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National Bureau of Economic Research

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Trade and Structural Change in Pacific Asia

A National Bureau
of Economic Research
Conference Report

Trade and Structural Change in Pacific Asia

Edited by Colin I. Bradford, Jr., and William H. Branson

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Contents

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Overview

During the period since the early 1970s, the newly industrializing countries (NICs) of East and Southeast Asia have become major factors in world trade in manufactures. First Japan and then the "Gang of Four"—South Korea, Taiwan, Hong Kong, and Singapore—emerged as major manufacturing centers. Japan during the seventies moved to the frontier of technology and joined the major Organization for Economic Cooperation and Development (OECD) countries as an industrial power. The Gang of Four expanded production and exports in a range of medium-technology products, from basic imports such as steel (Korea) to sophisticated electronics and financial services (Singapore). These countries have generally experienced rapid structural change in industrial composition and real income, and their export capacity is viewed as threatening to North America and Europe. An extensive literature has grown around the issue of the "secret" of the Gang of Four's success. Can they be imitated or are they sui generis? This is one issue addressed in this conference volume.

A second, and related, issue is the degree to which the resource-rich "ASEAN Four" (Association of South East Asian Nations)—Malaysia, Thailand, the Philippines, and Indonesia—will follow a similar path of development. Are they "next-tier NICs"? Manufacturing capacity has begun to grow rapidly in these countries, while their economies remain heavily based on resource endowments. The relations among the groups of countries at three levels of development in Pacific Asia—Japan, the Gang of Four, and the ASEAN Four—are also discussed in this volume. Do the industrializing countries further down the ladder displace those higher up as exporters to North America, Europe, and Latin America, or will those higher up the ladder themselves open to manufactured exports from those lower down? This is a third issue that runs through the papers in the volume.

The emergence of Pacific Asia as a center of manufacturing production and export and potentially as a major economic power is a phenomenon that we felt required some analysis in depth. Toward this end, with the financial support of the IBM World Trade Asia Corporation, we organized a conference, which was held 4–6 January, 1984 in Kuala Lumpur, Malaysia. The conference was jointly sponsored by the National Bureau of Economic Research and the Malaysian Economic Association and was (somewhat awkwardly) titled "Global Implications of the Trade Patterns of East and Southeast Asia." The volume includes the edited versions of the conference papers, plus an introductory chapter by the editors.

The conference program, reproduced as the appendix to this overview, included sixteen papers, eight of which discussed trade patterns of the eight developing countries mentioned above and eight of which covered international or comparative issues in world trade with Pacific Asia. Of the latter eight, three focused on patterns of trade of the United States, Europe, and Japan with the area. The conference program was organized as a mixture of overview and country papers. In the volume, we have reorganized the program into four cohesive parts plus our introduction in part I. Part II discusses the role of Pacific Asia in global trade patterns. Part III follows with papers on structural changes in the area. Then parts IV and V include the country papers on the Gang of Four and the ASEAN Four.

Our term *Pacific Asia* is meant to be descriptive of the countries at the Pacific edge of Asia running from Korea to Indonesia. This includes countries normally labeled East Asian and Southeast Asian. Strictly speaking, the term includes the eight economies of Parts IV and V plus Japan. Perhaps unfortunately, we omitted China from the project. Of course, some of the papers include a wider selection of Asian countries in their analysis, but Pacific Asia is the principal focus.

The first paper of part II, by William H. Branson, compares trade patterns of the United States, Europe, and Japan with the NICs in Asia and Latin America. He finds that the United States, the Latin American NICs, and the Far Eastern NICs form a trade triangle. The United States exports manufactures (mainly capital goods) to the Latin American NICs, who in turn sell raw materials on the world market, while the Far Eastern NICs import raw materials and export manufactures (mainly consumer goods) to the United States. These patterns show, on the one hand, the sensitivity of U.S. exports to the debt situation in Latin America and, on the other hand, the rapidity of change in the structure of U.S. industrial production. As the United States expands its exports of equipment to the developing countries and its imports of consumer goods from them, its economy becomes increasingly interdependent with them.

Using a new data set on production and trade in developed countries, Jean L. Waelbroeck's paper examines the pattern of trade in manufactured goods between developing countries and the European Community (EC, or Common Market). The first section examines the revealed comparative advantage and the geographic pattern of trade of the EC, the United States, and Japan. The second part is devoted to an in-depth study of trade between the EC and developing countries. Waelbroeck and Branson observe a similar "proximity effect" in trade patterns; the trade of Europe, the United States, and Japan is most intensive with African, Latin American, and Asian developing countries, respectively. Waelbroeck also concludes that while exports from Japan and the Gang of Four have put considerable pressure on Europe and North America, the export shares of the next-tier NICs are still small enough to permit significant expansion in their manufactured exports.

The third paper in part II, by Ippei Yamazawa, finds that Japanese manufacturers have been competing with manufacturers in the Asian NICs and other Asian developing countries: first, in their export markets in the United States and Western Europe and later, since the mid-1970s, in the Japanese market itself. This has created a deficit in trade in manufactured goods for the Asian less-developed countries (LDCs). Beyond this competition, strong complementarity has continued between Japan and her Asian neighbors through Japan's supplying capital and intermediate goods and importing labor-intensive consumer goods and primary products. However, the paper argues that in order to further this trade relationship, Japan would have to increase manufactured imports and improve the balance of trade with the Asian LDCs through structural adjustment and industrial cooperation as well as by eliminating "implicit barriers."

The paper by Robert E. Baldwin and J. David Richardson concludes that three basic economic and political influences explain most shifts in U.S. trade policy in the postwar period. They are (1) the emergence and subsequent decline of the United States as a hegemonic power, (2) the persistence during the entire period of a politically significant group of domestic industries that were opposed to duty cuts on competing import products, and (3) efforts by Congress to reduce the greatly increased power granted the president during the depression and World War II. In fact, the authors find that conflict has punctuated relations between branches of government more often than between political parties. They believe that leadership on U.S. trade policy is still potentially strong despite the decline in U.S. hegemony.

The last paper in part I, by Lawrence R. Klein, describes the role played by the Pacific Asian economies in Project LINK. There, the developing countries play an important role and are represented in four area models: Africa, Latin America, Middle East, and Southeast Asia/Pacific Far East. Projections for 1983–88 indicate relatively poor prospects for these developing countries in the context of relatively moderate performance for the world as a whole. Within the developing areas of the world, there is great diversity. In the short run, the Asian countries are expected to do fairly well in contrast with Latin American countries, where activity levels are expected to be quite depressed. Over a longer period, until 1988, economic prospects appear to be good for the countries of Southeast Asia and the Pacific Far East. Similarly, among socialist countries, the People's Republic of China is expected to turn in an outstanding performance.

In the first paper of part III, Colin I. Bradford, Jr., examines the sources and manifestations of internal and external structural change in the NICs and next-tier NICs in East and Southeast Asia, comparing them with European and Latin American transitional economies. By compiling data on compositional shifts in exports, Bradford finds patterns that are broadly consistent with an explanation of structural changes in trade based on factor proportions. His paper also finds evidence of policies encouraging underpricing investment goods in rapidly industrializing countries, which appears to have been an important vehicle for countries becoming NICs in the 1970s but may have produced overinvestment in the NICs during the slower-growth 1980s. Bradford also presents data that relate the degree of price distortion to the degree of inward versus outward orientation of growth strategies. Getting prices right, while important, is not a sine qua non of economic growth, and the identification of correct prices with outward-oriented growth strategies has been overdrawn in some of the recent literature.

Lawrence B. Krause presents an empirical study of the structure of trade in manufactures within the Pacific Asian region. He concludes that, despite the world recession of the early 1980s, which reduced international trade, international specialization continued to progress. Moreoever, LDCs continued to increase their share of world trade in manufactured goods. The developing countries in East and Southeast Asia were the star performers among the LDCs. The basis for the comparative advantage of these countries differed depending on whether they were NICs who moved from labor-intensive goods to more skill- and technology-intensive goods, or whether they were the other developing Asian countries who remained heavily involved in natural-resource-intensive development during the 1970s. The paper also examines the special case of textiles and clothing and, despite the Multi-Fiber Arrangement, finds increased scope for LDC trade in these commodities. Krause concludes that development in Pacific Asia has followed lines of comparative advantage.

In the last paper of part III, Laurence J. Kotlikoff and Edward E. Leamer examine the relationship between trade, growth, and factor prices in (1) the standard Heckscher-Ohlin (HO) model, with equal numbers of factors and goods; (2) the uneven HO model, with more goods than factors; and (3) a generalized HO model, with adjustment costs caused by immobility of physical capital in the short run. Preliminary statistical tests of the three models of transitional international growth in twenty-eight countries and twenty-eight industries provide some support for each view of the evolution of international trade and factor prices. This partial support for each of the models suggests that an uneven model with adjustment costs provides a better basis for discussing international trade than any of the three models on its own. Consistent with the results of Bradford and Krause, the more general conclusion of this analysis is support for a general factor endowment HO view of sources of comparative advantage and growth.

The first country study of part IV, on South Korea, is by Wontack Hong. His paper first sets out to analyze the relationship between the export-oriented growth strategy and the high-growth performance of the Korean economy, on the one hand, and Korea's shifting comparative advantage and pattern of trade in manufactured goods, on the other. He also looks at the impact of subsidized credit and the consequent rationing of credit on the pattern of trade in manufactured goods. The paper concludes that subsidization of credit favored capital-intensive industries and skewed Korea's exports toward capital-intensive goods, such as machinery. The Korean experience is contrasted with that of Taiwan, which subsidized credit less and had more labor-intensive exports.

The paper on Taiwan, by Chi Schive, argues that Taiwan's fast economic growth during the past two decades came mainly from the expansion of trade. Taiwan's trade pattern was determined by comparative advantage, with labor-intensive exports. The trade balance in Taiwan fluctuated widely in the 1970s, partly as a result of the inflexibility of the exchange rate in that period. When trade expansion created a potential market for intermediate and capital goods, local entrepreneurs responded to this signal to the extent that other conditions for the development of such industries were also met. Schive notes that Taiwan's exports in the 1970s were relatively labor-intensive, but that growth with rising real wages has ended this phase. He concludes that Taiwan's trade in the late 1980s will shift toward more capital-intensive exports and consumer-goods imports.

Edward K. Y. Chen's paper on Hong Kong begins by documenting that the rapid growth of the past twenty years has been based on manufactured exports. Chen shows that this growth was largely demand determined, with trade liberalization and growth in the industrial countries expanding demand for consumer goods, especially clothing. Hong Kong responded by diversifying production within industrial groups rather than undergoing fundamental structural change. Chen concludes that this period of demand-determined growth is ending and that Hong Kong will have to shift toward exports that are more skill- and technology-intensive. He believes that this shift will be hindered by the existing relatively low technological capability and by the political uncertainty related to the expiration of Hong Kong's British lease in 1997.

In the last paper in part IV, Chung Ming Wong examines the changes in Singapore's trade in manufactured goods in the last two decades. He relates these changes to domestic economic development and to shifts in government policies. Since the turn from import substitution to export promotion in the 1960s, Singapore has achieved high rates of industrial growth by rapid absorption of labor into labor-intensive industries. In view of the current shortage of labor, however, the government is following a deliberate policy of phasing out unskilled-labor-intensive industries and restructuring the economy to emphasize high-technology and skill-intensive activities.

The part IV papers on the Gang of Four all point to an anticipated shift toward less labor-intensive and more technology-intensive production. The authors tend to agree with Waelbroeck's assessment that there is ample room in the markets of the industrial economies to accommodate this shift.

Beginning the country studies of part V, the paper by Chee Peng Lim traces the changes in the Malaysian economy over the last twenty years and examines how these changes affected the product composition and direction of Malaysia's trade. He notes particularly the rapid growth in manufactured exports. The paper illustrates the tension between development of manufacturing and resource-based industry in the conclusion that Malaysia may move toward development of "high-value" machinery and resource-based exports. Lim sees Malaysia joining the NICs by the end of the 1980s.

In his paper on Thailand, Juanjai Ajanant asserts that the growth of Thailand's manufacturing sector during 1960–76, in terms of both production and exports, was stimulated by the moderate import substitution industrialization policy. While industrial activities were promoted, other sectors, such as agriculture, maintained steady growth in terms of both production and export value. This import substitution policy was replaced by a more export-oriented policy after 1976. Ajanant argues that a combination of supply and demand factors spurred manufactured export growth so that by 1980 30% of Thailand's exports were manufactures. Ajanant concludes that Thailand will experience further growth in exports of agriculture and manufactures, with the balance continuing to shift to the latter.

Florian A. Alburo examines the industrialization process in the Philippines and the role that trade has played in it. He points out that the country has begun a shift from an "inward-looking" path to an "outward-looking" strategy. He also presents evidence that the increasing exports of nontraditional manufactured goods in the 1970s have been associated with structural change that is consistent with the country's resource endowments and its comparative advantage. While Philippine development is currently hindered by the debt problem and political turbulence, Alburo finds the prospects for sustained structural change encouraging.

In the last paper in the volume, on Indonesia, Ralph E. Beals finds that despite progress toward industrialization since 1966 under the "New Order" government, exports have remained almost exclusively unprocessed mineral and agricultural products, with crude oil being the dominant export since 1974. Government policies—including protective tariffs and other barriers to trade, interest rate subsidies and credit controls, tax holidays and other investment subsidies, energy price controls, and investment in capital-intensive industry—have steered industrial growth away from areas of Indonesian comparative advantage and into import-competing sectors. Growth in these sectors has not provided satisfactory employment growth and, indeed, appears to be slowing down. Beals concludes that Indonesia's pattern of trade and industrialization is quite different from that of other countries under discussion in this volume. While the other three resourced-based ASEAN countries have moved toward manufacturing and an export-oriented growth strategy, Indonesia is still in the import substitution phase.

Our intent, in organizing the conference, was to generate a lively and wide-ranging discussion of the comparative patterns of trade and structural change in Pacific Asia and their implications for the world economy. Rather than record the discussion, we decided to write an introductory chapter that integrates the main points that emerged. This is the first chapter in the volume. It discusses issues such as whether the NICs exist as an ex ante category, patterns of trade and growth in the three tiers of Pacific Asia, the extent of government intervention in the growth process, the role of financial repression, and supply-led versus demand-led growth. The chapter is, in a sense, the research agenda that emerged from the conference.

We extend our thanks to the IBM World Trade Asia Corporation for providing financial support and to the Malaysian Economic Association for providing the local arrangements for the conference in Kuala Lumpur. We are particularly indebted to Kirsten Foss, the NBER organizer, and especially to Dr. Lim Lean Lun of the Malaysian Economic Association for her organizing efforts on the scene in Kuala Lumpur.

Appendix
Conference Program

On 4–6 January 1984, NBER's Program in International Studies held a conference in Kuala Lumpur, Malaysia, on the "Global Implications of the Trade Patterns of East and Southeast Asia." This conference, organized by NBER's William H. Branson of Princeton University and Colin I. Bradford, Jr., of Yale University, was supported in part by the IBM World Trade Asia Corporation and was jointly sponsored by the Malaysian Economic Association and NBER. The conference program included sixteen papers, eight of which discussed trade patterns and trends of developing countries in the region and eight of which covered relevant international or comparative issues in world trade with the area. The program was as follows:

Wednesday, January 4

Opening Address by Y. B. M. Tengku Ahmad Rithauddeen, Minister of Trade and Industry, Malaysia

William H. Branson, "Trade and Structural Interdependence between the United States and the NICs"

Jean L. Waelbroeck, Université Libre, Brussels, "Trade and Structural Interdependence: The European Community and the NICs: Their Trade in Manufactures"

Ippei Yamazawa, Hitotsubashi University, Tokyo, "Japan and Her Asian Neighbors in a Dynamic Perspective"

Discussants: Narongchai Akransanee, The Industrial Management Company, Bangkok; J. David Richardson, NBER and University of Wisconsin; and Lawrence B. Krause, Brookings Institution

Chee Peng Lim, University of Malaya, Kuala Lumpur, "Changes in the Malaysian Economy and Trade Trends and Prospects"

Florian Alburo, University of the Philippines, Manila, "Manufactured Exports and Industrialization: Trade Patterns and Trends of the Philippines"

Juanjai Ajanant, Chulalongkorn University, Bangkok, "Trade Patterns and Trends of Thailand"

Discussants: Robert E. Baldwin, NBER and University of Wisconsin; Chong Ngian Yet, Ministry of Trade and Industry, Malaysia; and David L. Grove, U.S. Council for International Business

Thursday, January 5

Lawrence B. Krause, "The Structure of Trade in Manufactured Goods in the East and Southeast Asian Region"

Lawrence R. Klein, University of Pennsylvania, "The South Asian and Pacific Far East Countries in Project LINK"
Discussants: William H. Branson and J. David Richardson

Edward Chen, University of Hong Kong, "Hong Kong's Trade Patterns and Trends"
Chung Ming Wong, National University of Singapore, "Trends and Patterns of Singapore's Trade in Manufactures"
Discussants: Dr. Fong Chan Onn, University of Malaya, and Jean L. Waelbroeck

Friday, January 6

Wontack Hong, Seoul University, Korea, "Export-oriented Growth and Trade Patterns of Korea"
Chi Schive, National Taiwan University, Taipei, "Trade Patterns and Trends of Taiwan"
Ralph Beals, Amherst College, "Trade Patterns and Trends of Indonesia"
Discussants: Gustav Ranis, Yale University; Dr. Tan Tat Wai, Bank Negara Malaysia; and Giuseppe Sacco, Free University of Rome
Colin I. Bradford, Jr., "The Role of the Industrializing Countries of East and Southeast Asia in World Trade: NICs and Next-Tier NICs as Transitional Economies"
Laurence J. Kotlikoff, NBER and Yale University, "Empirical Tests of Alternative Models of International Growth"
Robert E. Baldwin and J. David Richardson, "Recent U.S. Trade Policy and Its Global Implications"
Discussants: Ronald Findlay, Columbia University; Lawrence R. Klein; and Peter B. Kenen, Princeton University

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