiling FDI stock vary considerably from country to country. Each of the methods used has serious limitations that bias the data. See appendix B for a further discussion.

[12] In U.S. dollar terms there was a sharp increase beginning in 1986, but it was largely a result of the sharp rise in the value of the yen that started in 1985.

Table 5-8
The distribution of foreign direct investment inward stock by home countries/regions, selected years
(Percent)

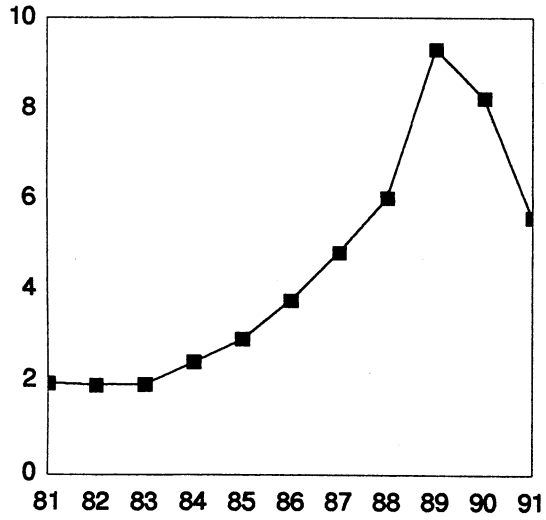
Host country/territory	Year	Developed areas					Developing areas	
		Share of total stock from all developed areas	Share of stock from developed areas from				Share of total stock from all developing areas	Share of stock from developing areas from Asia and the Pacific
			North America	Western Europe	Japan	Other developed countries		
Newly industrializing economies:								
Hong Kong	1989	83.1	38.6	20.0	36.0	5.4	16.9	88.2
	1984	92.0	58.8	16.2	22.9	2.2	8.0	76.5
	1975	84.0	56.2	18.8	18.3	6.7	16.0	39.7
Korea	1988	92.8	29.9	13.8	56.1	0.2	5.8	66.5
	1980	89.9	21.9	10.7	67.3	0.1	8.2	26.1
	1976	88.6	23.3	7.3	69.4	([1])	9.7	18.9
Singapore	1989	94.6	35.1	32.4	32.5	([1])	5.4	([1])
	1980	88.5	33.4	47.7	18.9	([1])	11.5	([1])
	1975	64.9	24.2	56.0	14.5	5.3	35.1	([1])
Taiwan	1988	72.3	44.4	18.5	37.1	([1])	27.7	61.9
	1980	63.2	55.4	15.3	29.4	([1])	36.8	71.6
Southeast Asia:								
Indonesia	1988	72.8	12.2	34.4	38.4	15.0	27.9	82.8
	1980	77.1	6.3	14.0	48.6	31.1	22.9	70.6
	1975	77.7	5.0	11.7	54.6	28.7	22.3	75.4
Malaysia	1987	59.2	12.4	46.1	33.9	7.6	40.8	93.0
	1981	58.6	11.5	49.4	30.0	9.2	41.4	92.2
Philippines	1987	90.6	65.0	17.2	14.7	3.1	9.4	78.4
	1980	92.0	63.7	13.7	18.3	4.4	8.0	64.6
	1975	97.2	58.7	13.0	24.2	4.1	2.8	81.7
Thailand	1988	77.3	31.7	19.9	47.5	0.9	22.8	98.4
	1980	80.2	40.5	22.5	36.2	0.8	20.3	99.9
	1975	82.9	48.7	17.5	32.8	0.9	17.3	97.2
Other Asia:								
China	1987	35.0	48.8	27.2	20.5	3.6	65.0	98.3
	1984	41.8	45.1	34.9	13.9	6.0	58.2	96.6
	1982	58.5	48.3	36.0	8.4	7.2	41.5	93.6

[1] Less than 0.05 percent

Source: United Nations Centre on Transnational Corporations, *World Investment Directory 1992, Volume 1, Asia and the Pacific*, table 8, pp. 19-20; data derived from country/territory tables in part III of the volume.

Figure 5-4
Total Japanese foreign direct investment outflows on an approval basis, JFYs 1981-91

Trillions of yen



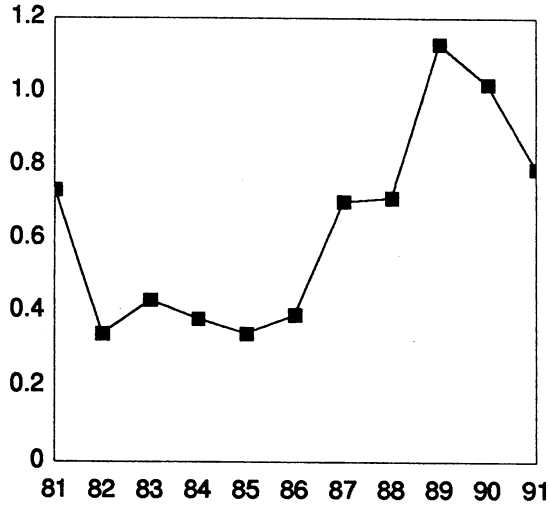
Source: Japan, Ministry of Finance.

Japanese FDI in East Asia shows a peak similar to the worldwide peak in 1989 and a corresponding subsequent drop, but the pattern is more erratic, as shown in figure 5-5. Most of the increases occurred in JFYs 1987 and 1989, while the trend was more or less flat or falling in other years. The share of Japanese FDI going to East Asia was generally smaller from 1985 onward than it was before 1985, as shown in table 5-9.[13]

[13] Japanese statistical reports include a total for Asia, which includes East Asia as well as other parts of Asia, excluding the Middle East. The statistics reported for Asia in table 5-9 and figure 5-5 are almost entirely for East Asia. FDI in other parts of Asia have typically amounted to 0.1 to 0.2 percent of total Japanese FDI.

Figure 5-5
Japanese foreign direct investment outflow to Asia, JFYs 1981-91

Trillions of yen



Note.—Japanese FDI flows to parts of Asia other than East Asia have been negligible.

Source: Japan, Ministry of Finance.

North America was the overwhelming destination for Japanese FDI from 1985 onward, with Europe being the second most important destination. The increase in the share going to East Asia in JFY 1991 mainly reflects the much larger drop in FDI going to other parts of the world. Among East Asian countries in 1991, Indonesia, Hong Kong, and Malaysia were the top three recipients of Japanese FDI, with 2.9, 2.2, and 2.1 percent of the total, respectively.

Table 5-9
Japanese foreign direct investment on an approval basis, regional shares of annual totals, JFYs 1981-91

(Percent)

JFY	North America	Europe	Asia[1]	Latin America[2]	Total
1981	28.2	8.9	37.4	13.2	100.0
1982	37.7	11.4	18.0	19.5	100.0
1983	33.2	12.2	22.7	23.1	100.0
1984	34.9	19.1	16.0	22.6	100.0
1985	45.0	15.8	11.7	21.4	100.0
1986	46.8	15.5	10.4	21.2	100.0
1987	46.0	19.7	14.6	14.4	100.0
1988	47.5	19.4	11.8	13.7	100.0
1989	50.2	21.9	12.2	7.8	100.0
1990	47.8	25.1	12.4	6.4	100.0
1991	45.3	22.5	14.3	8.0	100.0

[1] Includes East Asia and other parts of Asia (not including those in the Middle East). Other parts of Asia have typically amounted to less than 0.2 percent of total Japanese FDI.
[2] Includes Central and South America and Western Hemisphere islands.

Source: Derived from Japan, Ministry of Finance.

Within Asia 48 percent of the cumulative dollar-value total of Japanese FDI flows to Asia at the end of JFY 1991 had gone to the NIEs and 47 percent had gone to the ASEAN 4 (Indonesia, Malaysia, the Philippines, and Thailand), of which 21 percent of the cumulative Asian total had gone to the ASEAN 3 (Malaysia, the Philippines, and Thailand).[14]

FDI in manufacturing industries was much more important in East Asia than in other regions, with 40 percent of the cumulative total going to manufacturing as opposed to 27 percent overall. (See table 5-10.) Electric machinery, chemicals, and metals industries were the top recipients of FDI in the region among manufacturing industries. Mining (including petroleum extraction) and services were the top recipients of FDI in the region among nonmanufacturing industries, at 14 and 12 percent of the total, respectively.

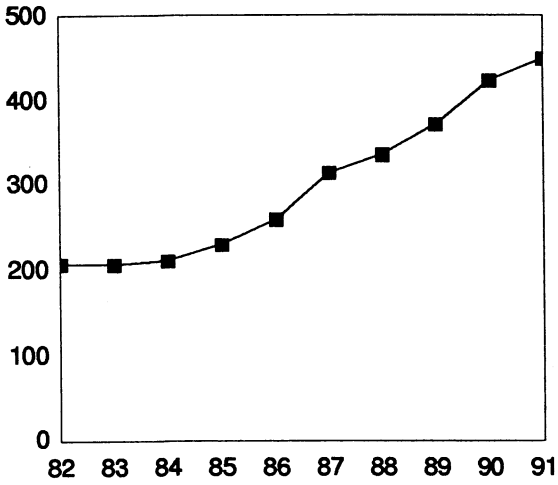
U.S. FDI

The nominal worldwide stock of U.S. FDI more than doubled from 1982 to 1991 as shown in figure 5-6, with an average annual growth rate of 9.0 percent.[15,16] Slow growth in the early 1980s was largely a result of liquidations of holdings in Latin America and other developing areas of the Western Hemisphere. Much of the growth can be attributed to reinvested earnings, which exceeded net outflows of equity capital and intercompany debt in all years. Currency appreciations in a number of host countries, primarily in Europe, also accounted for some of the growth in the stock.

The behavior of the stocks of total U.S. FDI and U.S. FDI in East Asia was similar, as shown by comparison of figures 5-6 and 5-7, with the stock doubling from 1982 to 1991—an average annual growth rate of 8.4 percent.

Figure 5-6
U.S. direct investment position abroad on a historical-cost basis, total, 1982-91

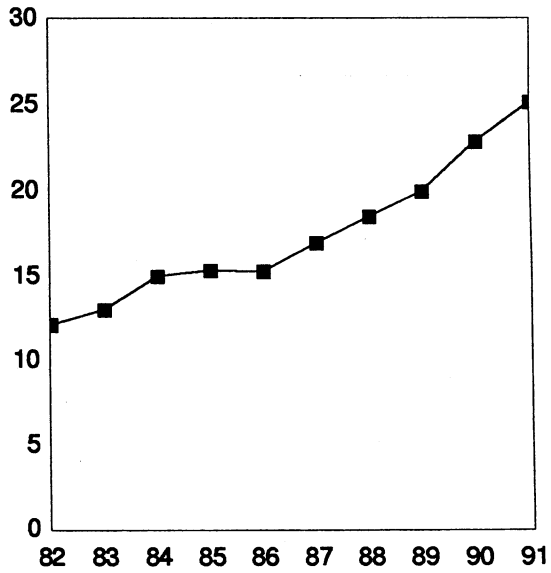
Billions of U.S. dollars



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

Figure 5-7
U.S. direct investment position in developing Asia-Pacific on a historical-cost basis, 1982-91

Billions of U.S. dollars



Note.—The U.S. direct investment position in developing parts of Asia and the Pacific other than in East Asia has been negligible.

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

The share of the stock of U.S. FDI located in East Asia in 1991 was nearly identical to the share in 1982, as shown in table 5-11.[17] This share rose in 1983 and 1984, partly as a result of increases in the absolute stock in East Asia, and partly because the total stock grew very little. It then fell as the stock in Europe and Latin America and developing areas of the Western Hemisphere began to grow more rapidly. Europe was by far the major location of the stock of U.S. FDI during the period, with 50 percent of the total in 1991.

[14] See appendix B for a discussion of the problems involved in using cumulative FDI flows.

[15] Figures 5-6 and 5-7 are not comparable with figures 5-4 and 5-5. Each set of two figures is presented to show that the pattern of each country's FDI in East Asia is similar to each country's overall pattern.

[16] The statistics on U.S. direct investment position abroad are reported on a historical-cost basis (accounting book value) and therefore tend to understate the actual value, especially for older investments. See appendix B for further discussion.

[17] The U.S. Department of Commerce reports an FDI total for "Other Asia and Pacific" under "Developing Countries" that is reported here as "Developing Asia." It includes East Asia, developing Pacific islands, and other developing countries in Asia, excluding the Middle East. The statistics reported for Developing Asia in table 5-11 and figure 5-7 are almost entirely for East Asia. FDI for other parts of Developing Asia have typically amounted to 0.1 to 0.2 percent of the total stock of U.S. FDI.

Table 5-10
Japanese foreign direct investment on an approval basis, by industries in selected regions, shares of regional totals, cumulative flows for JFYs 1951-91

(Percent)

Industry	North America	Europe	Asia[1]	Latin America[2]	Total
Manufacturing:					
Food	1.4	0.8	2.5	0.6	1.3
Textiles	0.6	1.5	3.9	1.1	1.3
Lumber, pulp	1.4	0.1	1.0	0.5	0.9
Chemical	3.6	2.4	6.0	1.9	3.6
Steel, nonferrous metal	3.0	1.0	5.7	4.9	3.2
Machinery	2.8	3.4	3.6	1.0	2.6
Electric machinery	7.7	7.0	9.4	1.6	6.4
Transport machinery	3.7	3.8	3.5	3.3	3.7
Other	5.5	2.0	4.7	0.4	3.6
Total, manufacturing	29.8	22.2	40.4	15.2	26.7
Nonmanufacturing:					
Agriculture, forestry	0.3	0.0	0.7	0.7	0.5
Fisheries	0.1	0.0	0.4	0.4	0.2
Mining	1.5	2.5	14.2	3.7	5.0
Construction	0.9	0.2	1.6	0.5	0.8
Commerce	12.5	12.1	8.4	5.6	10.4
Finance, insurance	13.6	39.6	9.4	34.3	19.9
Services	15.1	6.0	11.6	5.0	11.4
Transportation	0.4	0.4	2.2	31.2	5.7
Real estate	23.3	12.0	6.3	0.5	15.5
Other	1.4	1.5	3.1	2.7	2.1
Total, nonmanufacturing	69.2	74.4	57.9	84.7	71.5
Branch offices established or expanded	0.7	3.3	1.6	0.1	1.7
Real estate	0.3	0.1	0.1	0.1	0.2
Total, all industries	100.0	100.0	100.0	100.0	100.0

[1] Includes East Asia and other parts of Asia (excluding those in the Middle East). Other parts of Asia have typically amounted to less than 0.2 percent of total Japanese FDI.

[2] Includes Central and South America and Western Hemisphere islands.

Source: Derived from Japan, Ministry of Finance.

Table 5-11
U.S. direct investment position abroad on a historical-cost basis, shares of annual totals, 1982-91

(Percent)

Year	Canada	Europe	Japan	Latin America[1]	Developing Asia[2]	Total
1982	20.9	44.5	3.1	13.6	5.8	100.0
1983	21.4	44.5	3.7	11.6	6.3	100.0
1984	22.1	43.3	3.8	11.6	7.1	100.0
1985	20.4	45.7	4.0	12.3	6.7	100.0
1986	19.5	46.5	4.4	14.2	5.9	100.0
1987	18.4	47.9	5.0	15.1	5.4	100.0
1988	18.7	46.8	5.4	15.9	5.5	100.0
1989	17.2	48.3	5.0	16.8	5.4	100.0
1990	15.8	49.8	5.0	16.9	5.4	100.0
1991	15.2	49.9	5.1	17.2	5.6	100.0

[1] Includes Central and South America and Western Hemisphere islands.

[2] Includes East Asia, developing Pacific islands, and other parts of Asia (excluding those in the Middle East). Developing Pacific islands and other parts of Asia have typically amounted to less than 0.2 percent of total U.S. FDI.

Source: Derived from U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Aug. 1992, and *National Trade Data Base* on CD-ROM, 1992.

Canada was the number-two location until the share in Latin America surpassed the Canadian share in 1990. Among East Asian countries, Hong Kong, Singapore, and Indonesia were the top locations, with 1.4 percent, 1.0 percent, and 0.8 percent of the total, respectively.

Within Developing Asia, 62 percent of the 1991 U.S. FDI stock was located in the NIEs and 33 percent in the ASEAN 4, of which 20 percent was in the ASEAN 3.

Manufacturing industries accounted for 39 percent of the U.S. FDI position at the end of 1991, while nonmanufacturing industries accounted for 61 percent. (See table 5-12.) Among manufacturing industries, chemicals and allied products accounted for 9 percent of the total, and nonelectrical machinery accounted for just under 7 percent. Finance, insurance, and real estate accounted for the largest share of both the overall total and the subtotal for nonmanufacturing industries, at 26 percent of the total. Petroleum accounted for 13 percent of the total.

In contrast to Japanese FDI patterns, manufacturing industries were less important in U.S. FDI in East Asia than in most other regions, with 36 percent of the total going to manufacturing as opposed to 39 percent overall. The electric and electronic machinery and chemicals industries were the top recipients of U.S. FDI in the region among manufacturing industries, with 15 and 7 percent of the total, respectively. The petroleum, wholesale trade, and banking industries had the largest FDI shares in the region among nonmanufacturing industries, at 24 percent, 16 percent, and 11 percent of the total, respectively.

Net FDI in East Asian Countries

Net FDI flows for eight East Asian countries, the United States, and Japan on a balance of payments basis for 1980-91 are shown in table 5-13.[18] The large increases in net FDI inflows in recent years are readily evident, especially for China, Indonesia, Malaysia, and Thailand. The rise of Korea and Taiwan as net outward investors is also evident. Hong Kong would presumably show a similar pattern if data were available. The table also reflects the rapid rise in outward Japanese FDI to 1990 and the large drop in 1991.

[18] Brunei and Hong Kong do not report balance of payments statistics.

Table 5-12
U.S. direct investment position abroad on a historical-cost basis, by industries, shares of regional totals, 1991

(Percent)

Industry	Canada	Europe	Japan	Latin America[1]	Developing Asia[2]	Total
Manufacturing						
Food and kindred products	3.6	4.2	1.9	4.0	2.5	3.8
Chemicals and allied product	9.8	8.6	12.8	7.7	7.3	8.9
Primary and fabricated metal	4.9	1.8	0.9	2.4	0.8	2.3
Machinery, except electrical	4.0	8.5	[3]	3.6	6.1	6.6
Electric and electronic equipment	3.5	2.7	5.5	1.8	15.0	3.4
Transportation equipment	9.3	4.4	7.3	5.6	1.1	5.1
Other manufacturing	12.2	9.5	[3]	8.1	3.3	8.8
Total, manufacturing	47.2	39.7	45.5	33.2	36.2	39.0
Nonmanufacturing						
Petroleum	15.8	10.2	18.3	5.6	23.7	13.1
Wholesale trade	6.4	11.1	21.2	4.4	16.1	9.6
Banking	1.5	3.1	0.1	8.8	11.3	4.2
Finance, insurance, real estate	17.8	30.0	11.1	38.6	8.3	26.0
Services	3.2	3.6	1.7	2.3	1.2	3.0
Other	8.0	2.3	2.0	7.1	3.2	5.2
Total, nonmanufacturing	52.8	60.3	54.5	66.8	63.8	61.0
Total, all industries	100.0	100.0	100.0	100.0	100.0	100.0

[1] Includes Central and South America and Western Hemisphere islands.

[2] Includes East Asia, developing Pacific islands, and other parts of Asia (excluding those in the Middle East). Developing Pacific islands and other parts of Asia have typically amounted to less than 0.2 percent of total U.S. FDI.

[3] Suppressed to avoid disclosure of data on individual companies.

Source: Derived from U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Aug. 1992.

Table 5-13
Foreign direct investment, net flows on a balance of payments basis, 1980-91

(Millions of US dollars)

Year	China	Indonesia	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand	Japan	United States
1980	(1)	180	-7	934	-106	1,138	(1)	187	-2,110	-2,300
1981	(1)	133	60	1,265	172	1,675	(1)	288	-4,710	15,570
1982	386	225	-76	1,397	16	1,298	(1)	189	-4,100	12,820
1983	543	292	-57	1,261	105	1,085	130	348	-3,200	5,250
1984	1,124	222	73	797	9	1,210	131	400	-5,970	13,970
1985	1,031	310	200	695	12	809	260	162	-5,810	5,860
1986	1,425	258	325	489	127	1,529	261	261	-14,250	15,390
1987	1,669	385	418	423	307	2,630	11	182	-18,350	27,100
1988	2,344	576	720	719	936	3,538	-3,161	1,081	-34,730	41,540
1989	2,613	682	453	1,668	563	2,317	-5,347	1,726	-45,220	38,870
1990	2,659	1,093	-105	2,514	530	3,368	-3,913	2,303	-46,290	12,450
1991	3,453	1,482	-241	3,454	544	2,883	-583	1,847	-29,370	-15,650

[1] Not available.

Note.—Positive numbers denote a net inflow, negative numbers denote a net outflow.

Source: International Monetary Fund, *International Financial Statistics*, and Central Bank of China, *Financial Statistics: Taiwan District, The Republic of China.*

Some East Asian countries are more dependent on FDI than others, as can be seen in table 5-14, which shows the ratio of net FDI to gross domestic fixed investment (GDFI) in the countries for which data are readily available.

Singapore is by far the most dependent on FDI, with an FDI/GDFI ratio exceeding 10 percent in all years reported and 20 percent in 7 of 12 years. Malaysia and Thailand rank second and third, with the FDI/GDFI ratio rising in the most recent years.[19]

Top Sources of FDI in East Asian Countries

The United States and Japan have been major sources of FDI in all of the East Asian countries. Although absolute flows from the United States have generally increased, substantially in some cases, recent years have seen Japan increasing in importance as a source of FDI and the United States falling in relative importance. The most remarkable phenomenon of FDI in East Asia is the rise of the NIEs as major investors in other East Asian countries. Most notable among these is Taiwan, which has become the top source of FDI in Malaysia and Indonesia and the number-two source in China, according to official host country statistics.

Officially reported statistics on the top sources of FDI in East Asian countries are shown in tables 5-15 through 5-23.[20] Because many problems exist with the officially reported statistics, comparisons among countries or summations of data from all East Asian countries are nearly impossible. Tables 5-15 through 5-23 show FDI flows for individual countries for the earliest year for which we have data (or 1980 if we have a data for earlier years) and the most recent year for which we have data.

[19] As Ryutaro Komiya notes, "[e]ven just for the direct investment flows in the balance-of-payments statistics published in the International Monetary Fund (IMF) *International Financial Statistics*, different countries use different conceptual criteria." Among other problems, IMF accounting guidelines call for retained earnings to be included in the annual flow of direct investment (reported in table 5-13 and on which table 5-14 is based), "but few countries other than the United States observe this accounting principle." Komiya, "Japan's Foreign Direct Investment: Facts and Theoretical Considerations," in Silvio Borner, ed., *International Finance and Trade in a Polycentric World* (New York: St. Martin's Press, 1988), pp. 247 and 284. The high FDI/GDFI numbers for Singapore may reflect adherence to IMF standards for retained earnings. Japanese FDI statistics on a balance of payments basis reported by the Bank of Japan do not include retained earnings. Komiya, "Japan's Foreign Direct Investment," p. 244. Nor do the Japanese net FDI statistics reported by the IMF. For further discussion of data problems, see appendix B.

[20] No FDI statistics were available for Brunei.

Table 5-14
Foreign direct investment, net flows relative to gross domestic fixed investment, selected East Asian countries, Japan, and the United States, 1980-91

(Percent)

Year	Indonesia	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand	Japan	United States
1980	1.2	-0.0	12.2	-1.2	23.9	([1])	2.3	-0.6	-0.4
1981	0.5	0.3	14.0	1.7	27.6	([1])	3.3	-1.3	2.6
1982	0.9	-0.4	14.3	0.2	17.9	([1])	2.3	-1.3	2.2
1983	1.2	-0.2	11.6	1.0	13.1	1.1	3.7	-1.0	0.8
1984	1.0	0.3	7.4	0.1	13.5	1.0	4.0	-1.7	1.9
1985	1.3	0.8	7.5	0.2	10.8	2.2	1.8	-1.6	0.7
1986	1.1	1.1	6.7	2.5	23.3	1.9	2.9	-2.6	1.9
1987	1.6	1.1	5.8	5.4	36.5	0.1	1.6	-2.7	3.3
1988	2.1	1.4	8.6	13.8	41.0	-12.5	6.7	-4.0	4.7
1989	2.1	0.7	15.0	6.3	22.0	-16.5	8.1	-5.1	4.2
1990	2.8	-0.1	18.1	5.5	25.7	-11.1	8.1	-4.9	1.3
1991	3.6	-0.2	([1])	6.0	18.1	-1.5	([1])	-2.8	-1.8

[1] Not available

Note.—Positive numbers denote a net inflow, negative numbers denote a net outflow.

Source: International Monetary Fund, *International Financial Statistics*, Central Bank of China, *Financial Statistics: Taiwan District, The Republic of China.*

Table 5-15
China: Foreign direct investment inflows, 1985 and 1991
(Millions of US dollars)

FDI source	Amount	Share
1985:		
World	5,930	100.0
Hong Kong/ Macao	4,134	69.7
United States	1,152	19.4
Japan	471	7.9
1991:		
World	11,880	100.0
Hong Kong/ Macao	7,500	63.1
Taiwan	1,380	11.6
Japan	812	6.8
Germany	558	4.7
United States	548	4.6

Note.—Data based on figures for contractual value of investment. Figures reported in U.S. dollars.

Source: U.S. Department of State, "Foreign Direct Investment in China," message reference No. 22201, prepared by U.S. Embassy, Beijing, July 23, 1992.

Table 5-16
Hong Kong: Book value of assets of manufacturing companies with foreign interests, change from previous year, Hong Kong, 1986 and 1989
(Millions of U.S. dollars)

FDI source	Amount	Share
1986:		
World	400	100.0
United States	284	70.9
Japan	45	11.3
Netherlands	11	2.8
1989:		
World	425	100.0
Japan	230	54.2
Netherlands	59	13.9
China	27	6.4
Australia	22	5.2
Switzerland	19	4.5
Liberia	18	4.2
Singapore	12	2.9
Canada	12	2.9
Philippines	10	2.4
United States	10	2.3

Note.—Figures converted from Hong Kong dollars to U.S. dollars using IMF exchange rates. Shares computed from unrounded data. See United Nations, Centre on Transnational Corporations, *World Investment Directory 1992: Volume 1, Asia and the Pacific*, New York, 1992, p. 101 for a discussion of problems with Hong Kong FDI statistics.

Source: United Nations, Centre on Transnational Corporations, *World Investment Directory 1992, Volume 1, Asia and the Pacific*, New York, 1992, table 4, p. 105.

Table 5-17
Indonesia: Foreign direct investment inflows, 1986 and 1991
(Millions of U.S. dollars)

FDI source	Amount	Share
1986:		
World	800	100.0
Japan	325	40.6
United States	128	16.0
Singapore	105	13.1
1991:		
World	8,778	100.0
Taiwan	1,057	12.0
Japan	929	10.6
Singapore	345	3.9
Korea	301	3.4
Hong Kong	278	3.2

Note.—Figures reported in U.S. dollars. Shares computed from unrounded data.

Source: *Vision for the Economy of the Asia-Pacific Region in the Year 2000 and Tasks Ahead*, prepared for the APEC Ad Hoc Economic Group Meeting, Aug. 10 and 11, 1992, in Tokyo, Japan, table 3-1, p. 23, from Indonesia Financial Statistics/approval basis; Indonesia, Investment Coordinating Board, *Investment Statistics of Indonesia*, approval basis.

Table 5-18
Korea: Foreign direct investment, net inflows, 1985 and 1988
(Millions of U.S. dollars)

FDI source	Amount	Share
1985		
World	219	100.0
United States	116	53.1
Japan	58	26.3
United Kingdom	12	5.7
1988:		
World	801	100.0
Japan	392	43.8
United States	215	26.8
Netherlands	36	4.5

Note.—Figures converted from Korean won to U.S. dollars using IMF exchange rates. Shares computed from unrounded data.

Source: United Nations, Centre on Transnational Corporations, *World Investment Directory 1992, Volume 1, Asia and the Pacific*, New York, 1992, table 4, p. 237.

Table 5-19
Malaysia: Foreign direct investment inflows, 1980 and 1990
(Millions of U.S. dollars)

FDI source	Amount	Share
1980:		
World	114	100.0
Singapore	25	21.7
Japan	16	14.4
United States	10	8.8
1990:		
World	1,517	100.0
Taiwan	2,344	36.0
Japan	1,557	23.9
Indonesia	400	6.1
Singapore	331	5.1
United Kingdom	321	4.9
Korea	240	3.7
United States	210	3.2

Note.—Figures converted from Malaysian ringgits to U.S. dollars using IMF exchange rates. Shares computed from unrounded data.

Source: Based on official approvals by the Malaysian Industrial Development Authority.

Table 5-20
Philippines: Foreign direct investment inflows, 1986 and 1991
(Millions of U.S. dollars)

FDI source	Amount	Share
1986:		
World	78	100.0
United States	22	28.7
Japan	22	28.5
Hong Kong	7	9.3
1991:		
World	783	100.0
Japan	210	26.9
United States	87	11.1
Korea	45	5.7

Note.—Figures converted from Philippine pesos to U.S. dollars using IMF exchange rates. Shares computed from unrounded data.

Source: *Vision for the Economy of the Asia-Pacific Region in the Year 2000 and Tasks Ahead*, prepared for the APEC Ad Hoc Economic Group Meeting, Aug. 10 and 11, 1992, in Tokyo, Japan, table 3-1, p. 23, from Philippines: BOI/ approval basis.

Table 5-21
Singapore: Foreign direct investment, change in foreign direct equity investment yearend stock from previous year, 1981 and 1989

(Millions of U.S. dollars)

FDI source	Amount	Share
1981:		
World	1,508	100.0
United Kingdom	403	26.7
United States	319	21.2
Malaysia	223	14.8
Hong Kong	186	12.3
Japan	147	9.8
1989:		
World	2,699	100.0
Japan	993	36.8
Netherlands	400	14.8
United States	340	12.6

Note.—Figures converted from Singapore dollars to U.S. dollars using IMF exchange rates. Shares computed from unrounded data.

Source: Singapore, Department of Statistics, *Foreign Equity Investment in Singapore, 1980-1989*, Jan. 1992.

Table 5-22
Taiwan: Foreign direct investment, approved inflows, 1980 and 1991

(Millions of U.S. dollars)

FDI source	Amount	Share
1980:		
World	466	100.0
United States	190	40.8
Singapore	105	22.5
Japan	89	19.1
1991:		
World	1,778	100.0
United States	612	34.4
Japan	535	30.1
Hong Kong	128	7.2

Note.—Figures reported in U.S. dollars. Figures are the sum of data reported for overseas Chinese and foreign investment.

Source: Republic of China, Ministry of Economic Affairs, Investment Commission, *Statistics on Overseas Chinese and Foreign Investment, Technical Cooperation, Outward Investment, Outward Technical Cooperation*, Dec. 31, 1991.

Table 5-23
Thailand: Foreign direct investment, net inflows, 1987 and 1991
(Millions of U.S. dollars)

FDI source	Amount	Share
1987:		
World	352	100.0
Japan	127	36.1
United States	71	20.1
Hong Kong	31	8.8
1991:		
World	2,014	100.0
Japan	611	30.3
Hong Kong	453	22.5
Singapore	254	12.6
United States	232	11.5

Note.—Figures converted from Thai bhat to U.S. dollars using IMF exchange rates. Shares computed from unrounded data. The Bank of Thailand defines direct investment as equity investment plus loans from related companies.

Source: U.S. Department of State, "USITC Investigation on Economic Integration," message reference No. 46562, prepared by U.S. Embassy, Bangkok, Oct. 1992; Bank of Thailand, *Monthly Economic Reports*.

CHAPTER 6
Foreign Aid

Foreign aid has been a vital complement to inflows of foreign direct investment for many East Asian countries. Although the United States did provide substantial foreign aid to East Asia in the 1960s and 1970s, Japan has been the leading provider of such assistance in recent years. Much of the aid Japan provides to East Asia underwrites infrastructure-related projects, which not only improve the investment climate in the recipient nations, but also provide ready markets for suppliers of equipment and services in the region's energy, telecommunications, water treatment, transportation, and construction fields. This chapter reviews the current levels of foreign aid provided by Japan and the United States to East Asia, their importance to individual East Asian nations, and the aid-related policies of East Asia's leading investors and trading partners—Japan and the United States.

This discussion focuses on foreign aid provided in the form of official development assistance (ODA), a term coined by the Organization for Economic Cooperation and Development (OECD) to refer to foreign aid provided by governments to promote economic development.[1] (Military assistance is not considered ODA, nor are loans that do not carry concessional financial terms.[2]) Because data issued directly from the U.S. and Japanese governments are not comparable, this chapter generally relies on data submitted to the OECD. However, the OECD does not report East Asia separately. Instead, its data cover either the Asia and Oceania region, defined as "all of Asia," with the exception of Japan, and "all of Oceania," with the exception of New Zealand and Australia, or Asia alone. When appropriate information on East Asia's share of the total or on the upward distortion introduced by the use of the OECD data is available, it is presented in a footnote.

Levels of Funding to Asia

After a decade in which U.S. ODA grew by 1.6 percent annually against Japan's 5.3 percent annual gain, Japan and the United States are nearly tied for the spot of leading provider of ODA to the developing world, with each providing approximately $11 billion in 1991, or about a fifth of the total provided by members of the OECD.[3] In 1989, Japan's total aid levels surpassed those of the United States.

Compared to the United States, however, Asia and Oceania play a much larger role in Japan's overall ODA. In 1990, almost half of Japan's total ODA—$3.5 billion—was earmarked for Asia and Oceania (table 6-1). The East Asian countries of Indonesia, China, the Philippines, Thailand, and Malaysia consistently ranked among Japan's top 10 ODA recipients in each of the past 5 years, and ODA is still being provided by Japan to more advanced countries, such as Korea and Singapore. Japan is by far the leading contributor to the Asian Development Bank (ADB),[4] supplying $455 million out of the $688 million provided to the ADB by OECD members in 1991.[5]

In contrast, 6 percent, or $560 million, of U.S. ODA was directed to countries in Asia and Oceania during 1990, down from 9.5 percent in 1980.[6] The share of U.S. aid directed to the region was significantly less than that of Australia (66.0 percent), France (17.8 percent), or Germany (12.3 percent),[7] and the absolute levels given by these three nations also exceeded the U.S. total.[8] Most U.S. aid is directed

[1] The definitions herein are drawn from the discussion of terms and definitions presented in Organization for Economic Cooperation and Development (OECD), *Development Cooperation: 1992 Report*, Dec. 1992, p. A-99.

[2] Defined by the OECD as loans that contain less than a 25 percent grant element. Grant element refers to financial terms—interest rate, maturity, and grace periods—and measures the "softness" of a loan, in the form of the present value of an interest rate below the market rate over the life of a loan.

[3] At the beginning of the 1980s, Japan accounted for about 13.5 percent of the total ODA provided by OECD countries. The U.S. share was 22.4 percent. By 1990, the Japanese share stood at 17.1 percent and the U.S. share had dropped slightly, to 20.0 percent. OECD, *Development Cooperation: 1992 Report*, table V-1, p. 84; table V-3, p. 89; table 2, p. 24; table 25, p. A-35.

[4] The Asian Development Bank (ADB) was created in 1966. The bank currently has 52 member countries and is engaged in promoting economic and social progress in the Asia-Pacific region. The ADB concentrates its lending in the areas of physical and social infrastructure. ASEAN member states have been significant borrowers, accounting for roughly 45 percent of the $37.1 billion in loans granted during 1968-91. In 1991 Indonesia accounted for nearly one-fourth, or $1.2 billion, of the ADB's $4.8 billion in loans. China accounted for 10 percent, or $496 million. By convention, a Japanese has always been president of the bank.

[5] OECD, *Development Cooperation: 1992 Report*, table 26, p. A-36.

[6] Ibid., table 42, p. A-54. Only one of the countries included in the broader definition of Asia and Oceania—Pakistan—was among the top 25 U.S. aid recipients that year. For details see ibid., table 27, p. A-49; table 41, p. A-43, and table 43, p. A-64.

[7] Ibid., table 42, p. A-54.

[8] Ibid., table 41, p. A-53. Australia allotted $600 million to the Asia and Oceania region; France allotted $1,087 million; Germany, $630 million.

Table 6-1
Regional distribution of multilateral and bilateral ODA, on a net disbursement basis, 1990-91

	Amount	Share of total
	Million dollars	*Percent*
Japan:		
Sub-Saharan Africa	1,455	18.8
South Asia	1,376	17.9
Other Asia and Oceania	3,465	45.2
Middle East and North Africa	744	9.7
Latin America and Caribbean	637	8.3
United States:		
Sub-Saharan Africa	1,782	19.1
South Asia	988	10.6
Other Asia and Oceania	560	6.0
Middle East and North Africa	4,489	48.1
Latin America and Caribbean	1,506	16.1

Source: OECD, *Development Cooperation: 1992 Report*, table 41, p. A-53 and table 42, p. A-54.

toward the Middle East and North Africa, which accounted for 48.1 percent of the total in 1990, and Latin America and the Caribbean, which accounted for 16.1 percent.[9] One East Asian country—the Philippines—was among the top 10 U.S. aid recipients in 1990, and Indonesia ranked 19.[10] U.S. contributions to the ADB were negligible, accounting for $2 million of the $688 million in total DAC contributions in 1991,[11] although this level apparently reflects year-to-year fluctuations in actual appropriations.[12] In terms of assessed contributions, both the United States and Japan were assessed 14.9 percent of the ADB's most recent capital replenishment and had a 12.3 percent share of voting power in the organization. However, Japan contributes more than its assessed contribution.

Importance to Asian Recipients

OECD statistics suggest that ODA accounted for just under a third of the total net resource flows into Asia from all sources in 1991,[13] and Asia's share of net ODA receipts by all developing countries stood at 29.6 percent during 1990-91, down from the 35.6 share registered a decade earlier.[14] Nevertheless, the importance of official development finance[15] relative to total resource flows in Asia was significantly smaller than it was in other developing countries in the 1980s, largely because of the size and the continued growth in private flows,[16] particularly from 1987 to 1990 (figure 6-1).

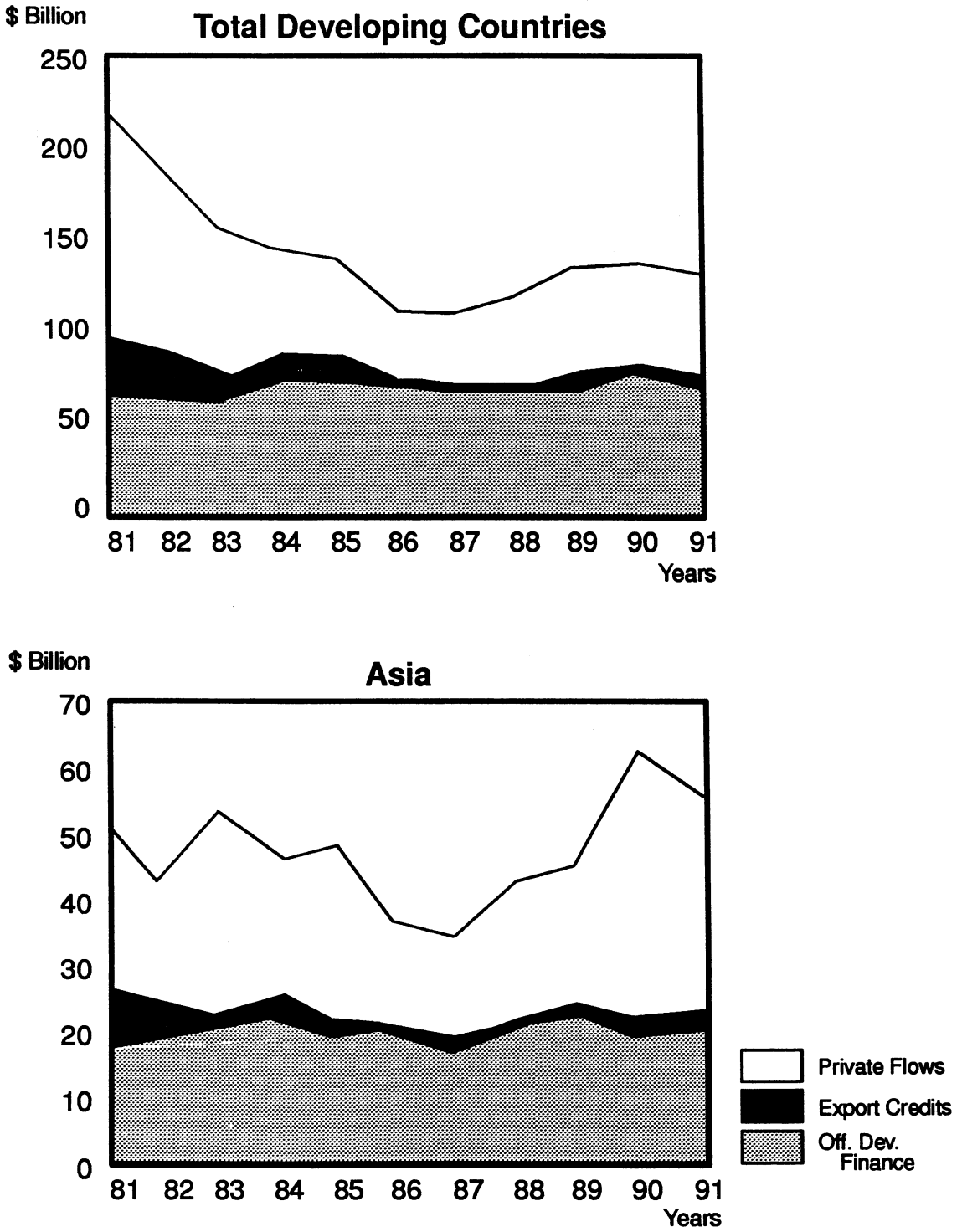
The importance of ODA to individual East Asian countries varies. According to the OECD, the ratio of ODA to GNP during 1990-91 was 0.5 percent in China, 1.2 percent in Thailand, 1.4 percent in Malaysia, 2.0 percent in Indonesia, and 3.0 percent in the Philippines. These ratios are higher than the comparable ratios for Brazil, Mexico, and Argentina and about on par with the ratios for Peru, the Dominican Republic, and Ecuador.[17]

Export credits accounted for a comparatively small share of total resource inflows and they diminished in relevance throughout the decade. Only about 14 percent of the total stock of export credit finance to East Asian countries came through official export credit agencies. The relatively poor developing countries of East Asia appear to make greater use of official export credits (e.g., 30 percent and 21 percent of total export credits for the Philippines and Indonesia, respectively) than do those that are relatively rich and have greater access to commercial trade finance (e.g., 3 percent and 9 percent for Singapore and Korea, respectively).[18]

Japan accounted for a large proportion of the aid provided to many East Asian countries in 1989, as shown in table 6-2. The Philippines was the only East Asian country in which the United States was among the leading three providers of ODA. However, the U.S.

[9] Ibid., table 9, p. A-18.
[10] Ibid., table 43, p. A-64.
[11] Ibid., table 26, p. A-36.
[12] Ibid. and U.S. Agency for International Development (USAID) official, informal communication with USITC staff, Feb. 26, 1993.
[13] Net resource flows to developing countries include official development finance, official and private export credits, long- and short-term private transactions (including bank lending), and grants from private voluntary agencies. Expressly netted out are loans and credits for military purposes and with maturities of less than 1 year.
[14] Includes both bilateral and multilateral ODA. Repayments of principal and interest on previous loans are netted out. Ibid., table 20, p. A-28.
[15] Official development finance includes multilateral and bilateral ODA and other officially supported, development-oriented financial flows.
[16] Ibid., table 15, p. A-24.
[17] Ibid., table 19, p. A-27.
[18] OECD and Bank for International Settlements, *Statistics on External Indebtedness* (Paris and Basle, Jan. 1993). The total stock is here defined as external bank claims plus nonbank credits.

Figure 6-1
Net resource flows to developing countries and to Asian developing countries, 1981-91



Source: OECD, *Development Cooperation: 1992 Report* (Paris: OECD, Dec. 1992).

Table 6-2
ODA receipts by East Asian nations in 1989, multilateral, bilateral, and from Japan and other donors

(Million dollars)

Recipient	Multilateral ODA	Bilateral ODA: Total[1]	Bilateral ODA: Japan	Japan's share of bilateral ODA
Brunei	0.1	4.5	4.0	88.9
China[2]	659.7	1,494.9	832.2	55.7
Indonesia[3]	133.1	1,703.7	1,145.3	67.2
Korea	3.7	48.9	41.0	83.8
Malaysia[4]	14.1	132.0	79.6	60.3
Philippines[5]	86.9	757.3	403.8	53.3
Singapore[6]	1.1	93.7	10.7	11.4
Thailand	56.0	657.4	488.9	74.4

[1] Total bilateral ODA provided by members of the Organization for Economic Cooperation and Development's Development Assistance Committee.

[2] France provided $179.9 million in bilateral ODA to China, or 12.0 percent of China's total bilateral ODA; Italy provided $118.8 million, or 7.9 percent; Germany provided $111.9 million, or 7.5 percent.

[3] The Netherlands provided $161.5 million in bilateral ODA to Indonesia, or 9.5 percent of the total.

[4] Australia provided $21.4 million in bilateral ODA to Malaysia, or 16.2 percent of the total; the United Kingdom provided $10.6 million, or 8.1 percent.

[5] The United States provided $192.0 million in bilateral ODA to the Philippines, or 25.4 percent of the total.

[6] Germany provided $78.3 million in bilateral ODA to Singapore, or 83.6 percent of the total.

Source: Ministry of Foreign Affairs (Japan), *Japan's ODA (Official Development Assistance), Annual Report*, 1991.

share of the total amount of bilateral assistance received by the Philippines that year was less than half as large as Japan's.

Administration of Japan's ODA Program

Japan's aid program began four decades ago, but it was only after the 1977 launch of a series of aid-doubling plans that the country became one of the major donors. Foreign aid was one of two items shielded from fiscal austerity measures in the 1980s, largely as a result of its role in fulfilling Japan's perceived obligations as a member of the world economic community.[19]

Four agencies are involved in ODA policy formulation in Japan, and three in its implementation. On the policy side, the key agencies are the Ministry of Foreign Affairs (MOFA), the Ministry of Finance (MOF), the Ministry of International Trade and Industry (MITI), and the Economic Planning Agency (EPA). In general MOFA tends to focus on broad national interest and foreign policy considerations, including the role of ODA in defining Japan's global leadership role, in responding to U.S. concerns about burden sharing, in building good relations with neighboring nations and the world community, and in advancing the security interests of Japan and its allies. MOF is reported to play the role of resident skeptic and gatekeeper, attempting to keep ODA budgets and ambitions within the bounds of tight fiscal discipline. MITI is regarded as the champion of business, promoting projects resulting in the sale of Japanese goods and services and encouraging ODA in areas which could benefit Japanese investors and contribute to Japan's overall industrial policy goals. The EPA's presence is said to be largely symbolic, though it and the Ministry of Finance have lately been advancing Japan's model of development, with the attendant long-term planning and extensive interaction between government and business, as appropriate for emulation by recipients.

The three agencies involved on the implementation side include two dealing with bilateral assistance. The Overseas Economic Cooperation Fund (OECF) is responsible for the provision of ODA loans. The Japan International Cooperation Agency (JICA) is responsible for ODA grants. Contributions to multilateral development banks, including the ADB, are administered by MOF. Japan's capacity for administering its large and increasingly diverse aid program is perceived as lagging, although steps are being taken to improve evaluation, project design, and implementation.[20]

Administration of the United States' ODA Program

Foreign aid has been an integral part of the conduct of U.S. foreign policy for much of the postwar period. However, there has been considerable debate over the

[19] Military spending also was permitted to increase.

[20] OECD, "DAC Aid Review of Japan," OECD Press Release No. (93) 17, Apr. 22, 1993.

years about the priority to be accorded various goals—commercial, political, strategic, development, and humanitarian.[21] It is generally agreed that political and security considerations have predominated in decisions about country allocation, while development and humanitarian goals have guided program management. Even when economic objectives are emphasized, they tend to be cast in broad terms.[22]

The U.S. foreign aid presence in East Asia today reflects the myriad objectives and considerations shaping overall U.S. aid policy. For example, the United States has generally not extended foreign aid to China because of various policy considerations. U.S. aid to Thailand was suspended in 1991 after the military coup,[23] but funding is resuming now in the wake of democratic elections. Indonesia has been a major recipient of U.S. aid, but Congress recently cut U.S. military aid to the country and placed restrictions on cash transfers in light of the human rights situation in Eastern Timor. The Philippines' prominence as a recipient of U.S. aid partly reflects the historical U.S. military presence there.

The economic and political changes now occurring in East Asia are causing the United States to rethink its approach to foreign aid in the region. In its most recent statement of goals toward Asia, for example, the U.S. Agency for International Development (USAID) notes that "the Philippines program must be redesigned to reflect a strategy less influenced by the U.S. military relationship and more developmentally oriented."[24] U.S. aid programs in the region will, according to the document, support the development of free markets throughout the region, improve environmental planning and management, enhance individual well-being, and strengthen democratic institutions.

Coordination and administration of the U.S. bilateral economic aid is the responsibility of USAID. In relation to food aid, responsibility is shared with the U.S. Departments of Agriculture, State, and Treasury. For other types of aid, the Department of State plays a role in determining the geographical allocation of funds. For multilateral aid, the Treasury Department has the lead, but USAID and other agencies are involved in various aspects. The Department of Commerce and the Office of the United States Trade Representative, which are responsible for U.S. export promotion and trade policy respectively, do not play a formal role in U.S. foreign aid decisions. However, USAID sometimes cooperates with them on country-specific approaches.

The United States takes a somewhat different approach in providing assistance than does Japan. USAID typically maintains a large in-country mission, which designs and develops country-specific strategies. These medium-term strategies reflect the country's developmental needs, USAID expertise, and overall U.S. objectives. Communication with host government officials is maintained, but there are times when the United States encourages the host government to move in a particular policy direction.[25] In the Philippines, for example, the United States linked a loan on rice imports to eliminating the Government's monopoly over wheat and fertilizer imports.[26]

Impact of ODA on Recent Trends in East Asia

Over the years, Japan's foreign aid program has been criticized on several grounds,[27] as has the U.S. program. Perhaps the most persistent complaint, and one particularly relevant from a trade policy perspective, is that Japan's ODA program is first and foremost a means of advancing its own commercial interests. A 1990 report by the U.S. General Accounting Office, for example, concludes that Japan's foreign aid program "largely retains its traditional focus and so continues to be more commercially oriented than U.S. assistance."[28] Specifically, it has been alleged that Japan's aid money is spent in parts of the world—notably East Asia—and for types of projects where Japanese suppliers have an advantage, that Japan's ODA is formally or informally tied to the purchase of Japanese goods and services, and that Japanese ODA is often teamed with other Japanese Government programs as part of an overall approach to the pursuit of its commercial and industrial policy objectives.

[21] Export-Import Bank of the United States (Eximbank), *Report to the U.S. Congress on Tied Aid Credit Practices* (Washington, DC: Eximbank, Apr. 1989), p. 14.

[22] U.S. House of Representatives, *Report of the Task Force on Foreign Assistance to the Committee on Foreign Affairs, U.S. House of Representatives* (Washington, DC: Government Printing Office (GPO), Feb. 1989), Document 101-32, p. 24.

[23] Thailand received $11.5 million in fiscal year (FY) 1991 before being suspended from the U.S. aid program.

[24] USAID, *Asia Regional Overview*, p. 431.

[25] USAID official, informal communication with USITC staff, Feb. 11, 1993.

[26] Filogo Pante, Jr., and Romeo A. Reyes, "Japanese and U.S. Aid to the Philippines: A Recipient Country Perspective," ch. in Shafiqul Islam, ed., *Yen for Development* (New York: Council on Foreign Relations, 1991), p. 131.

[27] For a review of these issues, see, for example, Margee J. Ensign, *Doing Good or Doing Well?: Japan's Foreign Aid Program* (New York: Columbia U. Press, 1992); Susan J. Pharr, "Japanese Aid and the New World Order," conference paper, Woodrow Wilson International Center for Scholars, 1992; Islam, Yen for Development; Robert M. Orr, *The Emergence of Japan's Foreign Aid Power* (New York: Columbia U. Press, 1990); Dennis T. Yasutomo, *The Manner of Giving: Strategic Aid and Japanese Foreign Policy* (Lexington, MA: D.C. Heath, 1986).

[28] U.S. General Accounting Office (GAO), Report to the Chairman, Subcommittee on Economic Resources and Competitiveness, Joint Economic Committee, U.S. Congress, on *Economic Assistance: Integration of Japanese Aid and Trade Policies* (Washington, DC: GAO, May 1990), NSIAD-90-19.

One analyst observes that "while Japan is accused of having a hidden agenda of advancing Japan's commercial interest, Western donors are credited with being motivated by 'missionary zeal.' "[29] The administration of the U.S. aid program has been criticized in domestic circles as lacking a clear focus and as being subject to micromanagement, overly bureaucratic, and too thinly stretched. Current U.S. foreign aid legislation contains 33 objectives and 288 individual reporting requirements and, in fiscal 1989, 98 percent of economic support fund money and 49 percent of development assistance funds were earmarked for particular countries or purposes.[30] USAID had some 2,000 projects under way in 90 countries around the world, far too many to manage effectively, a Congressional Task Force concluded several years ago.[31] One analyst recently opined that[32]

> The impact abroad of this programmatic jumble, tight fistedness, and runaway conditionality has been one of incredulity. In Asia, countries receiving development assistance . . . contrast the size and steady flow of big-ticket aid from the Japanese, Germans, or even Koreans to the restrictive American loans and grants worth but a fraction of these other credits.

Furthermore, some critics say that U.S. aid programs do a poor job of promoting U.S. economic interests abroad and that this failure is one reason the United States has lost out on export and investment opportunities in East Asia. Noting Thailand's potential graduation from eligibility for ODA and mixed credits due to its economic success, another analyst observes that "U.S. critics complain that Washington tends to sever completely its aid ties with graduates, whereas countries such as Japan combine aid, trade, and investment by providing an 'aid-to-trade' transition."[33]

The U.S. program has come under more general criticism as well, with some academics arguing that the thrust of U.S. aid policies is currently such that it fosters a climate of dependency and lack of accountability on the part of recipients, directs resources toward unproductive uses, strengthens governmental power relative to that of the private sector and individuals, and places too much emphasis on short-term poverty alleviation measures versus long-term productive investments and entrepreneurial initiative. This is particularly ironic, they say, since the U.S. aid program was initially rooted firmly in the belief that self-help measures and private sector investment were to be the primary engines of growth, with foreign aid playing little more than a catalytic role.[34]

Recipients have complained about frequent policy "strings" attached to U.S. aid, arguing that the overt nature of this pressure sometimes runs counter to the goal of securing domestic support for needed reform. Moreover, they say a greater host country voice in project identification and selection is desirable.[35]

Several key strands of argument about the commercial orientation of Japan's ODA and its relationship to trade and investment activities in East Asia are discussed in further detail below.

Emphasis on Asia and on Capital Projects

Like many other major aid donors, Japan focuses its ODA heavily on parts of the world in which it has a commercial interest, and funds projects that call for substantial imports of capital goods and for extensive use of engineering, consulting, and construction services that its domestic firms are well prepared to undertake. Japan has faced pressure to direct more of its aid to the least developed countries and to address such basic human needs as population control, education, and health care, which some development experts say are vital elements in the economic transformation of poor countries. Such programs, however, offer little by way of direct commercial opportunity for the donor country's manufactured goods. Calls have also been made to increase the share of outright grants so as to avoid adding to developing countries' debt burden.[36] Grants involve the provision of funds to developing countries without assigning the obligation of repayment.[37]

Japan has increased the share of its bilateral ODA directed outside Asia (as demonstrated in table 6-1) and to social and administrative infrastructure, but its neighboring nations and economic infrastructure still dominate Japan's ODA commitments. In fact, until May 1988, Japan's interest rates on ODA loans were lower for Asian countries than they were for non-Asian countries. The percentage of bilateral ODA disbursements accounted for by grants has also grown

[29] Louise Do Rosano, "Help Those Who Help Themselves," *Far Eastern Economic Review*, June 18, 1992, p. 58.

[30] The Economic Support Fund is one of the three primary forms of ODA offered by the United States, and is intended to address special needs such as balance of payments or budget support and restoring political stability. Development assistance funds focus on long-term development needs such as nutrition, education, and expansion of the private sector.

[31] U.S. House of Representatives, *Report of the Task Force on Foreign Assistance*, pp. 26-28.

[32] James C. Clad and Roger D. Stone, "New Mission for Foreign Aid," *Foreign Affairs*, vol. 72, No. 1, winter 1992/93, p. 197.

[33] Susumu Awanohara, "The Shrinking Pie," *Far Eastern Economic Review*, Jan. 24, 1991, p. 46.

[34] See, for example, Nicholas Eberstadt, *Foreign Aid and American Purpose*, (Washington, DC: American Enterprise Institute, 1988); Shafiqul Islam, "Yen Diplomacy and U.S. Foreign Policy," ch. in Islam, *Yen for Development*; and Administrator, USAID, *Development and the National Interest* (Washington, DC: USAID, 1989).

[35] Pante and Reyes, "Japanese and U.S. Aid to the Philippines: A Recipient Country Perspective," p. 132.

[36] OECD, "DAC Aid Review of Japan," OECD Press Release No. (93) 17, Apr. 22, 1993.

[37] OECD, *Development Cooperation: 1992 Report*, table 5, p. A-14.

from about one-fourth of the total in 1985 to one-third today. Asia accounts for about half of such assistance. Economic infrastructure accounted for slightly less than a third of Japan's total aid spending in 1990, compared to 3.3 percent in the case of U.S. commitments, as shown in table 6-3 detailing how Japan and the United States allocate aid funds among different types of uses. About half of Japan's social and administrative expenditures were allocated to a category that includes water supply infrastructure.

Japan's allocation of resources is fairly consistent with that of donors such as Germany. In fact, it is the United States that stands apart from other OECD countries in its low levels of funding for economic infrastructure.

Japanese officials and analysts offer some insights on these characteristics of Japan's aid program.[38] The heavy emphasis on infrastructure is not, Japanese officials say, simply a bid for overseas sales. It also reflects Japan's own development experience in the postwar period. Japan received substantial World Bank funding in the early postwar years, and channeled those funds toward infrastructure in the belief that such infrastructure paved the way for the private investment needed to spur economic activity. Developing countries are often eager for such projects (although some observers attribute this as much to the desire for showcase projects and political patronage as to sound policy). Finally, they say, the reason Japan's ODA is focused on Asia is because of its origins as post-World War II reparations payments and the natural inclination to view prosperity and stability in one's own backyard as the highest priority. They note that despite a dramatic success, the East Asian region hosts some of the world's poorest and most populous nations.

Indeed, some observers have argued that Japan's ODA spending should be a model for other countries, maintaining that Japan's development assistance promotes capital formation and technology development while putting the recipient on the path to self-sustaining growth. One analyst recently noted that even if Japan's ODA is also commercially oriented, it is more likely to be successful than the U.S. approach of trying to meet numerous and sometimes competing goals.[39]

Tying Aid to the Purchase of Domestic Goods and Services

Another charge is that Japanese loans and grants are directly or indirectly tied to the purchase of Japanese equipment, parts, or services. From a commercial policy perspective, the concern is that this might give Japanese firms an unfair advantage in certain state-dominated markets. From a development perspective, the concern is that tied aid may raise the direct and indirect costs of achieving given economic goals.[40]

It is common for a foreign aid donor to tie the provision of loans and grants to the purchase of its goods and services. Japan's foreign aid program has, according to statistics collected by the OECD, reduced the percentage of its foreign aid that is tied over the past decade and, by 1990, roughly 70 percent of its ODA was officially untied.[41] The percentage of U.S. ODA that was untied was 59 percent in 1990,[42] even though the United States historically has been against the use of aid funds for commercial purposes.[43] Of the $4 billion in the large-scale tied aid transactions (projects valued over $50 million) reported to the OECD in 1990, however, Japan accounted for about one-third ($1.3 billion), whereas the United States accounted for one-fifth, or $887 million. Such large-scale projects are said to be more likely to offer direct benefits for donor country businesses.[44]

Other types of tying of potential relevance are "associated financing" and "mixed credits," which involve the combining of aid with commercial and official credits to yield a package whose terms are sufficiently attractive to secure an export contract for domestic suppliers. Both Japan and the United States have programs to assist developing countries through official export credits. As a general matter, neither Japan nor the United States is viewed as using mixed credits to the extent that it significantly distorts market-driven trade flows in East Asia. However, after studying the prevalence of mixed credits, the Export-Import Bank of the United States (Eximbank) and USAID set up a $500 million joint program in fiscal 1991 in an effort to bring greater discipline over mixed credit practices. The program was targeted for markets where mixed credits are extensively used by Japan and European governments—the telecommunications, transport, power, and construction equipment markets of Indonesia, the Philippines, Thailand, and Pakistan[45]—and was used defensively in

[38] A definitive work on this subject is Alan Rix, *Japan's Economic Aid* (New York: St. Martin's Press, 1980). A more recent work by the same author is *Japan's Aid Program: A New Global Agenda* (Canberra, Australia: Australian Government Publishing Service, Apr. 1990).

[39] Islam, "Yen Diplomacy and U.S. Foreign Policy," pp. 32-40.

[40] For a discussion, see, for example, Catrinus J. Jepma, *The Tying of Aid* (Paris: OECD, 1991), pp. 55-64.

[41] OECD, *Development Cooperation: 1992 Report*, table 6, p. A-15. Parenthetically, Japan has switched more of its ODA spending into the grant category in response to pressure that it soften the foreign aid terms offered developing countries. This shift may militate against the trend toward untying, since Japan continues to tie its grant awards almost completely to the use of Japanese firms (although subcontracting to foreigners is permitted).

[42] Ibid.

[43] Eximbank, *Report to the U.S. Congress on Tied Aid Credit Practices*, p. 15.

[44] U.S. Department of State, *Japan's Foreign Aid: Program Trends and U.S. Business Opportunities*, (Washington, DC: U.S. Department of State, Feb. 18, 1993), p. 28.

[45] For an in-depth market share analysis of the use of concessional export credits supporting this conclusion, see Eximbank, *Report to the U.S. Congress on Tied Aid Credit Practices*, particularly ch. 3 pertaining to selected sectors involving equipment sales in the construction,

Table 6-3
Allocation of ODA by use, selected years

(Percent)

	Year	
	1975/76	1989/90
Japan:		
Social and administrative infrastructure	3.3	18.9
Economic infrastructure	36.6	31.9
Agriculture	6.0	11.2
Industry and other production	20.3	6.0
Food aid	1.2	0.5
Program assistance	0.1	18.9
Other	32.4	12.6
United States:		
Social and administrative infrastructure	8.7	15.0
Economic infrastructure	2.3	3.3
Agriculture	8.1	4.0
Industry and other production	4.1	3.3
Food aid	29.5	8.2
Program assistance	8.8	16.3
Other	38.6	49.8

OECD, *Development Cooperation: 1992 Report*, table 10, p. A-19.

a few notable instances, such as the competition for a major telecommunications contract in Indonesia a few years ago, where a mixed credit offer from Japan prompted a matching response from Eximbank. A similar effort directed at Indonesia and Thailand was made in 1987. Moreover, as chapter 8 of this report explains, mixed credits were among the factors identified as giving Japanese and European firms an edge in East Asia's markets for energy- and environment-related equipment and services. European nations are reported to be the worst mixed credit offenders and to have been active in East Asian markets, such as Indonesia.[46]

Despite recent positive trends in the official level of untying and greater multilateral discipline over mixed credits, a variety of factors have continued to give Japanese or Japanese-affiliated firms an advantage in winning ODA-related contracts. A 1992 book by a U.S. academic, Margee Ensign,[47] and a congressionally requested study by an interagency group headed by the U.S. Department of State and delivered in February 1993,[48] both reach similar conclusions in this regard, though the reasons offered differ somewhat. Their findings are briefly summarized below.

Ensign and the State Department group essentially agree that the Japanese firms get in early—at the crucial project formulation and design stages—and exert some influence on which projects will ultimately requested by the host country and funded in Tokyo. In both Thailand and Indonesia, for example, one observer claims that an ODA request "often coincides fortuitously with the needs of Japanese multinationals with whom these same governments are dependent on for tax revenues and technologies."[49] They also agree that these advantages create an environment in which the pursuit of notoriously slow-to-develop ODA business remains worthwhile for Japanese firms, since the final awards for ODA projects are often made to them. These results are consistent with earlier studies done by Robert M. Orr, Jr.[50] and Ernest Preeg,[51] among others.

At the same time, Ensign's and State's extensive research did little to rectify the apparent discrepancy between Japanese statistics on the number of contracts that are officially tied and the various other types of information that suggest otherwise.[52] In its most recent

45—*Continued*
electric power, telecommunications, and transportation sectors.

46 U.S. Department of State, informal communication with USITC staff, Mar. 8, 1993.

47 Ensign, *Doing Good or Doing Well?*

48 U.S. Department of State, *Japan's Foreign Aid.*

49 Peter J. Katzenstein and Martin Rouse, "Japan as a Regional Power: Influence and Response in Pacific Asia," National Bureau of Economic Research, Inc., Conference on the U.S. and Japan in Pacific Asia, Apr. 2-5, 1992, p. 31.

50 Orr, *The Emergence of Japan's Foreign Aid Power.*

51 Ernest H. Preeg, *The Tied Aid Credit Issue: U.S. Export Competitiveness in Developing Countries* (Washington, DC: Center for Strategic and International Studies, 1989).

52 Ensign attempted to decompose official Japanese statistics on contract awards to construct a sample of successful firms that she then intended to interview, to glean useful insights for other potential U.S. bidders. In so doing, she discovered numerous inconsistencies in data and information, particularly when she attempted to track down successful firms. The U.S. Department of State group employed a consultant for its yearlong study and sought and received extensive field reporting from U.S. embassies in the region. The resulting information was extensive but anecdotal. It almost uniformly pointed to systematic features of Japan's ODA administration and award process that gave Japanese firms an inside edge. Ensign, *Doing Good or Doing Well?;* U.S. Department of State, *Japan's Foreign Aid.*

annual report, for example, OECF reports that all the loans it extended in the fiscal year ended March 31, 1992 (FY 1991) were untied, and that Japanese enterprises accounted for 31 percent of the total value of contracts approved in FY 1992. Developing country enterprises accounted for 48 percent of the contracts approved, the OECF reported, while enterprises of developed countries other than Japan accounted for 21 percent.[53]

Both Ensign and the State Department group conclude that the data that have been released are simply not sufficient to confirm the nationality of firms that were actually awarded contracts. This lack of data is largely blamed on the decentralized nature of the contract award process for Japanese ODA-funded projects: since recipient governments themselves award contracts, the Japanese Government maintains that it is the host country's responsibility to maintain statistics on the nationality of winning bidders. Nonetheless, the weight of available evidence about past procurement is that the majority of ODA-related business has ended up with Japanese-owned or affiliated firms, particularly in East Asia, where Japan's presence is strong.[54]

Japanese trading companies appear to be the most important link in this chain, since their substantial on-the-ground network does a formidable job of gathering information about potential market opportunities and cultivating relevant host country officials. Japanese general trading companies (sogo shosha) are very active in East Asia as elsewhere in the world, providing information, consultation, and prime contractor services.[55] Drawing upon their extensive networks of subsidiaries (both Japanese and others) within the host countries,[56] the trading companies are also in a position to offer a full line of services—from suggesting potential projects to host country officials, to working the system back in Tokyo to improve prospects for funding, to conducting required feasibility studies, to assembling prime and subcontractors for the entire project, to offering the needed finance (Japan's ODA loan programs typically fund between 65 to 80 percent of the total project costs), and to overseeing project implementation.

Japanese Government policies and practices also give Japanese affiliated firms an edge. The Government's technical assistance arm, JICA, often funds feasibility studies and the dispatch of Japanese experts from the private sector and Government to host country departments. Until recently, these prime contracts were available only to Japanese firms (some foreign firms have participated as subcontractors). Inadequate aid staffing reportedly opens the system to greater private sector involvement and increases the potential for such interests to influence project selection and final contract awards. Japanese firms are also reputed to coordinate their bidding strategies so that each gets a piece of the overall ODA pie.[57]

Attitudes by host country officials and potential U.S. bidders also appear to play a role. Host governments may think it proper or wise to show gratitude for Japanese aid and thus lean toward selection of Japanese firms.[58] Potential foreign bidders may hesitate to enter the fray absent a stronger sense of the likelihood of success. Moreover, a local presence is considered something of a requirement for firms wishing to do business in East Asia, including with host governments.

On the other hand, there are some signs of improvement in the openness of Japan's ODA contract awards, notably in parts of the world, services, or technologies where Japanese firms are less experienced. Indeed, both Ensign and State were able to locate U.S. firms, such as General Electric, General Motors, and Caterpillar, that had secured ODA-related business in East Asia, though generally as subcontractors to Japanese trading houses. Some of these contracts have been fairly sizeable, such as a $37 million contract by Voith Hydro (formerly Allis

[53] Overseas Economic Cooperation Fund (OECF), *Annual Report, 1992*.

[54] For example, the State Department group concludes, "[t]he Japanese ODA program clearly retains vestiges of its traditional commercial orientation; many of the OECF-funded contracts for capital projects goes [sic] still to Japanese businesses, and the major Japanese trading companies do and will continue to play the leading role—with all that implies for future award of contracts—in identification, assessment and early development of ODA-funded projects overseas. A great many foreign firms remain convinced that the door is effectively albeit not legally or explicity barred to their meaningful participation." U.S. Department of State, *Japan's Foreign Aid*, p. 36.

[55] The role of Japanese trading companies in Japan's commerce is discussed in greater detail in an earlier USITC study. USITC, *Japan's Distribution System and Options for Improving U.S. Access* (investigation No. 332-283), USITC publication 2291, June 1990, pp. 30-40.

[56] According to the representative for a U.S. business association in Tokyo, in 1991 there were 3,000 Japanese expatriates working for 9 trading companies in East Asia. Annual reports from C. Itoh & Co., Ltd., indicate that it has regional offices in 9 of the 10 East Asian countries examined in this study (Brunei was the exception) and affiliated companies in China, Hong Kong, Indonesia, Korea, Malaysia, Singapore, and Thailand. Mitsui & Co., Ltd., has offices in 8 of the 10 countries (Brunei and Indonesia are the exceptions), as well as subsidiaries in

[56]—*Continued*
Hong Kong, Indonesia, Taiwan, and Thailand, and more than 150 joint ventures in the region. The trading companies are said to play an important role in the region's commerce, including in non-ODA contracts. Small and medium-size firms in Japan are said to especially benefit from their on-the-ground presence in East Asian markets, since they would not otherwise have access to needed information and business contacts.

[57] This allegation, reported in the U.S. Department of State study, is neither confirmed nor denied. U.S. Department of State, *Japan's Foreign Aid*, p. 34.

[58] For example, the U.S. Department of State report notes that, in the Philippines, explicit mention was made of a phenomenon alluded to by persons surveyed elsewhere in Asia: "that channeling Japanese ODA contracts to Japanese firms is an expected expression of gratitude in an Asian cultural setting, helping to ensure future ODA monies." Ibid., p. 40.

Chalmers) to supply hydropower equipment to China and a $10 million contract by General Electric to supply locomotives to Malaysia.[59] In 1988, JICA announced that engineering and feasibility studies would no longer be tied in several East Asian markets (China, Thailand, the Philippines, and in some cases, Indonesia). Korean and British firms are said to be increasingly successful in securing these newly opened JICA contracts. Some host countries like China have also insisted on greater autonomy, a factor that is said to work to U.S. suppliers' advantage.

Progress has also been made in achieving multilateral discipline over tied aid practices. The United States has been a primary force in efforts to ensure that concessional development aid is kept distinct from commercial credit. This effort has led to increased discipline under the 1978 OECD Export Credits Arrangement and, most recently, by the October 1991 amendments to the arrangement known as the "Helsinki Package." The arrangement establishes ground rules for export credit competition and sets out minimum permissible grant elements for tied aid credits.

The Helsinki amendments to the OECD arrangement entered into effect February 15, 1992. They restrict the use of tied aid credits by (1) banning tied aid credits to relatively rich developing countries,[60] (2) banning tied aid credits to middle-income developing countries for "commercially viable" projects, and (3) requiring any signatory offering tied or partially tied aid credits to notify the bid to the OECD in advance if the credits involve less than 80 percent concessionality or are over 2 million special drawing rights ($2.86 billion in 1991) in value. The agreement's purpose is to ensure that exporters from donor countries without such concessional financing will not be at a disadvantage in bidding on projects compared with exporters that have such funding available.

On the bilateral front, the Global Partnership Plan of Action announced by President Bush and Japanese Prime Minister Miyazawa in January 1992 included a pledge to undertake cooperative efforts to introduce American firms to Japan's ODA program. USAID posted an officer at the U.S. Embassy in Tokyo, and a November 1992 joint informational symposium drew 70 U.S. business representatives.

Meanwhile, the State group suggests that the evident difficulty of cracking Japan's ODA market may justify continued efforts by the U.S. Government to assist U.S. business in identifying and exploiting potential opportunities. The U.S. Embassy will use a working group it established composed of State, Commerce, and USAID representatives as a forum for encouraging systemic change by the Japanese Government and private sector.[61] This and other U.S. Government efforts may be particularly appropriate when the contracts at stake could serve to establish—or exclude—suppliers for years to come (e.g., in the telecommunications, rail transport, and power generation fields).[62] Finally, legislation passed in 1992 establishes a capital projects office within USAID to create a program focused on "developmentally sound capital projects, taking into consideration needs of the host country and the export opportunities for the United States."[63]

Development professionals offer several grounds for caution in the event the U.S. Government attempts to emulate Japan by further raising the level of capital project funding or increasing the tied aspect of it.[64] Among them is a concern that aid money, at least that which is directly economic in nature, should be used primarily to further the development of the recipient, not that of individual U.S. commercial interests. For example, they point out that U.S. aid was consciously redirected toward basic human needs in the 1970s after the development community reassessed the desirability of focusing aid dollars on capital projects. Unlike Western Europe under the Marshall Plan, many developing countries had proved lacking in capacity to absorb and effectively utilize infrastructure-related investments. Poor training, inappropriate pricing, and poor maintenance were draining national budgets and causing completed projects to fall into disrepair. U.S. business interests were seen as driving project selection. Progress in alleviating poverty, meanwhile, had proved frustratingly slow.

Even if U.S. companies succeeded in winning contracts because of a shift in aid spending toward capital-intensive projects, the impact on overall U.S. exports would be small, since the ratio of aid expenditures to U.S. exports has dropped from a high of 35 percent 40 years ago to less than 1 percent today. Instead, U.S. development officials say, the United States would get more for its development dollar by fostering broad-based economic reform, since countries embarking on these types of policies report better-than-average growth in imports from the United States.[65] This position would also be in keeping with the traditional U.S. opposition to tied and mixed credits that, it believes, distort aid and trade flows. The United States would thus maintain credibility in its effort to discipline such practices in the OECD and elsewhere. In addition, these officials warn that the United States is unlikely to win an "aid war" because of the deeper

[59] Ibid., p. 69.

[60] Those above $2,464 per capita gross national product in 1991.

[61] Ibid., p. 59.

[62] GAO, Report to the Chairman, Subcommittee on Economic Resources and Competitiveness, Joint Economic Committee, U.S. Congress, on *Economic Assistance: Integration of Japanese Aid and Trade Policies* (Washington, DC: GAO, May 1990), NSIAD-90-10, p. 8.

[63] No new monies were provided for this function. "Jobs through Exports Act of 1992," P.L. 102-549, Oct. 28, 1992, sec. 302.

[64] USITC staff interviews with USAID policy planning, donor coordination, and Asia bureaus, Jan. and Feb. 1993.

[65] USAID, "Sources of U.S. Competitiveness," Feb. 1992. USAID, "U.S. Trade Trends and Issues," June 1992.

pockets of U.S. competitors. Finally, it may sometimes make sense from an overall foreign policy standpoint to continue to allocate scarce aid dollars to political and military trouble spots or to countries in dire economic need rather than to pay already fast developing countries to buy U.S. goods.

Program Linkage

ODA is only one aspect of what is often an overall approach taken by industrial countries to raising incomes, creating markets, and developing supply sources in lesser developed countries. Japan's success in integrating its ODA program with other policies affecting trade and investment is said to result in commercial advantages for its firms relative to those of the United States.

Indeed, when Japan's aid program was launched in the mid-1950s, it was cast by the Japanese Government as one element of its "economic cooperation efforts." These efforts also included both public and private export credits and private capital flows, and it was only in the 1960s that a distinction was made between official and "nonofficial" aid.[66] But the linkage remains to this day. In its most current statement of Japan's aid policies, for example, Japan's Ministry of Foreign Affairs states that "a close relationship will be maintained between ODA, direct investment and trade, so that those three can promote the development of developing countries organically."[67] Japanese aid, one U.S. analyst observes, has served as seed money for investments in countries where Japan has major trade interests. Some analysts also believe that the provision of ODA to a certain country is tantamount to providing the Japanese Government's stamp of approval to it, thereby assuring investors of its political stability and creditworthiness.[68]

The Japanese ODA program has been characterized by close cooperation with the private sector. The Export-Import Bank of Japan, for example, began providing loans for direct investment overseas, a large proportion of which have funded direct investment by Japanese firms in East Asia.[69] In FY 1991, Export-Import Bank of Japan loan commitments to Asia and Oceania totaled 539.8 billion yen ($4.0 billion). Of this total, overseas investment loans accounted for ¥241.6 billion (45 percent); export loans for ¥162.2 billion (30 percent); and import loans, ¥20.9 billion (4 percent).[70] In 1989, Japan's leading business association, the Keidanren, set up a program with substantial OECF support to complement official aid programs.[71] Known as the Japan International Development Organization, the program encourages joint ventures in developing countries to conduct non-ODA projects that are too large or risky for individual firms. Chapter 8 of this report provides additional examples of Government-private partnership in the energy and environmental fields.

Although the United States also aims to utilize a variety of tools to assist developing countries and support its business interests, it is perceived by many of the experts interviewed as less adept in this regard. In a comprehensive study released in 1992, the U.S. General Accounting Office (GAO) concluded that U.S. export promotion programs are diluted because efforts are spread among numerous programs with separate budgets and different agendas.[72] For example, 5 different appropriations subcommittees in the House and Senate independently appropriate funds for export promotion.[73] In fiscal year 1991, the U.S. Government spent about $2.7 billion on export promotion programs and approved about $21.4 billion in export loans, export credit guarantees, and export insurance.[74] However, out of the $2.7 billion, $2 billion (74 percent) was for agriculture programs, whereas agriculture accounts only for about 10 percent of total U.S. exports.[75] In a later study, GAO found that, compared with its competitors, the United States generally spends less money and assigns less staff to promoting exports.[76]

Several initiatives have been launched to improve U.S. performance, including greater efforts by USAID to match projects with potential U.S. suppliers and the creation of the interagency Trade Promotion Coordinating Committee in May 1990 to "unify and streamline" the various activities concerning U.S.

[66] Toru Yanagihara and Anne Emig, "An Overview of Japan's Foreign Aid," ch. in *Yen for Development* (New York: Council on Foreign Relations, 1991), p. 38.

[67] Japanese Ministry of Foreign Affairs, "Japan's Official Development Assistance Charter," Tokyo, June 30, 1992, p. 5.

[68] Orr, *The Emergence of Japan's Foreign Aid Power*, p. 60.

[69] Overseas investment credits are extended to Japanese corporations for overseas investments, mainly in the fields of natural resource development and manufacturing. They may be used to fund Japanese equity participation in foreign corporations, for relending to foreign governments and corporations for use in ventures directly or indirectly affiliated with Japanese corporations, and for funding projects by Japanese corporations overseas. Export-Import Bank of Japan, *Role and Function*, p. 15.

[70] Untied direct loans accounted for ¥115.1 billion (21 percent). Export-Import Bank of Japan, *Annual Report 1992*.

[71] OECF reportedly provided about $16 million of the organization's $53 million startup capital.

[72] GAO, *Export Promotion—Federal Programs Lack Organization and Funding Cohesiveness*, GAO/NSIAD-92-49, Jan. 1992, pp. 5, 7.

[73] U.S. GAO, *Export Promotion—U.S. Programs Lack Coherence*, statement of Allan I. Mendelowitz, Director, International Trade and Finance Issues, General Government Division, GAO/T-GGD-92-19, Mar. 4, 1992, p. 6.

[74] Ibid., p. 2.

[75] Ibid., p. 3.

[76] U.S. GAO, *Export Promotion—A Comparison of Programs in Five Industrialized Nations*, GAO/GGD-92-97, June 1992. p. 6.

export promotion.[77] In recent testimony, Secretary of Commerce Ron Brown signaled his intention to "activate and energize" the Coordinating Committee.[78] The U.S. Ambassadors' Tour 1992 was an effort to present the nations of East Asia to U.S investors and exporters across the country. Five U.S. ambassadors and their senior commercial officers from ASEAN nations toured seven U.S. cities to promote U.S. business interest in the East Asian region. Another tour has been scheduled for 1993.

The Trade and Development Program (TDP) was also just made an independent agency under the foreign policy guidance of the Secretary of State and renamed the Trade and Development Agency (TDA)[79] to assist the U.S. private sector in exporting goods and services for major capital projects in developing and middle-income countries. TDA is similar to Japan's JICA, providing grants to fund feasibility studies, orientation visits, training, and other planning services for projects that are economic priorities of host governments.[80] TDA is expanding its programs in Asia, and obligated $8.3 million for 56 projects in Asia in FY 1992, up from $6.3 million in FY 1991. Most of this funding has been dedicated to the energy sector. TDA is also working in the area of environmental projects in an effort to assist U.S. companies in gaining access to untied financing from the Japanese OECF.[81] (The operation of these programs is discussed more fully in chapter 8.)

Some analysts have gone so far as to suggest that ODA is but one element of Japan's overall industrial policy, and reflects the Government's desire to smooth the transition by the Japanese private sector away from labor-intensive manufactures. The so-called New Aid Plan, announced by Tokyo in 1987, has as a major goal the restructuring of Japan's economy by directing the nation's capital surplus toward the development of export industries in East Asia. Both the United States and ASEAN countries expressed some concern when the program—also known as the New Asian Industrial Development Plan—was announced, fearing that, unless Japan's market became more open to imports from LDCs, the resulting East Asian exports could be directed to countries other than Japan.[82] The plan is seen by some as highly relevant to current and future economic trends in the region. Two U.S. observers declared that "both the magnitude and comprehensive designs of the New Aid Plan depart significantly from past policies and emphasize the extent to which the Japanese are seeking to take on a more prominent role in regional economic integration."[83]

Japan would continue to develop sophisticated or high-tech products and services and shift its labor-intensive manufacturing to East Asia, but the plan puts increased emphasis on what it terms a horizontal division of labor in Asia. In essence, this calls for Japanese firms to exploit the comparative strengths of different countries in the region in various aspects of the manufacture of particular goods, such as electronics, and to increase specialization within their Asian operations on differentiated products, thus leading to gains as a result of expanded intra-industry trade. The words of one researcher illustrate the concept:

> Clearly, Sony's investments and operation in any single ASEAN country are dictated not just by the country's local comparative advantages, but also by what the company chooses to and can do in neighboring ASEAN countries. Sony's ASEAN facilities are integrated with one another—or at least with the regional OHQ [Operations Headquarters] in Singapore—with respect to component sourcing, product distribution, training and technical support. Though it is not yet an integrated regional market, to Sony and companies like it, ASEAN already functions as a single investment and production location.[84]

The plan also picks up on previously noted themes. It reflects a conviction that improvements in infrastructure are necessary for further economic development in East Asia. It also calls for the use of Japan's panoply of assistance programs, including seconding private sector and Government experts with JICA grant funding,[85] to provide technical assistance and advice on economic development plans.[86]

[77] There are 18 executive branch agencies represented on the Trade Promotion Coordinating Committee (TPCC). Of the 18, 8 offer significant export promotion activities: the U.S. Departments of Agriculture, Commerce, Energy, USAID, Eximbank, the Overseas Private Investment Corporation, the U.S. Small Business Administration, and the Trade and Development Agency (TDA). Not represented on the TPCC but nonetheless funding export promotion activities are the U.S. Department of the Interior and the National Air and Space Administration.

[78] Testimony by Secretary of Commerce Ron Brown before the House Appropriations Committee, Mar. 23, 1993 (transcript).

[79] President Bush signed the Jobs through Export Act of 1992 into law on October 28, 1992. Public Law 102-549, renamed TDP, broadened the agency's authority, and increased authorization levels to $55 million for FY 1993. However, TDA's actual appropriation for FY 1993 is $40 million. The TDP was established in 1961 by section 661 of the Foreign Assistance Act of 1961.

[80] U.S. Trade and Development Agency, *TDA Overview.*

[81] U.S. Trade and Development Agency, *TDA by Region.*

[82] Margo Grimm, "Japan and ASEAN: Aspects of a New Interdependence," *Japan Economic Institute Report,* No. 12A, Mar. 27, 1992, p. 3.

[83] Katzenstein and Rouse, "Japan as a Regional Power," p. 30.

[84] Linda Y.C. Lim, "The Role of the Private Sector in ASEAN Regional Economic Cooperation," University of Michigan, prepared for Research Programme on Globalization and Regionalisation, OECD Development Centre, Paris, Aug. 1992.

[85] In 1987, there were 1,200 JICA missions to Indonesia alone. Orr, *The Emergence of Japan's Foreign Aid Power,* p. 80.

[86] "The Three Phases of the New Aid Plan," reprinted in David Arase, "U.S. and ASEAN Preceptions of Japan's Role in the Asia-Pacific Region," in Harry H. Kendall and Clara Joewono, eds., *Japan, ASEAN and the United States* (Berkeley, CA: Institute of East Asian Studies, U. CA, 1991), p. 272; Katzenstein and Rouse, "Japan as a Regional Power," p. 29.

Representatives of the Government-supported Japan External Trade Organization (JETRO) have also been sent to these countries to conduct export promotion activities as part of the plan.

Various Japanese Government documents appear to support the thesis that Japan's ODA is playing a role in attaining its industrial and foreign policy goals in East Asia. MITI's 1988 White Paper stated that Japan should recycle its surpluses to Asia, open its market to Asian exports, and extend more assistance and technical cooperation to the region. It again cited Japan's first goal in Asia as being the promotion of a horizontal division of labor. The EPA's 1988 5-year plan supports the promotion of an international division of labor through increased imports, foreign direct investment, and ODA. MOFA's Fourth ODA Plan also expresses these goals. During his January 1993 visit to the ASEAN countries, Japanese Prime Minister Miyazawa stated that Japan will continue to promote the flow of investment and technology to ASEAN, and to regard Asia, including the ASEAN countries, as a priority region for ODA.[87]

What these policy pronouncements add up to is less apparent. Various analysts have suggested that Japan is increasingly viewing the rest of East Asia as its backyard, or an extension of the Japanese economy itself. Whether this world view will ultimately have an appreciable effect remains to be seen. To the extent that Japan views the development of Asia as in its own economic interest, it seems obvious that East Asian countries could potentially gain both in the form of increased financial flows and other economic assistance, and in the form of a potentially more hospitable reception in Japan for East Asian goods. It is less clear whether this would in any sense be bad for the United States. The United States has long been pushing Japan to become an "importing superpower," and to absorb a greater share of the developing world's imports, particularly from East Asia. Some analysts have suggested that U.S. policymakers should not necessarily be concerned if these steps have to be taken in a somewhat chauvinistic manner to be accepted, and indeed embraced, in Japan.

Furthermore, a few analysts have suggested that all the pronouncements may not mean much because, as Japanese corporations internationalize their operations and diversify their markets, they may be less inclined to follow formal or informal suasion from bureaucrats in Tokyo. Moreover, with the current lull in domestic economic activity, Japanese officials reportedly are now somewhat concerned about retaining manufacturing jobs at home.

On the other hand, many analysts believe that the power being wielded in Tokyo as a result of its ODA levels may give Japan influence over other elements of host country policy.[88] They assert that this leverage could be used to shape host country policies and decisions in such a way as to discriminate against U.S. or other suppliers or to hinder U.S. efforts to ease barriers to market access. Available information suggests that Japan is pushing for some of the same kinds of trade and investment reforms in East Asia that the United States has long been seeking, notably improved intellectual property rights protection and a reduction of investment performance requirements. At the same time, Japan seems more inclined to believe that East Asian governments have a legitimate role in the production and allocation of goods, and in the provision of preferential financing and import protection to infant industries.[89] Indeed, Japan has been challenging the World Bank's faith in market forces and stringent structural adjustment policies, urging instead "active government policies to channel capital in desired directions and nurture chosen industries."[90] At Japan's insistence the World Bank is now conducting studies on its own and other East Asian development experiences in an effort to redirect the bank's future lending activities.[91]

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[87] "Thailand—Paper Praises Miyazawa's Response to Proposed Role," *Pacific Rim Intelligence Report*, translated from *Matchon*, in Thai, Jan. 19, 1992.

[88] See, for example, Paul Maidment, "The Yen Block," *The Economist*, July 15, 1989, p. 6.

[89] See, for example, OECF (Japan), "Issues Related to the World Bank's Approach to Structural Adjustment," Tokyo, Overseas Economic Cooperation Fund, Occasional Paper No. 1, Oct. 1991.

[90] Susumu Awanohara, "More Ways to Skin a Cat," *Far Eastern Economic Review*," June 19, 1992, p. 60.

[91] One such study was just released. It concludes that while economic performance was "very good" in East Asia compared to other regions during the period characterized by heavy government intervention (1965-80), it has been "even better in the era of market reform." World Bank, *Sustaining Rapid Development in East Asia and the Pacific* (Washington, DC: International Bank for Reconstruction and Development, 1993), p. vii.

CHAPTER 7
Industry-Specific Trade and Investment Activities in East Asia

This chapter, as suggested in the letter requesting this study (appendix A) presents case studies on autos, computers, and refined petroleum products and petrochemicals in an effort to illustrate trends in economic integration in East Asia. Commercial activity by private foreign investors is substantial in each of these sectors, and U.S. industries in these sectors are facing or are likely to face international competition.

The three sectors offer a varied picture of East Asia's integration prospects, as well as Japanese and U.S. involvement in the region. Japan invested heavily in East Asia's automotive sector over the past 20 years to serve domestic markets protected by import barriers and domestic content requirements for investors. Now, Japanese-affiliated firms appear to be serving as a catalyst for integration in East Asia. Both the United States and Japan are actively engaged in the region's computer industry, making it a good candidate within the electrical machinery sector for study. As noted in chapter 5, this sector has seen substantial trade and investment over the past decade, and a variety of factors have led to greater integration in recent years. Significant new capacity is planned by East Asian producers of refined petroleum and petrochemicals, industries that have received substantial U.S. investment. However, integration within the region has been limited by a desire to retain national control over the exploitation of energy resources and the production of critical inputs for industries, such as chemicals and steel, that are seen as vital to national development plans.

Automotive Industry[1]

East Asia is widely viewed by automotive executives from the United States, Japan, and Europe as a region with highly promising market potential. In recent years, industry leaders have taken even greater interest as analysts identified the region as likely to register the fastest sales growth in the world during the coming decade.[2] Japanese firms dominate foreign investment in the East Asian automotive industry. U.S. and European firms lag far behind. This not only puts them at a disadvantage in seeking to exploit the region's sales potential, but limits the customer base for U.S. and E.C.-produced parts. There is currently little integration among East Asian producers. Instead trade, investment, and technological ties are with Japan. There is, however, evidence that integration is developing among Japanese firms with facilities in the region, and that this could enhance their efficiency and export competitiveness.

Production and Consumption

Industry observers view the strategic situation of automotive producers in East Asia as highly favorable to Japanese firms and extremely poor for U.S. firms.[3] Japanese investment in the automotive industry is so extensive that U.S. firms have been described as being 30 to 40 years behind Japanese firms.[4] This assessment, while generally accurate, may be slightly overstated since the East Asian automotive industry is not homogeneous. Japanese firms dominate the industry in ASEAN countries. In Taiwan, Korea, and China, Japanese automobile firms are less dominant, and U.S. firms maintain much stronger positions. However, in the automotive parts industry, Japanese foreign investment substantially dominates that of other foreign firms in every country except China. The following discussion presents a country-by-country overview of the East Asian industry, organized in descending order of the approximate size (production) of each industry.[5]

[1] "Automotive industry" is defined here as passenger automobiles, light trucks, and parts used in those vehicles. References in this chapter to the "automobile" industry refer only to the industry producing passenger automobiles and light trucks. Where possible, data presented in this chapter are limited to the automotive industry as defined here, but data limitations have required some reliance on data that include a slightly broader segment of the industry.

[2] "The World's Fastest Growing Market," *Automotive Industries*, Nov. 1991, p. 64; "Backyard Boom," *Automotive News*, July 9, 1990, p. 26; "Worldwide Vehicle Sales Forecast at 74M by Year 2010," *Financial Times*, Aug. 16, 1991, p. 3.

[3] U.S. industry representatives, interviews by USITC staff, Aug.-Oct. 1992; industry analysts, conversations with USITC staff, Jan. 1991-Oct. 1992.

[4] "Nissan Plants in Asia Begin Sharing Parts," *Automotive News*, June 29, 1992, p. 22.

[5] The term "assembler" is used interchangeably with "producer" in this section.

Korea

In 1991, Korea produced 1.5 million vehicles,[6] making it the largest automotive producer in East Asia. Korea is the only East Asian country with an internationally competitive industry, as evidenced by its substantial automobile exports (378,600 units in 1991),[7] the bulk of which went to the highly competitive U.S. market. There are five Korean automobile producers—Hyundai Motor Co., Kia Motors Corp., Daewoo Motor Co., Asia Motor Co. (a subsidiary of Kia), and Sangyong Motor Co.—and over 1,100 auto parts producers.[8]

Foreign ownership is relatively limited. Mitsubishi owns 15 percent of Hyundai, and Ford and Mazda own 10 and 8 percent, respectively, of Kia.[9] Recent tension between Daewoo and General Motors (GM) led to an agreement to allow Daewoo Group to purchase GM's share of the 50/50 joint venture.[10] Since then, Daewoo has formed an agreement with Honda to produce the Acura Legend in Korea.[11] In late 1992, Daimler-Benz AG (Germany) purchased a 5 percent stake in Sangyong with the intent of jointly producing trucks in Korea.[12]

The majority of Korea's auto parts firms are small: fewer than 10 percent have more than 1,000 employees, and only about 300 firms have more than 100 employees.[13] Production in 1991 is estimated at $13 billion.[14] In 1985, the Korean Government opened the auto parts industry to foreign investment, and foreign ownership and technological cooperation with foreign firms are now extensive. Such linkages have been a major reason for Korea's successful entry into the global automotive industry. Approximately 300 technical cooperation agreements and 100 joint venture agreements have been formed. Japan dominates foreign involvement in the parts industry, accounting for over 60 percent of all technical cooperation agreements and over 50 percent of all joint ventures. U.S. firms account for about 16 and 31 percent of the technical agreements and joint ventures, respectively. European firms account for most of the remaining such cooperative arrangements.[15]

The Korean market is controlled by Hyundai (47 percent market share), Kia (32 percent), and Daewoo (15 percent). Few foreign nameplate vehicles are sold in Korea, although Korean automakers produce a variety of foreign designed vehicles, which are then sold locally under Korean brand names.

Because of limited local production of foreign nameplate automobiles and the minor importance of imported automobiles in the Korean market, no foreign automaker is in a particularly strong position to capitalize on sales growth or capture market share. Clearly, however, Mitsubishi, with its strong ties to Hyundai, and Ford and Mazda, with their ties to Kia, hold favorable positions. In the auto parts industry, Japan's historical technological dominance of the industry in Korea will make it difficult for U.S. firms to gain a stronger foothold. Japanese firms view technical licensing and technology transfer as part of an export strategy;[16] the strong technical ties between the Korean and Japanese automotive industries have helped Japanese parts firms to export and create joint ventures in Korea.

China

China produced 644,496 passenger automobiles and trucks in 1991.[17] Some 100 vehicle producers exist in China, but fewer than 10 are considered key producers. Detailed data on Chinese producers are limited, with significant inconsistencies among various data sources.[18]

The primary source of technology transfer has been through technical licensing agreements, which allow Chinese automobile producers to assemble foreign designed vehicles and parts, frequently with restrictions on the external markets in which the products may be sold.[19] The Chinese Government has encouraged joint ventures between local and foreign firms, but there are relatively few such ventures.

European automotive firms have substantial investments in China. Volkswagen is China's largest car producer because of its Shanghai Volkswagen venture. Volkswagen is in the process of establishing a $980 million production plant with China's First Auto Works that will have a capacity of 150,000 vehicles annually by the mid-1990s. France's Citroen is building an $865 million plant of similar size with Second Auto Works. Peugeot has a more limited

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[6] Automotive News, *Automotive News Market Data Book: 1992* (Detroit: Automotive News, 1992), p. 3.

[7] "S. Korea Pushing Hard To Diversify Export Base," *Automotive News*, Mar. 2, 1992, p. 23.

[8] Ward's Communications, *Ward's Automotive Yearbook: 1991* (Detroit: Ward's Communications, 1992), p. 83; Ian L. Robertson, *South Korea's Motor Industry*, Economist Intelligence Unit, 1990, p. 105.

[9] U.S. Department of Commerce, "Korea—Automobiles—Industry Analysis," National Trade Data Base (NTDB), June 1992.

[10] Ibid.; "GM Cutting Links With Daewoo," *Automotive News*, Jan. 20, 1992, p. 1; "Business Digest", *Washington Post*, Aug. 12, 1992, p. B2.

[11] "Daewoo To Assemble, Market Acura Legend," *Automotive News*, Nov. 16, 1992, p. 25.

[12] "Benz/Korea Equity," *Ward's Automotive International*, Dec. 1992, p. 7.

[13] Robertson, *South Korea's Motor Industry*; U.S. Department of Commerce, "Korea—Automotive Parts," NTDB, June 1992.

[14] U.S. Department of Commerce, "Korea—Automotive Parts."

[15] Robertson, *South Korea's Motor Industry*, p. 100.

[16] U.S. Department of Commerce, "Korea—Auto Parts and Accessories," NTDB, June 30, 1992.

[17] Automotive News, *Automotive News Market Data Book: 1992*, p. 4.

[18] Anne Hope and Marcus Jacobson, *China's Motor Industry*, Economist Intelligence Unit, 1989, p. 114.

[19] Ibid., p. 195.

production capacity,[20] and Renault is reportedly negotiating to open a production plant.[21]

Among U.S. firms, Chrysler owns 42 percent of Beijing Jeep and provides technical assistance.[22] Beijing Jeep produces Chrysler's Jeep Cherokee from complete knock-down kits[23] primarily for sale in the Chinese market. Beijing Jeep also produces a truck that was designed in China during the 1950s. GM recently began joint-venture production of its S-10 pickup truck in China. GM has 30 percent equity and total management control in the venture. In January 1993, GM announced its plans to produce minivans (the APV) in China in 1993.[24] A GM executive suggests that the firm is considering component ventures as well.[25]

Although Japanese automobile firms have invested in China, production is limited.[26] Daihatsu is considering a joint venture in China to produce cars, and Fuji Heavy Industries recently signed an agreement to supply components and technical assistance to produce a Subaru minicar.[27]

Approximately 3,000 plants in China produce auto parts. Many of the producers are small,[28] and fewer than a dozen producers make a wide range of parts. Chinese firms produced approximately $1.4 billion in auto parts and $337 million in engines in 1986.[29] The industry currently produces an estimated $2.1 billion in auto parts and about $500 million in engines.[30] Technical ties to European firms are particularly strong, although there are significant ties to Japanese and U.S. firms as well.

Market share data for China are not available, but the prominent role of European automakers places those firms in a leading sales position among foreign firms.

Taiwan

Taiwan is one of the few East Asian countries where U.S. investment in the automobile industry is noteworthy mainly because of the investment of Ford Motor Co. Taiwan produced approximately 380,000 vehicles in 1991,[31] with production distributed among 10 producers.[32] Volkswagen (VW) and GM have plans to begin local automobile production in 1993.

Many Taiwan automakers are linked to Japanese automobile firms through equity and technical arrangements, and over half of Taiwan production consists of the assembly of Japanese-brand automobiles.[33] However, Ford Lio Ho, a joint venture in which Ford has 70 percent equity, is the single largest producer, and approximately 32 percent of all Taiwan production consists of Ford-brand automobiles. Yue Loong, an assembler of Nissan-brand automobiles, is a distant second, accounting for approximately 17 percent of the total production.[34]

Annual production by the 2,000 or so auto parts firms in Taiwan[35] is estimated at approximately $836 million.[36] The parts industry has substantial technical and equity linkages to foreign firms, largely because some parts production is performed by foreign-affiliate vehicle assemblers.[37] Japan dominates these linkages.

The U.S. position in the Taiwan automobile market is relatively strong. Ford is by far the market leader, controlling approximately 25 percent of the market. The automobiles it produces are based on Mazda designs, although Ford imports a significant number of U.S.-made vehicles as well. GM's market share was about 8 percent in 1990, despite its lack of a local assembly plant, but its share fell to less than 5 percent in 1991 in the face of increasing imports of Japanese-brand automobiles made in the United States. Japanese automakers can avoid a Taiwan ban on imports of Japanese automobiles by exporting automobiles from their U.S. assembly plants. Daihatsu, Honda, Toyota, and Nissan each hold an estimated minimum of 5 percent of the market and a total of about 36 percent of the market.[38]

Indonesia

In 1991, Indonesia's 16 vehicle makers produced approximately 264,000 automobiles and light trucks.[39]

[20] "China," *Automotive News*, Mar. 4, 1991, p. 3.
[21] "China Allows More Foreign Joint Ventures," *Automotive News*, Sept. 7, 1992, p. 20.
[22] Chrysler representatives, interview by USITC staff, Aug. 1992. Chrysler has been reinvesting dividends from the venture to increase its equity share, which is permitted to increase to 49 percent.
[23] Complete knock-down kits are disassembled, complete vehicles that are shipped to another plant for assembly.
[24] "GM May Build APV in China," *Automotive News*, Jan. 18, 1993, p. 1.
[25] U.S. industry executives, interviews by USITC staff, Aug.-Oct. 1992.
[26] "The Pull of China," *Automotive News*, July 6, 1992, p. 1.
[27] "China Allows More Foreign Joint Ventures," *Automotive News*, p. 20.
28 Hope and Jacobson, *China's Motor Industry*, p. 104.
[29] USITC staff estimates.
[30] USITC staff estimates.
[31] *Automotive News Market Data Book: 1992*, p. 4.
[32] Stephen Vines, "Taiwan Makers Confident Despite Sales Rollercoaster Ride," *Automotive News*, June 3, 1991, p. 22.
[33] USITC, *U.S. Global Competitiveness: The U.S. Automotive Parts Industry* (investigation No. 2037), USITC publication 2037, Dec. 1987, p. 4-30.
[34] John Guy, *The Motor Industry of South East Asia* (London: Economist Intelligence Unit, 1991), p. 168-9; Auto & Truck International, *1991 World Automotive Market* (New York: Auto & Truck International, 1991), p. 12.
[35] USITC, *U.S. Global Competitiveness: The U.S. Automotive Parts Industry*, p. 4-30.
[36] Based on USITC staff estimates.
[37] Guy, *South East Asia*, p. 180.
[38] USITC staff estimates based on sales data contained in *Ward's Automotive International*, Feb. 1991, p. 11.
39 Automotive News, *Automotive News Market Data Book: 1992*, p. 4.

Japanese-brand autos account for approximately 90 percent of total output. Three producers assemble brand-name autos of Ford and GM.[40] In late 1992, GM announced a joint venture with an Indonesian firm to produce passenger cars and commercial vehicles by 1995.[41]

Indonesia has an estimated 70 large auto parts firms and at least an equal number of smaller producers.[42] As a result of foreign investment restrictions, approximately 80 percent of the larger auto parts firms are locally owned, but these often have technical agreements with foreign firms. Equity arrangements are primarily with Japanese firms. Indonesia produces a variety of automotive parts including engines and engine components, transmissions and transmission components, suspension parts, and body stampings.[43]

Japanese firms hold an Indonesian market share of approximately 92 percent. U.S. automobile firms hold an estimated 2 percent.

Thailand

In 1991, Thailand's 11 assemblers produced approximately 249,000 automobiles and light trucks. Eight Thai producers have equity ties to Japanese firms, accounting for an estimated 94 percent of total Thai production, and the remaining 3 have equity ties to European firms (Volvo, Mercedes-Benz, and Peugeot). Hyundai (Korea) recently announced plans to produce vehicles in a joint venture beginning in 1993.[44] Toyota and Mitsubishi have announced aggressive plans to expand production.[45] Two of the Thai producers assemble Ford and GM models.

There are approximately 350 auto parts producers in Thailand. Technical and equity ties to foreign firms, primarily Japanese, are common, particularly among firms that supply local foreign-affiliated vehicle assemblers. Automobile assemblers also are important auto parts producers. For example, Siam Toyota Thailand and MMC Sittipol both produce engines.[46]

Japanese firms hold a strong sales position in Thailand, where their market share is approximately 96 percent. U.S. automobile firms hold an estimated 2 percent or less of the Thai market.

Malaysia

In 1991, Malaysia produced approximately 163,000 vehicles.[47] The country has nine vehicle assemblers, and at least one new producer, in cooperation with Chrysler, is likely to enter sometime in 1993.

The largest producer is Proton, accounting for about 38 percent of total production.[48] Proton is a joint venture among the Malaysian Government corporation, Hicom, Mitsubishi Motors Corp., and Mitsubishi Corp. The venture was started in 1983 as an effort by the Malaysian Government to establish a National Car Project after unsuccessful attempts to increase local content in the auto industry. Proton's product, the Proton Saga, is based on Mitsubishi's 1985 Colt, and the plant has been managed by Mitsubishi Motors Corp. since 1988. Analysts believe that it is unlikely that Proton will be independent from Mitsubishi's hands-on management for at least several years. Proton's success is largely based on the preferential tariff and tax treatment granted to the venture by the Malaysian Government.[49]

Assembly Services, Malaysia's second largest automaker, produces about 20 percent of all vehicles, and the third largest producer, Tan Chong Motor Assemblies, makes approximately 12 percent. The fourth largest, Associated Motor Industries, accounting for roughly 10 percent of all production, is the only current Malaysian producer of U.S. nameplate vehicles (among other brands).[50] Its U.S. nameplate products are essentially Mazda vehicles with the Ford nameplate attached.[51] Ford-badged vehicles account for 8 percent of all Malaysian production.[52] Chrysler announced in late 1992 that it would assist a Malaysian firm in assembling Jeep Cherokees.[53]

There are approximately 200 auto parts firms in Malaysia.[54] Most large firms have equity or technical arrangements with foreign firms, primarily Japanese. Foreign equity typically does not exceed 30 percent.[55]

Proton holds approximately 40 percent of the automobile market. Mitsubishi and other Japanese firms control most of the remainder. Ford-brand vehicles hold 9 percent of the Malaysian market, the highest U.S. brand-name share in the four ASEAN auto-producing countries.[56]

[40] Based on data in Guy, *South East Asia*, pp. 5-24.
[41] "GM Inks JV for Assembly in Indonesia," *Ward's Automotive Reports*, Nov. 9, 1992, p. 3.
[42] Guy, *South East Asia*, p. 40; USITC staff estimates.
[43] Guy, *South East Asia*, pp. 38-40.
[44] "Hyundai Ties Up With Thai Assembler," *Automotive News*, Dec. 12, 1992, p. 14.
[45] "Toyota Plans 200,000-Unit Assembly Plant in Thailand," *Automotive News*, Nov. 11, 1992, p. 43.
[46] Guy, *South East Asia*, p. 136.
[47] *Automotive News Market Data Book: 1992*, p. 4.
[48] Auto & Truck International, *1991 Automotive Market*, 1991, p. 8.
[49] Guy, *South East Asia*, p. 58; Cheryl Eberwein, "Malaysia Looks Like Hot Investment Once Again," *Ward's Automotive International*, June 1990, p. 1.
[50] Guy, *South East Asia*, p. 63.
[51] "Japanese Makers' Ventures Have Finally Roused the Big 3," *Automotive News*, July 9, 1990, p. 26.
[52] Auto & Truck International, *1991 World Automotive Market*, p. 8.
[53] "Malaysia Prepares for Jeep Assembly," *Automotive News*, Nov. 2, 1992, p. 29.
[54] Guy, *South East Asia*, p. 74.
[55] Richard F. Doner, *Driving a Bargain: Automobile Industrialization and Japanese Firms in Southeast Asia*, 1991, p. 98.

Philippines

There are 14 automobile assemblers in the Philippines.[57] Japanese automotive firms have extensive technological ties to Philippine producers. Toyota, Mitsubishi, and Nissan brand names account for over 75 percent of total production.[58] The Philippine automobile industry reportedly depends upon Japan for most components and most, if not all, technological development.[59] Economic decline in the Philippines during the 1980s prompted the U.S. Big Three automakers (Ford, GM, and Chrysler), along with several European firms, to cease operations there. However, sources report that a local partner may assemble GM cars (the Opel Corsa) in the near future.[60]

Philippine auto parts production is estimated at $660 million. Approximately 90 percent of all auto parts firms are independent and serve the local vehicle assemblers. In the near future, the Philippine auto parts industry will likely undergo a substantial increase in output. While several U.S. auto parts firms intend to invest in the Philippines, most of the new investment will be by Japanese automotive firms, which are by far the dominant foreign investors.[61]

Japanese firms' market share ranges between approximately 92 percent to 96 percent. U.S. automobile firms hold an estimated 2 percent or less of the market.

Singapore, Brunei, and Hong Kong

There is no significant automobile production in Singapore, Brunei, and Hong Kong. While there is some auto parts production in these nations, information on these industries is limited.

In Singapore, Brunei, and Hong Kong, Japanese nameplate vehicles control about 76 percent, 92, and 84 percent of the market, respectively. European nameplate vehicles account for most of the remainder.[62]

Trade

East Asian automotive trade grew rapidly during 1987-90, reflecting the region's dynamic production base and market growth. East Asian imports of auto parts totaled approximately $6.1 billion in 1987 and nearly doubled to about $11.5 billion in 1990.[63] The largest importer was China ($3.8 billion), followed by Thailand ($2.4 billion) and Singapore ($1.7 billion). Japanese auto parts accounted for 46 percent of total East Asian auto parts imports, whereas imports from the United States amounted to 7 percent. Many of the imports from Japan consist of relatively high-value original equipment vehicle parts, such as engines, transmissions, and parts thereof. The imports are destined for East Asian vehicle and parts assembly plants, which are often aligned with Japanese firms, although many of the imports serve the aftermarket or replacement parts market. Imports from the United States consist of miscellaneous parts, with no particular segments dominating.

Imports of cars and trucks grew less dramatically, increasing from about $530 million in 1987 to approximately $713 million in 1990, or by about 35 percent.[64] The slow growth of automobile trade compared with auto parts trade is a result of East Asian protection of the automobile industry. The region's largest importer of automobiles was Taiwan ($180 million), which has comparatively low (but still significant) import barriers (tariffs). Malaysia and Thailand were the second and third largest importers of automobiles, with totals of $166 million and $102 million, respectively. Japan was the major source, accounting for approximately 60 percent of the region's imports in 1990. The United States accounted for about 11 percent of imports.

Exports of auto parts also increased substantially. In 1987, East Asian auto parts exports totaled approximately $3.4 billion and more than doubled by 1990, to about $6.9 billion.[65] The largest exporter was China ($3.8 billion). Over 75 percent of China's exports were to Hong Kong. The second largest exporter was Korea, which exported $1.4 billion. East Asia's exports to the United States reached approximately $748 million in 1990, whereas exports to Japan totaled about $490 million.

Automobile exports declined, however. In 1987, automobile exports totaled about $3.1 billion, but declined to approximately $2.5 billion in 1990, primarily as a result of declining exports from Korea, the region's main automobile exporter.[66] Korea's drop

[56] USITC staff estimates based on sales data contained in Guy, *South East Asia.*

[57] Guy, *South East Asia*, pp. 80-82.

[58] "Car Industry Reborn," *Ward's Automotive International*, June 1992, p. 1; Guy, *South East Asia*, p. 94.

[59] U.S. Department of Commerce, "Philippines—Automotive Parts," NTDB, June 30, 1992; Guy, *South East Asia*, p. 94.

[60] Richard Johnson, "GM Wages Expansion Campaign in Pacific," *Automotive News*, Apr. 6, 1992, p. 39.

[61] U.S. Department of Commerce, "Philippines—Automotive Parts."

[62] Ford, informal communication with USITC staff.

[63] USITC staff estimates based on United Nations Trade Data Series D. Estimates are derived from data on imports of major categories of automotive parts. United Nations automotive parts trade data are unavailable for Taiwan, the Philippines, and Brunei.

[64] USITC staff estimates based on United Nations Trade Data Series D. United Nations trade data are unavailable for the Philippines and Brunei.

[65] USITC staff estimates derived from United Nations Trade Data Series D. United Nations trade data are unavailable for Malaysia, the Philippines, Brunei, and Taiwan.

[66] USITC staff estimates based on United Nations Trade Data Series D. United Nations trade data are not available for Malaysia, the Philippines, and Brunei.

in exports is largely attributed to Hyundai's struggle in the North American market, where sales have declined or remained slow since the late 1980s. The United States was the primary destination, absorbing approximately 46 percent of total automobile exports from East Asia in 1990; Japan accounted for less than 1 percent of East Asia's exports.

East Asian countries import a modest amount (about $3.2 billion) of auto parts from other East Asian countries, accounting for about 28 percent of the region's total imports. However, $2.4 billion, or 75 percent of that trade, consists of Chinese imports from Hong Kong. The second largest intraregional trade flow is China's $115 million of imports from Indonesia. By comparison, on average, each East Asian country imported over $700 million worth of auto parts from Japan. Intraregional trade in automobiles is much lower, totaling approximately $25 million and accounting for only 3 percent of the region's imports. Unfortunately, the trade data are not current and complete; accordingly, it is difficult to access trends since 1990 or to predict future intraregional trade. This topic will be discussed in the "regional integration" section below.

Investment

East Asia has experienced substantial foreign investment in the automotive industry.[67] The main foreign investors have been Japanese automotive firms, which have formed numerous joint ventures and licensing agreements and established other types of manufacturing and technical ties. U.S. and European firms have much more limited investments in the region.

Foreign investment has generally been the primary force behind the development of the East Asian automotive industry. Technical ties to foreign automotive firms are also strong and are critical both to the development of the industry and to the entrance into the East Asian market by foreign firms. These ties give East Asian automobile plants greater access to technology and know-how. The foreign partners are in turn able to sell what is essentially their product in the East Asian market, although often under a local nameplate.

Foreign investment in the East Asian automotive industry became substantial during the late 1960s and increased steadily during the 1970s, largely in response to import substitution policies.[68] The main force behind foreign investment in East Asia today is the high growth of regional automotive sales and the perception that growth will continue to be strong in the future. Automobile sales in the region totaled approximately 3.1 million units in 1991, an increase of about 36 percent since 1987 (table 7-1).

Because the East Asian industry is highly protected, foreign automotive firms generally have had to establish local production to serve the East Asian market, a practice that has led to large increases in East Asia output, particularly by Japanese affiliated producers. While national policies to protect the

[67] Quantitative foreign investment data specific to the automotive industry in East Asia are limited, but descriptive data adequately illustrate major trends. For a detailed discussion of the East Asian automotive industry, see Guy, *South East Asia*; Robertson, *South Korea's Motor Industry*; Doner, *Driving a Bargain*; Hope and Jacobson, *China's Motor Industry*.

[68] Doner, *Driving a Bargain*, p. 35.

Table 7-1
East Asian sales of automobiles, 1987-91

(In units)

Country	1987	1988	1989	1990	1991	Percentage change
China	555,895	736,857	651,819	566,301	738,404	+33
Korea	966,358	1,099,610	762,959	954,277	1,104,480	+14
Hong Kong	58,818	87,631	52,380	51,232	53,267	-19
Taiwan	298,697	402,436	516,127	547,000	473,353	+58
Malaysia	54,506	80,259	123,240	161,476	174,244	+220
Indonesia	159,720	158,555	178,792	203,629	146,122	-9
Thailand	101,651	146,492	208,233	304,062	268,560	+164
Singapore	18,504	38,024	45,937	42,850	41,574	+125
Philippines	39,458	56,876	91,902	42,228	52,660	+33
Brunei	([1])	([1])	7,069	7,341	8,083	([1])
Total	2,253,607	2,806,740	2,638,458	2,880,396	3,060,747	+36

[1] Information not available.

Source: Guy, 1991; *Ward's Automotive Yearbook*, various issues, 1987-1990; *World Motor Vehicle Data*, various issues, 1987-89; apparent consumption, "China Projects Rise in 1992 Output," *Ward's Automotive International*, June 1992 (China 1991, production data to derive apparent consumption); U.N. Trade Data System (Singapore, 1987-88 are estimates based on trade data; Hong Kong, 1987-88 are estimated using import data); "S. Korea Sales Pass 1 Million Mark," *Automotive News*, Feb. 3, 1992, p. 20 (South Korea 1991); MVMA (Indonesia 1990, China 1990 apparent consumption, 1991 imports and exports to derive apparent consumption); *Ward's Automotive International*, Apr. 1992 (Thailand, 1990-91); Ford Motor Co. (Hong Kong, Brunei, Singapore, 1989-91, Taiwan 1991 estimated using production and trade data); *1992 Market Data Book*, Automotive News, (Malaysia, Indonesia, and Philippines, 1990-91).

industry hinder regional integration, Japanese automakers are gradually integrating their assembly operations in the region, both through East Asian government policies to further integration and through their corporate strategies. U.S. firms have had a much smaller regional presence, but investor interest has grown both as a result of anticipated expansion of the regional market and out of fear that failure to get into the market during the expected rapid growth period in the 1990s could make it more difficult to capture market share later. Further, a larger presence of U.S. automobile firms in the region may improve the ability of the U.S. auto parts producers to enter the market, since U.S. auto parts firms typically find it easier to sell parts to U.S.-owned automakers than to Japanese-owned automakers.

Government Policy

Foreign investment in the East Asian automotive industry is largely a result of East Asian government policies to develop and protect the industry. Without a local manufacturing presence, it is difficult to gain even a limited share of the market.[69]

The region is heavily protected by high tariffs, taxes, selective import bans, local content requirements, mandatory use of certain locally produced auto parts, quotas, foreign exchange earning requirements, and restrictions on foreign equity holdings.[70] One analyst noted that during the 1960s Southeast Asian governments began to enforce local content requirements. While this drove some U.S. and European firms out of the region, Japanese firms made an effort to meet the requirements, often bringing their suppliers from Japan to set up local joint ventures to produce parts.[71]

Korea provides a widely publicized example of Government influence on automotive trade. In May 1990, Korea launched what was termed a "frugality campaign," officially designed to curb inflation but widely viewed as an anti-import program.[72] To enforce the program, Korea's National Tax Administration threatened to audit the tax returns of purchasers of imported and domestic luxury cars. Although sales of domestic luxury cars were unaffected, customers began to stay away from import car showrooms.[73]

Overall, government policies in the United States, Japan, and Europe have played a relatively minor role in East Asian investment decisions by foreign automakers. However, U.S. industry officials believe that Japan's domestic economic policies at least have an indirect but positive effect on Japanese investment in East Asia.[74] They contend that Japanese firms had access to extremely low-cost capital during much of the 1980s, which allowed the firms to take a very long-term view of investment in East Asia.[75] Other policies that encourage Japanese foreign investment are the absence of double taxation for Japanese nationals employed in East Asia and the presence of tax breaks on sales of Japanese technology. Some U.S. industry officials also believe that Japanese Government agencies are very adept at supporting the interests of Japanese firms through lobbying efforts and providing information about foreign countries.[76]

One study of Japanese foreign investment in ASEAN's automotive industry supports U.S. industry officials' views of the impact of Japanese Government policies on Japanese foreign investment in East Asia.[77] For example, Government-backed Japanese research organizations provide strategic information, and the Export-Import Bank of Japan has been an important source of financing. Since the 1970s, the Japanese Government has also encouraged Japanese firms to spread manufacturing technology throughout the ASEAN region, partly in response to anti-Japanese sentiment in the area.[78] The Voluntary Export Restraint Agreement with the United States which placed a ceiling on exports of Japanese cars to the United States may have prompted greater interest in East Asia, particularly by smaller Japanese automakers that were more adversely affected by the agreement than larger firms.[79]

Some U.S. industry representatives also state that, like Japan, European governments provide tax breaks to European citizens working in foreign countries. U.S. industry representatives argue that such policies place U.S. firms at a disadvantage for investing in foreign countries.[80]

A significant U.S. policy affecting U.S. automotive investment in the region appears to be the Foreign

[69] Industry officials, interviews by USITC staff, Aug.-Oct., 1992; Guy, *South East Asia*; Hope and Jacobson, *China's Motor Industry*; Robertson, *South Korea's Motor Industry*.

[70] U.S. industry officials, interviews by USITC staff, Aug.-Oct. 1992; Guy, *South East Asia*; U.S. Department of Commerce, "Taiwan-Passenger Cars," NTDB, June 30, 1992; "Taiwan—Automobile Parts," June 30, 1992; "Thailand—Automotive Parts," June 30, 1992; "Korea—Automobiles," June 30, 1992; "Korea—Automotive Parts," June 30, 1992; "Philippines—Trucks, Trailers, and Buses," June 30, 1992; Robertson, *South Korea's Motor Industry*; Hope and Jacobson, *China's Motor Industry*.

[71] "Automakers Refocus on S.E. Asia," *Ward's Automotive International*, Dec. 1992, p. 6.

[72] For a further discussion of the policy, see USITC, "Taiwan," ch. 4 in *The Year in Trade: Operation of the Trade Agreements Program, 1991*, USITC publication 2554, Aug. 1992.

[73] U.S. industry officials, interviews by USITC staff, Aug.-Oct. 1992.

[74] U.S. industry officials, interviews by USITC staff, Aug.-Oct. 1992.

[75] Ibid.

[76] Ibid.

[77] Doner, *Driving a Bargain*, p. 82.

[78] Ibid., pp. 80-89.

[79] "Automakers Refocus on S.E. Asia," p. 6; Doner, *Driving a Bargain*, p. 79.

[80] U.S. industry officials, interviews by USITC staff, Aug.-Oct. 1992.

Corrupt Practices Act. All U.S. automakers argue that they are significantly disadvantaged by this law, although one U.S. automaker stated that its significance has decreased recently. U.S. automobile industry representatives state that Japanese automobile firms are able to engage in practices that U.S. firms are prohibited from using to influence East Asian government policy. U.S. industry officials believe that this situation sometimes results in policies that benefit Japanese firms at the expense of U.S. firms.[81]

Other Factors

Many industry analysts and company executives believe that East Asia offers automotive firms an important opportunity to expand sales while their primary markets remain stagnant and subject to increasing competition. There is a concern among some U.S. industry executives that the longer their firms wait to enter the East Asian market, the more difficult it will be.[82] Recent decisions by GM and Chrysler to establish new production bases in East Asia were partly a response to this concern. Similarly, one executive of a large U.S. automotive parts firm noted that after extensive analysis, his firm had concluded that investments should be made within the next 3 to 5 years because of the risk of being unable to enter the market later.[83]

Some analysts believe that at least some Japanese automotive firms' interest in East Asia goes beyond an effort to capture market share in a high-growth regional market. Japanese firms may also view the region as a future export base. The highly fragmented and protected East Asian markets mean that production levels remain low. If East Asian automotive production is to reach a level that will allow producers to compete in world markets, exports may be required.[84] This view is supported by some industry analysts, who state that Japanese automotive firms consider inefficient factories set up in the 1960s potential export bases in the 1990s.[85] Labor shortages in the Japanese automotive industry have reportedly been a factor in recent Japanese investments in East Asia,[86] and they might be an added reason for broadening Japan's export strategy to include East Asia in the future. At this time, however, the practicality and advantage of exporting from East Asia are doubtful.[87]

In general, investment in East Asia is also driven by an effort among automakers to maintain an international presence. Failure to establish a significant international presence is considered by most industry analysts to be a liability in today's global automotive industry. Automotive firms must retain the flexibility to form appropriate responses to international political and economic developments.

Taiwan holds significant strategic interest for automotive firms as a potential avenue for sales to China. A Ford executive recently noted the possibility of using Ford Lio Ho Motor Co. as a manufacturing base for the Chinese market. But, although current regulations prohibit Ford Lio Ho from selling vehicles directly to China, serving the Chinese market from Taiwan remains a possibility in the future because of movement toward relaxing these regulations.[88] Taiwan appears to offer similar strategic potential for auto parts firms.[89]

Automotive firms' investment in East Asia appears to be more for strategic reasons than for financial gain. Indications are that firms operating in the region are not making large profits.[90] However, profitability is likely to improve if production volumes increase through market growth, integration, and rationalization of existing production facilities.[91]

Implications

Opportunities for New Entrants

Most assessments are pessimistic on the ability of firms without existing investments in East Asia to enter the region. For example, one source states that there are "virtually no opportunities for new manufacturers because each market is already overcrowded."[92] Even one U.S. industry executive whose firm has made recent investments in ASEAN stated that U.S. firms will never achieve anything beyond a niche market presence.[93]

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[81] Ibid.

[82] Ibid.

[83] U.S. industry officials, interviews by USITC staff, Aug.-Oct. 1992; James Womack, interview by USITC staff, 1991. Guy, *South East Asia*, p. 200, considers most of the East Asian automotive markets to already be closed to new entrants.

[84] *Digest of Japanese Industry & Technology*, No. 264 (1991), p. 35.

[85] "Japanese Boosting Investment in Indonesia," *Ward's Automotive International*, Jan. 1991, p. 1; "Backyard Boom," *Automotive News*, July 9, 1990, p. 26.

[86] Richard F. Doner, "Japanese Foreign Investment and the Creation of a Pacific-Asian Region," paper prepared for National Bureau of Economic Research Conference on the U.S. and Japan in Pacific Asia, Mar. 1992, Del Mar, CA, p. 23.

[87] For example, considering the current state of the East Asian industry, it seems doubtful that there would be a significant cost advantage. Other factors, such as quality considerations and stagnant auto sales in major markets, suggest that East Asia will not be a significant export base in the near future.

[88] "Ford Plans New Asian Assembly, Japan Sales Growth," *Ward's Automotive International*, Aug. 1992, p. 4.

[89] "Island of Opportunity," *Automotive Industries*, Sept. 1992, p. 70.

[90] U.S. industry officials, interviews by USITC staff, Aug.-Oct. 1992; "Backyard Boom," p. 26; Doner, *Driving a Bargain*, pp. 67, 81.

[91] "Nissan Plants in Asia Begin Sharing Parts," *Automotive News*, June 29, 1992, p. 22.

[92] Guy, *South East Asia*, p. 200.

[93] U.S. industry executives, interviews by USITC staff, Aug.-Oct. 1992.

There is little doubt that new entrants will not easily gain a share of the market and that profits will be low at best, especially during the early years of startup. This financial outlook alone is a major disincentive for U.S. firms considering investment in East Asia.

The recent investments by U.S. firms, even in ASEAN countries, suggest that despite their admitted aversion to risks, U.S. firms believe that there is a rationale for investment in East Asia. One U.S. executive asserted that there is a strategic advantage to simply establishing a presence in the region. An executive of a large U.S. auto parts firm noted that while financial analysis of investing in the region did not strongly support the investment, he, nevertheless, had a sense that, in 10 to 15 years, firms will wish they had invested there. It would appear that a large investment is not necessary to establish a presence,[94] although significant increases in market share may require further investment. Furthermore, U.S. firms may be stronger in specific market segments, which could help them gain entry into some East Asian markets.[95]

Regional Integration

Progress toward integrating East Asian economies appears to be limited, although efforts toward integration by Japanese automakers with foreign investments in the region are evidently making gradual progress, particularly in the ASEAN region. Among U.S. automotive firms, integration within East Asia is virtually nonexistent.

The advantages of integration have been recognized by some East Asian countries. ASEAN countries, with the exception of Indonesia,[96] have instituted a program to increase integration of the automotive industry. The program is the Memorandum of Understanding on Brand-to-Brand Complementation (BBC), an agreement reached in 1988. Imports of auto parts from participating ASEAN countries are counted toward national local content requirements, and such imports receive a 50 percent import duty reduction. The participants in the program are free to produce their choice of parts in participating countries, although BBC projects must be approved by ASEAN's Committee on Industry, Minerals, and Energy, must meet certain quality criteria, and should attempt to export BBC components outside the ASEAN region.[97]

The BBC was initially received with little interest by Japanese producers,[98] but there is increasing use of the program. For example, Nissan is producing diesel engines, fuel tanks, front floor panels, and seven other parts in Thailand and exporting them to the Philippines. In return, the Philippines is sending rear floor panels, wheel housings, and 11 other parts to Thailand. Nissan is also producing items in Thailand and sending them to Malaysia, which is sending 6 parts to other Nissan plants elsewhere in ASEAN. Nissan expects the present level of trade among the plants, totaling only about $1.6 million annually, to grow significantly.[99] It is also taking steps to increase standardization of the Sentra (built in several ASEAN nations) to facilitate regional integration.[100]

Mitsubishi and Toyota are also participating in the BBC. Toyota produces transmissions in the Philippines, steering assemblies in Malaysia, and diesel engines in Thailand and exchanges these parts among its plants.[101] Toyota is also establishing a management center in Singapore to oversee regional production and is standardizing its popular Hilux pickup truck to allow greater integration of its regional suppliers. Toyota anticipates that the value of parts involved in its complement program will exceed $100 million in 1992.[102] Honda is reportedly participating in some level of regional integration, but details are unclear. Additionally, there is some indication that Japanese firms may increase their cooperation with one another within East Asia for the production of some major components.[103] Further evidence of this possibility emerged when Mitsubishi recently stated that it might consider cooperating with other manufacturers in the region to increase volume.[104]

Japanese automotive firms may also engage in strategies for regional integration between the ASEAN region and the rest of East Asia. Nissan, for example, plans to integrate some of its Taiwan production with ASEAN countries and anticipates that trade among Nissan plants in Taiwan, Malaysia, Thailand, and the Philippines will reach approximately $16 million by mid-1993.[105] In early 1993, Nissan announced an ambitious effort to develop a passenger car designed to appeal to a cross-section of the East Asian market. Parts for the vehicle will be built in Thailand, Taiwan, Malaysia, and the Philippines, with each country exchanging parts and also getting a small assembly plant to build the car. Toyota and Mitsubishi have reportedly attempted a similar strategy, but have not yet developed a car with widespread appeal.[106] Honda recently announced plans to build a $16.2 million plant for plastic auto parts in Malaysia, the output from

[94] For example, see "GM Wages Expansion Campaign in Pacific," *Automotive News*, Apr. 6, 1992, p. 39.

[95] U.S. industry officials, interviews by USITC staff, Aug.-Oct. 1992; "GM To Assemble Trucks in China in a Joint Venture," *Wall Street Journal*, Jan. 16, 1991.

[96] Indonesia apparently believes that it has more to lose than to gain from regional integration at this time. Guy, *South East Asia*, p. 3.

[97] Guy, *South East Asia*, p. 3.

[98] Doner, "Japanese Foreign Investment," p. 59.

[99] "Nissan Plants in Asia Begin Sharing Parts," p. 22.

[100] "Japanese Boosting Investment in Indonesia," p. 6.

[101] "Nissan Plants in Asia Begin Sharing Parts," p. 3.

[102] "Backyard Boom," p. 26.

[103] Doner, "Japanese Foreign Investment," p. 60.

[104] "Backyard Boom," p. 26.

[105] "Nissan Plants in Asia Begin Sharing Parts," p. 22.

[106] "Nissan Launches Pan-Asian Plan," *Automotive News*, Jan. 4, 1993, p. 14.

which will be shipped to Thailand, Malaysia, Indonesia, and the Philippines.[107]

The BBC scheme developed by ASEAN countries allows firms to reduce the impact of trade barriers, but it is only a partial solution. Besides its effect of reducing rather than removing barriers, the plan has its own restrictions. As mentioned above, firms must get approval to utilize BBC, which can be slow and time consuming. ASEAN governments that feel threatened by specific BBC projects can stall the approval process. Producers must meet quality standards, and they also must develop plans to export outside the ASEAN region. There is reportedly an expectation that BBC projects should result in balanced trade flows, a difficult goal given the varying sizes of the ASEAN markets. Additionally, problems with customs appear to exist. ASEAN markets also vary significantly in composition. For example, Thailand's market is composed mainly of pickup trucks, whereas Malaysia's market consists mostly of passenger automobiles.

Some analysts have speculated that the main beneficiaries of the plan will be Mitsubishi, Nissan, and Toyota. These firms have operations in the Philippines that must earn foreign exchange through exports, and the BBC may be used mainly to provide them with foreign market access and reduced duties.[108] In fact, as discussed earlier, these firms appear to be the most active participants in the BBC. Indonesia's decision not to participate in the program represents an absence of one of the region's most important automotive markets and automotive producers.

There are also economic barriers to regional integration. Some U.S. industry officials note that despite low wages in East Asian countries, there is widespread inefficiency combined with high import costs, freight costs, and taxes. The quality of auto parts in the region is generally low, and some U.S. industry officials believe that there is also a predisposition among the local business community and consumers toward European, Japanese, or U.S. parts, even when high-quality East Asian parts are available.[109]

Some U.S. industry officials are doubtful about the potential for integrating their manufacturing plants in East Asia given U.S. firms' limited presence in the region, but are, nevertheless, considering their options.[110] Likewise, European firms have made little progress toward integration, but are showing interest.[111]

[107] "Honda Sets Up in Malaysia," *Automotive News*, Nov. 23, 1992, p. 2i.

[108] Guy, *South East Asia*, p. 3-4. Some U.S. industry officials express similar views (U.S. industry representatives, interviews by USITC staff, Aug.-Oct. 1992).

[109] U.S. industry officials, interviews by USITC staff, Aug.-Oct. 1992.

[110] Representatives of U.S. automobile industry, interviews by USITC staff, Aug.-Oct. 1992; "Nissan Plants in Asia Begin Sharing Parts," p. 22.

[111] Guy, *South East Asia*, p. 3.

Implications of East Asian Investment for U.S. Firms

There are significant implications for U.S. automotive firms of investment in, and technology transfer to, East Asia. These implications are not dramatic in the short term; they consist mainly of lost opportunity and poor competitive positioning for future East Asian growth. In the long term, the implications may be more significant.

While the East Asian automotive industry is still in a relatively early stage of development, the region's impact as both a producer and a market is nevertheless significant. For example, the ASEAN countries and Taiwan combined generate approximately 300,000 vehicle sales annually for Toyota, and approximately 200,000 vehicle sales each for Nissan and Mitsubishi. After the United States, Thailand is Toyota's second largest market for the Hilux pickup truck.[112]

If East Asian sales increase rapidly, as is widely predicted by industry analysts, U.S. automobile firms may lose global market share. This probability is increased by the entrance of Japanese firms into the European Community, their growing interest in Latin America, their strong presence in the North American market, and the slow progress that U.S. firms have made in entering the Japanese market. Furthermore, if U.S. firms are unable to improve substantially their ability to serve East Asian markets, the region could emerge as an important and largely unchallenged profit center for Japanese firms.

The dominance of Japanese automobile firms in East Asia has translated into a lost opportunity for U.S. auto parts firms. Much of East Asian production consists of assembling vehicle kits that are imported from Japan and contain mostly Japanese parts. While local content regulations require that automobile producers in East Asia source some parts locally, the region is still heavily dependent upon imports, particularly of the more sophisticated parts. In 1990, East Asian auto parts imports from Japan totaled nearly $1.5 billion. Although U.S. parts firms could share in the benefits of growth in the East Asian market, the effect will be limited not only because of East Asian protectionism, but also because of the nature of the relationship between Japanese automakers and their parts suppliers. U.S.-owned auto parts producers assert that they have had great difficulty becoming suppliers to Japanese automakers in foreign countries as well as in the United States. The reasons for this difficulty vary, but it generally results from the close relationship between Japanese automobile firms and their Japanese parts suppliers, as well as from the relatively rigorous demands that Japanese automakers place on their suppliers regarding quality, technological capability, close proximity to assembly plants, costs, and reliable and timely delivery. U.S. parts producers would appear to have a better chance of participating in East Asian growth, or they might have more incentive

[112] Guy, *South East Asia*, p. 135.

to invest there, if U.S.-owned automakers had a more extensive presence.

The development of the East Asian automotive industry has relevant trade implications for the United States. In 1991, U.S. automotive imports from East Asia totaled $3.2 billion, whereas U.S. exports to East Asia amounted to $1.4 billion, creating a $1.8 billion U.S. automotive trade deficit with the region.[113] Furthermore, U.S. automotive imports from East Asia accounted for 8 percent of total U.S. automotive imports, an increase from the 1987 level of 5 percent. It is likely that trends in foreign investment will help to shape U.S.-East Asian automotive trade.

Finally, there is a growing sentiment in the U.S. automotive industry that East Asia cannot be ignored as part of a successful global strategy. Automotive firms with an extensive international position have distinct advantages over firms that lack a well-developed global presence. Accordingly, a vice-president of Ford's international automotive operations, who has argued that Ford should adopt a more aggressive approach to Southeast Asia, noted that the firm cannot be a strong global automotive company without a major presence in the Asia-Pacific region.[114] This view seems to be foreshadowing a significant new investment by Ford in Asia. The firm's president announced in late 1992 that Ford must develop and build cars either in Japan or elsewhere in Asia, and it will probably do so in a joint effort with Mazda. He noted that Ford's investment in Taiwan is not sufficient to serve the Asian market, and that the firm's reliance on selling Mazda cars with Ford nameplates is not a viable strategy.[115]

Similarly, GM's Automotive Components Group (ACG) recently announced a new effort to increase global sales to mitigate the impact of a stagnant or sluggish North American market during the 1990s. The firm will attempt to increase the proportion of its non-North American sales from 22 percent currently to 30 percent by 1996. The Asia-Pacific region is the second largest non-North American sales region for ACG ($400 million) after Europe ($3.5 billion),[116] suggesting that East Asia will be an important parts of ACG's renewed global sales effort.

Computers

U.S.-based companies have a strong foothold in the East Asian computer market and play an important role in the region's computer production. Japanese firms are present in the region, but tend to produce component products for export outside the region, while U.S.-based companies manufacture many finished products and components in the region both for local consumption and export. Investment within the region by computer firms based in Hong Kong, Korea, Singapore, and Taiwan is increasing, as are their imports from other countries in the region. Exports to the United States and Japan continue to increase.

Production and Consumption

The East Asian region produces low-cost, high-volume computer products. Computer production, primarily personal computer (PC), peripheral, component, and parts manufacturing, grew over twice as fast in East Asia as in the rest of the world.[117] Foremost among the East Asian computer producers are the newly industrializing economies (NIEs) of Singapore, Taiwan, Korea, and Hong Kong, which account for over 80 percent of East Asian exports.[118] The Philippines and Brunei do not have significant computer industries.[119]

The NIEs are shifting toward higher value-added production and transferring manufacture of less advanced, lower value-added products to less developed Asian nations, such as China, Malaysia, Thailand, and Indonesia, which are fostering nascent industries (see figure 7-1).[120] These second tier countries now supply the NIEs, as well as Japan and the United States, with parts and labor-intensive components for microcomputers and peripheral production. Levels of technology in the NIEs are increasing as a result of efforts to increase domestic value-added and revenues. This trend has led to greater private development work in Singapore and the establishment of the Government-supported Hsinchu Science-based Industrial Park in Taiwan.

The $4 billion East Asian computer market, approximately one-tenth the size of the U.S. or European markets and one-sixth the size of Japan's market, is growing faster than any other in the

[113] USITC staff estimates using official statistics of the U.S. Department of Commerce.

[114] "Ford Motor Names W. Wayne Booker To Head International Auto Operations," *Wall Street Journal*, Sept. 15, 1992, p. B3.

[115] "Ford, Mazda Likely To Build Cars in Asia," *Ward's Automotive International*, Dec. 1992, p. 2.

[116] "GM's ACG Looks Global for Growth," *Ward's Automotive Reports*, Dec. 28, 1992, p. 1.

[117] "Rapid Growth for Asian Microcomputer Trade," *Asian Sources Computer Products*, Aug. 1991, p. 25.

[118] Accurate and timely trade data are not available for all of the East Asian countries. Since the NIEs account for over 80 percent of East Asian trade, many of the East Asian trade estimates will use NIE trade data. This analysis uses trade data from only the Asian NIEs. USITC estimate from individual countries' official trade data and "Outlook '92: Asia," *Asian Sources Computer Products*, Jan. 1992, p. 55.

[119] U.S. and Asian-based computer firms producing in East Asia, interviews by USITC staff, East Asia, Oct. 1992.

[120] Because of political instability and infrastructure problems, the Philippines is not significantly benefiting from this shift. U.S. and Asian-based computer firms producing in East Asia, interviews by USITC staff, East Asia, Oct. 1992.

Figure 7-1
Major products and investors in East Asian countries

Tier 1	Hong Kong	Korea	Singapore	Taiwan
Major products	PCs system boards monitors	PCs components monitors	PCs printers disk drives	PCs system boards monitors
Major investors	AST Compaq DEC Elcap Electronics Teac Video Technology	Daewoo Goldstar Hyundai Sambo-Trigem Samsung	Apple Compaq Conner Hewlett Packard Hitachi Seagate Siemens Nixdorf Vikay Industrial	Acer Copam DEC DTK IBM Logitech Mitac Philips Tatung Texas Instruments
Tier 2	**China**	**Indonesia**	**Malaysia**	**Thailand**
Major products	monitors disk drives keyboards PCs	system boards	monitors disk drives semiconductors	printers disk drives keyboards
Major investors	Compaq Conner DEC IBM		Acer AMD Conner IBM Intel Sony	Canon Fujitsu Micropolis Minebea Seagate
Tier 3	**Brunei**	**Philippines**		
Major products		disk drives		
Major investors		Matsushita Communications Corp.		

Source: Data compiled by USITC staff.

world.[121] Korea and Taiwan, the two largest markets, are expected to average more than 20 percent annual growth during 1990-94. Markets in Singapore and Hong Kong are expected to grow around 14 percent per year over the same period.[122] To serve these growing markets more easily, many U.S.-based firms have established manufacturing or representative offices in East Asia. More personal disposable income and increasing demands of the education systems are the two most important reasons for consumption growth of PCs. Market growth in the NIEs is also the result of government and corporate purchases to expand R&D, infrastructure, and service capabilities. Although mainland China and Indonesia have large populations, their markets are only beginning to develop, and substantial increases in computer demand are not expected in the near term.[123]

East Asian markets by themselves are still too small to support domestic computer industries, so most production is currently destined for export outside the region. In fact, many multinational corporations produce in East Asia solely for export. According to a JETRO (Japan External Trade Organization) poll, Japanese manufacturers expected to export over 80 percent of their total production in Malaysia, Singapore, and Thailand in 1991.[124] There are major differences in the computer industries in East Asia, such as the size of firms, the extent of vertical integration, concentration, and the involvement in trade.

Korea

Five large, vertically integrated, multinational conglomerates—Daewoo, Goldstar, Hyundai, Sambo-Trigem, and Samsung—supply over 90 percent of Korea's PC market. These large conglomerates have many divisions and subsidiaries that produce such components as semiconductors and, unlike most East Asian producers, are not dependent on outside suppliers for certain components, such as memory chips. However, they remain totally dependent on U.S. and Japanese suppliers of high-technology components and software, paying royalties of 10-20 percent of sales to use these technologies. The inherently high cost structure and the loss of flexibility associated with their large size have made it difficult for Korean firms to compete with Taiwan in PC price wars.[125]

Foreign investment plays only a minor role in Korea's computer industry. In 1990, however, 50 percent of Korea's total computer exports were sold under other companies' brand names.[126] OEM/ODM[127] agreements usually occur between East Asian manufacturers and firms based in the United States or Japan. One of the principal reasons these Asian companies sell products on an OEM/ODM basis is that they do not have distribution networks or brand recognition with consumers outside Asia and cannot afford to provide after-sales support in the U.S. and European markets.

Taiwan

In contrast to Korea, there are over 1,000 Taiwan producers, with an average of less than 20 employees per company.[128] The top three domestic PC suppliers[129] in Taiwan—Acer, DTK, and Copam—account for 38 percent of Taiwan's market; the top 20 companies account for only 54 percent of PC production.[130] Taiwan firms are generally quite specialized and make a very narrow range of products; many local parts firms serve as component suppliers to the Taiwan PC and peripheral industries.

Compared with Korea, Taiwan is more dependent on foreign sales and investment. IBM, Logitech, Philips, and others have significant investments in Taiwan. For example, in 1990, 26 percent of microcomputer exports, 65 percent of printer exports, 85 percent of hard disk drive exports, and 32 percent of monitor exports from Taiwan were produced by foreign subsidiaries.[131] The value of Taiwan's computer exports is over twice that of Korea. In 1990, 47 percent of Taiwan's total computer exports were under OEM/ODM agreements. Although Asian producers would not disclose their major customers, their OEM/ODM agreements are with large multinationals such as IBM, DEC, NEC, and Groupe Bull.

[121] East Asian market figures differ according to sources used. This number is a USITC staff estimate from interviews in East Asia in Oct. 1992 and several publications.

[122] International Data Corp. (IDC), Hong Kong, 1992.

[123] U.S. and Asian-based computer firms producing in East Asia, interviews by USITC staff, East Asia, Oct. 1992.

[124] These data were collected through a JETRO questionnaire of Japanese manufacturers in ASEAN countries. These manufacturers represented several different industries, with a large percentage of the companies producing electronic goods.

[125] U.S. and Asian-based computer firms producing in East Asia, interviews by USITC staff, East Asia, Oct. 1992.

[126] "Outlook '92: Taiwan," *Asian Sources Computer Products*, Jan. 1992, p. 105, and *Taiwan's Personal Computer Industry Report: Hardware/Software Strategies and Trends — 1991 Edition* (Taipei: Institute for Information Industry (III), Market Intelligence Center, 1991), p. 19.

[127] Original equipment manufacturer (OEM) and original design manufacturer (ODM) sales usually involve relatively unknown companies selling hardware to multinationals that resell the hardware under their brand name. ODM sales differ from OEM sales in that ODM products are actually designed by the local manufacturer, whereas OEM products are often designed by the multinational and produced to specifications by the manufacturer.

[128] Taiwan- and Korean-based computer firms, interviews by USITC staff, East Asia, Oct. 1992.

[129] This estimate is based on domestic installed base.

[130] Taiwan-based company, telephone conversation with USITC staff, Nov. 1992, and Bob Johnstone, "Taiwan Holds Its Lead," *Far Eastern Economic Review*, Aug. 31, 1989, p. 31.

[131] III, *Taiwan's Personal Computer Industry Report*.

Singapore

Computer production in Singapore, as in Korea, is dominated by several large multinational computer firms. It differs from Korea in that most production in Singapore is performed by multinational firms based in other countries, namely the United States and Japan. Foreign multinationals such as Apple, Conner, Compaq, and Seagate dominate Singapore's production because the Government of Singapore supports investment in technologically advanced processes from all sources and has promoted the development of an industry infrastructure for the computer industry. Producers are geographically concentrated to benefit from networks of suppliers, shippers, and industrial communities that cater to specific requirements.[132]

These firms depend on many outside sources for components. As in the other Asian NIEs, a large portion of computer production is exported. In fact, in 1992, computer exports equaled approximately 24 percent of GDP.[133]

Hong Kong

Unlike in Singapore, computer firms in Hong Kong do not have major investment in production facilities, but rather have offices from which to coordinate production in China and other East Asian nations. While Hong Kong-based manufacturers employ 3 million people in Southern China, total computer employment in Hong Kong reached only 750,000 in 1992.[134] The Government of Hong Kong, with its traditional laissez-faire policy, does not use official programs to foster the domestic computer industry or to encourage investment by foreign firms.[135] Hong Kong continues its historical role as a trading nation by serving as an intermediary between Southern China and the rest of the world, especially Taiwan. Although value-added in Hong Kong is low, the volume of computer trade handled by Hong Kong is quite large.[136]

[132] The idea of industry infrastructure is prevalent in East Asia. Many disk drive companies cite Seagate's investment in Singapore and the subsequent development of an extensive supplier network as the major factor in their investment in the country. The same is true for the other industry clusters throughout East Asia. For instance, 66 percent of the world's PC system boards in 1990 were manufactured in Taiwan. U.S.-based computer firms, interviews by USITC staff, East Asia, Oct. 1992, and III, *Taiwan's Personal Computer Industry Report*, p. 14.

[133] U.S. Department of State, "Singapore's Computer Industry—An Engine of Growth," message reference No. 020220, prepared by U.S. Embassy, Singapore, April 1993.

[134] Grace Ho and Joe Kovar, "Hong Kong's Pivotal Geographic Position Enhances its Attractiveness," *OEP*, Aug. 1992, p. 55.

[135] Asian-based computer firms, interviews by USITC staff, East Asia, Oct. 1992.

[136] Asian-based computer firms, interviews by USITC staff, East Asia, Oct. 1992.

Trade

As noted above, trade is important to the computer industries in the Asian NIEs. Computer trade within East Asia accounts for 25 percent of total NIE trade in computers. Its 37 percent annual growth rate during 1988-1991 was greater than the trade growth with any other region.[137] Intracompany transfers among subsidiaries account for some NIE trade within East Asia, but many companies rely on imports from unrelated supplier companies. The NIEs have begun to source from other countries in the region, such as Thailand, Malaysia, or China. The East Asian share of Taiwan's imports increased 125 percent; Singapore's and Hong Kong's regional import shares nearly doubled; and Korea's increased slightly during 1988-1991 (table 7-2). However, the East Asian share of NIE exports has increased only by 4 percentage points.

The United States, Europe, and Japan are the major trading partners outside East Asia. Imports from outside the region consist primarily of high-technology products, including both parts for assembly and more advanced computers. East Asian exports consist mainly of PCs, disk drives, subassemblies, parts, and peripherals. Nearly half of all East Asian computer exports go to the United States, and fewer than 5 percent are exported to Japan.

The nature of the computer industry necessitates sourcing in Asia and throughout the world. A typical multinational might import mouse devices from Taiwan, liquid crystal displays (LCDs) from Japan, microprocessors from the United States, and semiconductors from Malaysia to produce a computer in Singapore for export. A U.S.-based disk drive producer in Singapore obtains 71 percent of its components from East Asia, 20 percent from the United States, and 9 percent from Japan and exports nearly all of the finished product.[138] Taiwan exports 90 percent of domestic PC production[139] and Malaysia exports approximately 82 percent of domestic electronics production.[140]

Tariffs are becoming less of a barrier to trade with and among East Asian countries. Taiwan and Korea used protectionism to encourage their domestic computer industries in the early 1980s, but reduced tariffs to near zero and reduced nontariff trade barriers on most products in the past 5 years. Tariffs imposed by the Korean Government in the early and mid-1980s have been eliminated; duties in the Asian NIEs are now

[137] Most of the growth in trade was from the less developed East Asian countries to the NIEs.

[138] U.S. Department of State, "USITC investigation on Economic Integration in East Asia," message reference No. 254670, prepared by U.S. Embassy, Singapore, Sept. 1992.

[139] III, *Taiwan's Personal Computer Industry Report*, p. 23.

[140] U.S. Embassy, Kuala Lumpur, Malaysia, *Electronic Component, Consumer Electronic and Telecommunications Products Industry Report*, Aug. 1989, p. 2.

Table 7-2
Computer imports and exports between East Asian NIEs and selected regions of the world, 1988 and 1991

Country and group	Imports					Exports				
	1988		1991		Growth Rate[1]	1988		1991		Growth Rate[1]
	Value	Share	Value	Share		Value	Share	Value	Share	
	1,000 dollars	*Percent*	*1,000 dollars*	*Percent*		*1,000 dollars*	*Percent*	*1,000 dollars*	*Percent*	
Korea:										
East Asian countries	131,452	16.62	352,961	20.99	38.99	41,677	2.24	218,753	7.92	73.79
North America	283,798	35.89	651,372	38.74	31.91	989,482	53.10	1,388,073	50.24	11.94
Japan	336,016	42.49	568,096	34.86	20.37	47,551	2.55	114,248	4.13	33.94
EC	23,540	2.98	46,993	2.79	25.91	476,412	25.57	846,757	30.65	21.13
Other countries	15,979	2.02	43,997	2.62	40.14	308,315	16.55	195,172	7.06	-14.14
Total	790,785	100.00	1,681,339	100.00	28.59	1,863,437	100.00	2,763,003	100.00	14.03
Singapore:										
East Asian countries	746,708	33.31	2,314,844	50.20	45.81	696,357	13.01	1,589,306	15.39	5.93
North America	946,892	42.24	1,170,520	25.38	7.32	3,234,154	60.44	5,171,460	50.06	34.95
Japan	354,071	15.80	824,100	17.87	32.52	53,843	1.01	456,741	4.42	61.88
EC	172,236	7.68	158,391	3.43	-2.75	675,867	12.63	1,262,364	12.22	-12.56
Other countries	21,716	0.97	143,519	3.11	87.66	690,451	12.90	1,850,231	17.91	40.75
Total	2,241,622	100.00	4,611,374	100.00	27.18	5,350,672	100.00	10,330,102	100.00	29.80
Taiwan:										
East Asian countries	134,786	13.50	484,659	30.36	22.47	326,008	6.73	463,358	8.28	13.08
North America	315,658	31.62	387,421	24.27	10.20	2,270,076	46.88	2,189,282	39.10	2.81
Japan	454,419	45.52	649,352	40.68	14.52	82,395	1.70	119,287	2.13	-4.59
EC	53,882	5.40	19,059	1.19	-5.43	1,520,552	31.40	891,065	15.91	2.83
Other countries	39,598	3.97	55,757	3.49	7.78	643,606	13.29	1,936,320	34.58	33.73
Total	998,344	100.00	1,596,248	100.00	14.88	4,842,637	100.00	5,599,312	100.00	6.94
Hong Kong:										
East Asian countries	349,170	25.56	1,079,786	46.04	45.69	664,167	33.29	1,415,711	41.15	28.70
North America	486,985	35.65	513,541	21.89	1.79	286,648	14.37	858,515	24.96	44.15
Japan	400,695	29.33	582,870	24.85	13.31	48,865	2.45	147,843	4.30	44.63
EC	48,304	3.54	58,956	2.51	6.87	359,336	18.01	418,311	12.16	5.20
Other countries	81,009	5.93	110,410	4.71	10.87	635,863	31.87	599,648	17.43	-1.94
Total	1,366,163	100.00	2,345,562	100.00	19.74	1,994,880	100.00	3,440,029	100.00	19.92
NIE trade:										
East Asian countries	1,362,117	25.24	4,232,250	40.97	45.92	1,728,209	12.30	3,687,128	16.66	28.74
North America	2,033,333	37.68	2,722,854	26.47	10.22	6,780,360	48.25	9,607,330	43.41	12.32
Japan	1,545,201	28.63	2,642,418	26.10	19.58	232,654	1.66	838,119	3.79	53.30
EC	297,962	5.52	283,400	2.62	-1.66	3,032,167	21.58	4,369,466	19.74	12.95
Other countries	158,302	2.93	353,663	3.85	30.73	2,278,236	16.21	3,630,402	16.40	16.80
Total	5,396,915	100.00	10,234,524	100.00	23.78	14,051,627	100.00	22,132,447	100.00	16.35

[1] Compounded annual average growth rate.

Souce: USITC staff estimates based on country trade data.

comparable to U.S. tariffs.[141] Tariffs in the less technologically advanced countries are generally higher though the trend has been toward reduction. Thailand has reduced its duties from 20 percent to 7.5 percent and, in April 1992, China announced that it would cut its tariffs from a 36 percent maximum rate to a 24 percent maximum rate for high-technology goods.[142] Nontariff trade barriers still exist, particularly in such countries as China, where the computer industry is just beginning to develop. For instance, the Government of China requires computers to be purchased with foreign currency but access to foreign currency is limited. Furthermore, import licenses for computers are only given to local distributors, so companies exporting computers to China must do so through local distribution companies. These barriers are often avoided through investment in the country.[143]

As shown in table 7-3, from 1988 to 1991, East Asian NIE computer trade with East Asian countries and Japan increased as a percentage of total trade, whereas the percentage trade with North America, Europe, and "other" countries declined. Although trade with Japan grew faster than trade with any other partner outside the region, trade between Japan and the NIEs, at $3.5 billion in 1991, is relatively insignificant and represents the smallest segment of the NIEs' computer trade. Trade with North America decreased as a percentage of total trade in this period, but still accounts for over 35 percent of NIE computer trade. Part of the declining percentage of trade with North America is a result of some East Asian producers moving production to the United States.[144] For instance, in 1992, Hyundai moved its PC manufacturing, testing, and assembly for the U.S. market from Korea to San Jose, California and, in 1991, Acer increased monthly production in the United States from 3,000 to 10,000 units.[145] Bondwell Industrial Ltd. moved its headquarters, R&D, and production from Hong Kong to the United States to benefit from closer proximity to sources of technology and to participate in Government contracts.[146] When production moves to the United States, there is a twofold effect on trade—East Asia imports fewer components from the United States and exports fewer finished goods to the United States.

Trade Within East Asia

NIE trade within East Asia grew at a compounded average annual growth rate of 37 percent between 1988 and 1991 to reach $7.9 billion, accounting for 25 percent of the NIEs' total computer trade (see table 7-3).[147] Over 40 percent of NIE imports were from East Asian countries, while only 17 percent of NIE exports stayed in the region. Much trade growth is attributable to increasing imports of parts from other East Asian countries, as investments and manufacturing capabilities within the region grow.

[141] From 1984 to 1988, the Korean Government imposed a complete ban on imports of microcomputers and gave software firms low-interest loans, representing up to 90 percent of their R&D spending. Office of Technology Assessment, "The New Competitors: Industrial Strategies of Korea and Taiwan," ch. in *Competing Economies: America, Europe, and the Pacific Rim* (Washington, DC: U.S. Congress, Office of Technology Assessment, 1991), p. 318.

[142] U.S. Department of Commerce, "China—New High Tech Tariff Rates," *Market Research Reports*, 1992, and Asian- and U.S.-based computer firms producing in East Asia, interviews by USITC staff, East Asia, Oct. 1992.

[143] Asian- and U.S.-based computer firms producing in East Asia, interviews by USITC staff, East Asia, Oct. 1992.

[144] East Asian companies are moving some production to the United States to be closer to the U.S. market and new technologies. Many of these firms previously supplied the U.S. market as OEM producers, and their brand names are unfamiliar in the United States. These firms feel that investments are necessary to foster brand recognition and distribution channels and to offer after-sales service of their products in the United States. Industry association officials, interviews by USITC staff, East Asia, Oct. 1992.

[145] Taiwan- and Hong Kong-based companies, interviews by USITC staff, East Asia, Oct. 1992, and "Falling Prices Cause Pacific Rim Vendors To Rethink U.S. Strategy," *PC Week Special Report*, Nov. 16, 1992, p. S/22.

[146] U.S.-based company, telephone interview by USITC staff, Jan. 8, 1993.

[147] USITC estimate from individual countries' trade data and "Outlook '92: Asia," *Asian Sources Computer Products*, Jan. 1992, p. 55. Estimates use trade data from Hong Kong, Korea, Singapore, and Taiwan that account for over 80 percent of total East Asian computer exports.

Table 7-3
East Asian NIE computer trade with selected regions of the world, 1988 and 1991

Partner	1988 Value	1988 Share	1991 Value	1991 Share	Growth Rate[1]
	1,000 dollars	*Percent*	*1,000 dollars*	*Percent*	
East Asian countries	3,090,326	15.89	7,919,378	24.47	36.84
North America	8,813,693	45.32	12,330,184	38.09	11.84
Japan	1,777,855	9.14	3,480,536	10.75	25.10
EC	3,330,129	17.12	4,652,866	14.38	11.79
Other countries	2,436,538	12.53	3,984,065	12.31	17.81
Total	19,448,541	100.00	32,367,030	100.00	18.51

[1] Compounded annual average growth rate.

Source: Data compiled by staff of the USITC from country trade data.

Regional trade in computer parts has increased because labor and land shortages, along with rising wages in the NIEs, have forced companies to expand production into neighboring countries. In Hong Kong, Singapore, and Taiwan, land and labor are in short supply and relatively expensive; however, China, Malaysia, and Indonesia have ample supplies of both and have established free trade zones to encourage investment.[148] In fact, Singapore is encouraging offshore production of labor-intensive products as part of an economic plan to increase skilled employment and value-added in Singapore. In 1990, Singapore's exports to Malaysia increased by 30 percent, partly because of firms shifting some production to Malaysia.[149] The circumstances are similar in Hong Kong, where many computer producers are using the relatively inexpensive labor in Shenzhen, China for assembly and finishing, while design and packaging are done in Hong Kong.[150] Most of the components made in these operations are then shipped to the parent company for incorporation into finished products.

Hong Kong plays a large role in the computer parts trade because Taiwan authorities forbid direct trade between Taiwan and mainland China; Hong Kong is geographically well positioned as a conduit for trade between Southern China and Taiwan. In 1990, Hong Kong's computer re-exports[151] accounted for 43 percent of total trade, 51 percent of which went to other East Asian countries.[152]

East Asian markets are increasingly important to the NIEs for several reasons. As other East Asian economies expand, their computer demand and import potential increase. However, the most immediate reason for greater trade within East Asia is that the weak economies of Europe and the United States have forced East Asian computer producers to look for other markets.[153] In particular, Taiwan and Korean companies dependent on OEM sales to the United States were forced to develop new markets to sell their excess supply.[154] For instance, one Korean company's total computer exports as a percentage of total sales have dropped from 80 percent to 50 percent.[155] The Korean Government is attempting to bolster its domestic market to absorb a portion of Korean production by encouraging the use of PCs at home for children's education.

Growing technological expertise in East Asia is increasing production capabilities so that some components no longer must be imported. For instance, over the past 20 years, Singapore has upgraded its product and process technology to move from making lower end computer products to upper end hard disk drives.[156] At the same time, lower technology disk drive production was moved to Thailand and Malaysia. Thus, most East Asian firms now source their higher end hard disk drives from Singapore and lower end disk drives from Thailand and Malaysia. As countries develop expertise, their ability to supply themselves and their surrounding markets with higher technology products will continue to grow. The NIEs' dependence on their neighbors for key components, such as system boards and keyboards, will also increase as their production shifts to higher value-added products.[157]

Trade Between East Asia and the Rest of the World

NIE computer trade with the rest of the world increased at a compounded average annual growth rate of 14 percent from 1988 to 1991. Table 7-2 shows that exports grew faster than imports for all regions except for "other" countries, from which imports increased 31 percent annually to $354 million.

North America, with $9.6 billion in computer shipments from East Asia in 1991, was the largest export market, although as a percentage of total exports, it decreased from 48 percent in 1988 to 43 percent in 1991. The proportion of exports to the EC fell slightly during this time, remaining around 20 percent of East Asian computer exports. Japan's share of East Asian computer exports was the smallest of any major computer market throughout the period and,

[148] Korea is also experiencing a shortage of land and labor. However, USITC staff interviews reveal that only one or two of the "Big Five" conglomerates are planning any offshore production. Korean-based companies and government representatives, interviews by USITC staff, East Asia, Oct. 1992.

[149] U.S. Department of Commerce, "Singapore—Economic Trends," *Market Research Reports*, June 29, 1992.

[150] U.S. Department of State, "USITC Study: Hong Kong Final Reply," message reference No. 254670, prepared by U.S. Embassy, Hong Kong, Sept. 1992.

[151] Re-exports are defined as products that were imported into a country and exported without any substantial modifications.

[152] This scenario may cause trade among East Asian countries to appear more significant than it is, as it inflates trade figures with products that are not significantly altered while in Hong Kong. USITC staff estimates from the Census and Statistics Department, Hong Kong, *Hong Kong Trade Statistics*, Dec. 1991.

[153] Asian-based companies, USITC staff interviews, East Asia, Oct. 1992.

[154] IDC, interview by USITC staff, Hong Kong, Oct. 1992. In 1991, OEM/ODM sales accounted for a large portion of Taiwan computer sales: PCs, 49 percent; notebook computers, 80 percent; and monitors, 63 percent. Joe Kovar and Grace Ho, "Taiwan's Information Technology Industry Attains Champion Status," *OEP*, Aug. 1992, p. 54, and "The Datamation 100: Asian 25," *Datamation*, Sept. 25, 1992, p. 82.

[155] Korean-based company, USITC staff interviews, East Asia, Oct. 1992.

[156] Keith Edwards, "Foreign Investment Builds Industry in Singapore," *OEP*, Aug. 1992, p. 57.

[157] "Taiwan Falls in Information Goods Ranking," *Asian Sources Computer Products*, Aug. 1991, p. 27, and U.S.-, Taiwan-, and Korean-based producers in East Asia, USITC staff interviews, East Asia, Oct. 1992.

although it grew most dramatically, remained below 4 percent of regional computer exports. Computer producers in Japan and East Asia say that Japanese customers tend to perceive goods not made in Japan as of poor quality and are willing to spend more money on products assembled domestically.[158]

The East Asian computer products most in demand in international markets were price-elastic products, such as PCs, disk drives, and low-end peripherals. Production of these products is concentrated in different East Asian countries, several of which supply a significant portion of the world market. In 1990, Taiwan supplied the global market with 67 percent of its motherboards, 36 percent of its monitors, 35 percent of its scanners, and 72 percent of its mouse devices.[159] That same year, Korea accounted for 34 percent of the monitors in the world.[160] Singapore dominates the world disk drive industry, producing over 50 percent of the world's supply, worth $3.8 billion in 1990.[161]

NIE imports from outside the region totaled $6.0 billion in 1991, a decrease from around 75 percent in 1988 to less than 60 percent of total imports, reflecting a declining dependence on imports as the NIEs gain technological expertise. Korea's imports-to-consumption ratio for computer products dropped from 74 percent in 1986 to 46 percent in 1990.[162] Increases in domestic production are often a result of joint ventures and technology transfer to East Asian companies. In 1992, for example, Unisys agreed to give technical assistance to the Ministry of Trade and Industry of Korea to help establish mainframe production in Korea.[163] As production capabilities grow in the second tier countries, imports by these countries are expected to slow also because, like the NIEs, firms in these nations will no longer be solely dependent on outside sources for computer parts and equipment. However, most East Asian countries still depend almost entirely on imports for their supply of upper end computer products and components. This is evident in Taiwan and Korea, where portable computer makers are dependent on flat panel display (FPD) imports from Japan. Semiconductors and disk drives often come from U.S.-based producers' manufacturing facilities in Asia and elsewhere.

Products from Japan and the United States each accounted for approximately 44 percent of the NIEs' imports from outside the region and 25 percent of total imports in 1991. Imports from the EC accounted for only 3 percent of total imports and 5 percent of imports from outside East Asia. The primary imports from Japan were parts and components, such as FPDs and floppy disk drives, for incorporation into finished products intended for North American and European markets. In 1990, Taiwan imported approximately $60 million worth of LCDs, 90 percent of which were supplied by Hitachi, Sharp, and Toshiba.[164] In addition, Japan supplies the bulk of the upper end peripheral markets. A significant proportion of imports from the United States is similar to imports from Japan; however, imports from the United States include a higher proportion of mainframe and minicomputers. The United States is the dominant supplier of large-scale systems and accounts for over 70 percent of the minicomputer and mainframe markets in China, Indonesia, Korea, and Taiwan. U.S. computer products are popular because the companies have reputations for quality products, long-standing associations in East Asia, and good relationships with regional governments.[165]

Investment

The United States and Japan are the largest foreign investors in East Asian computer operations. Investment approaches differ in that U.S. investment tends to be in facilities that produce or assemble finished products, whereas Japanese investment is concentrated in component and parts manufacturing. Recently, foreign investment from the United States and Japan has slowed in response to their weakening domestic economic conditions. At the same time, the East Asian NIEs represent a small, but growing, share of total foreign investment. However, this investment does not appear to be organized by the East Asian governments in any way.[166]

Several of the East Asian NIEs have been encouraging foreign investment for over 20 years. At first, their objective was to boost their economies by creating jobs and developing strategic industries. Later, their focus shifted to technology transfer. The governments of Singapore, Taiwan, and Korea are encouraging R&D and technological processes through their investment policies for domestic and foreign firms. Singapore offers a tax incentive, known as Pioneer Status, to foreign or domestic companies that carry out high-technology R&D and make other investments in designated high-technology industries.[167] In Taiwan, the Statute for Upgrading

[158] Japanese research firms and Asian-based companies, USITC staff interviews, East Asia, Oct. 1992. Statistical information on consumer perceptions can be found in *An International Survey of Consumers' Perceptions of Product and Service Quality*, a Gallup Poll conducted for the American Society for Quality Control, 1991.

[159] III, *Taiwan's Personal Computer Industry Report*, p. 17.

[160] Ibid., p. 57.

[161] *Economic Development Board Yearbook 1990/91* (Singapore, Economic Development Board, 1991), p. 75.

[162] This is substantial because stringent import controls were in place until 1988. The Korea Development Bank, *Industry in Korea 1991*, 1991, p. 118.

[163] Kim Nak-Hieon, "Korea Poised To Begin Mainframe Production," *Electronics*, June 15, 1992, p. 6.

[164] Dieter Ernst and David O'Connor, *Competing in the Electronics Industry* (Paris: OECD, 1992), p. 60.

[165] Asian-based companies and Asian government officials, USITC staff interviews, East Asia, Oct. 1992.

[166] U.S.- and Asian-based companies producing in East Asia, USITC staff interviews, East Asia, Oct. 1992.

[167] U.S. Department of Commerce, International Trade Administration (ITA), "Singapore—Electronic Components—Electronics Industry," *Market Research Reports*, Apr. 1988.

Industries Tax Law (1991) gives tax credits of 5 to 20 percent to companies that invest in automated production equipment, technology, or R&D outlays. The Government is also willing to provide loans for R&D or help with development costs.[168] Capital-intensive investment is being encouraged in the NIEs through tax and investment policies while worldwide computer price wars are forcing firms to move labor-intensive production from the NIEs to lower cost countries in East Asia.

China, Indonesia, Thailand, and Malaysia are still seeking investment from the United States, Japan, and other Asian countries in low-end products because they are developing their industries and infrastructures. The incentives to investment in these countries vary. For instance, while free trade zones are prevalent in all four, China offers some producers a guaranteed percentage of sales in the domestic market.[169] Malaysia has formed a Linkage Policy to strengthen the bonds between foreign subsidiaries and local supporting industry. Technology transfer from the foreign companies has been singled out as crucial to the success of this policy.[170]

Investment Within East Asia

Domestic firms based in some of the NIEs are shifting manufacturing to developing East Asian nations to geographically place labor-intensive production facilities in low-cost countries while keeping R&D activities and higher technology products near headquarters. Investment within East Asia is occurring as a result of individual companies' reactions to market and production conditions, not as a result of an organized integration scheme.[171]

Computer producers based in Hong Kong and Singapore have established a presence in one or more East Asian countries in order to escape rising domestic labor costs, enter new markets, and find resources unavailable domestically (fig. 7-1).[172] Many companies in Singapore and Hong Kong have invested just across their borders in Malaysia and Southern China. Singapore formed the growth triangle with Indonesia and Malaysia in 1989 to combine the technology, labor, and land of the three countries into cooperative production. In Southern China, subsidiary firms are often under the direct management or control of the Hong Kong parent.[173] According to one electronics executive, "about 99 percent of Hong Kong's manufacturers already have moved some production to China to reinforce competitiveness."[174] For instance, Video Technology Computers has four factories in China, producing keyboards, cases, and power supplies for its own computer systems and OEM customers.[175] In an attempt to rationalize resources, Taiwan companies have invested in facilities in Southern China through Hong Kong corporations because of the ban on direct trade with China. These firms have invested in China partly to gain market access and partly to benefit from lower component costs.[176] Investments in China not only reduce production costs but also enhance sales opportunities in China by avoiding some trade restrictions.

Investments within East Asia include wholly-owned subsidiaries as well as joint ventures. Wholly-owned operations are frequently labor-intensive component facilities that have been moved to lower cost countries. Joint ventures take advantage of different companies' talents and East Asian countries' resources, and may also include partners from outside the region. Elcap Electronics of Hong Kong and TEAC of Japan are jointly conducting R&D and producing semiconductors and disk drives in China for sale in the Asian market.[177]

Investment in East Asia by the Rest of the World

For companies outside the region, the reasons for and patterns of investment in East Asia are much the same as for those companies within East Asia, and U.S. and Japanese investors are now moving labor-intensive processes from the Asian NIEs to other Asian countries in search of lower costs. For instance, as their products reach maturity, Conner Peripherals and Seagate have been moving production from Singapore to Malaysia and Thailand, respectively, to reduce costs and endure strong price competition.[178] Japanese companies are following the same principle: Hitachi and Mitsubishi produce keyboards in wholly-owned subsidiaries in Malaysia and joint ventures in China.[179]

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[168] "An Ambitious Taiwan Beckons U.S. Electronics Partners," *Electronic Business*, Dec. 9, 1991, p. 38.

[169] U.S.-based companies producing in East Asia, USITC staff interviews, East Asia, Oct. 1992.

[170] "Incentives for Foreign Investment," *Tradescope*, Oct. 4, 1992, p. 4.

[171] U.S.- and Asian-based companies producing in East Asia and research and computer associations in Japan and Asia, USITC staff interviews, East Asia, Oct. 1992.

[172] Singaporean Government and trade association officials and U.S. companies producing in Asia, USITC staff interviews, East Asia, Oct. 1992.

[173] U.S. Department of State, "USITC Study: Hong Kong Final Reply," message reference No. 254670, prepared by U.S. Embassy, Hong Kong, Sept. 1992.

[174] Grace Ho and Joe Kovar, "Hong Kong's Pivotal Geographic Position Enhances Its Attractiveness," *OEP*, Aug. 1992, p. 56.

[175] *Asian Sources Computer Products*, Aug. 1991, p. 110.

[176] U.S.-based firms producing in East Asia, USITC staff interviews, East Asia, Oct. 1992.

[177] *Asian Sources Computer Products*, Aug. 1991, p. 122.

[178] Both are U.S. disk drive firms with large manufacturing capabilities in Singapore. U.S.-based firms producing in East Asia, USITC staff interviews, East Asia, Oct. 1992.

[179] Japanese research firms and U.S.-based firms producing in Asia, USITC staff interviews, East Asia, Oct. 1992.

Other reasons for investment in East Asia are market access, proximity to customers, and proximity to suppliers. The rapidly growing economies of East Asia are potentially large computer markets, and many firms are beginning to supply these markets from local manufacturing operations. Apple recently established a marketing and service base in Taiwan in an attempt to encourage sales of its computers there.[180] In some countries, such as China, investment is a means of gaining market access and, in all East Asian nations, a local presence provides better market information and facilitates after-sales service. Manufacturers also benefit from close proximity, and thus good communication, with suppliers.

The leading investors in East Asia are corporations based in the United States and Japan, such as IBM, Hewlett Packard, Apple, Compaq, and Fujitsu. The majority of U.S. investment in East Asia is occurring through multinational companies, whereas the majority of Japanese investment in East Asia is occurring through small firms.[181] Companies from the United States have historically been large investors in the region and although they continue to invest, it is at a slower rate than before. Japanese companies are relatively new investors in East Asia, but their rate of investment in recent years has been equal to, or greater than, that of any other investor in the region. While U.S. firms dominate foreign investment in PCs, disk drives, and mid-range computers, Japanese investment is concentrated in the parts and peripherals production. For instance, Toshiba Display Devices produces cathode ray tubes (CRTs) in Thailand, and Fujitsu has produced printer parts there since 1990.[182] Other than the Philips monitor facility in Taiwan, European computer companies do not have significant investments in East Asia.

Japanese investment in computers differs from U.S. investment in computers in that Japanese companies tend to prefer wholly-owned operations and to bring their supplier companies with them, rather than to build domestic supplier relationships. Although these patterns of investment may have the appearance of an extended keiretsu,[183] the suppliers that the Japanese companies bring with them are often small companies, removed from the keiretsu. Companies based in the United States often encourage their suppliers to also move with them, but U.S.-based companies are usually more willing to try new suppliers in the host country than are Japan-based companies.[184]

Although Japanese investment in East Asia has increased relative to other investment in recent years, Japanese manufacturers still do not play a central role in the East Asian computer industry. Investment increased partly because the 1985 Plaza Accord caused the yen to appreciate against the dollar, increasing the cost of producing in Japan for export to the United States. Recently, investment from Japan has slowed as economic growth in Japan has languished.

Officials in East Asian countries say they prefer U.S. to Japanese investment for several reasons.[185] First, East Asian countries are eager for technology transfer, and Japanese companies are reportedly reluctant to share advanced technologies that their Asian competitors do not have. Second, although relations between the East Asian nations and Japan are good, there is an air of distrust that inhibits close working relationships with Japan, causing many East Asian countries to be more at ease with U.S. investors. Last, the Japanese policy of reserving most managerial jobs for Japanese nationals does not compare well with U.S. firms that hire many local managers.[186]

On the other hand, Japanese companies use East Asian resources differently than U.S. companies. The sheer size of Japanese-based companies, coupled with their dependence on vertical integration, greatly compounds the amount of time it takes Japanese firms to adapt to emerging technology. As a result, Japanese computer firms are often not the leading competitors in markets that depend on quickly changing technologies, such as hard disk drives and PCs.[187] Rather than investing, Japanese companies are more inclined to make a prototype and use OEM sourcing of that product for 2 to 3 years until the product stabilizes; then, the Japanese companies begin their own production. For instance, Fujitsu, Canon, and NEC buy products on an OEM basis from Acer for sales in the United States.[188] This method, unlike traditional Japanese business practices, brings the products to market much sooner and gives the companies flexibility to change suppliers, instead of entire manufacturing facilities, as product lines change.[189]

[180] Krista M. Conley, "Planting Another Apple," *Electronics*, July 1991, p. 12.

[181] Although some Japanese multinationals, such as Fujitsu and Hitachi, have facilities in East Asia, small component manufacturers are the main investors in the region. U.S.- and Asian-based companies producing in East Asia, USITC staff interviews, East Asia, Oct. 1992.

[182] Royal Thai Government, Office of the Prime Minister, Office of the Board of Investment, *Investment Opportunity Study: Electronics Industries in Thailand*, Oct. 1991, annex 1, and "Outlook 1992: Thailand," *Asian Sources Computer Products*, Jan. 1992, p. 518.

[183] Keiretsu are organizations of companies that supply one another and use the same trading companies, creating a close-knit, family-like relationship between buyers and sellers. Keiretsu membership generally revolves around banks or trading companies, and members often have crossholdings of stock in other keiretsu-affiliated firms. These connections are said to result in flexibility, dependability, and access to strong distribution channels. Imai Ken'ichi, "The Legitimacy of Japan's Corporate Groups," *Japan Echo*, No. 3, (1990),

[183]—*Continued*
p. 24; Dick K. Nanto, "Japan's Industrial Groups, the Keiretsu," in *Japan's Economic Challenge*, p. 76.

[184] Asian-based companies producing in East Asia and Japanese research firms, USITC staff interviews, East Asia, Oct. 1992.

[185] East Asian government representatives, USITC staff interviews, East Asia, Oct. 1992.

[186] East Asian computer associations and U.S.-based companies, USITC staff interviews, East Asia, Oct. 1992.

[187] U.S.- and Asian-based computer firms producing in East Asia and Japanese research firms, USITC staff interviews, East Asia, Oct. 1992.

[188] Ibid.

[189] Japanese research firms, USITC staff interviews, East Asia, Oct. 1992.

Implications

Throughout the East Asian region, the level of computer technology and production is increasing at the same time the East Asian markets for computer equipment are growing at 20 to 30 percent per year. Producers in East Asia, both domestic and foreign-owned, are supplying an increasing share of that market. In addition, investment patterns within the region contribute to increasing intraregional trade. As producers set up operations in more than one East Asian country, intracompany transfers increase regional trade. Sourcing from regional suppliers allows firms to rely upon just-in-time inventory and source from several different suppliers, changing when components are difficult to obtain or prices change.[190] Inasmuch as individual companies expand operations across East Asian borders to take advantage of lower wages or to gain market access, a form of integration is occurring. For instance, Acer, based in Taiwan, opened a plant to manufacture printers in Malaysia and entered a joint venture with Pilecon Engineering Bhd. to increase computer sales in Malaysia.[191]

East Asian investment patterns in the computer industry are not necessarily indicative of an explicit integration plan, but rather the result of three market-oriented factors. First, proximity and availability of resources are driving investment from Hong Kong and Taiwan to Southern China and from Singapore to Malaysia and Indonesia. Second, as the United States and Japan transferred labor-intensive production to the Asian NIEs, as well as to Mexico and a number of other places, the NIEs are similarly transferring their low-technology production to Malaysia, Thailand, Indonesia, and China. Both foreign-owned and domestic firms in East Asia are shifting production of more mature products to lower cost, less technologically advanced countries. Third, in countries that have barriers to trade, such as China, market access drives investment.

Imports of older technology products from Japan and the United States will likely continue to decline. Instead, imports into East Asia will be concentrated in products. Trade with the United States will also be influenced by the establishment of assembly operations in the United States by East Asian producers. This will reduce both East Asian imports of U.S. components and exports of subassemblies and finished products to the United States from East Asia.

The implications for investment by the United States and Japan in East Asia are mainly dependent on the availability of investment capital and a willingness to transfer technology. If investment capital from the United States is not available, East Asian countries will turn to other sources, including Japan. Barriers to investment in industries are minimal, and those that remain are diminishing. However, incentives for investment and favorable treatment by East Asian governments will increasingly be focused on investments in industries that transfer technology, create engineering and other skilled jobs, and produce products with high value-added in East Asia. Computer production certainly fits that profile.

[190] Asian- and U.S.-based firms producing in East Asia, USITC staff interviews, East Asia, Oct. 1992.

[191] Taiwan-based computer firms and associations, USITC staff interviews, East Asia, Oct. 1992; China External Trade Development Council, *Computer Industry Update*, 1991; *Acer Annual Report*, 1991.

Refined Petroleum Products and Primary Petrochemicals

The United States and Western Europe are the major investors in the development of East Asia's refining and petrochemicals industries. Total U.S. refining and petrochemical investment in 1991 was estimated at $5 billion, compared with Japanese investment of $1 billion. Asia's demand for chemicals is now expanding at a rate twice as fast as demand in North America and Western Europe. By the year 2000, Asia's market for chemicals is expected to surpass that of North America in size.

Integration of East Asia's refined petroleum products and primary petrochemicals industries has been limited by government policy and national attitudes. However, improved transportation and storage facilities for needed feedstocks are being constructed. Foreign multinationals have also linked capital, technology, and inputs from various sources at production sites throughout the region. While there may be some degree of cooperation among various subsidiaries of multinational firms occurring in East Asia, prospects for nation-to-nation integration in these industries remain poor.

Refined Petroleum Products

East Asia possesses significant reserves of crude petroleum and natural gas, the precursors to the production of refined petroleum products and primary petrochemicals.[192] But in terms of crude petroleum

[192] Refining operations include the production of gasoline, fuel oils, jet fuels, and so forth. Primary petrochemicals include natural-gas-based ethylene, propylene, and butadiene and their derivatives, as well as aromatics, benzene, toluene, and xylenes.

and natural gas drilling and production, refining, and petrochemical production technologies, the United States is the world's leader. The two countries in the region possessing the largest crude petroleum reserves, China and Indonesia, are also the region's most significant producers (table 7-4). In terms of natural gas, Indonesia and Malaysia have the highest reserves and account for the most significant production.

The ASEAN nations account for 4.2 percent of the world's crude petroleum refining capacity. Indonesia and Singapore have 71 percent of ASEAN's total refining capacity (table 7-5). Both nations permit some form of foreign investment. Although the other nations in the region, with the exception of Hong Kong, currently operate refining capacity, these nations do not possess the crude petroleum reserves necessary to maintain or establish world-scale refineries.

Table 7-4
Crude petroleum and natural gas, estimated proved reserves and production, by country, 1991

Country	Estimated proved reserves		Production	
	Crude petroleum	Natural gas	Crude petroleum	Natural gas
	1,000 barrels	*billion c/ft*	*1,000 b/d*	*trillion c/ft*
Indonesia	6,581,293	64,837	1,432.6	1.47
Malaysia	3,045,000	59,055	629.0	.63
Thailand	262,000	13,600	46.6	.19
Brunei	1,350,000	11,200	151.3	.32
Philippines	38,000	100	3.0	0
Singapore	0	0	0	0
Total ASEAN	11,276,293	148,792	2,262.5	2.61
China	24,000,000	35,400	2,800.0	.52
Taiwan	4,000	670	1.9	0
Korea	0	0	0	0
Hong Kong	0	0	0	0
Japan	59,753	968	14.0	.07
United States	26,250,000	169,300	7,371.4	17.61
Other	929,421,402	4,022,926	47,469.7	53.46
Total world	991,011,448	4,378,056	59,919.5	74.27

Note.—"b/d" stands for barrels per day; "c/ft" stands for cubic feet.

Source: "Worldwide Report," *Oil and Gas Journal*, Dec. 30, 1991.

Table 7-5
Number of operating refineries, refining capacity, and percent of world refining capacity, by country, 1991

Country	Number of operating refineries	Refining capacity	Share of world capacity
		1,000 b/d	*Percent*
Indonesia	6	860	1.4
Malaysia	4	210	0.4
Thailand	3	221	0.4
Brunei	1	10	([1])
Philippines	4	287	0.4
Singapore	5	893	1.5
Total ASEAN	23	2,481	4.2
China	40	2,200	3.7
Taiwan	2	543	0.9
Korea	6	1,163	2.0
Hong Kong	0	0	0
Japan	41	4,612	7.8
United States	190	15,327	25.8
Other	430	33,031	55.6
Total world	732	59,357	100.0

[1] Less than 0.05 percent.

Note.—Due to rounding, percentages may not add to 100; "b/d" stand for barrels per day.

Source: Official statistics of the U.S. Department of Energy.

The other leading refiner in the region, China, accounts for 3.7 percent of the global refining capacity. The industry consists entirely of the state-controlled China Petro-Chemical Corporation (Sinopec); direct foreign investment is not permitted.[193] Sinopec's input prices are controlled by the Government of China in its Five-Year Plan, and the industry's production is determined by the interaction of quotas and nonmarket prices for various refined petroleum products. Prices for refined petroleum products for domestic consumption are currently set at about one-quarter of the world market price, and as a result, Sinopec's advanced refining equipment and processing technology are not fully utilized. In response to the Government's intention to raise plan prices to international levels by 1995, Sinopec has announced capacity expansion plans, including a 350,000 barrels per day refinery in Huian, Fujian Province, which are due to come onstream in early 1995.[194]

Singapore

Production and Consumption

Singapore has no reserves of crude petroleum but, because of its location between the East and the West and its natural deep-water ports, it is one of the world's leading refining centers, ranking third behind Houston and Rotterdam. During the mid-1980s, many refiners, such as Shell Singapore, decreased capacity as a result of a worldwide glut of refined petroleum products. However, by the late 1980s capacity was brought back onstream as an increasing number of countries and companies looked toward Singapore as the region's hub for increased trade and distribution.

Singapore primarily produces higher valued products such as distillate fuel oils, jet fuels, and gasoline, generally for export. Domestic consumption consists principally of residual and distillate fuel oils. The following tabulation, derived from official statistics of the U.S. Department of Energy, shows Singapore's production and consumption of refined petroleum products (in 1,000 barrels per day):

Year	Production	Consumption
1987	840	372
1988	848	382
1989	839	382
1990	878	380
1991	896	380

[193] U.S. Department of State, "The 1992 Oil and Gas Report," message reference No. 150947Z, prepared by U.S. Embassy, Beijing, Sept. 1992, pp. 2-3.
[194] Ibid.

One of Singapore's main attractions as a refining center is its ability to adapt to changing circumstances. Singapore can handle 40 different configurations of crude petroleum, ranging from low-sulfur sweet crudes from the Middle East to high-sulfur sour crudes from China, Malaysia, and Indonesia. Singapore's major sources of crude petroleum imports are the United Arab Emirates, Saudi Arabia, China, Malaysia, and Australia. Singapore is currently the largest market for Malaysian crude, refining 23.7 percent of the country's production in 1991.

Singapore, with world-scale, technologically advanced refineries, has developed into a "swing" producer[195] of refined petroleum products. Its location, near the crude petroleum producers in the Persian Gulf and Asia and in the center of international shipping lanes, and the ability of its refineries to switch crudes, have made Singapore capable of satisfying regional demand for refined petroleum products when other nations in the region with crude petroleum reserves cannot. During the Persian Gulf war, Singapore increased production with refineries operating at or over capacity in order to supply Saudi Arabia with jet fuel.[196]

Trade

Singapore maintains a positive balance of trade in refined petroleum products, importing small quantities of residual fuel oils and exporting distillate fuel oils, jet fuels, gasoline, and lubricating oils. The following tabulation, derived from official statistics of the U.S. Department of Energy, shows Singapore's imports and exports of refined petroleum products (in 1,000 barrels per day):

Year	Imports	Exports
1987	330	798
1988	340	806
1989	346	803
1990	350	848
1991	350	866

Indonesia is Singapore's major source of refined petroleum products. The principal export markets are all in Asia—in rank order, Japan, Hong Kong, Malaysia, and China.

Government Policy

One hundred percent foreign ownership is permitted and encouraged in Singapore's refining industry. Britain is the largest investor, followed by the United States. There are five operating refineries, with the largest being the Shell refinery, a Netherlands-

[195] The term "swing" producer refers to Singapore's role as a producer that increases or decreases its production in order to maintain a particular level of production for the region.
[196] U.S. Department of State, "USITC Investigation on Economic Integration in East Asia: Singapore," message reference No. 07538, prepared by U.S. Embassy, Singapore, Sept. 1992.

based company. The other refineries are Esso and Mobil, both U.S.-based companies; British Petroleum; and the Singapore Refining Company (SRC), a joint-holding company, 40 percent owned by the state-owned Singapore Petroleum Company (SPC) and 60 percent owned by British Petroleum and Caltex.

Investment and Implications

The focus of Singapore's expansion plans are in upgrades and debottlenecking.[197] Plans are geared to supplementing Singapore's expanding role as the major refining center in the region and developing downstream industries. Mobil recently began to increase distillation capacity at its 235,000 barrels per day refinery by 10,000 barrels per day and added a new 38,000 barrels per day continuous catalytic reformer to ensure a captive supply of naphtha feedstock for its aromatics complex. The $662 million investment program is to be completed by late 1993. Esso Singapore's plans include a $600 million upgrade of its 225,000 barrels per day of distillation capacity by an additional 30,000 barrels per day. SRC plans to increase capacity by 30,000 barrels per day from its current 210,000 barrels per day by mid-year 1993.[198]

After reopening a 378,000 barrels per day refinery in the late 1980s, Shell Singapore is planning an increase in late 1993 in its distillation capacity by 40,000 barrels per day, at a cost of $75 million to come onstream. With the planned expansions, Shell's capital investment in Singapore will total over $2 billion.

Singapore's refineries also face many challenges in the future. Singapore depends solely on imported crude petroleum to feed its refineries; in the past, contracts have been terminated, resulting in a shortage of crude for Singapore's refineries. Also, milder winters in Europe and North America, coupled with other refineries coming onstream in other ASEAN nations, resulted in a drop in Singapore's refining margins to $1.50 per barrel in 1992, from $5 per barrel in 1991.[199]

Indonesia[200]

Production and Consumption

The primary refined petroleum products produced by Pertamina, Indonesia's state-owned petroleum company, are distillate fuel oils, kerosene, and gasoline. Indonesia's refineries are sophisticated, world-scale facilities that satisfy domestic demand and provide enough surplus gasoline and distillate fuel oils for export; however, domestic demand has increased more rapidly than expected, and new refineries need to be brought onstream if self-sufficiency in such products as residual fuel oils is to be maintained. During 1986-90, production increased by 29 percent while consumption increased by 34 percent, as shown in the following tabulation (1,000 barrels per day):[201]

Year	Production	Consumption
1986	550.0	470.0
1987	568.7	491.6
1988	606.5	514.0
1989	640.4	547.9
1990	711.4	629.7

Trade

Indonesia has historically maintained a positive balance of trade in refined petroleum products; however, according to industry sources, imports have recently begun to outpace exports because domestic production increases failed to satisfy domestic demand. The following tabulation shows Indonesia's imports and exports of refined petroleum products (1,000 barrels per day):[202]

Year	Imports	Exports
1986	79.3	159.3
1987	110.8	187.9
1988	112.4	204.9
1989	138.3	230.8
1990	158.0	239.7

Japan is Indonesia's major trading partner, accounting for nearly 70 percent of its imports of refined petroleum products and 85 percent of its exports. Singapore accounts for most of the remaining 30 percent of Indonesia's imports; Korea and Singapore account for the remaining 15 percent of Indonesia's exports. The United States accounts for less than 1 percent of Indonesia's refined petroleum products trade.

Government Policy

Foreign capital and technology from private companies are welcome in the development of Indonesia's reserves of crude petroleum and natural gas; however, the Government of Indonesia must, by law, play a predominant role in hydrocarbon exploitation. The Department of Mines and Energy has the primary responsibility for energy; within the department, the Directorate General for Oil and Gas (MIGAS) oversees the operations of Pertamina and its

197 "Upgrades" refer to plant modernization; "debottlenecking" refers to the elimination of conditions that have led to production delays or stoppages.

198 "Singapore Refiners in Midst of Huge Construction Campaign," *Oil and Gas Journal*, July 20, 1992, pp. 23-28.

199 Ibid., p. 24.

200 Indonesia is a member of the Organization of Petroleum Exporting Countries (OPEC).

201 OPEC, *Annual Statistical Bulletin*, 1990.

202 Ibid.

foreign contractors. All foreign companies operate under production-sharing contracts with Pertamina. Under these contracts, management rests with Pertamina, and output is split between the contractor and Pertamina generally on a 15/85 basis. The foreign contractor finances all production and development costs, but is entitled to recover its operating costs and capital investment before the split is applied.[203]

In October 1991, Indonesia established the Foreign Commercial Debt Coordinating Team to combat the nation's soaring public debt and set up policies that would allow for foreign investment in the downstream sectors.[204] The team established public sector foreign borrowing debt ceilings of $5.9 billion per year for 3 fiscal years, ending in March 1995. During the 1991-92 fiscal year, Pertamina was limited to raising $1.5 billion in foreign funds—a sharp cutback. To ease the constraint, certain sectors, including refining, were opened to 100 percent foreign equity investment in the spring of 1992.[205]

Investment and Implications

Domestic demand is rising so quickly that, without additions to its refining capacity or a switch from export to domestic sales, Indonesia could find itself in the position of becoming a net importer of certain refined petroleum products. Indonesia needs to discover 500 million barrels of crude petroleum per year to maintain current export levels and to satisfy domestic demand.

The government recently announced its commitment to building two new export-oriented refineries, EXOR-1 (export-oriented refinery) and EXOR-4 but, given the rise in domestic demand, these two refineries could possibly be devoted to domestic needs. EXOR-1, which is expected to be onstream in early 1994, will be wholly owned by Pertamina. Its estimated cost of $1.8 billion is being funded by a loan from a consortium of Japanese trading houses, led by Mitsui.[206] EXOR-1 will provide an additional 125,000 barrels per day of capacity. Because the funding for EXOR-1 was already in place before the Foreign Commercial Debt Coordinating Team's ceilings were established and construction was far advanced, it was exempted from the new regulations. EXOR-4 is a joint venture between Pertamina and its equal partners, British Petroleum and Japan's C. Itoh, involving construction of a 120,000 barrels per day refinery at a cost of $600 million during its first phase. However, the project, which was expected to be onstream by 1995, has been put on hold.

Indonesia's new investment laws allowing 100 percent foreign ownership of refineries may result in the resumption of construction of EXOR-4, as well as other refinery projects. Private firms are seeking joint-venture partners abroad in an effort to resurrect projects put on hold under the new ceilings. As a result, production-sharing agreements are now being negotiated.

The loan ceilings for Pertamina, set to rise during the early 1990s and reach $1.4 billion by 1994, have been earmarked for upgrading two refineries in East Kalimantan and for expanding the Cilacap refinery. Production-sharing agreements are being offered on these projects in an attempt to make them more attractive to foreign investors.

The planned investments that will actually achieve full operating status during the 1990s will be those with substantial involvement from major multinational petroleum producers, both in terms of investment and technology. The expanded production capacity will provide products needed to satisfy the increasing demand in the East Asian nations as well as other industrializing nations, such as Vietnam and India. Anticipated growth in both size and per capita consumption of these expanding markets could absorb much of the production capacity currently slated to come onstream. Trade patterns for refined petroleum products are thus not expected to change in any significant way for the United States, Japan, or Western Europe.

The possession of ample feedstock sources for the production of refined petroleum products tends to create an intense feeling of nationalism; therefore, much of the industrial development associated with these resources in East Asia, as has been common throughout many developing industrial nations (i.e., the Middle East, Mexico), will be preserved as a wholly domestic and sometimes state-involved undertaking. Foreign investment in crude petroleum and natural gas may be accepted, and even encouraged, but often only when the particular technology or expertise of that firm is viewed as a necessary element to successfully complete a particular project. As a result, interregional cooperation that would extend beyond favorable trading conditions is highly unlikely.

Primary Petrochemicals

The nations of the Asia and Oceania[207] region together account for about one-third of the world demand for chemicals.[208] However, most of these nations are expected to remain net importers of primary petrochemicals and their major derivatives through 2000. The region's leading import suppliers in 1991 were Japan, the United States, and Western Europe. Interregional trade accounted for less that 10 percent of total trade.

[203] U.S. Department of State, "Annual Petroleum and Natural Gas Reports 1992," message reference No. 07538, prepared by U.S. Embassy, Jakarta, Aug. 1992, p. 4.

[204] "Just a Hint of Hesitation," *Petroleum Economist*, Feb. 1992, pp. 8-9.

[205] U.S. Department of State, "Annual Petroleum and Natural Gas Reports 1992," p. 4.

[206] "New Export Refineries Firm Up," *Petroleum Economist*, Jan. 1990, p. 4.

[207] East Asia (including Japan) and Australia.

[208] "Far East PE Ambitions Unsettle Trade Balance," *European Chemical News*, Feb. 10, 1992, p. 15.

Major expansions of East Asian primary petrochemical capacity are planned for 1994 through 2000. Such regionally concentrated expansions of production capacity, if realized, could involve a major and potentially unstable readjustment of world trading patterns. However, the likelihood of all such projects reaching fruition and the corresponding shift in trade occurring has been significantly reduced as the current worldwide glut of ethylene and other primary olefins[209] has persisted and kept world prices at a low level in recent years. Thus, East Asian production is unlikely to displace significant volumes of material currently imported from U.S., Japanese, Middle Eastern, and Western European sources.

Major Producers and Consumers

The most significant industrial forces currently involved in the production of primary petrochemicals in ASEAN are the same multinational companies that dominate the petroleum refining and primary petrochemical industries, as shown in the following tabulation:[210]

ASEAN nation	Multinational company/subsidiary
Brunei	Brunei Shell Petroleum (Royal Dutch Petroleum)
Malaysia	Esso Malaysia (Exxon)
	Shell Refining Company; partner with Federation of Malaysia (Royal Dutch Petroleum)
Philippines	Getty Oil Company
	Mobil Oil
Philippines	Shell Petroleum Corporation (Royal Dutch Petroleum)
Singapore	Amoco Far East Oil
	BP Singapore Pte Ltd
	Esso Singapore (Exxon)
	Mobil Oil Singapore
	Shell Oil

Non-ASEAN nations—Hong Kong, Korea, China, and Taiwan—are dominated by national petroleum and chemical companies. The primary feedstock used for petrochemical production in most of these nations is naphtha, a petroleum product, as opposed to ethane (the most common feedstock for petrochemicals in the United States derived from natural gas). The exception to this rule is Malaysia, which has a wealth of natural gas reserves that are easily recoverable at a minimum cost.[211]

[209] Propylene and butadiene.

[210] *Regional Surveys of the World: The Far East and Australia* (London: Europa Publications, 1991).

[211] Taiwan has an ethylene facility that is based on ethane feedstock. However, the facility is currently being refurbished to also accept petroleum liquids as a feedstock, because production from this plant was often suspended as supplies of ethane became unavailable.

Investment

The companies holding major interests in East Asian petrochemical production are primarily involved in the recovery, refining, and marketing of petroleum products and represent interests based in the United States and Western Europe. Although there is some Japanese investment in East Asia's primary petrochemical industries, it is on a far smaller scale.

U.S.-based multinational chemical producers, such as Dow Chemical, are also investing in new facilities for producing petrochemical intermediates and products either within or adjacent to existing primary petrochemical production facilities in East Asia.[212]

The East Asian nations with significant existing and planned primary petrochemical production capacity—Malaysia, Singapore, Thailand, Korea, China, and Taiwan—differ in many ways. Malaysia has a large volume of recoverable reserves of natural gas, totaling approximately 59 trillion cubic feet (an amount slightly more than one-third that of the reserves located in the United States).[213] Of these reserves, only about one-quarter are associated[214] with crude petroleum.[215] Therefore, production of primary petrochemicals based on natural gas feedstocks may be pursued without concerns about constraints in the flow of feedstock materials related to changes in the rate of recovery of crude petroleum.[216]

Plans exist for the development of new infrastructure that will enable other ASEAN member nations to take advantage of the natural gas resources in Malaysia, thus liberating their petrochemical industries from dependence upon imported petroleum-based feedstocks.[217] One project being explored is a natural gas pipeline that would cover many of the countries of Southeast Asia. The ASEAN member nations approved a feasibility study for this project at their ministerial meeting in 1991. (The study is to be completed in 1993.)[218]

The majority of the planned expansion in primary petrochemical capacity in East Asia will still be based on petroleum-based feedstocks, principally naphtha.

[212] "Chemical Companies Face Economic Slowdown and Competition, Decline in Export Markets," *European Chemical News*, Nov. 27, 1991, p. 33.

[213] "Worldwide Report," *Oil and Gas Journal*, Dec. 30, 1991, p. 48.

[214] Produced at the same time that crude petroleum is recovered.

[215] International Labor Office, Geneva, *China and Malaysia: Social and Economic Effects of Petroleum Development*, Dec. 1987, p. 96. In nations where production of associated natural gas is limited to a rate tied to the recovery of crude petroleum, plants based on natural gas feedstock cannot be operated efficiently because the restricted availability of feedstock materials could often interrupt the production process.

[216] Malaysia is also one of the seven liquefied natural gas (LNG) producing nations because of its abundance of available nonassociated natural gas.

[217] "Natural Gas Assumes Growing Role in Asia as Fuel, Chemical Feedstock," *Chemical and Engineering News*, Aug. 3, 1992, pp. 7-13.

[218] Ibid.

Major expansions[219] in olefin capacity[220] for nations other than Malaysia are shown in the following tabulation (in 1,000 metric tons):[221]

Startup date	Company	Anticipated capacity
Korea:		
1991	Samsung	385
1991	Lucky	385
1991	Hyundai[1]	385
1991	KPIC	250
1992	Honam PC	350
1993	Han Yang	385
Taiwan:		
1991	CPC No. 1	-55
1994	CPC No. 2	-235
1994	CPC No. 5	400
1995	Formosa	450
Thailand:		
1993-4	NPC1	60
1995	NPC2	350
Indonesia:		
1996	Chandra Asri	350
Singapore:		
1995	PC Corp.[1]	400

[1] Plans to use natural gas-based feedstocks.

Other expansions planned by the end of the 1990s include another three facilities in Indonesia, each with a capacity of 350,000 metric tons; two plants in the Philippines, with an anticipated aggregate capacity of about 700,000 metric tons; and one plant in Taiwan, with an additional 450,000 metric tons.[222]

Malaysia

The new ethylene production plant under development in Malaysia is a joint venture under the auspices of Ethylene Malaysia, with shares owned by Petronas, the Malaysian petroleum company (60 percent), Idemitsu, Japan (25 percent), and BP Chemicals, United Kingdom (15 percent). The associated downstream polyethylene plant, to be operated by Polyethylene Malaysia, is owned by BP Chemicals (45 percent), Petronas (40 percent), and Idemitsu (15 percent). Completion is expected in 1995.

[219] Although some of the changes shown appear to be decreases in production capacity, these changes involve debottlenecking projects. These projects may reduce production capacity at plants for short periods, while the overall facility is reconfigured so that capacity will be increased over the long term.

[220] Other expansions are planned; however, very little progress has been made in some of these plans, and industry analysts are unsure of whether these expansions will be completed.

[221] "The World Closes in on European Petrochemicals," *European Chemical News*, Mar. 23, 1992, p. 18.

[222] Ibid.

Korea

The Korean petrochemical industry is dominated by the production of olefins, primarily ethylene, from petroleum feedstocks. The major sources for these feedstocks are Saudi Arabia and Kuwait.[223] The ethylene that Korea produces is used by the domestic chemical industry to produce plastics, synthetic fiber materials, and synthetic rubber.

The supply of Korean ethylene is expected to outstrip domestic demand during 1992-96. The supply/demand surplus is expected to increase from 47,000 metric tons in 1992 to nearly 500,000 metric tons in 1996.[224] During the same period, the supply/demand balance for the primary products of the Korean petrochemical industry derived from ethylene would decrease, as shown in the following tabulation (in 1,000 metric tons):[225]

Product grouping/year	Supply/demand balance
Plastics:	
1992	2,351
1996	1,753
Synthetic fiber materials:	
1992	-574
1996	-1,351
Synthetic rubber:	
1992	47
1996	-22

It is anticipated that additional downstream derivative capacity will be developed to use the excess ethylene from the planned new capacity, or that the Korean plans for increased ethylene production may be delayed until the downstream projects can move beyond the planning stages.

Taiwan

Taiwan's primary petrochemical industry, currently operated solely by the state-owned Chinese Petroleum Company, is completely dependent upon imported feedstocks. There are currently four petrochemical complexes in Taiwan,[226] with a fifth expected to come onstream in 1994. There are six naphtha crackers to produce primary olefins and one natural gas-based plant at the three petrochemical complexes currently operating.[227]

[223] *Korean Chemical Industries: At the Crossroads*, paper presented by Key H. Kim, Senior Managing Director of Sunkyong Industries Korea, at the Asia-Pacific Chemicals Markets Conference, Houston, TX, June 18-19, 1992.

[224] Ibid., p. 5.

[225] Ibid.

[226] Only three are operating. One was shut down in mid-1990 because of a shortage of feedstock material.

[227] "Taiwan's Petrochemical Industry Entering New Development Phase," *Chemical and Engineering News*, Feb. 10, 1992, pp. 17-19.

The first privately owned ethylene cracker (by Formosa Plastics Corp. Group) is expected onstream sometime in 1995.[228] This cracker is to use imported petroleum-based feedstocks.

The increase in ethylene production in Taiwan is needed to supply new downstream derivative production. Taiwan's chemical industry concentrates on processing of primary petrochemicals and other chemical intermediates into final products, such as plastics, textiles, and rubber products.[229]

Singapore

Singapore functions as the trading center of Southeast Asia for chemicals [230] and is the world's third largest petroleum-trading center (after New York and London), primarily because of its continued political stability and substantial tax incentives.[231] In order to maintain this dominance through the next decade, the Singapore Government is emphasizing new developments in primary petrochemicals and in various downstream products, such as pharmaceuticals and specialty chemicals. As recent worldwide ethylene demand has remained flat, the domestic downstream projects will create the necessary outlet for the production from Singapore's proposed new world-scale ethylene plant, which is expected to come onstream during 1995-96.

A major infrastructure project related to petrochemical development in Singapore involves the tripling of land area that will be devoted to chemical production. The Government plans to connect the seven southern islands into one large land mass, initially adding approximately 1,000 hectares of usable industrial space.[232] Another 2,000 hectares of industrial land area will be added in projects expected to be completed in the next 10 to 15 years.[233] Four of the islands in the grouping are already occupied by petroleum refineries and primary petrochemical production facilities owned by Petrochemical Corp. of Singapore.[234]

In addition to the primary petrochemical development for the production of olefins, Mobil is investing more than $600 million in an aromatics complex expected to come onstream in 1993.[235] It is believed that Mobil Petrochemical International will market the plant's output predominantly in Southeast Asia.[236]

Other major foreign investors in new petrochemical capacity in Singapore are Exxon Chemical (United States), Shell (United Kingdom), GE Plastics (United States), and DuPont (United States).[237]

Thailand

New developments in primary petrochemical production in Thailand are also planned. The most significant project involves construction of a major petrochemical complex, NPC2, at Mab Ta Phut. A smaller scale project involves expansions for NPC1, the existing petrochemical complex, which is administered by the state-owned National Petrochemical Corp. (Bangkok). The centerpiece of this expansion project will be an increase in annual ethylene production capacity of about 70,000 metric tons.[238]

The core unit of the NPC2 complex will be a 350,000 metric ton ethylene/210,000 metric ton propylene facility owned by Thai Olefins.[239] The facility is being constructed through the combined financing and technology provided by Stone & Webster (United States), Daelim (Korea), and Sumitomo (Japan).[240]

China

The most ambitious of the development plans for any of the East Asian nations involves China. Significant investments from many of the world's major multinational producers of primary petrochemicals and petrochemical products have been announced for the next 5 to 10 years. The principal organization involved is the state-controlled China Petro-Chemical Corp. (Sinopec). Sinopec controls more than 70 subsidiaries operating 38 refineries, 21 other primary petrochemical production facilities, and numerous other downstream chemical facilities and various associated operations.[241]

As an indication of the credibility of Sinopec's plans, since 1983 Sinopec has brought onstream four 300,000 metric-ton-per-year ethylene plants; several others are reported to be in various phases of construction.[242] Additionally, three 300,000 metric-ton-per-year ammonia plants and three 520,000 metric-ton-per-year urea plants have been built.

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[228] *The Petrochemical Industry Development in Taiwan*, paper presented by Dr. Wenet P. Pan, Vice-President, Corporate Planning, Chinese Petroleum Corporation, at the Asia-Pacific Chemicals Markets Conference, Houston, TX, June 18-19, 1992.

[229] "Taiwan's Petrochemical Industry Entering New Developmental Phase."

[230] "Singapore Is Optimistic on Growth," *Chemical Week*, Feb. 12, 1992, p. 28.

[231] Ibid; "Shifting the World Map to China and Singapore," *European Chemical News*, June 8, 1992, pp. 22 and 24.

[232] Ibid.

[233] "Singapore Charms Western Investors," *European Chemical News*, June 8, 1992, pp. 18-21.

[234] Ibid.

[235] "Mobil Okays Singapore Plan for Aromatics," *Chemical Marketing Reporter*, Apr. 1, 1991, p. 7.

[236] Ibid.

[237] "The Far East Buildup Continues," *Chemical Week*, Mar. 20, 1991, p. 46.

[238] "The Ambitious Buildup," *Chemical Week*, Feb. 12, 1992, pp. 20-26.

[239] Ibid.

[240] Ibid.

[241] "China's Sinopec Sets Sights on International Petrochemical Market," *Chemical and Engineering News*, Feb. 24, 1992, pp. 9-11.

[242] Ibid., p. 10.

The most recent 5-year plan stipulates that ethylene production capacity will be brought up to 2.3 million metric tons per year by 1995, and to 3 million metric tons by 2000. These goals presume approximately 18 major chemical industry construction projects during the 1990s, of which 8 would be new ethylene plants and 3 would produce aromatic primary petrochemicals.[243]

The new construction will be undertaken as joint ventures with many of the world's largest petrochemical producers. Thus far, 15 different development projects have been announced.[244] ICI (United Kingdom), which recently withdrew from a planned joint venture in Thailand, licensed its technology for two primary petrochemical projects (to be built by Foster-Wheeler Corporation of the United States). Neste (the state-owned petroleum company of Finland) is discussing the addition of a processing facility to one of the existing Sinopec ethylene facilities. BASF (Germany) is studying the possibility of producing acrylic acid and polystyrene in collaboration with Sinopec. The Exxon Corporation (United States) is reportedly looking for small to medium-size ventures with which to enter the China market. Although Exxon is the world's largest polyolefin producer, it has not established any major primary polymer production facilities in East Asia. According to industry sources, however, Exxon has stated its intention to "participate in the region's future."[245]

Implications

Expectations of industry sources regarding trade patterns for primary petrochemicals involve no significant changes for the United States, Japan, or Western Europe. The planned investments that will actually achieve full operating status during the 1990s will be those with substantial involvement from major multinational petrochemical producers, both in terms of investment and technology.[246] The expanded production capacity for primary petrochemicals will provide the materials needed to meet rapidly expanding demand in the East Asian nations covered in this report and in other industrializing nations, such as Vietnam and India.

Anticipated growth in both size and the per capita consumption in these expanding markets could absorb much of the capacity currently expected. Industry analysts estimate that demand for chemicals in Asia is growing at a rate twice that of the industrialized West.[247] Demand in North America and Western Europe is growing at 2 percent and 2.5 percent, respectively. Demand growth of 4.8 percent annually in Asia now is expected to increase to 5.5 percent between 1995 and 2000.[248] Asia accounted for 26 percent of world chemical sales in 1990, compared with only 18 percent in 1974. It is expected that the Asian share of chemical sales will reach 30 percent by 2000.[249] At that point, the Asian chemical market ($460 billion) will be larger than that of North America ($380 billion).

The greatest potential for significant changes in trading patterns involves the possible displacement of Japanese exports of finished chemical products to East Asian nations. Currently, Japan supplies the majority of these various products to consumers throughout the region. However, if most of the planned primary petrochemical facilities are brought onstream as projected, and if there are also new processing facilities built to make use of the primary petrochemicals in the production of downstream materials, it is feasible that those East Asian nations with significant trade deficits in petrochemicals and the resulting downstream products may begin to meet their own domestic demand. Such a development could eliminate the need for these nations to import Japanese products. It is believed that U.S. exports and Western European exports to the East Asian region would be affected to a far lesser extent. Imports from the U.S. and Western European producers are in many cases transactions between associated companies. Generally, such trade involves parent companies supplying necessary materials for production of a final product in the East Asian nation. Much trade with Japan is believed to consist of imports of final products that are not available from domestic sources. Therefore, as the East Asian industry expands its range of available final products, it is far more likely that the imports from the Japanese firms will be the first to be displaced.

Although the increase in activity in the petrochemical sector throughout East Asia will generally increase the propensity for intraregional trade, much of the industrial development associated with energy resources in East Asia, as has been common throughout many developing industrial nations (i.e., the Middle East and Mexico), will be preserved as a wholly domestic, and sometimes state-involved, undertaking. Foreign investment may be accepted, and even solicited, but the materials produced by such joint ventures are still often perceived as belonging to the nation. Often these joint ventures involving foreign firms are solicited only when the particular knowledge, technology, or experience of that firm is viewed as a necessary element to complete a particular project successfully. Intraregional cooperation beyond favorable trading conditions is thus not likely.

[243] Ibid.
[244] "Shifting the World Map to China and Singapore," p. 24.
[245] Ibid., p. 34.
[246] Earl Anderson, "Asian Chemical Growth Poses Challenge to Western Chemical Firms," *Chemical and Engineering News*, Sept. 28, 1992, pp. 23-31.
[247] Ibid.
[248] Ibid., p. 24.
[249] Ibid., p. 23.

CHAPTER 8
Energy and Environmental Issues Affecting Trade, Investment, and Integration

Energy Needs and Resources

East Asia has attained one of the highest economic growth rates in the world—a trend that will likely continue in coming years. This high level of economic growth has translated into a similar increase in the region's demand for energy.[1] The annual growth in total energy requirements for the countries in East Asia averaged 6.4 percent between 1982 and 1989, compared with 2.2 percent for North America and 2.1 percent for the OECD countries of Europe (table 8-1).

The procurement of stable energy supplies and adequate generating capacity is considered a prerequisite for continued economic development. Shortages in energy supply, however, have already begun to threaten economic growth—particularly in such countries as China, Indonesia, and the Philippines. These shortages are not simply a matter of a lack of energy resources, but are also linked to a scarcity of capital and appropriate technologies, and inefficiencies in the existing power generation and distribution systems.

[1] The term "energy" in this chapter is used in a very broad context, and includes both renewable power sources (such as solar, biomass, and geothermal) and nonrenewable sources (such as petroleum, natural gas, coal, and nuclear).

Regional Overview—Energy Policies

Despite differences in energy resources and levels of development among the countries of East Asia, a similar set of basic policy objectives has emerged among all of the countries studied in this report. In brief, these policy objectives are the following:

Table 8-1
Total energy[1] consumption[2] for countries in East Asia, 1983-90
(Million metric tons oil equivalent)

Country	1983	1984	1985	1986	1987	1988	1989	1990
China	460.1	497.8	539.8	567.7	593.5	619.4	637.3	633.2
Korea	47.0	50.7	54.6	60.2	66.2	74.2	79.9	92.4
Taiwan	29.6	31.3	32.9	35.5	37.8	41.7	44.1	46.0
Indonesia	28.3	29.5	32.3	34.9	35.8	37.9	44.5	47.0
Thailand	14.1	15.6	16.3	17.0	19.5	21.2	24.7	29.6
Philippines	12.8	12.4	12.3	12.4	13.9	16.0	17.7	18.3
Malaysia	11.9	12.3	13.2	14.1	16.0	16.6	18.9	20.4
Hong Kong	7.1	7.3	7.5	8.7	9.6	10.3	11.0	10.1
Singapore	9.3	10.1	12.4	12.2	8.6	9.5	9.6	9.9
Brunei	0.7	0.6	0.6	0.6	0.8	2.1	2.0	2.2
Total, East Asia	620.9	667.6	721.9	763.3	801.7	848.9	885.0	909.1
Japan	333.9	358.9	359.5	363.5	365.6	393.1	406.7	428.2
North America	1,859.2	1,941.2	1,965.1	1,967.4	2,050.9	2,138.1	2,165.2	2,116.1
OECD Europe	1,149.2	1,185.0	1,229.9	1,255.6	1,282.2	1,295.0	1,318.4	1,337.8

[1] Includes coal and other solid fuels, crude and refined petroleum products, natural gas, nuclear, hydroelectric, geothermal, electricity, and heat.
[2] Figures based on OECD estimates of total energy requirements and total primary energy supply (indigenous production plus imports, minus exports, plus international marine bunkers and stock changes).
Source: OECD, *Energy Balances of OECD Countries*, and *Energy Balances of Non-OECD Countries*, 1992.

1) Diversify sources of imported crude petroleum and, in particular, reduce reliance on imports of crude petroleum from the Middle East;

2) Develop alternative energy sources; and

3) Enact measures to help conserve energy and increase efficiency in existing power plants and energy grids.

These policies reflect both the importance of a stable energy supply to the economic development strategies of East Asian countries and a common experience with fluctuating crude petroleum prices during the 1970s and 1980s. For resource-poor nations such as Taiwan and Korea, these policy objectives are designed to protect continued economic growth from the possibility of "oil shocks," such as those seen during the rapid increase in crude petroleum prices of the 1970s. Conversely, these same policy objectives also serve to ensure continued economic development for such energy resource-rich countries as Indonesia and Malaysia, which learned the dangers of over-reliance on exports of petroleum products during the crude petroleum gluts of the 1980s.

The emergence of the three energy-related policy goals described above has resulted in two key developments. First, the desire to reduce imports of petroleum from the Middle East has resulted in a greater level of intraregional trade in petroleum and petroleum products. The principal importers of the region—Japan, Taiwan, and Korea—have increasingly looked to such neighboring countries as Indonesia, Malaysia, and China as sources of crude petroleum and refined petroleum products. Second, the above policy objectives have triggered sizeable interest and investment in the development of alternative energy sources such as coal, natural gas, hydroelectric, geothermal and, for the more advanced countries in the region, nuclear energy.

Efforts by East Asian nations to boost energy production and diversify energy sources have been only partially successful. While most countries in the region have managed to increase their domestic energy supplies during the past two decades, in many cases economic growth continues to outpace the rate of energy growth. Energy resource development often requires substantial levels of investment, advanced technology, and a long lead time. Moreover, just as energy consumers need to ensure a stable energy supply, it is important for energy suppliers to be assured of a steady energy demand when investing in long-term energy development projects such as natural gas and nuclear power. Regional cooperation in energy development, therefore, will likely be a significant factor in East Asia during the next several decades.[2]

Regional Overview—Energy Supply and Demand

There are numerous opportunities for U.S. suppliers of energy-related technology and services in the East Asia region. The United States retains the lead in a number of energy technologies that are of vital interest to countries in East Asia—including not only power-generation equipment, but also technology related to energy conservation and efficiency. U.S. suppliers are not without competition in East Asia, however. In some cases Japanese and European firms threaten to overtake the United States either in selected energy and power-generation technologies or in terms of East Asian market share. Additionally, changing priorities of East Asian countries with regard to environmental protection, resource conservation, and energy source diversification will pose additional challenges to U.S. firms involved in the region.

Energy production and consumption statistics for 11 countries in East Asia are shown in table 8-2. To gain a better understanding of the regional energy resources and opportunities, however, a brief description of the energy supply/demand situation in key East Asian countries is presented herein. Particular attention is given to those countries that could provide opportunities for U.S. suppliers of energy technology, equipment, and related services.

China

China has one of the largest electricity-generating systems of any developing country,[3] and in terms of the sheer size of new capacity that has been added in recent years, China's electrical power program is among the most successful in the world. Despite its electricity-generating capacity, however, China's energy crunch is steadily worsening because of rapidly increasing energy demand. Officials estimate that the national electricity supply would have to increase by 20 to 30 percent to eliminate existing power shortages. As it is, factories are forced to shut down for up to 3 days a week in many parts of the country. In Guangdong and elsewhere many factories that are either foreign owned or joint ventures have installed their own generators to keep production lines running during power shortages. Plants that cannot afford their own power supply must bear the expense of lost production.[4]

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[2] Tsuyoshi Okamoto, *Energy Policies of the East Asian NICs and ASEAN Countries and the Role of Japan and the United States*, Harvard University, U.S.-Japan Program, 1987, p. 7.

[3] Mudassar Imran and Philip Barnes, *Energy Demand in the Developing Countries: Prospects for the Future*, World Bank Staff Commodity Working Paper No. 23, 1990, p. 26.

[4] Carl Goldstein, "China's Generation Gap," *Far Eastern Economic Review*, June 11, 1992, p. 45.

Table 8-2
Energy production and consumption[1] in East Asia, 1990
(1,000 tons oil equivalent)

Country	Oil & Products	Coal	Gas	Nuclear	Hydro & Other
Japan:					
Production	690.0	5,770.0	1,770.0	47,660.0	8,860.0
Consumption	288,510.0	73,240.0	40,510.0	47,550.0	8,860.0
Taiwan:					
Production	117.7	486.1	1,137.7	7,387.9	574.7
Consumption	21,377.2	11,616.6	1,142.4	7.387.9	574.7
Korea:					
Production	0.0	9,561.1	0.0	12,343.6	394.6
Consumption	40,024.4	24,504.6	2,629.8	12,343.6	394.6
China:					
Production	140,796.0	529,143.0	12,494.0	NA	9,503.0
Consumption	112,897.0	498,092.0	12,494.0	NA	9,503.0
Hong Kong:					
Production	0.0	0.0	0.0	0.0	0.0
Consumption	4,689.4	5,700.5	0.0	0.0	0.0
Singapore:					
Production	0.0	0.0	0.0	0.0	0.0
Consumption	9,385.2	0.0	0.0	0.0	0.0
Indonesia:					
Production	74,171.6	5,419.4	33,044.2	0.0	911.6
Consumption	36,800.7	3,402.4	8,744.9	0.0	911.6
Brunei:					
Production	7,198.1	0.0	8,075.9	0.0	0.0
Consumption	694.3	0.0	1,779.4	0.0	0.0
Thailand:					
Production	2,430.0	2,403.3	4,358.2	0.0	479.1
Consumption	17,150.7	2,561.7	4,358.2	0.0	479.1
Philippines:					
Production	271.5	693.6	0.0	0.0	5,161.1
Consumption	11,028.7	1,298.8	0.0	0.0	5,161.6
Malaysia:					
Production	29,161.7	0.0	13,569.2	0.0	488.0
Consumption	11,220.5	781.9	4,723.0	0.0	488.0

[1] Data for consumption based on estimates of total primary energy supply (indigenous production plus imports, minus exports, plus international marine bunkers and stock changes).

Source: OECD, *Energy Balances of OECD Countries*, and *Energy Balances of Non-OECD Countries*.

Over 75 percent of China's power generation is from thermal plants, mainly coal-fired. Current energy development plans focus on continuing the switch out of remaining oil-fired plants to coal to save crude petroleum for export. Although China continues to develop its hydroelectric power resources and also has plans for two nuclear plants[5] to go into operation in the 1990s, China seems to have little choice but to increase its reliance on domestic coal—a resource that is both abundant and cheap.[6]

Indonesia

Despite Indonesia's abundance of crude petroleum, power shortages loom as a potential threat to the nation's continued economic development. Many of Indonesia's current power problems are due to rapid economic and energy demand growth. Between 1981 and 1991, electricity sales by PLN, the state

[5] Reportedly, U.S. suppliers of nuclear power generation and control equipment are operating at a disadvantage in China insofar as they are prevented by U.S. sanctions, imposed after the Tienanmen incident, from supplying equipment to China for nuclear power stations. For further information, see Carl Goldstein, "Foreign Favorites," *Far Eastern Economic Review*, June 11, 1992, p. 50.

[6] Imran and Barnes, *Energy Demand in the Developing Countries*, p. 26.

electric utility, increased from 7.5 terawatt-hours (TWH) to 27.7 TWH.[7] Crude petroleum is still used to generate roughly 60 percent of the nation's electricity supply. According to a recent World Bank study, much of the existing plant is run inefficiently because of the lack of an integrated energy grid, and many of the oil-fired plants in existence are overdue for replacement.[8]

The Government of Indonesia is undertaking a massive investment program to increase electrical power supply. By the year 2008, Indonesia hopes to bring on-line between 40,000 megawatts (MW) and 50,000 MW of new generating capacity. Capital outlays for the program could reach more than $60 billion.[9] The Government plans to base most future capacity on indigenous coal-fired and hydroelectric plants,[10] and a decision has already been made at the highest levels to proceed with the introduction of nuclear power.[11] In connection with increasing interest in coal-fired power generation, energy officials in Indonesia have reportedly shown considerable interest in U.S. clean-coal technology.[12]

Philippines

Power shortages have become an issue of considerable concern in the Philippines, particularly insofar as they have resulted in lower levels of economic growth. During the first 7 months of 1992, the interruptions in power supply in the Philippines resulted not only in the shutdown of facilities producing goods for export,[13] but also forced the Government of the Philippines to revise its GDP growth targets from between 2.8 and 2.9 percent to between 1.8 and 2.4 percent range for 1992.[14]

The Philippines' dependence on crude petroleum for power generation has declined through the 1980s, with energy production from hydroelectric, coal, and geothermal plants having increased. Despite this process of diversification, however, oil-fired plants still account for nearly 50 percent of all electricity in the Philippines. There is considerable potential for the development of geothermal energy, and the Government has expressed some interest in developing the Philippines' small indigenous coal reserves.[15]

There is one nuclear power plant in the Philippines, but it has little prospect of coming into operation in the near future.[16] According to a report prepared by American Embassy staff in Manila in 1990, however, prospects for the development and commercialization of renewable energy[17] resources are favorable, and Government projects to encourage development of such alternative sources are already under way.[18]

Malaysia

Power demand in Malaysia has been growing at roughly 9 percent per year since 1971 because of rapid industrialization, urbanization, and rising incomes.[19] Thus far, however, Malaysia has enjoyed a comfortable margin with regard to energy reserves. Malaysia has domestic supplies of three fuel resources: coal, natural gas, and crude petroleum. Since the early 1980s, the Government of Malaysia has encouraged the development of all three of its energy resources and its hydroelectric capacity through the "four fuels" policy.[20]

Compared to many of its neighbors, Malaysia is far more advanced in the utilization of natural gas as an energy source. Large-scale use began in the mid-1980s, and future power capacity will be based largely on natural gas or dual-fired, combined cycle plants. Malaysian energy planners expect to be able to make major cuts in crude petroleum consumption by the electrical power sector over the next two decades. Malaysia expects the natural gas contribution to electricity generation to rise from 21 percent of the total energy mix in 1991 to roughly 80 percent by the year 2000.[21] Malaysia also plans to develop further its hydroelectric resources and is currently assessing two

[7] U.S. Department of State, "Indonesia's Electric Power Sector," message reference No. 01431, prepared by U.S. Embassy, Jakarta, Feb. 3, 1992.

[8] Imran and Barnes, *Energy Demand in the Developing Countries*, p. 28.

[9] U.S. Department of State, "Indonesia's Electric Power Sector."

[10] Imran and Barnes, *Energy Demand in the Developing Countries*, p. 28.

[11] U.S. Department of State, "A Successful Set of U.S.-Indonesia Energy Consultations," message reference No. 14804, prepared by U.S. Embassy, Jakarta, Nov. 14, 1991.

[12] Ibid.

[13] U.S. Department of State, "Philippine Merchandise Trade: April Exports Fall as Power Shortages Slow Industrial Production," message reference No. 18758, prepared by U.S. Embassy, Manila, July 20, 1992.

[14] U.S. Department of State, "Government Scales Down Economic Growth Targets," message reference No. 18638, prepared by U.S. Embassy, Manila, July 17, 1992.

[15] Imran and Barnes, *Energy Demand in the Developing Countries*, p. 26.

[16] The Bataan nuclear power station, constructed primarily by Westinghouse Corp., has been embroiled in a dispute regarding alleged kickbacks and potential damage the plant might inflict on the environment. Although it is almost entirely completed, the plant has not been brought on line, due to opposition from local environmental groups and a lawsuit by the Philippine Government against Westinghouse. U.S. Department of State, informal communication with USITC staff, Oct. 2, 1992.

[17] Renewable energy resources include geothermal, solar, hydroelectric, and biomass.

[18] U.S. Department of Commerce, International Trade Administration (ITA), "Philippines—Renewable Energy Resources—Industry Analysis—ISA9008," National Trade Data Base (NTDB), June 30, 1992.

[19] U.S. Department of State, *Malaysia Economic Report: Energy in Malaysia*, U.S. Embassy, Kuala Lumpur, May 1991, p. 12.

[20] Imran and Barnes, *Energy Demand in the Developing Countries*, p. 28.

[21] U.S. Department of State, *Malaysia Economic Report: Energy in Malaysia*, May 1991, p. 12.

sites for tapping geothermal energy.[22] Malaysia has no plans to introduce nuclear energy.

Taiwan

Taiwan is endowed with limited natural resources and has, therefore, been dependent on imported energy for its local consumption. In 1990, expenditures on imported energy resources amounted to 11 percent of Taiwan's total import value and roughly 4 percent of the country's GDP. Of the $5.8 billion worth of fuel resources imported in 1990, crude petroleum accounted for $3.2 billion, followed by fuel oil at $1.14 billion, coal at $985.6 million, fuel gas at $321.5 million, and nuclear fuel imports at $65.6 million. Taiwan's power generation system consists primarily of fossil fuel-fired, hydroelectric, and nuclear facilities. Domestic demand for electrical power is growing rapidly in Taiwan, with the annual increase estimated at 7.4 percent. Construction of more generation facilities is most likely the only way that Taiwan can alleviate power shortages in the middle and long term.[23]

The Government of Taiwan plans to accelerate industrial transformation and promote industrial modernization through a current 6-year (1991-96) National Development Plan. Government agencies have budgeted considerable public expenditures for a number of major public development projects, including those related to power generation. The construction of a fourth nuclear power station is listed as one of the most significant projects in the National Development Plan and will likely be a major commercial opportunity for foreign suppliers of energy systems equipment.

Positions of the United States and Japan

From the regional overview given above, the opportunities for foreign involvement in the East Asia energy sector appear to be considerable. According to both industry and government representatives, the reputation of U.S. equipment and technology is well established in East Asia. Indeed, the United States is considered by many in the region to be the leader in energy-related technology. Additionally, U.S. firms enjoy at least one advantage insofar as much of the energy infrastructure currently in place is either of U.S. manufacture or based on U.S. designs and standards.[24]

[22] Geothermal plants make use of the Earth's interior heat for power generation.

[23] U.S. Department of Commerce, ITA, "Taiwan—Energy Systems & Fuel—Industry Analysis—ISA9104," NTDB, June 30, 1992.

[24] Electric power systems in Taiwan, for example, have been established and developed using U.S. standards. This practice will likely continue, thus providing a basis for imports of U.S. power systems. Ibid.

The United States is also on the cutting edge in such areas as clean-coal technology, which is of considerable interest to many nations in East Asia seeking to expand power generation through construction of coal-fired plants.

U.S. suppliers of energy technology and equipment are not without competition in East Asia, however. While the United States is dominant in the oil and gas sector, many industry and government officials agree that Japan and several European countries pose the greatest competitive challenge to the U.S. position in other sectors of the East Asia energy market. The wide variety of energy technologies makes any generalization on this point difficult, however. What follows is a brief assessment of where the United States stands as a supplier of renewable and nonrenewable energy technologies and equipment in East Asia.

Nonrenewable Energy Technologies and Equipment

Nonrenewable energy sources (crude petroleum, coal, natural gas, nuclear, and large-scale hydroelectric) constitute the bulk of energy technologies currently in use in East Asia. The crude petroleum and natural gas industry has been enjoying an upswing in East Asia, particularly in the ASEAN states, for the past several years. The Persian Gulf War in early 1991 had a significant impact in boosting offshore crude petroleum exploration activities, and new crude petroleum discoveries were made in Indonesia, Malaysia, and the Philippines. The coal industry has also enjoyed an upswing, as an increasing number of East Asian states look to coal-fired power plants to fuel expanding energy needs.

The United States remains a major foreign investor in the crude petroleum and natural gas sector in most East Asian countries, and U.S. firms[25] are key suppliers of exploration and drilling equipment in the region. The U.S. investment position in the petroleum sectors of Indonesia and Singapore has shown a particularly significant increase in recent years.[26] Despite the strength of the United States in the crude petroleum and natural gas exploration and drilling sector, however, Japan reportedly dominates the power-generation equipment[27] markets of most East

[25] There are currently more than 40 U.S. oil and gas companies operating in East Asia, including Amoco, Arco, Caltex, Exxon, Mobil, and Unocal. These firms are reportedly facing growing competition from such other companies as British Petroleum and Totale Compagnie of France.

[26] Singapore is the world's third-largest refining center. Shell, Esso, Mobil, and British Petroleum each have a refinery in Singapore, and Caltex, British Petroleum, and Singapore Petroleum Company (a state-owned firm) jointly operate a fifth refinery. The United States is Singapore's second largest investor in the petroleum and petrochemical industry. U.S. Department of State, message reference No. 07538, prepared by U.S. Embassy, Singapore, Sept. 4, 1992.

[27] Power-generation equipment generally refers to boilers, turbine systems, and various types of generators.

Asian countries and has also had more success in obtaining entire projects rather than orders for individual pieces of equipment.[28]

Renewable Energy Technologies and Equipment

Renewable energy sources (geothermal, solar, wind, biomass, and small-scale hydroelectric) represent emerging technologies that are increasingly used to supplement or replace power derived from nonrenewable sources. The geography of many of the countries in East Asia and growing demand for electricity outside established power grids make the region an excellent prospect for the development and use of renewable energy technologies.[29]

Potential or established markets for technology and equipment related to geothermal energy currently exist in Indonesia, Malaysia, the Philippines, and Taiwan. Reportedly, the United States currently holds a strong position in the Indonesian geothermal energy market, although competition from European firms is increasing as Indonesia further develops its geothermal resources. Key competitors in other East Asian markets, particularly the Philippines, are Japan and Italy. U.S. firms have had some advantages, however, in smaller scale facilities.[30]

East Asian markets for small-scale hydropower technology and equipment include Indonesia, Malaysia, the Philippines, and China. Compared to the geothermal sector, competition for small-scale hydroelectric projects from Japanese and European companies is low, although U.S. firms do face competition from domestic hydropower equipment suppliers in Indonesia.[31] Reportedly, Japanese firms have been very successful in obtaining small-scale hydropower projects financed by the Asian Development Bank (ADB).[32]

East Asian markets for solar and wind technologies are still in early stages of development. Although German, Dutch, and Japanese firms have been active in donating solar equipment to such countries as Indonesia and the Philippines, the solar equipment markets for most East Asian countries are currently underdeveloped, and very little foreign or domestic investment has occurred. The wind power sector is in much the same condition, although the potential for this market does exist as East Asian countries increasingly look to nonpolluting sources of energy.[33]

[28] U.S. Department of Commerce, ITA, Washington, DC, interview by USITC staff, Sept. 14, 1992.

[29] U.S.-ASEAN Business Council, *1992 Ambassadors' Tour: Energy Conservation and Renewable Energy*, Washington, DC, 1992, p. 11.

[30] Ibid., pp. 12-20.

[31] Ibid., p. 13.

[32] U.S. Department of Commerce, ITA, interview by USITC staff, Sept. 8, 1992.

Foreign Countries' Approach to Finance and Trade Promotion

A competitive edge in technology is an important factor in maintaining a presence in East Asia as a supplier of energy-related equipment and services. Another key issue, however, and one that has drawn the attention of both industry and government officials in the United States, is financing. A major problem that many of the developing countries in East Asia face regarding expansion of energy capacity is availability of capital.[34] Especially in countries with sizeable government deficits, price and ease of financing have reportedly become significant factors in choosing a supplier of energy-related equipment or services. According to government and private sector interviewees familiar with the East Asia energy sector, U.S. firms currently operate at a distinct disadvantage relative to Japanese and many European competitors in this regard.[35] U.S. firms, unlike other major suppliers, are unable to offer concessionary financing for East Asian purchases of U.S. energy equipment and machinery.[36] In contrast, Japan, Germany, France, Italy, and Britain all have government-backed energy financing programs.[37]

In addition to concessionary financing, some observers have suggested that Japan and some of the European countries are more effective in terms of cooperation between government organizations and energy-related firms in the private sector.[38] A brief examination of the U.S. and Japanese approach to dealing with the energy sector in East Asia follows.

[33] Reportedly, only one Japanese corporation (Mitsubishi) is currently engaged in wind power research and development. Key competition to U.S. firms operating in East Asia comes from Danish, Dutch, and German firms.

[34] Imran and Barnes, *Energy Demand in the Developing Countries*, p. 32.

[35] U.S. Department of Commerce and Department of Energy, interviews by USITC staff, September 1992.

[36] According to one U.S. Government official, foreign competitors offering concessionary financing have not complied with Organization for Economic Cooperation and Development (OECD) rules on notification of aid financing (see ch. 6 for a brief summary of these rules). Reportedly, host countries in East Asia have been reluctant to give information regarding concessionary financing schemes offered by Japan and other countries for fear that any U.S. attempt to enforce OECD rules would result in a withdrawal of these favorable financing arrangements. U.S. Department of Commerce, ITA, interview by USITC staff, Sept. 1992.

[37] Carl Goldstein, "Foreign Favorites," *Far Eastern Economic Review*, June 11, 1992, p. 50.

[38] U.S. Departments of Commerce and Energy and trade association representatives, interviews by USITC staff, Oct. 1992.

U.S. and Japan's Role in the East Asian Energy Sector

Japan

The Japanese program in support of energy technologies represents a joint effort between the public and private sector. This is not to say that the Government of Japan has directed the development of the energy technology industry. Rather, through strong leadership by major business representatives and a public/private sector corporate mechanism (the New Energy Development Organization, or NEDO), a coherent and integrated approach to energy technology development and trade promotion has emerged.[39] This cooperation between the public and private sector has been especially effective in commercializing selected energy technologies and developing export markets in East Asia.

The Japanese strategy has been to coordinate programs with different objectives so that they reinforce each other. NEDO is tasked with renewable energy technology research and development.[40] Through two internal agency groups, the Ministry of International Trade and Industry (MITI) has been responsible for the development of new sources of energy and for the transfer of new technology to the private sector. The Japan International Cooperation Agency (JICA), on the other hand, is responsible for technical assistance to and grant-aid cooperation with developing countries.[41] The Overseas Economic Cooperation Fund (OECF) plays a key role in the promotion of Japanese energy equipment through concessionary financing and "soft loans." These grants, mixed credits, and concessionary loans have become increasingly important in the contract-bid process of most East Asian countries.[42]

[39] U.S. Department of Commerce, ITA, *A Competitive Assessment of the U.S. Renewable Energy Equipment Industry*, Dec. 1984, p. 67.

[40] Notably, it is reported that intra-agency research and development and trade promotion efforts directed at renewable energy technology and equipment have declined in Japan since the drop in oil prices during the mid-1980s. Although this situation may change as environmental priorities generate renewed interest in nonpolluting energy sources, NEDO and other agencies are apparently directing their efforts at supplying the domestic renewable energy equipment market.

[41] U.S. Department of Commerce, ITA, *A Competitive Assessment of the U.S. Renewable Energy Equipment Industry*, Dec. 1984, p. 67.

[42] In China, for example, the Japanese will fund a number of projects through a new series of OECF loans—including the Tainshengqiao High Dam project, the Wuqiangxi hydropower project, the Shanxi Hejing thermal power plant, the Beijing Sanhe coal-fired power plant, and a new thermal power plant in Hubei. Given the strength of the foreign competition, many U.S. companies have chosen not to bid for such projects despite Chinese entreaties to do so. U.S. Department of Commerce, "China—Electrical Power Systems—Power Generation Market—IMR881," NTDB, Nov. 1988.

The following are examples of recent energy-related aid and cooperation programs carried out by Japan in East Asia.[43]

Thailand:

(1988-92) NEDO sponsored a joint study agreement of fuel cells. An experimental plant was also sponsored and installed.

(1990) NEDO sponsored a prefeasibility study of solar and wind power systems.

(1990) JICA sponsored the following programs: domestic lignite production, feasibility study for the construction of a lignite-fired power plant, an on-site inspection and environmental assessment of the pumped storage hydroelectric plant on the Ramkaton river, and the training of 26 Thai employees sent to Japan as part of the energy experts training program.

Indonesia:

(1986-90) NEDO participated in a joint coal exploration project in South Sumatra.

(1988-94) JICA sponsored the following programs: a crude petroleum and natural gas image processing project for exploration purposes, a feasibility study of a hydroelectric plant on Lombok island, feasibility studies for two hydroelectric power projects on the Sybrian river, and the training of 13 Indonesian employees sent to Japan as part of the energy experts training program.

Malaysia:

(1990) JICA sponsored the following programs: a hydroelectric project feasibility study and preliminary work agreement, and the training of 13 Malaysian employees sent to Japan as part of the energy experts training program.

Philippines:

(1990) JICA sponsored the following programs: a preliminary study and on-site inspection of an electric power station on Luzon, a feasibility study of a pumped-storage hydroelectric power project on Lake Laguna, a feasibility study of a coal-fired power development project on Luzon, and the training of 19 Philippine employees sent to Japan as part of the energy experts training program.

ASEAN Programs (1983-89):

NEDO conducted a prefeasibility study of newly developed energy resources in

Thailand, Indonesia, Malaysia, and the Philippines.

The Japan National Oil Corporation (JNOC) sponsored a 3-month technical training program for oil experts from crude petroleum-producing countries, including Indonesia and Malaysia, on geophysical exploration, crude petroleum reservoir engineering, and geology.

The Japan Institute for Energy Economics (JIEE), a private organization, has received JICA, NEDO, and other Japanese Government contracts to survey Indonesian coal development and utilization, ASEAN coal distribution, Vietnam's electric power, and Malaysia's coal-fired power plant construction.

In addition to the above projects, MITI is reportedly considering a new program that would seek to promote the use of Japanese technology to deal with energy and environmental problems in Asia. Under the program, local research centers would be set up to apply Japanese technology and also to serve as educational institutions to develop local experts on energy and the environment.[44]

Although Japan also coordinates through the Asia-Pacific Economic Cooperation (APEC) working group on energy, there has been some concern on the part of U.S. Government officials that the energy aid and cooperation projects sponsored by JICA, NEDO, and others might be undercutting the efforts of APEC to sustain interest and participation in that organization's energy programs.[45] The Japanese, however, are reportedly very supportive of the APEC working group process and seem to recognize the need for a more systematic approach whenever there is overlap with their own energy-related programs.[46]

United States

Several U.S. Government organizations are involved in international energy cooperation and the promotion of U.S. energy equipment, technology, and services. At the interagency level, the principal vehicle for trade promotion efforts is the Trade Policy Coordinating Committee (TPCC) and its Energy and Environment Infrastructure Working Group. Created in May 1990, the stated purpose of the TPCC is to coordinate the export promotion activities of various U.S. Government agencies—with the Energy and Environment Infrastructure Working Group being responsible for coordinating efforts to promote export of U.S. energy equipment and services. Another significant interagency organization is the Committee on Renewable Energy Commerce and Trade (CORECT), whose objective is to support U.S. industry initiatives for renewable energy and energy efficiency technology and equipment sales abroad, particularly in the Asia-Pacific region. CORECT works closely with other U.S. Government agencies such as the U.S. Agency for International Development (USAID), the U.S. Export-Import Bank, the Overseas Private Investment Corporation (OPIC), and the U.S. Trade and Development Agency (TDA).

In addition to participating in the interagency groups listed above, the U.S. Department of Energy is involved in a number of projects to promote exports of U.S. energy equipment and services to East Asia. Current efforts include involvement in the APEC Working Group on Energy and Minerals, the U.S.-Indonesia Bilateral Energy Consultations, and various fact-finding or trade promotion missions related to energy equipment and services.[47] USAID also plays a role in promoting energy cooperation with East Asian countries and the use of U.S. energy equipment and services. USAID activities, however, are largely limited to providing financing schemes for feasibility studies, providing training for local energy officials, and acting as a broker between private energy equipment suppliers and host country governments.

On the private sector side, there are several organizations involved in the promotion of U.S. energy equipment and technologies to East Asia. These organizations have recognized the lead held by the United States in energy technology and seek to develop this advantage to its full commercial potential—particularly in East Asia, where economic growth is rapid and the demand for energy technologies strong. The U.S.-ASEAN Business Council, for example, acts as a broker between U.S. suppliers of energy equipment and technology and potential buyers in East Asia. The council also works with U.S. Government agencies in promoting awareness of U.S. technology in the ASEAN member states.[48] In the area of renewable energy technology, the U.S. Export Council for Renewable Energy (ECRE), a consortium of nine U.S. trade associations,[49] works with DOE, CORECT, USAID,

[43] U.S. Department of State, "Japan's Existing Energy Aid Program to ASEAN Countries Pre-Dates APEC Energy Working Group Projects," message reference No. 08168, prepared by U.S. Embassy, Tokyo, May 29, 1992.

[44] U.S. Department of State, message reference No. 10750, prepared by U.S. Embassy, Tokyo, July 8, 1992.

[45] U.S. Department of State, "Visit to Thailand by U.S. Energy Team for APEC Energy Cooperation," message reference No. 16902, prepared by U.S. Embassy, Bangkok, Apr. 7, 1992.

[46] U.S. Department of State, "Japan's Existing Energy Aid Program to ASEAN Countries Pre-Dates APEC Energy Working Group Projects."

[47] In June/July 1992, the U.S. Department of Energy led a clean-coal technology mission to Indonesia. For more information, see U.S. Department of State, message reference No. 08489, prepared by U.S. Embassy, Jakarta, July 7, 1992.

[48] The U.S.-ASEAN Business Council played an important role in the recent U.S.-ASEAN Clean-Coal Technology Market Development Project, which visited Indonesia and Thailand to promote U.S. coal-processing equipment and explain U.S. assistance programs and financing options.

[49] Member associations are American Wind Energy Association, National Association of Energy Service Companies, National Geothermal Association, National Hydropower Association, National Wood Energy Association, Renewable Fuels Association, Solar Energy

TDA, and other agencies to promote the export of renewable energy equipment and technology to East Asian countries through education, financing programs,[50] and market information collection.[51]

While there is considerable activity on the part of the U.S. Government to coordinate energy trade policy and promote U.S. exports of energy equipment and services to East Asia, the general consensus of those interviewed for this study is that the United States lags behind Japanese and European competitors in accomplishing these policy objectives. A number of government and industry representatives specifically cited the overarching philosophy behind United States development assistance programs as an obstacle. First, the Reagan and Bush administrations did not view energy as a sector in which development assistance was justified, and preferred to let market forces prevail. Second, because of their rapid growth rates and comparative economic success, many of the countries in East Asia are no longer considered a priority for U.S. development assistance. Third, private sector representatives spoke of obstacles encountered when dealing with USAID in the form of resistance to combining commercial opportunities with development assistance programs.[52]

In addition to problems stemming from differences in philosophy, those interviewed also cited organizational deficiencies as key to understanding the weakness of U.S. energy trade promotion efforts. The United States does not coordinate its foreign aid and export promotion programs for energy equipment and technology as well as Japan and European countries do.[53] Although the TPCC and its Energy and Environment Infrastructure Working Group are supposed to coordinate such efforts, some private sector representatives have described the organization as "cumbersome" and "slow to respond."[54] Further, the TPCC has no budget and no real authority to manage trade promotion efforts.

[49]—*Continued*
Industries Association, Volunteers in Technical Assistance, and the Wood Heating Alliance.

[50] ECRE has been responsible for the establishment of two financing programs: Financing Energy Services for Small-Scale Energy Users (FINESSE), which works on ASEAN country market studies and aids in identifying project opportunities and financing strategies; and the International Fund for Renewable Energy and Energy Efficiencies (IFREE), which is funded by USAID, DOE, the Rockefeller Foundation, and the U.S. Environmental Protection Agency.

[51] U.S. Export Council for Renewable Energy, interview by USITC staff, Aug. 28, 1992.

[52] TDA, however, was praised as particularly effective in assisting exports of U.S. energy equipment and technology.

[53] U.S. Government official involved with energy equipment export promotion, interview by USITC staff, Oct. 1992.

[54] Energy industry representative involved with government/private sector export promotion programs, interview by USITC staff, Oct. 1992.

New Developments

In addition to matters of finance and trade promotion, several new issues now emerging in East Asia will present both challenges and opportunities for U.S. suppliers of energy equipment and services. Environmental protection has not traditionally been a factor affecting the energy policies of most developing countries in East Asia. Recently, however, the need to preserve the environment through the use of clean energy sources and energy conservation has entered into the energy development policies of many countries in the region. The shift from oil-fired power plants to those based on coal and natural gas is one reflection of this trend, as is the growing interest in renewable energy sources.

Another issue of considerable interest to U.S. energy equipment companies is the growing trend toward private power development in East Asia. For almost all countries in the region, power generation and distribution have traditionally been the domain of large state-run corporations and national utilities. Recently, however, because of rapidly expanding demand, such countries as Indonesia and the Philippines have passed legislation that will allow private companies to generate and sell power. This development could have ramifications for U.S. companies selling both renewable and nonrenewable energy equipment. According to one U.S. Government official, U.S. firms will be in a much better position to sell equipment and technology to private firms in East Asia because Japanese and European concessionary financing is less prevalent in private sector projects.[55] Additionally, U.S. firms have been dealing with private power companies since 1978 and have the technical and legal expertise to give them an advantage over Japanese and European competitors.

Environmental Conditions and Opportunities

Environmental issues have only recently been the focus of attention by most East Asian governments. The countries under study have been far more concerned with economic development and industrialization than with matters related to environmental protection. For the most part, environmental regulations and standards in these countries are either weak or nonexistent.

In the past few years, however, environmental protection and development of environmental infrastructure have become issues of considerable attention in East Asia for several reasons. First, rapid urbanization and economic development have resulted in substantial damage to environmental conditions in most of the developing countries of the region. Air and water quality have been the most affected, and

[55] U.S. Department of Commerce, ITA, interview by USITC staff, Sept. 1992.

problems common to many East Asian countries include waste water treatment, disposal of hazardous chemicals, treatment of industrial effluent, and air pollution abatement. Second, within the context of larger environmental issues such as global warming and ocean management, many countries in East Asia have recently come under increased pressure from developed nations to allocate greater resources to environmental protection.[56]

Domestic and international pressures are thus moving most East Asian countries toward creating coherent policy regimes for environmental protection. The formulation of such rules, regulations, and standards for environmental quality have in turn given rise to markets for equipment, technology, and services related to environmental protection and pollution abatement—products that are chiefly supplied by more advanced nations, such as the United States, Japan, and the EC countries. What follows is a brief summary of pressing environmental issues in East Asian countries, an overview of the emerging market for environmental equipment and services and, where data are available, an explanation of where the United States stands relative to Japan and other major competitors in terms of market share.

ASEAN Countries

With the exception of Singapore, which has experienced a much faster rate of development than other member states, the ASEAN countries face remarkably similar environmental problems. The most pressing environmental issues stem directly from the dramatic changes brought on by industrialization and economic development. Environmental consciousness in the ASEAN countries is now emerging, as are government programs and regulatory infrastructure related to pollution abatement and resource management. At present, all of the ASEAN countries have environmental regulatory structures in place, although these structures are not as comprehensive as those found in the more developed countries. Pollution control organizations are also present in all national governments[57] and, at a regional level, ASEAN is beginning to recognize the need for cooperation on transboundary pollution.[58] A brief summary of the most pressing environmental problems in each of the ASEAN countries follows.

Indonesia

Rapid urbanization and industrial development have taken a heavy toll on local water quality in Indonesia. This is especially the case on the island of Java, where more than 60 percent of Indonesia's 181 million people live. Reportedly, over half the rivers on Java are considered highly polluted from prolonged dumping of untreated municipal and industrial wastes.[59] Much of Indonesia's environmental legislation is quite recent, either updating or replacing antiquated Dutch colonial law. Additionally, responsibility and authority are shared among several ministries whose interests do not always coincide.[60] Current enforcement efforts are focusing on the chemical and textile sectors, but central Government plans for developing several hazardous waste treatment facilities are on hold, pending international financing. U.S. firms have been active in conducting environmental assessments and design studies, but Japanese, German, British, and Taiwanese firms have reportedly been more aggressive selling actual environmental products.

Malaysia

Substantive efforts at environmental protection in Malaysia began in 1989 with the issuance of regulations related to hazardous waste reporting and disposal. Currently, in addition to problems connected with massive deforestation, waste water and hazardous waste treatment are reportedly the most pressing issues facing the Government of Malaysia. Municipal sewer expansion programs designed to connect food processing, chemical, and textile factories to treatment facilities have been slow to materialize and, consequently, many Malaysian industries are indiscriminately discharging untreated waste into urban waterways.[61] A 1991 study by the International Finance Corporation estimated the current private sector market for pollution control facilities at roughly $100 million annually, and the public sector water and waste water systems sector at more than $100 million annually.[62]

[56] One example of such pressure is the recent increase in attention to the environmental impact of development projects by multilateral lending agencies such as the World Bank and the Asian Development Bank. For more information, see U.S. Department of State, "Informal ADB Board Seminar on Environment," message reference No. 04281, prepared by U.S. Embassy, Manila, Feb. 14, 1992.

[57] U.S.-ASEAN Business Council, *1992 Ambassadors' Tour: Environmental Protection*, 1992.

[58] A coordinated effort to detect and fight forest fires, deal with regional air and water pollution, and establish common environmental standards is currently being investigated by the ASEAN working group on transboundary pollution. U.S. Department of Commerce, "ASEAN—Environmental Clean-Up Plan—IMI920127," NTDB, June 30, 1992.

[59] Ibid., p. 2.

[60] U.S. Department of State, message reference No. 07046, prepared by U.S. Embassy, Jakarta, June 1, 1992.

[61] U.S.-ASEAN Business Council, *1992 Ambassadors' Tour: Environmental Protection*, p. 4.

[62] Ibid.

Thailand

Rapid industrialization has resulted in significant air and water pollution problems in Thailand, particularly in and around the capital city of Bangkok. There is a real need for pollution control equipment, but few actions have been taken to address the problem because of inadequate enforcement of existing environmental protection laws.[63] The Thai Government reportedly allocated $1.3 billion of its 1991 budget to "quality-of-life" spending, including a 36 percent increase in spending for environmental programs. Environmental protection is expected to remain a government priority in the future, with water quality, air quality, and forestry receiving the most attention.[64] Thailand's seventh environmental plan (1991-1996) gives high priority to waste water treatment and sewage and drainage systems. Expenditures on these plants over the next 5 years are expected to exceed $1 billion. According to current estimates, roughly 85 percent of Thailand's market demand for pollution control equipment is met by imports.[65]

Philippines

The most pressing environmental issues for the Philippines are waste water treatment and hazardous waste disposal. Environmental markets in the Philippines during the 1990s will likely center around municipal and industrial waste water treatment. Currently, most small and medium-size industrial plants in the Philippines do not treat their waste water.[66] Additionally, it has been estimated that less than 2 percent of the residential households are currently served by sewerage facilities, with the remainder dumping waste water directly into local rivers or estuaries.[67] The U.S. and Foreign Commercial Service (US&FCS) estimated the total market for water and waste water pollution-control equipment at $15.8 million in 1990. U.S. suppliers reportedly held 21 percent of the waste water equipment and instrumentation import market in 1990, compared with 23 percent for Japan and 19 percent for Germany.[68] With severe economic and budgetary constraints, funding for many of the larger public sector infrastructure projects will be contingent upon aid from multilateral and bilateral donors. Increased enforcement of environmental regulations, however, is expected to drive up private sector demand for pollution control equipment and services.

[63] U.S. Department of State, message reference No. 32651, prepared by U.S. Embassy, Bangkok, July 13, 1992.

[64] U.S.-ASEAN Business Council, *1992 Ambassadors' Tour: Environmental Protection*, p. 10.

[65] Suppliers of environmental design/engineering services in Thailand include Bechtel, Stone & Webster, Halcro, Metcalfe & Eddy, Sumitomo, Toyo Engineering, Chiyoda Engineering, and Daewoo.

[66] There are over 15,000 industrial firms in different parts of the country. Textile mills, pulp and paper mills, sugar mills, refineries, alcohol distilleries, food processing plants, plastic plants, and detergent factories are the major sources of water pollution. U.S. Department of Commerce, "Philippines—Water/Wastewater Pollution Control Systems—Industry Analysis—ISA9011," NTDB, June 30, 1992.

[67] U.S.-ASEAN Business Council, *1992 Ambassadors' Tour: Environmental Protection*, p. 6.

[68] Ibid.

The Newly Industrializing Economies

The newly industrializing economies of Korea, Taiwan, Singapore, and Hong Kong are not new to the problems of environmental degradation brought about by rapid economic growth. Each of these countries has had to come to grips with diminishing air and water quality during the past two decades and, by some reports, these countries will constitute one of the fastest growing markets for pollution control equipment and environmental services during the 1990s.[69] Unlike the developing nations of ASEAN, these countries have shown a greater degree of political will to address problems related to environmental protection and pollution abatement, as well as to the financial resources to raise environmental standards.

Korea

During the past year, environmental issues have become one of the major concerns of the Korean Government and the general public. In June 1991, President Roh Tae-Woo pledged to take steps to restructure Korea's industrial system to secure environmental protection—including a 10-year project to invest over $1.7 billion in developing environmental technologies.[70] Significant environmental problems facing the Korean Government include water and air pollution and waste disposal.[71] A study conducted by the US&FCS in 1989 estimated that U.S. suppliers held only 13 percent of Korea's pollution control equipment import market in 1988, compared with a 73 percent share for Japanese firms.[72]

Singapore

Singapore's experience with environmental protection is unique among the ASEAN countries. Through strict regulations and enforcement, Singapore has become known as one of the cleanest nations in Southeast Asia and is attempting to establish itself as a center for environmental product and service sales to the region. Reportedly, one of the key objectives of Singapore's Pollution Control Department is to utilize its experience in environmental protection to obtain

[69] Industry representative, interview by USITC staff, Sept. 1992.

[70] U.S. Department of State, message reference No. 10980, prepared by U.S. Embassy, Seoul, Oct. 15, 1992.

[71] To combat the rising problem of waste disposal, the Korean Government has put forth a long-term $3.63 billion plan to construct incinerators in large cities and industrial complexes during 1992-97.

[72] U.S. Department of Commerce, "Korea—Pollution Control Equipment—Industry Analysis—ISA891," NTDB, June 30, 1992.

regional environmental services contracts.[73] The domestic market for environmental products and services is limited, although joint ventures with foreign firms to provide testing, assessment, design, and products to other ASEAN countries are common. U.S., Japanese, German, British, and Australian firms are all active in Singapore's environmental market, although the German Government has been the most active in promoting its products and services. Singapore recently released a draft "green plan" which outlines proposals to preserve, protect, and enhance the environment and to promote Singapore as the regional center for environmental technology by the year 2000.[74]

Taiwan

Rapid industrial growth has not come without costs in Taiwan—especially in the southern half of the island, where economic growth is concentrated. Since May 1992, Kaohsiung has suffered at least 14 reported pollution incidents. Some of these incidents have pitted local residents against large state-owned enterprises (China Steel, Chinese Petroleum Corporation, and Taipower), and have contributed to a growing demand on the part of the general public for more attention to environmental protection.[75] Taiwan's most recent 6-year National Development Plan (1991-96) has allocated approximately $10.7 billion for environmental projects.[76] Given Taiwan's need to resolve systemic environmental problems, there will likely be a significant increase in the demand for pollution control equipment and environmental services. The Taiwan market, however, is reportedly very competitive. Capital-short or new-to-market U.S. firms may have difficulty gaining market share in competition with Taiwan, Japanese, and European suppliers.[77]

Hong Kong

In 1989, the Hong Kong Government issued its benchmark "White Paper on Pollution," a 10-year action plan for pollution abatement and the restoration of Hong Kong's environment. A sewage strategy and waste disposal plan were among the 100 separate initiatives, totaling $5.12 billion, spelled out in the White Paper.[78] Some significant progress has been made in air and water quality regulations, but some of the larger infrastructure projects (such as the sewer network needed to clean up Victoria Harbor) have been delayed because of a shortage of funds and competing projects.[79] Nevertheless, U.S. firms now selling pollution control and environmental equipment and services to Hong Kong expect to increase their current 20 percent market share during the 1990s.[80]

China

China's environmental problems are perhaps the most severe in East Asia. Heavy industrialization during the past few decades, coupled with a reluctance by government officials to sacrifice productivity for the sake of pollution abatement, has resulted in environmental degradation, ranging from massive deforestation and erosion to heavy air and water pollution. Despite China's vast size and serious environmental dilemmas, however, the import market for environmental equipment, technology, and services is reportedly small in comparison with other East Asian countries. According to a report prepared by the US&FCS, China imports only 15 percent of its pollution control equipment, worth only an estimated $192 million in 1992.[81] Water pollution control equipment represents the largest share of imports, followed by air and noise pollution equipment. According to the most recent data available, Japan is the chief supplier of environmental equipment to China, followed by the United States and Hong Kong.[82]

The United States, Japan, and the Regional Market

It is difficult to discern the size of the market for environmental goods and services for any country, including those in East Asia. First, the present structure and organization of the Harmonized Tariff System (HTS) and the Standard International Trade Classification (SITC) do not provide clearly delineated categories for environmental goods and services. Therefore, statements about exports, imports, and market share are based only on estimates.

Second, unlike the situation in most other sectors, the demand for environmental products and services is influenced in large part by government measures. For example, pollution abatement equipment is often not

73 U.S.-ASEAN Business Council, *1992 Ambassadors' Tour: Environmental Protection*, p. 8.

74 U.S. Department of Commerce, "Singapore—Environmental Plan—IMI9201121," NTDB, June 30, 1992.

75 U.S. Department of State, "Southern Taiwan's Pollution Control Market: Reality vs. Perception," message reference No. 05738, prepared by American Institute in Taiwan, Taipei, Aug. 12, 1992.

76 U.S. Department of Commerce, "Taiwan—Environmental 6-Year Plan—IMI910520," NTDB, June 30, 1992.

77 U.S. Department of State, "Southern Taiwan's Pollution Control Market."

78 U.S. Department of Commerce, "Hong Kong—Environmental Projects—IMI920520," NTDB, June 30, 1992.

79 Ibid.

80 For more information on market possibilities for U.S. firms, see U.S. Department of State, "Pollution Control Technologies Useful to Hong Kong," message reference No. 10537, Hong Kong, Sept. 29, 1992.

81 U.S. Department of Commerce, "China—Pollution Control Market Overview—IMR8804," NTDB, June 30, 1992.

82 Ibid.

viewed as a source of profit or of significant cost savings by the private sector, and the main impetus for its use comes from government requirements. As a result, it would seem apparent that such factors as quality and technological superiority play much less of a role in determining sales of environmental equipment than do price, financing, and ease of access.

Japan

Japan is one of the United States' chief competitors in the East Asian market for environmental products and services. According to some estimates, Japan is currently the dominant supplier of pollution control equipment to China, Korea, and the Philippines, and also holds a strong position in Indonesia, Singapore, Thailand, and Taiwan. Japan's strength as a supplier of environmental equipment and services in East Asia is a result of both economic factors and business practices.

Products, Price, and Financing

Japanese firms[83] are competitive suppliers of pollution control equipment in East Asia, and reportedly have the lead in some technologies related to air pollution.[84] As with the energy sector, however, market presence and financing appear to be the most significant factors in explaining Japan's strength as a supplier of environmental products to the region. Japan's OECF plays a key role in Japan's presence in East Asia's environmental sector by providing low-interest loans for environmental projects. Following Japan's support of environmental conservation projects in the region, OECF has been increasing the number of environmentally related projects in East Asia. A list of OECF loans to East Asian countries during JFY 1991 is given in table 8-3 below.

Although OECF funding is no longer tied, Japanese firms still enjoy a certain preference in bidding for contracts funded by OECF loans. This is particularly the case in feasibility studies financed by the Japanese Government. These studies, done before almost every major project, sometimes favor Japanese companies.[85]

In addition to attractive financing packages, Japanese firms (as well as a number of European companies) have reportedly been very aggressive in establishing a presence in the region and in marketing their equipment to various end users. In Taiwan, for example, Japanese environmental firms aggressively develop relationships with government agencies and end users on a long-term basis, whether projects are available or not. One Japanese organization has annually sponsored and funded expense-paid training trips to Japan for at least three to five Kaohsiung Department of Environmental Protection officers for the past 20 years.[86] Such an approach is often successful in acquainting local officials with Japanese technology and in cultivating relationships with environmental decisionmakers.

[83] Japanese firms supplying pollution control equipment to East Asian countries include IHI Ishikawa, Sumitomo, Kawasaki, Mitsubishi, Hitachi, Chyoda, MHI, and NKK.

[84] Government official familiar with U.S. environmental technology, interview by USITC staff, June 1992.

[85] U.S. Department of State, "Survey of Tied Credit Programs in China," message reference No. 12292, prepared by U.S. Embassy, Beijing, May 4, 1992.

[86] U.S. Department of State, "Southern Taiwan's Pollution Control Market."

Table 8-3
OECF loans on a commitment basis to East Asian governments for major environmental projects, 1991

(Million dollars)

Country	Project	Loan amount
Philippines	Environment and natural resources adjustment program	100.14
Thailand	Fourth Bangkok water supply improvement project (phase 1)	65.44
Indonesia	Environment study centers development program	8.34
	Sector program for living environment and forest conservation	99.11
	Engineering service for lower Solo river improvement project	5.07
	Mount Kelud urgent volcanic disaster mitigation project	24.59
	Ancol drainage improvement project	23.70
China	Water supply improvement project forcities of Kunming, Xiamen, and Chongqing	78.81
Total		405.20

Source: U.S. Department of State.

Aid and Cooperation

In addition to aggressive marketing and competitive financing, Japan seems to be increasingly involving itself in the East Asian environmental sector through overseas development assistance (ODA) and cooperation programs. The JFY 1992 budget boosted ODA funds related to environmental protection to ¥1.4 billion ($10.4 million), an 86 percent increase over JFY 1991.[87] At least in part, this increased interest in environmental aid to East Asian countries seems to stem from Japan's larger role as an emerging leader in global environmental issues. For the past several years, Japan has been positioning itself to take more of a leadership role on global environmental concerns, such as climate change. To some degree, this is probably due to a desire among Japanese government and business leaders to alter the image of Japan as an ecological outlaw among the developed countries.[88] This trend is further demonstrated by Japan's strong support of the United Nations Conference on Environment and Development (UNCED) earth summit held in Rio de Janeiro in June 1992, by such government initiatives as MITI's proposed New Earth 21 program for global warming,[89] and by the increased pressure on Japanese firms operating overseas to adopt stringent environmental measures.[90]

The other side of Japan's heightened interest in environmental issues relates to the commercial benefit derived from supplying the growing market for environmental equipment and technology. A variety of government agencies in Japan are actively pursuing the development and commercialization of new environmental technologies that could be sold in East Asian markets. MITI, in conjunction with Japan's Research Institute of Innovative Technologies for the Earth (RITE), is actively promoting research projects to develop marketable environmental technologies. With an annual budget of $40 million or more, MITI reportedly funds some projects entirely, while sharing the cost of some other projects equally with the private firms to which these projects are entrusted. Participation is open to foreign organizations as well.[91]

MITI also initiated a Green Aid Plan in April 1992, aimed at providing technology and funding to developing countries such as China and ASEAN members that face environmental problems as they industrialize.[92] A similar program, directed exclusively at countries in East Asia, is now being developed by MITI to support the use of Japanese energy and environmental technology in the region.[93] Reportedly, members of Japan's ruling Liberal Democratic Party (LDP) are currently considering a new ¥200 billion (US$1.6 billion) Global Environment Fund to support nongovernment organizations dealing with environmental problems in Japan and in other countries.[94]

United States

According to government and industry representatives, the United States maintains a significant technological lead in many areas of pollution control and environmental protection. This technological lead in the environmental sector reflects the United States' long experience with its own pollution control issues. Indeed, according to one U.S. Government official, the areas in which the United States has lost its technological lead are those in which foreign nations have adopted more stringent environmental standards.[95] Nevertheless, U.S. environmental equipment and services retain a very good reputation throughout East Asia for high quality and durability.

Competitive Position

Despite the high quality of U.S. environmental equipment, technology, and services, the United States does not dominate the East Asian market. Several factors, listed below, have been suggested by industry and government experts to have contributed to the relatively low share of the U.S. environmental industry in the East Asian market.

Price Competitiveness—The perception among most East Asian countries is that U.S. environmental equipment and services are relatively more expensive than those of Japanese and European competitors. The decrease in the value of the dollar relative to other

[87] Japan Economic Institute, "Foreign Aid Boosted in Japan's FY 1992 Budget," report No. 1B, Jan. 10, 1992.

[88] For more information on Japan's environmental programs, see Japan Economic Institute, "Environmental Developments Offer Opportunities for Japan," Washington, DC, *Japan Economic Institute Report*, No. 1A, Jan. 10, 1992.

[89] The proposed New Earth 21 program consists of a dynamic strategy for international cooperation to restore the Earth over the coming decades through the reduction of greenhouse gases. Measures would include the promotion of energy efficiency, introduction of clean energy sources, and development of new environmental technologies.

[90] MITI is currently formulating a Green Code for Japanese firms operating overseas. U.S. Department of State, message reference No. 13486, prepared by U.S. Embassy, Tokyo, Aug. 18, 1992.

[91] U.S. Department of State, "Japanese Ministry of International Trade and Industry's R&D Projects on Global Environmental Pollution," message reference No. 02672, prepared by U.S. Embassy, Tokyo, Feb. 25, 1992.

[92] An example of MITI's Green Aid Plan was its decision in September 1992 to provide desulfurization technologies to China's two coal-fired thermal power plants. The total cost of the project is estimated at $64.5 million. U.S. Department of State, message reference No. 16025, prepared by U.S. Embassy, Tokyo, Sept. 29, 1992.

[93] U.S. Department of State, "Stride: Environment and Energy News in Japan," message reference No. 10750, prepared by U.S. Embassy, Tokyo, July 8, 1992.

[94] U.S. Department of State, "GOJ Yen 200 Billion Global Environment Fund to Support NGO Environmental Activities," message reference No. 14053, prepared by U.S. Embassy, Tokyo, Aug. 26, 1992.

[95] The example cited was the air pollution control sector. The Government official interviewed believed that the United States had lost its technological lead to Japan in this sector because of the delay in passing the U.S. Clean Air Act.

major currencies, however, may increase the competitiveness of U.S. products.[96]

After-sales service—Many East Asian end users of pollution control equipment have complained that U.S. suppliers do not pay sufficient attention to after-sales service and spare parts supply networks. Japanese companies, on the other hand, reportedly excel in this area.[97]

Market presence—The distance between the United States and East Asian markets constitutes a disadvantage for the United States. Unlike many of their major competitors, U.S. suppliers of pollution-control equipment have thus far not established a physical presence in many East Asian markets, through either a branch office or a regional sales representative.[98]

Inflexibility—While U.S. environmental equipment and technology is generally regarded as very high in quality, a number of East Asian end users have complained that U.S. firms have shown unwillingness to adapt their products to fit the needs of local consumers. Japan, on the other hand, has reportedly been much more cooperative in designing equipment to meet the specific needs of East Asian environmental markets.[99]

According to some reports, however, increases in the trade deficits of many East Asian countries vis-a-vis Japan have prompted a move to diversify imports, including environmental equipment, away from Japan.[100]

U.S. exporters of environmental equipment and services have apparently begun to recognize the potential of the East Asian market. The Environmental Technology Export Council (ETEC), a recently formed consortium of U.S. environmental technology firms and trade associations, is one example of this growing awareness. ETEC's objectives are to coordinate industry export initiatives and to work with USAID, EPA, and other relevant government agencies in promoting the sale of U.S. pollution control equipment and environmental technology overseas.

Aid and Cooperation

Like Japan, the United States has shown an increasing interest in the environmental problems faced by East Asian countries, as well as a greater willingness to address these problems through ODA. The most recent environmental initiative that the United States has taken toward East Asia is the U.S.-Asia Environmental Partnership (AEP), a coalition of government agencies whose aim is to promote cooperation on environmental issues between the United States and countries in the region. AEP is coordinated by the USAID, although the State Department and the EPA also play major roles. AEP will center its activities around four major programs: environmental fellowships and training, technology cooperation, environmental infrastructure, and a regional biodiversity conservation network. Funding for the AEP for FY 1992 is roughly $15 million.[101]

East Asian reactions to the US-AEP have thus far been favorable. Taiwan, for example, has already proposed eight different projects for consideration by AEP.[102] The Philippines has also shown interest in the program, although questions have arisen in the Filipino business community about accessibility and financing.[103] Although the AEP was not designed as a forum to compete with Japan's selling of environmental technology, goods, and services to countries in East Asia, those government and industry officials interviewed felt that the AEP could improve the U.S. competitive position as a supplier of environmental products to the region.

Outlook

For most of the countries in East Asia, environmental issues are still at the fringe of more pressing problems, such as economic development and industrialization. Nevertheless, how these countries address environmental protection and pollution abatement will affect the patterns of trade and investment, particularly between the developing economies of East Asia and the relatively more advanced nations, such as the United States, Japan, and members of the EC. More stringent environmental regulations are both an incentive and an obstacle to investment. On the positive side, those firms that seek to avoid environmental controversy could direct their investments toward countries that have taken greater steps to provide environmental infrastructure and waste management systems. On the negative side, those firms that are less concerned about an environmental backlash could be discouraged by stricter regulations and standards related to pollution abatement.

[96] U.S. Department of Commerce, "Hong Kong—Pollution Control Equipment—Market Overview—IMR8801," NTDB, June 30, 1992.

[97] U.S. Department of Commerce, "Taiwan—Pollution Control Equipment/Services—Industry Analysis—ISA9104," NTDB, June 30, 1992.

[98] U.S. Government and industry representatives, interviews by USITC staff, Sept.-Nov. 1992.

[99] U.S. Department of Commerce, "Taiwan—Pollution Control Equipment/Services—Industry Analysis—ISA9104."

[100] U.S. Department of Commerce, "Korea—Pollution Control Equipment—Market Assessment—IMR8804, NTDB, June 30, 1992. See also U.S. Department of Commerce, "Taiwan—Pollution Control Equipment/Services—Industry Analysis—ISA9104."

[101] U.S. Department of State, "United States-Asia Environmental Partnership: Update Number 4," message reference No. 024630, prepared by State Department, Washington, DC, Jan. 25, 1992.

[102] U.S. Department of State, "US-AEP: Taiwan Proposals for Expanded US EPA/Taiwan EPA Technical Cooperation," message reference No. 04136, prepared by American Institute in Taiwan, Taipei, June 15, 1992.

[103] U.S. Department of State, "United States-Asia Environmental Partnership," message reference No. 06676, prepared by U.S. Embassy, Manila, Mar. 10, 1992.

On another level, environmental issues have provided a common ground for many of the developing countries in the region—particularly within ASEAN. Concern over transboundary pollution and the need for a regional response is one issue currently under discussion by the ASEAN countries.[104] Further, in response to pressure from developed countries to reform their environmental practices, many of the countries in the region are apparently finding common ground in calling for the United States, Japan, and the EC countries to open their economies to East Asian imports.[105] The UNCED summit in Rio de Janeiro, for example, was as much a forum for Malaysia, Indonesia, and other countries to voice discontent over current trading arrangements as it was a meeting on global environmental issues.[106]

Energy and Environment: Implications For Regional Integration

Both energy-related and environmental issues have relevance to the question of economic integration in East Asia. As mentioned in the preceding chapters, economic growth has been the primary engine for integration in East Asia, and any impediment to continued growth is thus a threat to closer economic ties in the region. As illustrated in the preceding analysis, inadequate energy and environmental infrastructure are already beginning to slow economic growth in some East Asian countries. Power shortages have affected productivity in China and the Philippines and threaten to do so in Malaysia, Indonesia, and Thailand. Environmental infrastructure, particularly in the area of air and water pollution control, has also failed to keep pace with development in most East Asian countries, and threatens to have a detrimental effect on foreign investment flows.

Most countries in East Asia fully recognize the importance of improving both energy and environmental infrastructure as a means of ensuring continued economic growth. Recent long-range economic plans in such countries as Malaysia, Indonesia, and Taiwan have allocated considerable government funds toward eliminating recurrent power shortages and rising environmental problems. This rising concern over energy and environmental infrastructure has presented both the United States and Japan with significant opportunities to take part in a growing market and in a process of regional cooperation. As seen from the preceding sections, both the United States and Japan have their respective strengths and weaknesses in these areas, as well as markedly different approaches. The Japanese have proven to be more aggressive in terms of using concessionary financing and development assistance as a means of securing market share, and this is reportedly an area of concern to some U.S. officials and industry representatives. This particular area of concern, however, extends well beyond energy and environment.

Aside from how the need for improvements to energy and environmental infrastructure will affect the United States and Japan, these issues also hold some potential for regional cooperation. Improvement of energy and environmental infrastructure is a goal that the nations of the region have in common, and cooperation on these issues could form the basis for closer ties. Also, given the fact that most of the regional institutions, such as the Pacific Economic Cooperation Council (PECC), APEC, and ASEAN, have already set up working groups to encourage a regional approach to energy and environmental matters, multilateral cooperation on energy and environmental issues could grow in the future.

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[104] U.S. Department of Commerce, "ASEAN—Environmental Clean-Up Plan—IMI920127," NTDB, June 30, 1992.

[105] Adam Schwarz and Vichael Vatikiotis, "See You in Rio," *Far Eastern Economic Review*, June 4, 1992, p. 60.

[106] See, for example, Adam Schwarz, "Back Down to Earth: Global Summit Fails to Live up to Ambitions," *Far Eastern Economic Review*, June 25, 1992, p. 61.

CHAPTER 9
Expert Views on Implications for U.S. Trade Interests and Policy

This chapter presents views of recognized experts and policymakers in the field of regional economic and business affairs concerning recent trade and investment trends in East Asia, the effect of these trends on U.S. commercial interests and policy, and the appropriate actions of U.S. business and Government in response to these trade and investment trends.

Introduction

In the official request letter, the House Committee on Ways and Means asked the U.S. International Trade Commission (Commission) to "seek expert views" on such questions as—

- Are the trade and investment trends [regarding the increasing economic integration in East Asia] something about which the U.S. private sector and Government should be concerned?
- How do U.S. business and Government activities and programs relating to U.S. trade and investment in East Asia compare with those of other major competitors in the region?
- Is there more that the U.S. private sector and Government could or should be doing to strengthen U.S. participation in the growing economic integration of East Asia?

In the course of this investigation, Commission staff interviewed more than 50 experts, including officials of the U.S. and foreign governments (21), academics (15), representatives of the private sector (13), and regional institutions (3), as well as numerous persons with more specialized expertise. Among others, academics from the University of California at Berkeley, Princeton University, Columbia University, the University of Michigan, Emory University, Harvard University, the East-West Center, the Center for Strategic and International Studies, the Council on Foreign Relations, Nomura Research Institute, and the Brookings Institution were consulted. Within the U.S. Government, individuals from the U.S. Departments of State, Treasury, Commerce, and Energy; the National Security Council; the Office of the United States Trade Representative; the U.S. Agency for International Development (USAID); and the U.S. Environmental Protection Agency were interviewed. Business representatives from the National Association of Manufacturers, the U.S. Chamber of Commerce, the Pacific Economic Cooperation Council (PECC), and the ASEAN-U.S. Business Council were consulted. Finally, staff met with foreign government officials, academics, and businesspersons from Hong Kong, Indonesia, Japan, Korea, Malaysia, Singapore, and Taiwan. Commission staff also conducted a literature review.

Persons were interviewed on a nonattribution basis so as to evoke frank, personal opinions, rather than official positions of the agencies or firms by which they are employed. Thus, citations are generally not provided. However, many of the themes also surface in the literature, and where this is the case, a footnote to pertinent work is provided.

The following discussion presents the broad themes emerging from the comments offered by such experts.

Perceptions of East Asian Integration

Interpretations of recent trends in trade, investment, and business activity in East Asia vary considerably. However, there seems to be consensus on several points: that economic integration among the economies of the region will likely grow, that Japan will continue to play a large role in the region's commercial activity, and that the United States will remain the single most important market for East Asian goods.

Many analysts claim that a combination of macroeconomic forces, strategic business decisions, governmental policies, political realism, cultural factors, and security considerations are encouraging economic integration in East Asia. As one expert put it, a bloc is definitely forming, but "by default, not by design." Most of the experts interviewed believe that economic integration in East Asia is taking place at a variety of different levels and degrees. Regional arrangements such as the Asia-Pacific Economic Cooperation forum (APEC) and the Association of Southeast Asian Nations (ASEAN) Free Trade Area (AFTA) represent one end of the integration spectrum, and the widening and deepening circle of bilateral investment relationships and trade in final products, labor, technology, and information represents the other.

A number of experts see the integration as a natural phenomenon, driven by market forces and the pragmatic, informal actions of business and government. The need to remain competitive through the exploitation of different countries' comparative advantages appears to explain much of the increase in intraregional business activity and commerce during the past decade.[1]

At the same time, many analysts have found little reason to think that anything resembling an exclusionary economic bloc is actually being formed in East Asia—or that one is likely. In particular, they find that increases in trade among nations in the region are to be expected, given the growth in these countries and the attendant rise in their importance in the world economy.[2] A number of experts also believe that the economic fundamentals for forming an exclusionary trading bloc are not present in East Asia. Considerable obstacles to trade, investment, and capital movements still exist. The region's diversity—social, political, and economic—is also cited as a major impediment. Infrastructure bottlenecks, environmental problems, and shortages of local technicians and engineers constrain the region's integration prospects.

Given East Asia's continued reliance on the United States and on other non-Asian markets, nearly all experts consulted believe that the region's first-best strategy is to support a strengthening of the world trade system and multilateral trade liberalization.[3] But most add an important caveat: if the current round of talks under the aegis of the General Agreement on Tariffs and Trade (GATT) fails, or if East Asian nations perceive that they are being left out of other regional arrangements, they may pursue greater regional integration as a distinctly second-best option. A number of experts warned that if the United States continues to concentrate on the North American Free Trade Agreement (NAFTA) and on expanding negotiations to Latin America, East Asian countries may reconsider their largely lukewarm response to Malaysia's Prime Minister Mahathir's call for an East Asian Economic Caucus that excludes the United States and Australia but not Japan.

How viable this second-best strategy would be is debatable. The lingering difficulty most East Asian countries face in penetrating the Japanese market, as attested to by the low market shares they exhibit in industries such as automobiles and computers, makes it unlikely that Japan would be a realistic alternative to the U.S. and other world markets. Further, given the continued importance of U.S. and European Community (EC) markets to both Japan and East Asia, no one appears to believe that Japan could truly go it alone in the region, even though its still formidable financial resources and record of economic success have earned it widespread admiration and the title of global partner of the United States. Indeed, as one expert observes, Japan would like to have the United States remain involved in the region, to help mitigate the historical animosity between Japan and the region's nations.

Several experts suggested that increased interdependence in East Asia could be advantageous for U.S. interests by increasing the region's growth and creating viable institutions for dealing with economic tensions. A regional framework may also ease lingering political tensions.[4] So long as East Asian nations focus on lowering barriers to trade and investment, expanding ties among East Asian nations and between them and Japan are not inconsistent with the multilateral trading system, and could in fact support the goal of increased global flows of trade and investment. Certainly, that is the argument the United States has made in connection with its pursuit of NAFTA, they note. Indeed, East Asian countries generally have been reluctant to adopt formal regional economic policies or plans, preferring instead to emphasize open trade, promotion of private sector investment, and technological advancement in pursuit of high economic growth. However, some observers warn that negative effects could result as well.

The primary concern of most experts interviewed is that U.S. firms may not be taking full advantage of investment, trade, and market opportunities in East Asia whereas firms from other countries such as Japan, Taiwan, and Korea are doing so. The implication is that U.S. firms will not be well-placed to serve the growing consumer markets of the region. Numerous analysts say that it is vital to the long-term competitiveness of U.S. industry, as well as to U.S. commercial interests and policy, to be a part of the continuing transformation of the fastest growing and most populous region of the world. It is considered highly relevant that Asia is now the hub of industries such as electronics and machinery, and an increasingly important source of new technologies and products. Many international businesspersons say that competing in East Asian markets is an important test of a company's ability to succeed globally. Whereas many Fortune 100 firms are reportedly well-placed in the

[1] For example, Joanna Poznanska of Seattle Pacific University asserts that the impetus for economic integration in East Asia comes primarily from the rapid economic growth of its countries, especially China. Poznanska argues that East Asian integration is not based primarily on interindustry patterns of trade, as is the case among equals in the European Community. Instead, integration is based on disparities in developmental stages, and thus creates a pattern in which the more advanced nations move their mature production to the less developed members of the region. Joanna Poznanska, "The Emergence of a Trading Bloc: Japan-East Asia Economic Relations," paper presented at annual meeting of the American Economic Association, Jan. 5-7, 1993.

[2] Jeffrey Schott, "Trading Blocs and the World Trading System," *The World Economy*, Mar. 1991; and Peter A. Petri, Brandeis University, "The East Asian Trading Bloc: An Analytical History," paper presented at the National Bureau of Economic Research, Inc., Conference on the United States and Japan in Pacific Asia (NBER Conference), Apr. 2-5, 1992.

[3] Ibid., p. 15.

[4] See, for example, Ippei Yamazawa, "On Pacific Integration," *The Economic Journal*, vol. 102, No. 415, Nov. 1992, p. 1527.

region, small and medium-size U.S. firms are said to be underrepresented. Without an on-the-ground presence, U.S. firms may miss out on information about emerging technology, products, and competitors in East Asia and increase the likelihood of U.S. firms being deluged by future imports from the region, many experts say. Moreover, stationing and keeping seasoned professionals in the region, as Japanese and European firms do, is said to provide "the context to do more"; if businesspersons are well-versed in the business climate and cultivate personal contacts, they can often get around formal and informal obstacles, several experts believe.

East Asian integration may have broader implications as well. If East Asia were to decrease its dependence on the U.S. and world markets, it could conceivably become more resistant to U.S. market-opening efforts, whether intentionally or as a natural result of changed circumstances. At the same time, as they grow in size and confidence, the countries in the region can be expected to find their voice in economic forums, making it necessary for the United States to adjust negotiating strategies. The blurring of boundaries within the region—and between it and Japan—may make bilateral trade an inappropriate focus for U.S. negotiating efforts and may make it more difficult to administer U.S. trade laws, the experts note.

The potential also exists for East Asian integration to result in effective discrimination against U.S. business, either in the form of de facto barriers or preferential access for East Asian suppliers. The host country profiles presented in chapter 2 of this report suggest that there has not been a general movement toward discriminatory policies in these countries. In fact, several have policies specifically designed to stem imports and investment from Japan. Nonetheless, several ASEAN initiatives grant preferential treatment to firms in the region versus those outside. (See chapter 4 of this report.)

The Role of Japan

Through a combination of private sector expansion, export promotion, and foreign aid, Japan has established a significant presence in East Asia. However, the question remains open as to whether its efforts constitute an attempt at regional domination, a drive to ensure continued competitiveness in light of changed economic circumstances, an effort to foster stability in nearby markets, or just effective business strategy. Most experts concur, however, that Japan will continue in some sort of leadership role in East Asia[5]—a role that the region appears prepared to accept, so long as doing so does not close off options.[6] Some experts argue that this role will necessarily be constrained by the traditional hostility and mistrust some of the region's nations harbor toward Japan, as well as by the growing importance of investors from newly industrializing economies (such as Taiwan and Korea) and ethnic Chinese in East Asian business activity. Moreover, some analysts suggest that Japan's leadership in East Asia will not necessarily come at the expense of the United States, any more than U.S. leadership in the Americas erodes influence by other countries in the Western Hemisphere. Others assert that the region could well become a Japan-centered bloc if the United States does not substantially increase its business and Government involvement.

There is concern in U.S. business and Government circles over Japanese foreign aid policies and related export promotion activities (which could be factors in limiting U.S. suppliers' position in the area). They are also concerned about the possibility that Japanese corporations will transfer their close and often difficult-to-penetrate supplier networks (keiretsu) to East Asian host countries. These concerns have led some observers to worry that U.S. firms could be excluded from the region. Although comprehensive empirical data are lacking, some analysis and first-hand business experience support these concerns.[7] The activities of Japanese trading companies and their associated keiretsu were cited by some experts as playing important roles in information gathering and in securing equipment contracts. Personnel exchanges and technology transfer policies also may be encouraging East Asian countries to source from Japanese suppliers, some analysts warn.[8] In terms of infrastructure and other projects underwritten by Japanese foreign aid, a variety of factors have made it likely that Japanese suppliers would ultimately win contracts. (See chapter 6 of this report.)

[5] Takashi Inoguchi, *Japan's Foreign Policy in East Asia*, Dec. 1992, testimony before the Joint Economic Committee, May 1992.

[6] Edward J. Lincoln, *Japan's Rapidly Emerging Strategy Toward Asia*, (Paris: Organization for Economic Cooperation and Development Development Centre, Apr. 1992). Technical Paper No. 58, OCDE/GD (92) 59.

[7] For example, Kenneth A. Froot and David B. Yoffie of Harvard University argue that by virtue of direct investment from outside, trading blocs can be kept from becoming regional fortresses. Japan appears to be the only major industrial country whose domestic market remains protected from both foreign trade and direct investment, Froot and Yoffie find. With Japanese expansion in East Asia, North American and European firms may increasingly lack both trade and investment access to the East Asian bloc, they conclude. Kenneth A. Froot and David B. Yoffie, "Trading Blocs and the Incentives to Protect: Implications for Japan and East Asia," paper presented at NBER Conference.

[8] For example, Richard Doner of Emory University suggests that Japanese investment is accompanied by certain institutional/cultural contributions (such as inspiring emulation of the Japanese work ethic, public-private sector cooperation, industrial standards, and creating supply networks biased toward Japanese firms). This growing Japanese institutional influence has caused U.S. investors' position in the region to decline, Doner argues.

Several experts suggest that Japan's growing leadership role in regional economic and political affairs, at a time when the United States is reassessing its interests there, may also mean that East Asia is the region in which the world's two leading economic powers define new roles. Some friction in fashioning a workable relationship appears likely, they warn.

The Role of the United States: Business and Policy Options

Since most of the experts consulted assume some further integration in East Asia, their recommendations about appropriate U.S. business and policy responses to East Asian integration generally focus on greater U.S. involvement in the region. Some experts, in fact, urge that the United States emulate the approach of such countries as Japan, which has been so successful in establishing a commercial presence in East Asia.

A number of experts—academic, business, and Government—offered opinions about why the U.S. presence was less than they think is warranted, given East Asia's dynamism. The reasons cited for why U.S. firms appear to have little interest in exporting and investing in East Asia relate mostly to the U.S. economy and U.S. corporate behavior rather than to trade barriers in East Asia. Experts noted that the U.S. budget deficit and low savings rates have affected U.S. investors' capabilities worldwide, including in East Asia. In addition, the majority of experts indicated that U.S. firms' focus on short-term earnings, unfamiliarity with and lack of awareness about East Asian market opportunities, complacency because of the large size of the North American market, and preoccupation with markets in Europe and Latin America all dampened interest in East Asia. Among the host country factors cited were distance, business customs, the small size of still segmented markets, and policies such as tariff and nontariff barriers. It was suggested that U.S. investors are generally slow to arrive on the scene in East Asia and slow to come to an investment decision, often seeking guarantees of a market before making any commitment to invest.[9] For its part, observers note, the U.S. Government has not adopted information gathering and trade promotion programs similar in size and coherence to those of Japan and Europe—not only because of diminishing budgetary resources, but also because it is trying to satisfy a bevy of often conflicting political, strategic, humanitarian, and commercial objectives. U.S. policies toward China and Vietnam, meanwhile, disadvantage U.S. investors in the region relative to those from Japan and Europe, many experts say.

The experts consulted for this study maintain that establishing a strong presence in East Asia is vital to the success of U.S. firms and to furthering overall U.S. objectives there. The United States, they believe, cannot afford to ignore the integration that is occurring in the region. As a practical matter, they argue, both U.S. business and Government must compete in East Asia or participate actively in its institutions. U.S. business is urged to consider more seriously the opportunities the vast region offers and to pursue them with vigor, patience, and an appreciation for the value placed on relationships and trust in the Asian cultural context.

A more systematic focus on the importance of furthering U.S. economic objectives would also behoove U.S. policymakers in this post-Cold War world, many experts suggest—particularly in East Asia, where business is considered paramount.[10] Efforts should be made to further "lower barriers to trade in goods and services, to reduce subsidies, protect intellectual property, and facilitate economically sound investment," the U.S.-ASEAN Council for Business and Technology urged. Negotiation of bilateral Trade and Investment Framework Agreements similar to those reached with the Philippines and Singapore should also be pursued, as should bilateral tax and investment agreements, the council continued.[11] Many experts indicated that there is a need for expanding U.S. export promotion activities (financing, trade support activities, and experts posted in embassies), improving their administration, and fostering Government-business cooperation. The 1992 U.S. and ASEAN Ambassadors' Tours were seen as succeeding in acquainting U.S. companies with opportunities in East Asia, and experts advised that they be continued in 1993.[12] Developing a clear focus and streamlined structure for U.S. foreign aid is advocated by many U.S. businesspersons in the region. Some experts noted that U.S. firms are constrained by the Foreign Corrupt Practices Act and tax regulations that result in double taxation of expatriates. Other suggestions from U.S. businesspersons included relaxing antitrust laws, developing entities comparable with Japanese trading companies, and forming a commercial Peace Corps to assist U.S. firms in entering overseas markets.

8—*Continued*

Richard Doner, "Japanese Foreign Investment and the Creation of a Pacific-Asian Region," paper presented at NBER Conference.

9 The area of after-sales service was frequently cited as one in which Japanese competitors have an advantage over their U.S. counterparts. One representative of a U.S. business organization contrasted the "days" it took Japanese firms to send service representatives to customers in East Asia with "months" for the United States.

10 Richard P. Cronin, *Japan's Expanding Role and Influence in the Asia-Pacific Region: Implications for U.S. Interests and Policy,* Congressional Research Service report for Congress, Sept. 7, 1990.

11 Robert E. Driscoll, President, U.S.-ASEAN Council for Business and Technology, written statement before the USITC, Nov. 10, 1992, p. 5.

12 Driscoll statement, p. 6.

To the extent that practices of Japanese Government and business disadvantage U.S. suppliers, a combination of pressure for change and pragmatic reassessment of U.S. strategies may be in order, the experts add. Several advocated emulating Japan by providing Government funding for investment and gearing U.S. development assistance toward capital projects. Other interviewees suggested that to the extent the rationale for investing in the region is driven by barriers to U.S. exports, it may make more sense from a U.S. national interest perspective to seek the lowering of those barriers than to encourage U.S. investors to set up shop in East Asia. Indeed, several experts noted that U.S. exports to East Asian countries that have pursued market-oriented reforms have grown markedly and urged the United States to stay the course, even if Japanese and European suppliers reap some of the rewards.

Getting involved in the region's fast-evolving business environment and still nascent economic institutions, most experts suggest, is both possible and desirable.[13] Many interviewees, particularly U.S. Government officials, spoke favorably of APEC's moves toward formal institutionalization and indicated that the United States should work with APEC, ASEAN, and other groups to ensure that the region retains its outward-looking focus. Such involvement would not only provide the United States with leverage to shape these institutions at a crucial moment, several policymakers say; it would signal U.S. recognition of its substantial economic stakes in East Asia and its intent to pursue a commercial agenda that is both broader and more pro-active than the traditional approach.

[13] Asia Foundation Center for Asian Pacific Affairs, *America's Role in Asia*, Jan. 26, 1993.

APPENDIX A
FEDERAL REGISTER NOTICE
AND
LETTER OF REQUEST FROM HOUSE COMMITTEE ON WAYS AND MEANS

COMMITTEE ON WAYS AND MEANS

HOUSE OF REPRESENTATIVES

WASHINGTON, DC 20515

May 4, 1992

The Honorable Don E. Newquist
Chairman
U.S. International Trade Commission
500 E Street, S.W.
Washington, D.C. 20436

Dear Mr. Chairman:

In recent years, United States trade policy has been heavily focused on the Uruguay Round of multilateral trade negotiations, as well as on the North America Free Trade Agreement negotiations with Mexico and Canada. However, increasing attention also has turned to trade and investment in East Asia, and the role played by the United States and other countries, such as Japan, in that region. There are clear indications of growing economic integration among East Asian countries, including members of the Association of Southeast Asian Nations (ASEAN), China, Hong Kong, Taiwan, and South Korea; and a number of plans for more formal regional economic integration have been proposed. In addition, concerns have been expressed by a number of observers about the relative decline in the U.S. trade and investment position in the region and its implications for U.S. trade interests and policy in the future.

On behalf of the Committee on Ways and Means, and under authority of section 332(g) of the Tariff Act of 1930, I am writing to request that the Commission conduct a fact-finding study of the causes and implications for the United States of increasing economic integration in East Asia. In its report, the Commission should evaluate the nature and extent of economic integration in the East Asian region, including the role of the United States and Japan as two of the largest traders and investors in that region, and how that role has changed in recent years. The Commission also should seek the views of experts on the implications of such trends for U.S. trade interests and policy.

More specifically, among the issues the Commission should review are:

-- overall trends in, and conditions for, trade, investment, and economic integration in East Asia (including intra-regional and extra-regional trade and investment);

-- host country policies and factors influencing those trends and conditions;

-- external factors affecting the business activities of major traders and investors in the region (e.g., exchange rate changes; labor shortages and costs; and foreign government programs, such as official development assistance);

-- the relationship between foreign direct investment in the region and the region's trade patterns with the United States and other countries;

-- energy needs and resources in the region, including the role of the United States and other countries;

-- environmental conditions, consequences, and opportunities for local and U.S. interests; and

-- current and proposed regional institutional arrangements.

Case studies on several industries in which U.S. trade and investment activity in East Asia is substantial and in which the United States currently faces or is likely to face strong international competition may be a useful way to illustrate the overall trends.

In assessing the implication of such trends, the Commission should seek expert views on such topics as: are the trade and investment trends something about which the U.S. private sector and Government should be concerned; how do U.S. business and Government activities and programs relating to U.S. trade and investment in East Asia compare to those of our major competitors in the region; and is there more that the U.S. private sector and Government could or should be doing to strengthen U.S. participation in the growing economic integration of East Asia?

The Committee would appreciate receiving the study no later than twelve months after receipt of this letter. Thank you for your attention to this request.

Sincerely yours,

Dan Rostenkowski
Chairman

DR/jrs

[Investigation No. 332-328]

Economic Integration in East Asia: Implications for the United States

AGENCY: United States International Trade Commission.

ACTION: Institution of investigation and scheduling of public hearing.

EFFECTIVE DATE: June 30, 1992.

SUMMARY: Following receipt of a request on May 5, 1992 from the House Committee on Ways and Means, the Commission instituted investigation No. 332-328, Economic Integration in East Asia: Implications for the United States, investigation under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)).

BACKGROUND: As requested, the Commission's report will seek to evaluate the nature and extent of economic integration in the East Asian region, including the role of the United States and Japan as two of the largest traders and investors in that region, and how that role has changed in recent years. The Commission will also seek the views of experts on the implications of such trends for U.S. trade interests and policy. The Committee requested that the Commission submit the report by May 5, 1993.

In its request letter, the Committee noted that increasing attention is being focused on trade and investment in East Asia, and on the roles of the United States and other countries, such as Japan, in the region. The Committee also said that there are clear indications of growing economic integration among East Asian countries, including the Association of Southeast Asian Nations (ASEAN), China, Hong Kong, Taiwan, and South Korea; and a number of plans for more formal regional economic integration have been proposed. It noted further that concerns have been expressed by a number of observers about the relative decline in the U.S. trade and investment position in the region and its implications for U.S. trade interests and policy in the future.

More specifically, as requested by the Committee, the Commission will seek to provide information in its report on the following:

—Overall trends in and conditions for trade, investment and economic integration in East Asia (including intra-regional and extra-regional trade and investment);
—Host country policies and factors influencing those trends and conditions;
—External factors affecting the business activities of major traders and investors in the region (e.g., exchange rate changes; labor shortages and costs; and foreign government programs, such as official development assistance);
—The relationship between foreign direct investment in the region and the region's trade patterns with the United States and other countries;
—Energy needs and resources in the region, including the role of the United States and other countries;
—Environmental conditions, consequences, and opportunities for local and U.S. interests; and
—Current and proposed regional institutional arrangements.

Also as requested by the Committee, the Commission will include in its report case studies of several industries in which U.S. trade and investment activity in East Asia is substantial and in which the United States currently faces or is likely to face strong international competition.

In conducting its assessment of the causes and implications for the United States of increasing economic integration in East Asia, the Commission will seek expert views on such topics as: Are the trade and investment trends something about which the U.S. private sector and government should be concerned; how do U.S. business and government activities and programs relating to U.S. trade and investment in East Asia compare to those of our major competitors in the region; and is there more that the U.S. private sector and government could or should be doing to strengthen U.S. participation in the growing economic integration of East Asia.

The countries that will be covered in the Commission's study include ASEAN (Indonesia, Malaysia, Philippines, Singapore, Thailand, and Brunei), Hong Kong, South Korea, China, and Taiwan. Information will also be obtained and provided for other major traders and investors in the region.

PUBLIC HEARING: Two public hearings in connection with this investigation will be held in the Commission Hearing Room, 500 E Street, SW., Washington, DC 20436, beginning at 9:30 a.m. on October 21 and October 28, 1992. All persons shall have the right to appear by counsel or in person, to present information, and to be heard. Requests to appear at the public hearing should be filed with the Secretary, United States International Trade Commission, 500 E Street, SW., Washington, DC 20436, no later than noon, October 8, 1992. Prehearing briefs (original and 14 copies) should be filed not later than noon, October 6, 1992. Post hearing briefs are required by November 10, 1992.

WRITTEN SUBMISSIONS: Interested persons are invited to submit written statements concerning the matters to be addressed in the report. Commercial or financial information that a party desires the Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of section 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6). All written submissions, except for confidential business information, will be made available for inspection by interested persons in the Office of the Secretary to the Commission. To be assured of consideration by the Commission, written statements relating to the Commission's report should be submitted at the earliest practical date and should be received no later than November 10, 1992. All submissions should be addressed to the Secretary, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing impaired individuals are advised that information on this matter can be obtained by contacting the TDD terminal on 202-252-1107. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000.

Issued: July 8, 1992.

By order of the Commission.

Paul R. Bardos,

Acting Secretary.

[FR Doc. 92-16811 Filed 7-14-92; 8:45 am]

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APPENDIX B
FOREIGN DIRECT INVESTMENT AND TRADE STATISTICS

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Foreign Trade Statistics

The primary sources of trade statistics for this study are electronic tapes of the International Monetary Fund (IMF), *Direction of Trade Statistics (DOT)*, and the United Nations Trade Data System (UNTD). Exports are reported f.o.b. in these tapes and related publications, and imports are generally reported c.i.f.[1] To fill gaps in the *DOT* tapes, we have relied on data reported by partner countries in the tapes or in the 1992 *DOT Yearbook*. Data for Taiwan were estimated from partner country reports in the *DOT Yearbook*. (For example, Taiwan's imports from Hong Kong were estimated to be equal to Hong Kong's reported exports to Taiwan.) There was no entry for Chinese trade with Taiwan, but this trade was derived as a residual from the reported total for Asia and the sum for reported Asian countries. Singapore trade with Indonesia was estimated from Indonesian trade data, and Korean trade with China was estimated from Chinese trade data.[2]

Sectoral trade data were taken from the UNTD tapes and the *Taiwan Statistical Data Book, 1991*. No attempt was made to fill gaps in the data.

Figures 5-1 and 5-2 in chapter 5 of the text show the volume of U.S. and Japanese trade flows with East Asia. Tabular presentations are in terms of U.S. dollars or shares of annual totals. The presentation of trade flows over time always presents a problem for interpretation and analysis since price levels are seldom stable over time. When trade flows of more than one country are presented, multiple national currencies are necessarily involved, and exchange rates are typically much less stable than individual country price levels. The presentation of one country's trade flows over time in the currency of another country can cause very large distortions, especially when there have been wide fluctuations in the rate of exchange of the countries' currencies.

U.S. trade flows with East Asia shown in figure 5-1 are nominal dollar trade flows deflated by U.S. export and import price indices for total U.S. trade (as reported in IMF, *International Financial Statistics (IFS)*). Japanese trade flows with East Asia shown in figure 5-2 are nominal U.S. dollar trade flows converted to yen using annual average exchange rates from *IFS*, then deflated by Japanese export and import price indexes for total Japanese trade from *IFS*.

Discrepancies between reported exports to a country and that country's report of the corresponding imports are the rule in trade statistics. Three of the major reasons for the existence of discrepancies follow:

(1) when imports are reported on a c.i.f. basis and exports are reported on an f.o.b. basis, import values can be expected to exceed the corresponding export values because the former include shipping and insurance costs that the latter do not;

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[1] International Monetary Fund, *Direction of Trade Statistics Yearbook, 1992*, p. vii. F.o.b. (free on board) denotes the value at the port of exit. C.i.f. (cost, insurance, and freight) denotes the value at the port of entry. The difference is shipping costs and insurance.

[2] Korea started reporting trade with China in 1991, but the totals were considerably lower than Chinese reports of the same trade. *DOT* has reports of Chinese trade in 1990 as well as 1991. We have used the Chinese statistics in order to have a longer, consistent time series. UNTD has Chinese reports of trade with Korea going back to 1988, which show a higher level of trade than *DOT* statistics in 1990 and nearly identical levels in 1991, but we would have abandoned our policy of using one consistent source if we had used the UNTD data.

(2) exports are often underreported; and

(3) the time periods during which exports are shipped and imports are received and/or recorded may not coincide.

FOREIGN DIRECT INVESTMENT STATISTICS

Foreign Direct Investment Defined

Foreign direct investment (FDI, sometimes called direct foreign investment, DFI) conceptually involves whole or partial ownership of a firm in one country (the host country) by residents of, or by a firm located in, another country (the home country) with the intention of management control or participation in the management of the firm. The home country firm is frequently called the parent company, and the host country firm is called the affiliate company. Considered as a flow, FDI includes such things as the establishment of new facilities, the purchase of shares of an existing company (with the intent of managerial control or participation), and intrafirm transfers (for example, a loan from a home country parent to a foreign subsidiary). Considered as a stock, FDI ideally refers to the sum of the value of foreign ownership (with management interests) of firms and net loans owed to parent firms at a given point in time.

Investment that does not include an interest in management is defined to be portfolio investment. This includes bank loans, ownership of stocks (equities) and bonds, government securities, and so forth, where the owner is only concerned with the return on investment.

Actual measurement of FDI is quite complicated. There are ambiguities in establishing managerial intent and location of parent company for both flows and stocks. For stocks, there are a number of accounting problems dealing with such things as inflation, exchange rate conversions, and equity valuation over time. Comparison of data reported by different countries is difficult to nearly impossible because countries frequently have different reasons for reporting data, and this is reflected in the way the data are collected and reported.

The United States and Japan have similar criteria for establishing managerial intent or interest. The United States counts the ownership of 10 percent or more of the voting shares of a corporation by a resident of a foreign country or similar ownership of an unincorporated business as constituting evidence of managerial intent or interest.[3] Japan also uses a 10 percent ownership criterion, but, in addition, for the years through JFY 1991, it includes ownership of less than 10 percent if there is a "close relationship" between the firm in the host country and the home country investor.[4] The U.S. definition is symmetric for both inward and outward direct investment, whereas the Japanese definition is not.[5] Other countries have their own criteria defining managerial intent or interest and, therefore, what constitutes direct investment rather than portfolio investment. For instance, Singapore classifies "ownership of 20 percent or more of total equity capital by a

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[3] U.S. Department of Commerce, Bureau of Economic Analysis, "A Guide to BEA Statistics on Foreign Direct Investment in the United States," *Survey of Current Business*, Feb. 1990, pp. 29–37.

[4] Ryutaro Komiya, "Japan's Foreign Direct Investment: Facts and Theoretical Considerations," in Silvio Borner, ed., *International Finance and Trade in a Polycentric World: Proceedings of a Conference held in Basel, Switzerland, by the International Economic Association* (New York: St. Martin's Press, 1988), p. 242.

[5] See ibid., p. 242, for more detail. The difference in definition presumably introduces only small errors.

single investor or 50 percent or more . . . by a group of investors" as evidence of "possession of effective influence" to qualify as FDI.[6]

There are possible ambiguities in assigning the country of residence of the parent firm or individual investor. Residence can be assigned to the country of the ultimate beneficial owner or to the place of incorporation or business registration of the immediate owner. The former practice may give a more accurate indication of the seat of managerial control, but the latter practice is easier to verify administratively. Most countries appear to use the latter practice, but some countries do not clearly state their practice.

FDI flows reported by different countries are more likely to be comparable than are stocks, because questions such as accounting for inflation are generally absent. However, many obstacles to comparison remain. Probably the biggest problem with FDI flow data in East Asia is the distinction between data on approved investment and data on actual (or realized or implemented) investment. Approved investment can differ from actual investment because it may actually occur after the year it is approved or it may not be implemented at all. Many of the countries covered in this study report FDI by country of origin only on an approval basis.

Another problem is that some countries report only gross inflows--that is, they do not report disinvestment (sales of ownership rights to host or third country nationals) and repayment of intrafirm loans. Yet another problem is that some countries do not report reinvested earnings as a part of capital inflows. In balance of payments accounting (from the point of view of the host country), income on FDI (which equals the sum of reinvested earnings attributable to foreign owners and repatriated dividends) is counted as a current account outflow, and reinvested earnings are counted as a capital account inflow.

There are two basic methods of measuring FDI stocks--cumulation of annual flows and evaluation of year-end firm value. Although the latter method is generally preferable, it has its own problems. The two methods *can* yield identical results, but seldom do. To get identical results, they must cover the same universe of firms; they must both cover realized investment; they must both be done in the host country currency; inflows must be net of disinvestment and of intrafirm transfers; and inflows must include reinvested earnings attributable to foreign owners.

Even with proper accounting of FDI flows, the book value of foreign equity in a firm is likely to differ considerably from the market value of that equity. If the investment was made in the distant past, then inflation may have eroded the book value, depending on the speed and longevity of inflation in the intervening years. Even if there were no inflation, book value would be likely to understate the value of firms with high growth prospects and overstate the value of firms with dismal prospects, relative to the market value of equities.

The U.S. Department of Commerce reports the U.S. direct investment position abroad, changes in that position, and the components of the change in considerable detail.[7] These statistics are on a balance of payments basis--that is, they represent *actual* transactions and changes in ownership claims between home and host country companies. Annual capital flows are divided into net equity flows, reinvested earnings, and net intercompany debt flows. The reported stock of U.S. investment abroad is the year-end book value of overseas holdings converted to U.S. dollars. Data are reported with country and sector breakouts.

Official U.S. statistics on overseas FDI stock greatly understate the actual value, since these statistics are reported at book value and much of this investment was in place years ago. Estimates of the market value of the overall stock of U.S. overseas direct investment in 1991 are nearly double the book value.[8] No breakout of the estimated market value is reported by country or region.

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[6] Singapore, Department of Statistics, *Foreign Equity Investment in Singapore, 1980-1989*, p. 13.

[7] U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, "U.S. Direct Investment Abroad: Detail for Historical-Cost Position and Balance of Payments Flows, 1991," Aug. 1992, and *National Trade Data Base* on CD-ROM, 1992.

[8] U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, June 1992, p. 53.

The Japanese Ministry of Finance (MOF) publishes statistics on notifications of outward FDI disaggregated by country and sector.[9] These data are not on a balance of payments basis--that is, they represent intended, not actual, FDI and represent a *gross* outflow of equity investment and loans to affiliates. The Bank of Japan (BOJ) publishes FDI statistics on a balance of payments basis, but it reports limited country and region breakouts and no sector breakouts.[10] In addition, the BOJ statistics do not include reinvested earnings.[11] Both MOF and BOJ statistics are reported in U.S. dollars. The cumulative MOF FDI statistics, intended to represent the stock of Japanese FDI, are simply the sum over time of the annual dollar flows.[12]

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[9] Japan Ministry of Finance, *Monthly Bulletin of Financial Statistics.*

[10] Bank of Japan, *Monthly Bulletin of Balance of Payments Statistics.*

[11] Eric D. Ramstetter, "Regional Patterns of Japanese Multinational Activities in Japan and Asia's Developing Countries," *Economic and Political Studies Series*, No. 74, Kansai University, Osaka, 1991, p. 6; Ramstetter and Komiya, "Japan's Foreign Direct Investment," both have detailed discussions of the sources of Japanese FDI statistics.

[12] As Komiya says about the Japanese FDI statistics, "[i]t is not an exaggeration to say that statistics on FDI are full of errors and pitfalls and that they generally lack international comparability." Komiya, ibid., p. 245.

Table B-1
U.S. and Japanese trade with East Asia: exports and imports, 1980-91
(Millions of U.S. dollars)

Year	United States		Japan	
	Exports	Imports	Exports	Imports
1980	24,710	31,276	33,639	34,869
1981	24,503	36,318	36,639	35,639
1982	25,083	35,868	32,270	33,677
1983	25,165	43,114	36,414	31,525
1984	26,713	55,266	41,033	36,148
1985	25,387	57,315	42,733	35,206
1986	26,572	64,643	47,828	33,645
1987	32,945	79,850	57,797	44,203
1988	46,712	89,357	72,392	55,159
1989	52,958	95,313	77,646	60,820
1990	56,550	98,029	85,277	63,815
1991	63,928	102,334	101,037	69,948

Source: International Monetary Fund, *Direction of Trade Statistics.*

Table B-2
U.S. and Japanese trade with East Asia: export and import volumes, 1980-91

Year	United States[1]		Japan[2]	
	Exports	Imports	Exports	Imports
	Millions of 1985 dollars		Billions of 1985 yen	
1980	27,732	30,875	7,478	7,530
1981	25,183	34,006	7,830	7,366
1982	25,491	34,127	7,491	7,288
1983	25,317	42,772	8,580	7,057
1984	26,501	53,866	9,602	8,377
1985	25,387	57,315	10,193	8,398
1986	26,309	66,918	9,493	8,832
1987	32,079	77,075	10,372	10,855
1988	42,504	82,281	11,773	12,578
1989	46,948	85,177	13,016	13,869
1990	49,649	84,800	14,699	14,064
1991	55,686	88,524	16,783	15,575

[1] Dollar value of U.S. exports and imports with East Asia deflated by U.S. export and import price indices for all U.S. exports and imports.

[2] Dollar value of Japanese exports and imports with East Asia converted to yen using annual average exchange rates. Yen value of Japanese exports and imports deflated by Japanese export and import price indices for all Japanese exports and imports.

Source: Dollar-value trade data, International Monetary Fund, *Direction of Trade Statistics*; exchange rates and export and import price indices, International Monetary Fund, *International Financial Statistics.*

Table B-3
Japanese foreign direct investment flows on an approval basis in selected regions, East Asian countries, and the world, and yen/dollar exchange rates[1], JFYs 1981-91

(Millions of US dollars)

Region/country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	Cumulative to 3/31/92
North America	2,522	2,905	2,701	3,544	5,495	10,441	15,357	22,328	33,902	27,192	18,823	155,008
Europe	798	876	990	1,937	1,930	3,469	6,576	9,116	14,808	14,294	9,371	68,636
Latin America	1,181	1,503	1,878	2,290	2,616	4,737	4,816	6,428	5,238	3,628	3,337	43,821
Asia	3,339	1,384	1,847	1,628	1,435	2,327	4,868	5,569	8,238	7,054	5,936	53,455
East Asia:												
Hong Kong	329	400	563	412	131	502	1,072	1,662	1,898	1,785	925	10,775
Singapore	266	180	322	225	339	302	494	747	1,902	840	613	7,168
Taiwan	73	103	129	107	134	436	647	483	606	284	260	4,398
Korea	54	55	103	65	114	291	367	372	494	445	405	3,136
Indonesia	2,434	410	374	374	408	250	545	586	631	1,105	1,193	12,733
Thailand	31	94	72	119	48	124	250	859	1,276	1,154	807	5,229
Malaysia	31	83	140	142	79	158	163	387	673	725	880	4,111
Philippines	72	34	65	46	61	21	72	134	202	258	203	1,783
China	26	18	3	114	100	226	1,226	296	438	349	579	3,402
World	8,931	7,703	8,145	10,155	12,217	22,320	33,364	47,022	67,540	56,911	41,584	352,392
Yen/dollar exchange rate	220.54	249.05	237.52	237.52	238.54	168.52	144.64	128.15	137.96	144.79	134.71	132.7

[1] Rate used to convert FDI data.

Source: FDI data from Japan, Ministry of Finance, 1992; exchange rate for flows from U.S. Department of State, "USITC Investigation of East Asia Economic Integration," message reference No. 14168, prepared by U.S. Embassy, Tokyo, Aug. 1992; exchange rate for cumulative flows is Mar. 31, 1992 rate from International Monetary Fund, *International Financial Statistics*.

Table B-4
U.S. direct investment abroad on a historical-cost basis (FDI stock) in selected countries/regions and world, 1982-91

(Millions of U.S. dollars)

Year	Canada	Europe	Japan	Latin America[1]	Developing Asia[2]	World
1982	43,511	92,449	6,407	28,161	12,142	207,752
1983	44,339	92,178	7,661	24,133	13,039	207,203
1984	46,730	91,589	7,936	24,627	15,045	211,480
1985	46,909	105,171	9,235	28,261	15,400	230,250
1986	50,629	120,724	11,472	36,851	15,332	259,800
1987	57,783	150,439	15,684	47,551	17,010	314,307
1988	62,656	157,077	18,009	53,506	18,528	335,893
1989	63,919	179,839	18,800	62,485	19,995	372,419
1990	67,033	211,194	20,997	71,593	22,890	424,086
1991	68,510	224,554	22,918	77,342	25,180	450,196

[1] Includes Central and South America and Western Hemisphere islands.

[2] Includes East Asia, developing Pacific islands, and other parts of Asia (excluding those in the Middle East). Developing Pacific islands and other parts of Asia have typically amounted to less than 0.2 percent of total U.S. FDI.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Aug. 1992, and *National Trade Data Base* on CD-ROM, 1992.

Table B-5
U.S. direct investment in developing Asia-Pacific on a historical-cost basis, 1982-91
(Millions of U.S. dollars)

Country	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Hong Kong	2,854	3,068	3,253	3,295	3,912	4,389	5,240	5,873	6,187	6,430
Singapore	1,720	1,821	1,932	1,874	2,256	2,384	2,311	2,549	3,385	4,313
Taiwan	544	613	736	750	869	1,372	1,621	1,661	2,014	2,470
Korea	690	589	716	743	782	1,178	1,501	2,003	2,178	2,392
Indonesia	2,295	2,770	4,093	4,475	3,217	3,070	2,921	2,850	3,226	3,458
Thailand	780	892	1,081	1,074	1,078	1,274	1,132	1,273	1,585	1,787
Philippines	1,315	1,331	1,263	1,032	1,299	1,396	1,513	1,485	1,629	1,672
Malaysia	1,221	1,157	1,101	1,140	1,021	952	1,135	1,105	1,384	1,440
India	360	371	329	383	421	439	436	427	513	533
Other	362	428	541	635	476	556	719	769	788	684
Total	12,142	13,039	15,045	15,400	15,332	17,010	18,528	19,995	22,890	25,180

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Aug. 1992, and *National Trade Data Base* on CD-ROM, 1992.

APPENDIX C
ANALYSIS OF TRENDS IN INTRAREGIONAL TRADE INTENSITY

APPENDIX C
ANALYSIS OF TRENDS IN INTRAREGIONAL TRADE INTENSITY

There are many ways to measure intraregional trade intensity or bias.[1] A measure of trade bias, taking the pattern of world trade into account, is shown in table C-1 for East Asian trade. This measure is what Peter Petri calls the "double-relative" coefficient of trade intensity. Petri's measure is "double-relative" because it is equal to East Asian intraregional trade relative to total East Asian trade divided by total East Asian trade relative to total world trade.[2] For example, the double-relative coefficient in 1991 is equal to 34.5/13.8 = 2.49. With this measure there is no bias in international trade if each country's exports to a given region are equal to the share of world exports going to that region. For example, if East Asia received 10 percent of world exports, and 10 percent of Japan's exports went to East Asia, the double-relative coefficient of trade intensity would equal 1.00, meaning that no bias exists in Japanese exports to East Asia.[3]

For the ten countries considered in this report alone, a regional bias in East Asian trade is indicated by a double-relative coefficient of trade intensity of 2.90 in 1980, using the sum of imports and exports to calculate the coefficient. By comparison, Petri found coefficients of 1.95 and 1.51 for North America and Western Europe, respectively, in 1979, and Frankel found coefficients of 1.9 and 1.3 for North America and the European Community in 1980. (See table C-2 for coefficients these analysts found for other years, as well as USITC calculations of the bias for East Asia plus Japan.) Since 1980, this measure of bias in East Asian trade has fallen, with a coefficient of 2.49 in 1991. It reached a trough in 1988 and 1989 of 2.40 and a recent peak of 2.59 in 1990, indicating the possibility that the downward trend may have reversed.[4]

Some of the measured increase in intraregional trade is a statistical artifact. There is an upward bias in the East Asian intraregional trade statistics because of double-counting of goods transshipped through Hong Kong, mainly to and from China, and through Singapore, that cannot be measured precisely. This upward bias appears to have grown

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[1] Some of these methods are demonstrated in Peter Petri, "The East Asian Trading Bloc: An Analytical History," paper presented at the National Bureau of Economic Research Conference on the United States and Japan in Pacific Asia, Del Mar, CA, Apr. 1992 (NBER conference); Jeffrey A. Frankel, "Is Japan Creating a Yen Bloc in East Asia and the Pacific?", paper presented at NBER conference; Gary Saxonhouse, "Trading Blocs, Pacific Trade and the Pricing Strategies of East Asian Firms," paper presented at the World Bank and CEPR Conference on New Dimensions in Regional Integration, Washington, DC, Apr. 2-3, 1992.

[2] Jeffrey A. Frankel calls this measure "intraregional bias, holding constant for exports" in table 1 of his paper.

[3] Petri and Frankel do not clearly establish the algorithm for aggregation from the case of bias for a single country trading with a region (as in the example in the text) to the case of bias for countries in a region trading with other countries in the region (as in the computations for East Asian intraregional trade bias). It is possible that the double-relative coefficient of trade intensity may not equal one, exactly, for the case of "neutral" intraregional trade, but, clearly, our calculations and those of Petri and Frankel show that East Asian trade, as well as North American and European trade, is disproportionately intraregional trade.

[4] Petri found weak evidence of a reversal of the downward trend in intraregional trade bias for East Asia plus Japan. Frankel found that intraregional bias diminished in the 1980s with the same regional grouping. Petri's conclusion is partly due to his choice of years for comparison, as was Frankel's. The data assembled for this report are not exactly the same as the data used by Petri or Frankel, but this is to be expected when data are as messy as those for East Asian trade (see appendix B). When Japan is included with East Asia, we find the double-relative coefficients in table C-2, which compare directly with those of Petri and Frankel. A case could be made for a slight uptrend for years after 1984, but it is not clear that this phenomenon indicates anything more than noise in the data. In addition, the increase in transshipments of Chinese goods through Hong Kong (discussed in the text below) tends to overstate this coefficient in later years.

significantly over the past decade. The difference between what the United States reports as imports from China and what China reports as exports to the United States is a rough indicator of the order of magnitude of transshipments of Chinese products through Hong Kong. This discrepancy amounted to about $180 million in 1980, but ballooned to $14 billion in 1991, lowering the intraregional trade share by about 2 percentage points. Adjustment of the double-relative coefficient for this discrepancy in U.S.-China trade has virtually no effect in 1980 and lowers the 1991 coefficient by about 0.08, reinforcing the long-term downtrend in the coefficient and lessening the possibility that the long-term trend has reversed in recent years. Accounting for transshipments to countries other than the United States would lower the coefficient further in the later years.

Table C-1
East Asian trade, intraregional and with world, 1980-1991

Year	East Asia		East Asia		(A) Intra-East Asia share of total East Asia trade	(B) Total East Asia trade as share of world trade	(A/B) Petri's "double-relative" coefficient
	Exports to East Asia	Imports from East Asia	Exports to World	Imports from World			
	Millions of U.S. dollars				Percent		
1980	33,627	30,951	146,102	147,311	22.0	7.6	2.90
1981	38,373	35,179	160,172	165,210	22.6	8.5	2.66
1982	41,264	38,280	157,577	160,497	25.0	9.0	2.79
1983	43,647	40,618	165,375	168,468	25.2	9.7	2.61
1984	47,914	44,051	191,286	181,041	24.7	10.1	2.45
1985	50,123	45,644	189,971	187,391	25.4	10.2	2.50
1986	52,112	48,938	208,138	196,595	25.0	9.9	2.51
1987	72,799	68,757	271,808	246,055	27.3	10.8	2.52
1988	98,801	92,475	336,455	324,275	28.9	12.1	2.40
1989	115,442	109,191	373,700	369,838	30.2	12.6	2.40
1990	138,364	131,662	419,646	420,748	32.1	12.4	2.59
1991	169,800	164,017	477,767	490,226	34.5	13.8	2.49

Note.—Shares and "double-relative" coefficient computed from unrounded data.
Source: International Monetary Fund, *Direction of Trade Statistics* and calculations by USITC staff.

Table C-2
Double-relative coefficients of trade intensity, selected regions and years

Year	East Asia + Japan			North America		Western Europe	EC
	Petri	Frankel	USITC	Petri	Frankel	Petri	Frankel
1979	2.64	(1)	(1)	1.95	(1)	1.51	(1)
1980	(1)	2.2	2.42	(1)	1.9	(1)	1.3
1981	(1)	(1)	2.18	(1)	(1)	(1)	(1)
1982	(1)	(1)	2.18	(1)	(1)	(1)	(1)
1983	(1)	(1)	2.07	(1)	(1)	(1)	(1)
1984	(1)	(1)	1.99	(1)	(1)	(1)	(1)
1985	2.05	(1)	2.02	1.71	(1)	1.58	(1)
1986	(1)	(1)	1.97	(1)	(1)	(1)	(1)
1987	(1)	(1)	2.05	(1)	(1)	(1)	(1)
1988	(1)	(1)	1.98	(1)	(1)	(1)	(1)
1989	(1)	1.9	1.98	(1)	1.9	(1)	1.5
1990	2.09	(1)	2.09	1.84	(1)	1.5	(1)
1991	(1)	(1)	2.07	(1)	(1)	(1)	(1)

[1] Not available.
Source: Peter Petri, "The East Asian Trading Bloc: An Analytical History," paper presented at the National Bureau of Economic Research Conference on the United States and Japan in Pacific Asia, Del Mar, CA, Apr. 1992 (NBER conference); Jeffrey A. Frankel, "Is Japan Creating a Yen Bloc in East Asia and the Pacific?"; paper presented at NBER conference; calculations by USITC staff.