Volume Title: Trade and Structural Change in Pacific Asia

Volume Author/Editor: Colin I. Bradford, Jr. and William H. Branson, editors

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-07025-5

Volume URL: http://www.nber.org/books/brad87-1

Publication Date: 1987

Chapter Title: The Structure of Trade in Manufactured Goods in the East and Southeast Asian Region

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Chapter URL: http://www.nber.org/chapters/c6923

Chapter pages in book: (p. 205 - 226)

8 The Structure of Trade in Manufactured Goods in the East and Southeast Asian Region

Lawrence B. Krause

8.1 Introduction

In 1983–84 the world economy recovered from the longest and deepest recession in the postwar period. One notable consequence of the recession was that world trade rose only 1.5% in 1980, had no growth in 1981, and declined by 2% in 1982 (GATT 1983). Thus trade, rather than being the handmaiden of growth, has been the transmitter of stagnation and recession.

Critics of an open trading regime might try to find lessons from this experience in an attempt to promote a protectionist point of view. They will be disappointed. International trade during this period made the recession less burdensome than it would have been with a less liberal regime in place. This is seen most clearly by concentrating on manufactured goods alone. In 1980 world production of manufactured goods increased 1.5% but exports of manufactures increased 5%; in 1981 manufacturing production increased only 0.5%, but its trade increased 3.5%; and in 1982 manufacturing production decreased 2% percent, but its trade declined only 1.5%. Thus, the presumption is established that international specialization continued to make headway and that efficiency was gained even during the recession. Looking at the difficult decade from 1973 to 1982, when aggregate growth and productivity declined in all industrial countries, production of manufactures increased at an annual rate of 2.5%, and trade of manufactures grew at the larger annual rate of 4.5%. In trade in manufactures, the handmaiden still lives.

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From 1973 to 1982, the value of world trade grew at an annual rate of 13.8% (reflecting a great deal of inflation). The value of world exports of manufactures grew at a slightly lower rate of 13.0% (the lower rate entirely the result of the slower rise of prices). In table 8.1 the trade of manufactured goods is broken down into major subdivisions, and the growth rates between 1973 and 1982 are shown. Export growth of office and telecommunications equipment was particularly fast (15.7%), along with chemicals (14.6%). On the other hand, exports of textiles grew only 9.2%, and iron and steel, 10.3%.

During this same period, total exports from the developing countries (excluding traditional oil exporters) grew at a 15.8% annual rate, and their manufactures exports at a 18.6% annual rate. Thus, in 1973, only

Table 8.1 **Exports by Commodity Groups**

Commodity Group	Compound Annual World Growth Rate, 1973–82 (%)	Share of Exports from LDCs[a] (%)	
		1973	1981
Food	10.28	25.52	26.20
Raw materials	6.79	22.22	20.09
Ores and minerals	9.59	27.63	31.37
Fuels	23.45	9.42	13.70
Nonferrous metals	7.81	25.46	16.90
Total primary products	15.04	20.42	18.50
Iron and steel	10.34	13.18	6.91
Chemicals	14.62	4.37	6.96
Other semimanufactures	11.64	11.71	13.31
Engineering products	13.47	3.14	6.40
Machinery for specialized industries	12.21	1.54	3.25
Office and telecommunications equipment	15.71	7.44	15.01
Road motor vehicles	13.18	0.93	1.95
Other machinery and transport equipment	14.02	2.90	6.40
Household appliances	13.19	10.75	17.94
Textiles	9.19	17.35	23.05
Clothing	14.08	30.34	40.68
Other consumer goods	14.26	13.11	18.64
Total manufactures	13.04	6.66	10.14
Total exports	13.83	11.89	13.70

Source: GATT 1983.

[a]Excluding traditional oil exporters, defined as members of OPEC: Algeria, Ecuador, Gabon, Indonesia, Iraq, Islamic Republic of Iran, Kuwait, Libyan Arab Jamahiriya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

6.7% of world exports of manufactures originated in less-developed countries (LDCs), but by 1982, 10.2% was coming from LDCs (10.1% in 1981). In other words, the penetration ratio of LDCs in world markets of manufactures had increased by half. The LDC share was greatest for traditional labor-intensive products, and by 1981 LDCs were providing 40.7% of world exports of clothing, 23.1% of textiles, and 18.6% of other consumer goods. For each of these categories the LDC share had risen since 1973. However, the rate of growth of LDC penetration was greater for many other categories, including all subgroups of engineering products. Of course, some of these products were only assembled in LDCs and, therefore, represent a continuation of labor-intensive specialization. However, a pattern has been noted in several studies that foreign-owned assembly operations over time evolve into more local production of parts and thus create a great deal more domestic value added (Galenson 1985).

The only category of manufactured exports where the LDC share was reduced was in iron and steel, which declined from 13.2% to 6.9%. These capital- and skill-intensive products are still mainly the preserve of industrial countries. However, certain advanced developing countries such as Korea, Taiwan, and Brazil have already established international competitiveness in steel and probably strengthened their position in recent years through major new investments. Therefore, the declining LDC share may be due not to a lack of competitiveness but rather to either shortage of capacity or growing protectionism (Jones 1983). Protectionism probably also played a role in limiting the rise in the LDC share of textiles, clothing, and footwear.

8.2 East and Southeast Asian Countries as Exporters

The developing countries of East and Southeast Asia reflect, indeed exaggerate, world trends. As seen in table 8.2, the growth of exports of every country in the region from 1973 to 1982 was greater than world totals. Indonesia and Korea stand out among these countries as having the largest growth in their value of exports: Indonesia primarily because of the rise of oil prices and Korea because of increases in manufactured exports. All of the others had approximately the same rate of export success. The recession years of 1979–82 saw great differentiation among the countries; however, all the countries in this region outperformed the world as a whole in export growth.

What can explain the relative export success of these countries? One factor is the Pacific Basin region itself. For over two decades, the countries of this region have been the fastest growing countries in the world. While the 1979–82 recession has had a negative impact on them, they have nevertheless been able to sustain moderate growth rates.

Table 8.2 **Exports of Asian NICs and ASEAN Countries**

Country	Compound Growth Rate of Exports (%)		Share of Manufactures in Exports, 1980 (%)	Share of Textiles and Clothing in Exports, 1980 (%)
	1973–82	1979–1982		
NICs				
Hong Kong	17.1	11.3	93	34
Korea	32.3	29.7	90	29
Singapore	19.6	12.9	54	4
Taiwan	19.8	14.3	97	23
ASEAN Four				
Indonesia	32.3	19.1	2	1
Malaysia	16.1	5.1	19	2
Philippines	14.3	8.0	37	6
Thailand	19.5	13.9	29	9

Sources: International Monetary Fund, *International Financial Statistics* (Washington, D.C.); Ministry of Finance, Republic of China, *Monthly Statistics of Exports and Imports*, 20 August 1983; World Bank, *World Development Report 1983* (London: Oxford University Press).

Furthermore, compared with other developing countries in other regions, the LDCs in East and Southeast Asia have introduced more outward-oriented policies. Singapore and Hong Kong are at the extreme of completely free trade. Since the early 1960s in Taiwan and the mid-1960s in Korea, these two countries have been liberalizing imports as an ingredient of their export-led growth strategy. The natural-resource-exporting countries of the Association of South East Asian Nations (ASEAN) have some protection for manufactures, ranging from moderate in Malaysia to fairly restrictive in Indonesia. However, in every case, the protection is less than that of other LDCs with similar economic structures and at similar stages of development. The important point is that none of these countries envision their development within a context of self-sufficiency but rather have an outward orientation.

A third factor that helps explain the export success of these countries is the pattern of trade within the Pacific Basin. All of these countries sell more than half their exports to other countries within the Pacific Basin, and on average more than 60% (table 8.3). There are two distinct patterns of trade involved. There are the newly industrializing countries (NICs) that specialize in manufactured goods and sell between 50% and 70% of their exports within the Pacific Basin. For them the United States is by far the largest market. The other LDCs are primarily exporters of natural resources and sell between 50% and 81% of their

Table 8.3 Exports of Pacific Basin Countries

	1982 Total Value of Exports (tens of billions of U.S. $)	1981 Export Shares (% of total)			
		Pacific Basin	ASEAN	Japan	United States
ASEAN Four					
Indonesia	2.53	81.33	12.04	47.32	18.32
Malaysia	1.21	68.36	27.52	22.06	10.41
Philippines	0.50	71.23	7.22	21.79	31.01
Thailand	0.70	50.46	14.65	14.22	12.93
NICs					
Hong Kong	2.09	50.53	11.45	4.68	27.76
Korea	2.18	57.64	5.16	16.47	26.74
Singapore	2.08	61.63	21.11	10.13	13.21
Taiwan	2.22	69.67[a]	7.48	10.96	36.10
Papua New Guinea	0.07	60.37	2.67	37.70	4.82
Advanced					
Japan	13.84	48.98	10.00		
Australia	2.21	62.62	8.56	28.15	25.67
Canada	7.11	71.45	0.64	5.02	11.19
New Zealand	0.56	51.89	6.40	13.00	63.98
United States	21.23	36.89	3.77	9.88	12.51

Sources: IMF, Direction of Trade Statistics tapes; Ministry of Finance, Republic of China, *Monthly Statistics of Exports and Imports,* 20 August 1983.

[a]Excludes New Zealand and Papua New Guinea.

exports within the Pacific Basin. For them Japan is the largest market. Thus, the Pacific Basin provides a major market regardless of specialization—manufactures to the United States and raw materials to Japan.

Another factor of importance has been the burgeoning trade among the LDCs within the Pacific Basin. Because five of the countries are institutionally linked to one another through ASEAN, intra-LDC trade has been given a boost. About 17% of the exports of ASEAN countries (including Singapore) are to other ASEAN countries, ranging from 7% for the Philippines to 27.5% for Malaysia. What is also noticeable is the importance of the ASEAN market for the non-ASEAN LDCs of the Pacific. For Hong Kong, 11.5% of its exports find a market in ASEAN. That makes ASEAN almost three times more important to Hong Kong than Japan.

Thus, the answer to the question of why the LDCs of the Pacific Basin have had relatively good export success seems to be threefold; first, the countries in the Pacific Basin have grown faster than other countries; second, these LDCs have had more outward-oriented eco-

nomic policies than other LDCs; and third, they had a ready market for their exports in other Pacific Basin countries.

8.3 Comparative Advantage in the Pacific Basin

As noted earlier, the countries of the Pacific Basin have sustained their economic growth better than countries in other regions. One of the reasons for this result is that countries in this region adjust better to shocks such as the two oil crises and the world recession. However, rapid adjustment also implies changing comparative advantages in international trade. Some empirical work was undertaken to summarize the nature of these changes.

A four-factor model was developed for this purpose. Goods were classified as either natural-resource-intensive, unskilled-labor-intensive, human-capital-intensive (skilled-labor-intensive), and technology-labor-intensive. Physical capital was dropped as a classification because it is so internationally mobile as to provide little guidance to the location of production.[1] A superior approach would be to measure the inputs of the various factors by product, but as the data were not available, an approximate method was employed. The results are shown in tables 8.4–8.7 for twelve countries of the Pacific Basin grouped into developed countries, NICs, and ASEAN.[2]

Table 8.4 shows the percentage of each country's exports that is made up of natural-resource-intensive products. Seven of the twelve countries had more than half of their exports in this category. One other country, Canada, was just about at the 50% mark. This illustrates the obvious fact that natural resources are the basis for much of the trade of the Pacific Basin for most of the countries. In the case of Singapore, this results from its role as an entrepôt for natural resource production of neighboring countries and from its own position as a large refiner of petroleum. All of the other countries are producers and processors of raw materials, which constitute the mainstay of their export basket. It is also evident that there was a general tendency for natural resource goods to become slightly less important during the decade of the 1970s. The trend is most noticeable for Malaysia, the Philippines, and Thailand—the group of countries that are considered to be directly behind the NICs in moving into manufactured production and manufactures exports. The NICs themselves also reduced their shares of natural resource goods, with the declines for Korea and Singapore being the most sharp.

Table 8.5 shows the trends during the 1970s of the share of labor-intensive goods in the exports of the Pacific Basin countries. At the beginning of the decade, three-quarters of the exports of Hong Kong, over half of Korea's exports, about one-quarter of Japanese exports,

Table 8.4 **Exports of Natural-Resource-Intensive Commodities by Pacific Basin Countries** (percentage of total)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Developed												
Australia	83.22	82.59	82.77	81.25	80.86	82.94	82.41	81.89	79.22	82.62	79.38	79.07
Canada	49.82	48.98	49.54	53.55	56.66	54.59	52.01	50.13	48.01	51.47	n.a.	n.a.
Japan	8.41	7.57	6.99	6.72	7.52	5.83	5.23	4.96	4.83	5.19	n.a.	n.a.
New Zealand	89.69	90.28	89.82	91.27	89.05	87.37	85.91	84.75	84.14	83.60	n.a.	n.a.
United States	31.19	29.23	30.73	36.91	34.88	32.40	31.47	31.06	31.69	32.83	n.a.	n.a.
NICs												
Hong Kong	4.24	4.03	3.79	3.83	3.88	3.48	3.29	3.69	3.69	3.53	n.a.	n.a.
Korea	34.93	31.17	28.00	26.31	20.91	24.70	19.15	21.67	17.19	15.86	n.a.	n.a.
Singapore	72.59	66.67	59.61	57.27	60.77	59.17	56.44	58.28	56.22	53.37	n.a.	n.a.
ASEAN Four												
Indonesia	99.25	99.17	99.16	99.05	99.34	98.83	98.68	98.57	98.62	n.a.	n.a.	n.a.
Malaysia	95.34	94.85	93.31	92.34	89.51	84.90	87.45	87.09	n.a.	n.a.	n.a.	n.a.
Philippines	96.87	96.84	95.94	94.51	95.30	92.22	88.40	86.82	81.52	n.a.	n.a.	n.a.
Thailand	97.18	95.69	92.94	88.38	90.11	89.18	86.57	86.48	82.00	n.a.	n.a.	n.a.

Source: UN Commodity Trade tapes.

Note: Figures are rounded; n.a. = not available.

Table 8.5 **Exports of Unskilled-Labor-Intensive Commodities by Pacific Basin Countries** (percentage of total)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Developed												
Australia	1.47	1.29	1.31	2.11	1.64	1.25	1.06	0.97	1.50	1.69	2.11	1.87
Canada	2.16	2.09	2.03	2.14	1.79	1.51	1.40	1.40	1.66	1.76	n.a.	n.a.
Japan	24.08	22.94	21.85	21.51	18.73	18.95	18.60	18.03	14.25	10.33	n.a.	n.a.
New Zealand	2.01	2.22	2.13	2.11	2.19	2.87	3.77	4.26	4.15	3.84	n.a.	n.a.
United States	5.76	5.88	5.95	5.29	5.40	5.25	5.66	5.91	5.80	5.69	n.a.	n.a.
NICs												
Hong Kong	76.15	75.89	73.79	71.75	68.93	70.52	69.83	66.05	64.64	63.08	n.a.	n.a.
Korea	52.82	54.53	50.10	47.64	45.12	49.49	51.71	48.54	51.17	45.86	n.a.	n.a.
Singapore	8.18	9.59	10.98	10.35	7.62	8.54	11.03	9.28	9.25	9.93	n.a.	n.a.
ASEAN Four												
Indonesia	0.18	0.16	0.18	0.16	0.14	0.10	0.12	0.12	0.24	n.a.	n.a.	n.a.
Malaysia	0.94	1.40	2.26	2.00	2.12	2.97	2.96	2.89	n.a.	n.a.	n.a.	n.a.
Philippines	1.39	1.52	2.48	3.99	3.46	5.83	8.85	8.82	12.37	n.a.	n.a.	n.a.
Thailand	1.59	3.06	5.12	9.05	6.71	7.29	9.30	9.03	12.01	n.a.	n.a.	n.a.

Source: UN Commodity Trade tapes.

Note: Figures are rounded; n.a. = not available.

Table 8.6 **Exports of Human-Capital-Intensive Commodities by Pacific Basin Countries** (percentage of total)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Developed												
Australia	7.94	7.61	8.33	7.88	7.91	7.55	6.09	6.34	7.27	6.83	6.31	6.37
Canada	32.87	34.09	33.33	30.56	28.48	29.48	32.11	33.61	35.77	31.37	n.a.	n.a.
Japan	42.50	45.53	45.71	45.26	47.67	47.59	48.62	48.57	49.56	51.36	n.a.	n.a.
New Zealand	3.78	3.97	4.38	3.66	5.08	6.11	6.33	6.09	6.95	7.21	n.a.	n.a.
United States	19.56	20.25	20.40	18.31	19.03	19.81	19.71	19.77	18.59	17.40	n.a.	n.a.
NICs												
Hong Kong	12.67	13.58	15.05	15.98	17.64	17.83	18.65	21.23	22.32	23.72	n.a.	n.a.
Korea	4.31	5.90	10.86	14.33	20.61	15.19	16.93	18.32	19.42	23.90	n.a.	n.a.
Singapore	8.60	10.27	11.16	10.49	10.11	11.23	11.38	11.72	13.18	12.04	n.a.	n.a.
ASEAN Four												
Indonesia	0.29	0.54	0.40	0.59	0.35	0.35	0.34	0.24	0.21	n.a.	n.a.	n.a.
Malaysia	2.01	1.88	2.19	1.62	1.83	2.51	2.20	2.45	n.a.	n.a.	n.a.	n.a.
Philippines	1.21	0.97	0.65	0.88	0.56	0.74	1.30	1.61	2.80	n.a.	n.a.	n.a.
Thailand	0.91	0.90	1.45	1.88	2.00	1.76	1.69	1.63	2.17	n.a.	n.a.	n.a.

Source: UN Commodity Trade tapes.

Note: Figures are rounded; n.a. = not available.

Table 8.7 **Exports of Technology-Intensive Commodities by Pacific Basin Countries** (percentage of total)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Developed												
Australia	7.37	8.51	7.59	8.75	9.59	8.27	10.45	10.80	12.02	8.86	12.20	12.69
Canada	15.15	14.84	15.10	13.75	13.07	14.42	14.48	14.87	14.56	15.40	n.a.	n.a.
Japan	25.02	23.97	25.45	26.51	26.08	27.62	27.54	28.43	31.35	33.12	n.a.	n.a.
New Zealand	4.52	3.54	3.67	2.97	3.69	3.65	4.00	4.90	4.76	5.35	n.a.	n.a.
United States	43.49	44.64	42.92	39.49	40.69	42.53	43.17	43.25	43.92	44.09	n.a.	n.a.
NICs												
Hong Kong	6.94	6.51	7.37	8.44	9.55	8.17	8.23	9.03	9.35	9.67	n.a.	n.a.
Korea	7.95	8.40	11.05	11.72	13.36	10.63	12.22	11.47	12.23	14.38	n.a.	n.a.
Singapore	10.64	13.47	18.26	21.89	21.50	21.06	21.15	20.72	21.35	24.65	n.a.	n.a.
ASEAN Four												
Indonesia	0.29	0.13	0.26	0.21	0.16	0.72	0.86	1.07	0.93	n.a.	n.a.	n.a.
Malaysia	1.72	1.87	2.24	4.04	6.54	9.63	7.40	7.58	n.a.	n.a.	n.a.	n.a.
Philippines	0.53	0.67	0.94	0.63	0.68	1.22	1.45	2.75	3.31	n.a.	n.a.	n.a.
Thailand	0.32	0.34	0.49	0.69	1.19	1.77	2.44	2.87	3.82	n.a.	n.a.	n.a.

Source: UN Commodity Trade tapes.

Note: Figures are rounded; n.a. = not available.

8% of Singapore's exports, and 6% of U.S. exports were labor-intensive goods. The exports of all of the other countries were 2% or less of those goods. During the 1970s, the share of labor-intensive goods dropped noticeably in Hong Kong and Korea, reaching 63% and 46% respectively, dropped sharply in Japan to only 10%, and remained unchanged in the United States. Singapore, New Zealand, and Malaysia had marginal increases in their shares. However, the Philippines and Thailand had significant increases. The rapid rise of wages in Japan, Hong Kong, and Korea no doubt explains why these countries became less competitive in exporting labor-intensive products. Wages also went up in the Philippines and Thailand but from a much lower base and by a lesser amount. These countries are at an earlier stage of development in which large gains in productivity are possible in labor-intensive products, giving them a new comparative advantage.

The measurement of the share of exports of human-capital-intensive products is shown in table 8.6. At the beginning of the 1970s, Japan had the largest share of its exports in human-capital-intensive products, followed by Canada and the United States. Several other countries had significant shares, especially Hong Kong, Singapore, and Australia. During the 1970s, Japan's export share of human-capital goods rose to over 50%. An even larger rise was recorded in Korea and Hong Kong, which both reached 24% by 1979. Singapore's exports of human-capital-intensive goods rose to 12%, and New Zealand's to 7%. The other countries that had high shares at the start of the decade, such as Canada, the United States, and Australia, each experienced a small diminution. The ASEAN Four had only slight increases. Thus the main trend was an increasing share in countries with few natural resources and in moderate or advanced stages of industrialization (such as Japan and the NICs) and a slightly decreasing share in advanced industrial countries that also have abundant natural resources. It should be noted that human-capital-intensive goods include some products such as steel and road motor vehicles which, under different models, would be considered capital-intensive. Thus, the accumulation of capital in the NICs might provide a partial explanation for their increasing shares.

Technology-intensive commodities are covered in table 8.7. The United States has the largest share of its exports made up of technology-intensive goods. Japan was the second largest at the beginning of the decade, with one-quarter of its exports technology-intensive goods, and its share rose to one-third by 1979. Canada had a rather high share of technology-intensive goods at the start of the decade (15%), but it grew no further. Singapore started below Canada at 11%, but its share grew rapidly so that by 1979 almost one-quarter of its exports were technology-intensive goods. Korea and Australia also increased their shares. The ASEAN Four had few technology-intensive exports at the

start of the decade; however, Malaysia and, to a lesser extent, the Philippines and Thailand all saw some growth. Comparative advantage in technology goods results from relatively large expenditures on research and development, which explains why the shares are so high in the United States and rising in Japan. However, technology can also be transferred between countries, usually as part of investments by multinational corporations (MNC). This explains much of the export success in these products by the developing countries of the Pacific Basin. Singapore is the most notable in this regard. It has welcomed foreign investment by MNCs, and in recent years the MNCs have promoted the transference of technology to Singapore, resulting in production for domestic use and export of technology-intensive products.

To summarize the story presented in tables 8.4–8.7, natural resource commodity exports are very important for many countries of the Pacific Basin, but they have tended to decline as a share of total exports for most of them. Indonesia is the exception, and it remains almost totally a natural resource exporter. Exports of labor-intensive commodities were very important for Japan and the NICs, but they have declined as a share of exports. Two ASEAN countries, the Philippines and Thailand, for the first time became significant exporters of labor-intensive goods during the 1970s. Japan and the NICs increased their export shares of both human-capital-intensive and technology-intensive goods. The higher-income developed countries (Australia, Canada, and the United States) had a slight decrease in shares of human-capital-intensive goods and increases in shares of technology-intensive goods.

These tables map out some of the major shifts in comparative advantage, but it is important not to exaggerate these changes into inevitable stages. It is not necessarily true that, just because all countries start out as natural resource exporters, when they begin to industrialize, they will export labor-intensive goods, develop further, and export human capital-intensive goods, and eventually become rich, do R&D, and export nothing but technology goods.[3] Especially in the case of natural resources, the bases for some comparative advantages are permanent or very long lasting, as seen in many Pacific Basin countries. Natural resources may set such a high reservation price for labor that a country might never specialize in labor-intensive commodities or do so only briefly. Futhermore, there is no obvious necessity for shifting from human-capital goods to technology-intensive goods. Nevertheless, the patterns exhibited by the twelve Pacific Basin countries over the last decade in the factor content of their exports are broadly consistent with trends we would expect in fast-growing economies from traditional theory of comparative advantage. These patterns are strikingly similar to those for the sixteen transitional economies whose

fifteen leading exports (based on United Nations Conference on Trade and Development data) were examined by Bradford in chapter 7 of this volume.

8.4 The Special Case of Textiles and Clothing

As already noted, major shifts have occurred in export shares of labor-intensive products in the Pacific Basin, particularly for the developing countries. Within the labor-intensive category, the most important product group is textiles and clothing. Therefore it merits some special attention. As seen in table 8.2, fully 34% of Hong Kong's exports in 1980 were textiles and clothing; these items constituted 29% of Korea's and 23% of Taiwan's exports. In fact, it was the dominant product group for the NICs (other than Singapore). It also had become an important part of Thailand's exports, reaching 9%.

Textiles and clothing are very sensitive to cyclical factors, more so than, for example, certain new electronic products for which there is a widening of the market in addition to replacement demand. Thus, during the 1979–82 recession, Hong Kong's export growth suffered from its heavy dependency on these goods. However, the vigorous recovery that began in the United States at the end of 1982 displayed the positive effects of cyclical sensitivity. In 1973, U.S. imports of textiles and clothing have risen rapidly, and the NICs have increased their exports to the United States.

A second factor that distinguishes textiles and clothing trade is that it is among the most restricted of any product group entering international trade. The long history of multilateral restrictions going back to the temporary agreement on cotton textiles is now enshrined in the all-encompassing Multi-Fiber Arrangement (MFA). Under pressures from the European Community, the last renewal of the MFA was even more restrictive and provided for little market growth. However, textiles restraints often work in unexpected ways. For example, witness the contrast between the United States and Japan; the former is part of the MFA and the latter is not.

Few importing countries ever evaluate or make known to their consumers the economic costs of their restrictions on textiles and clothing. Australia, however, in an exception. Through the excellent work of the Australian Industries Assistance Commission (IAC), the amount of assistance to the industry is measured and published (IAC 1983). Australia imposes high nominal tariff rates on textiles (25%) and clothing (81%) and in addition imposes quantitative restrictions on imports. Thus, the effective rate of assistance for textiles is 54%, having risen from 43% in 1968–69, and for clothing it is 213%, having risen from 108% in the earlier years. By way of contrast, the average effective

rate of assistance to Australian manufacturing from 1968–69 to 1981–82 was reduced from 36% to 26%. Hence, textiles and clothing received above-average assistance in 1968–69, which was sharply increased in contrast to other manufacturing industries. However, the results of this rise of protection are not exactly what one would expect. Unsurprisingly, exports as a share of Australian output, especially of clothing, were reduced as expected since protection generally reduces international competitiveness. Significantly, however, employment in these industries declined sharply and at a faster rate than in other manufacturing industries. Furthermore, imports continued to rise, no doubt at a slower rate than would have been the case with less assistance. Thus, despite these policy efforts to thwart the workings of the market, comparative advantage was still operative.

In table 8.8 the trade in textiles and clothing for some countries in the Pacific Basin for 1973 and 1980–82 is shown. The misleading appearance of protective schemes is evident in the contrast between the imports of the United States and Japan. By appearance, the United States by being a participant in the MFA is more restrictive than Japan. However, the import statistics prove that the opposite is true. The United States imported 2.2 times as much as Japan in 1973, that is, $3.8 billion versus $1.7 billion.[4] By 1982, U.S. imports had grown to $11.6 billion and Japan's to only $3.4 billion. In fact, U.S. imports were 3.4 times that of Japan, and this occurred before the economic recovery pushed U.S. imports even higher.

The probable reason for this is that the U.S. restraints do permit imports to grow and the quality of goods to be upgraded. Japanese restraints may be both less visible and more restrictive. Japan does impose some overt quotas on silk and silk products. It also forces voluntary restraints on foreign producers of cotton thread. However, most of the restraints are exercised through MITI's (Ministry of International Trade and Industry) reorganization of the industry. In 1973–74, in response to rapidly rising imports and the distress of the first oil crisis, MITI designed a reorganization of the industry primarily by promoting vertical integration. Trading firms were urged to limit imports to promote the reorganization. This was particularly effective in clothing, since international trade in garments is initiated by the buyers and goods are produced to importers' specifications. If the Japanese will not initiate the purchase, there is no way to effectively export to them. Those imports that did increase are believed to be mainly from foreign joint ventures of Japanese firms.

The MFA has several unfortunate quirks. Quotas apply only to developing countries and Japan and are allocated by historical share of the market. New entrants are permitted without restraint until they reach significant amounts, at which time they are brought under the

Table 8.8 **Trade in Textiles and Clothing in Some Pacific Basin Countries** (in billions of U.S. $)

	Textiles				Clothing				Total			
	1973	1980	1981	1982	1973	1980	1981	1982	1973	1980	1981	1982
	Exports											
Advanced												
Australia[a]	0.04	0.13	0.14	n.a.	0.02	0.02	0.02	n.a.	0.06	0.15	0.16	n.a.
Canada[a]	0.15	0.31	0.33	0.29	0.12	0.21	0.23	0.21	0.27	0.52	0.56	0.50
Japan	2.45	5.10	5.85	5.09	0.37	0.50	0.58	0.55	2.82	5.60	6.43	5.64
New Zealand	0.03	0.10	0.10	n.a.	0.00	0.04	0.04	n.a.	0.03	0.14	0.14	n.a.
United States	1.22	3.62	3.61	2.77	0.29	1.22	1.26	0.99	1.51	4.84	4.87	3.76
NICs												
Hong Kong	0.46	0.91	0.94	0.83	1.39	4.64	4.73	5.01	1.85	5.55	5.95	5.56
Korea	0.44	2.20	2.45	n.a.	0.75	2.95	3.86	n.a.	1.19	5.15	6.31	n.a.
Singapore	0.14	0.37	0.34	0.34	0.13	0.43	0.47	0.46	0.27	0.80	0.81	0.80
	Imports											
Advanced												
Australia[a]	0.62	1.10	1.15	n.a.	0.11	0.34	0.42	n.a.	0.73	1.44	1.57	n.a.
Canada[a]	0.78	1.28	1.41	1.13	0.33	0.71	0.84	0.84	1.11	1.99	2.25	1.97
Japan	1.13	1.65	1.63	1.60	0.57	1.53	1.80	1.83	1.70	3.18	3.43	3.43
New Zealand	0.20	0.32	0.33	n.a.	0.01	0.02	0.02	n.a.	0.21	0.34	0.35	n.a.
United States	1.58[a]	2.54	3.07	2.85	2.17[a]	6.94	8.12	8.79	3.75[a]	9.48	11.19	11.64
NICs												
Hong Kong	0.94	2.97	3.43	2.97	0.12	0.69	0.93	1.06	1.06	3.66	4.36	4.03
Korea	0.30	0.41	0.49	n.a.	0.01	0.01	0.01	n.a.	0.31	0.42	0.50	n.a.
Singapore	0.42	0.85	0.88	0.88	0.04	0.15	0.21	0.27	0.46	1.00	1.09	1.15

Source: GATT 1983.

Note: n.a. = not available.

[a]Exports and imports f.o.b.

quota. Thus, the quota encourages investment in new capacity in new countries which might not be competitive by a market test. Second, trade among developed countries may be artificially stimulated. For example, the largest percentage growth of imports into the United States in 1983 came from the European Community. Third, old suppliers with large historic shares are protected from the competition of new countries. Thus, Japan is unable to fill its quota in the United States but still exports more than it would by market test. Hence, it is not unusual for mature supplier countries to lobby for the continuance of a quota system.[5]

Table 8.8 also indicates a difference in the textile policies among the NICs. Hong Kong, which has a liberal trade regime, imports considerable amounts of textiles and exports even larger amounts of clothing. Korea, with a more restrictive import regime, imports very little textiles or clothing.

8.5 Protectionism and Trade Patterns in the Pacific Basin

Exports of manufactured goods by Pacific Basin countries continued to make progress in the 1970s and early 1980s despite the recession and rising protectionism. This was true even for textiles and clothing, the most seriously constrained group of manufactures. This should provide no grounds for complacency concerning protection. The factors that have increased protection still exist. Secondly, exchange rates were for many years very far out of line with purchasing power values, with the U.S. dollar greatly overvalued and the Japanese yen greatly undervalued. Thirdly, a new round of trade negotiations may not provide enough impetus to liberalize trade to offset the drift toward protectionism.

World trade problems center around Japan. Japan is the second largest industrial country, and none of Japan's trade partners are satisfied with their access to the Japanese market. Japan has benefited from four years of export-led growth during the worst recession in the postwar period. This, in effect, constitutes a beggar-thy-neighbor policy. Japanese exports have risen but imports have not. No country can export without importing. Although Japan does import the raw materials it needs, the problem lies in insufficient imports of manufactures and competitive agricultural commodities. Presumably, Japanese leaders believe they can manage trade tensions by exercising selective voluntary export controls. Already more than half of Japan's exports to Europe are under such controls. However, the rest of the world may not be willing to let Japan use voluntary controls, because they create windfalls for Japanese producers at the expense of foreign consumers.

Somehow Japan's imbalance with the rest of the world will be corrected. A possible way might be an exaggerated appreciation of the yen. A less desirable solution would be worldwide discrimination against Japan. From its own self-interest, one would think that Japan would overcome its inertia and propose a solution based on an increase in Japanese imports rather than trade contraction.

Clearly the world needs a new round of negotiations to liberalize trade. In such a negotiation, the developing countries should be prepared to be full and equal participants. In the past, the developing countries have appealed to their status and have asked for special treatment. The developed countries have treated them as special and, on average, worse than they treat each other; witness the MFA. The developing countries should be willing to bargain away their special privileges such as preferences (Generalized System of Preferences) in return for ending their special penalties. Generalized liberalization of trade barriers by developing countries would also encourage more intra-LDC trade, which is already growing rapidly.

Optimally, the negotiations should be global in scope. However, in the event that Europe and/or Latin America are unwilling to take part, then a second-best solution might well be a regional freeing of trade within the Pacific Basin.

Appendix
Commodity Classification System

International trade in commodities is classified by the United Nations into ten broad groups, labeled by the numbers 0 to 9 (standard international trade classification, or SITC). The categories, when finally disaggregated, number approximately 1,300 basic items, each of which is identified by a four-digit—or, in some cases, a five-digit—code. These basic items, when summed, compose total commodity trade for a given reporting country and partner country.[6]

To create a manageable data bank, the UN trade data were initially aggregated into 106 commodity groups, which taken together represent total trade. For the purposes of this study, the category "goods, not elsewhere specified" (SITC 9, less 951) was then excluded because it is composed of goods without any common traits.

The 105 commodities were classified into four groups according to their relative factor intensities. These groups are natural-resource-

intensive, unskilled-labor-intensive, technology-intensive, and human-capital-intensive goods (table 8.A.1).

The commodity classification procedure was performed sequentially by initially categorizing the commodities whose factor intensities are most apparent. First, the natural-resource-based goods were identified. This group consists of all commodities within SITC sections 0–4 (that is, food and live animals, beverages and tobacco, crude materials, mineral fuels, and animal and vegetable oils) and SITC classes 61 (leather), 63 (plywood), 68 (nonferrous metals), 661–63 (mineral manufactures), and 667 (diamonds). There were forty-two commodities in this group.

Second, by using the groupings of commodities according to their respective value added per worker, as presented by Garnaut and Anderson (1980, 141),[7] eleven goods were classified as unskilled-labor-intensive. These commodities, representing those with the lowest value added per worker, are the same goods appearing in Garnaut and Anderson, except where the commodity aggregations precluded separating goods further. Included in this group are such SITC classes as 65 (textiles and fabrics), 664–66 (glass), 735 (ships and boats), 81–85, 893–95, 899 (miscellaneous consumer goods, furniture, clothing, footwear, and toys), and 951 (firearms).

The remaining commodities were divided into technology-intensive and human-capital-intensive categories by selecting as technology-intensive those goods with the highest ratios of research and development expenditures to value added.[8] Ratios were calculated by industry, classified according to two- and three-digit standard industrial classifications (SIC), for the average of the years 1967–68 and 1975–76. The SIC classes were then cross-classified by using Balassa's system correlating SIC and SITC (1977, Appendix table 2). There are thirty commodities in the technology-intensive category, including SITC divisions 51 (chemical elements), 54 (medicine), 56 (fertilizer), 58 (plastics), 52, 57, 59 (other chemicals), 71 less 7199 (machinery), 7249 (telecommunications equipment), 726 (electrical apparatus, not elsewhere specified), 734 (aircraft), 861 (scientific, medical, and optical measuring apparatus), and 862–63 (photographic supplies).

Human-capital-intensive goods are those that have relatively lower ratios of research and development expenditures to value added than technology-intensive goods. Among the twenty-two commodities falling under the human-capital-intensive rubric are SITC groups 53 (paints), 55 (perfumes), 62 (rubber), 64 (paper), 672–79 (steel), 69 (manufactures of metal, not elsewhere specified), 7199 (machine parts), 7241 (televisions), 7242 (radios), 725 (domestic electrical apparatus), 7294 (automotive electrical equipment), 731 (trains), 733 (trailers), 864 (watches), 891 (phonographs), 892 (books), and 896–97 (jewelry).

Table 8.A.1 SITC Designations for Products in International Trade

Commodity	SITC, Rev.
Natural Resource Intensive	
Meat	00, 01
Dairy	02
Fish	03
Wheat	041
Rice	042
Other cerals	043, 045–47
Corn	046
Prepared foods	048, 0713, 09
Fruit	051–53
Vegetables	054–55
Sugar	06
Coffee	0711–12
Cacao	072–75
Feed	08
Beverages	11
Tobacco	12
Hides	21
Soybeans	22
Crude rubber	23
Wood	24
Pulp	25
Cotton	263
Fibers	261–62, 264–69
Iron ore	281–82
Nonferrous ore	283–86
Crude materials, not elsewhere specified	29
Coal	32
Gas, natural & manuf., & elec. current	34–35
Crude petroleum	331
Petroleum prod.	332
Animal and veg. oils	4
Leather	61
Plywood	63
Mineral manufactures	661–63
Diamonds	667
Pig iron	671
Unwrought nonferrous metals	681, 6831, 6851, 6861, 6871
Unwrought copper	6821
Copper manufactures	6822
Nonferrous manufactures	6832, 6852, 6862, 6872, 688–89
Unwrought aluminum	6841
Aluminum manufactures	6842
Unskilled Labor Intensive	
Yarn	651
Fabrics	652–53
Textile products	654–57
Glass	664–66
Ships	7353, 7358–59
Firearms	7351, 951
Furniture	82
Clothing	82
Footwear	85
Misc. consumer products	81, 83, 893, 895, 899
Toys	894
Technology Intensive	
Chemical elements	51
Medicine	54
Fertilizer	56
Plastics	58
Other chemicals	52, 57, 59
Power-generating equipment	7111–13, 7116–18

(*continued*)

Table 8.A.1 (continued)

Commodity	SITC, Rev.
Jet engines	7114
Car engines	7115
Tractors	7125
Agricultural machinery	7121–23, 7129
Office machinery	7141, 7149
Computers	7142–43
Metal-working machinery	715
Textile machinery	717
Mining machinery	7184
Other industrial machinery	718, 7194–98
Heating and cooling equip.	7191
Pumps	7192
Fork lifts	7193
Electric power machinery	722
Telecomm. equipment	7249
Elec. apparatus for medical purposes	726
Transistors	7293
Elec. measuring equipment	7295
Electrical apparatus	723, 7291–92, 7296–97, 7299
Scientific equipment	8617–19
Optical equipment	8611–13
Aircraft	734
Cameras	8614–16
Film (photographic supplies)	862–63
Human Capital Intensive	
Paints	53
Perfumes	55
Rubber	62
Paper	64
Steel	672–79
Metal manufacturing	691–94, 698
Cutlery	696–97
Hand tools	695
Machine parts	7199
Televisions	7241
Radios	7242
Domestic elec. apparatus	725
Trains	731
Cars	7321
Trucks	7322–25
Road motor vehicle parts	7236–38, 7294
Motorcycles	7329
Trailers	733
Watches	864
Phonographs	891
Books	892
Jewelry	896–97

Source: SITC numbers from United Nations 1961. This classification scheme was in effect from 1960 to 1975.

Notes

1. The classification method is described in the Appendix.
2. The exclusion of Taiwan from the United Nations commodity trade tapes prevents the extension of the analysis to that country.
3. However, technology goods are rising as a share of world trade, and therefore, the share of technology goods in the exports of all countries could increase.

4. Since the U.S. figure is f.o.b. and Japan's is c.i.f., the contrast would be greater if comparably measured.

5. In the case of U.S. quotas on stainless steel flatwear, only Japanese producers wanted them continued, but the quota was ended.

6. A detailed listing of the classification system used in this study is presented in United Nations 1961.

7. The presentation in Garnaut and Anderson is based on the work of Bela Balassa (1977, Appendix table 1).

8. Research and development figures were taken from National Science Foundation 1980; value added figures were from Bureau of the Census, *Annual Survey of Manufactures*, various years.

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