

AUSTRALIA'S TRADE GROWTH WITH DEVELOPING COUNTRIES

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THE share of Australia's exports to developing countries in the 1970s, and its growth over that decade, have been well above the industrial country average. Among the industrial countries, only Japan and (marginally) the United States have higher shares of exports to developing countries, and less so now than in 1970. The share of imports from developing countries has been growing more rapidly in Australia than in any other industrial country and by 1979 was close to the average for industrial countries. These changes have been even more marked for manufactures trade than total trade (Table I). By 1979, 5 per cent of Australia's domestic sales of manufactures were supplied by imports from developing countries, compared with an average of only 3 per cent sales in other industrial countries.

The comparatively high and increasing propensity for Australia to trade with developing countries may seem at odds with what standard trade theory would predict. Not only is Australia similar to most developing countries in being an exporter of mainly primary products, but it also has high import barriers against the most important manufactured exports from developing countries, namely, textiles, clothing, and footwear. Moreover, the extent of Australia's discrimination against these relative to other manufactured imports increased enormously in the mid-1970s (and early 1980s).

The purpose of this paper is to analyze Australia's relatively rapid trade growth with developing countries over the 1970s. The next section, which first summarizes the changing directions of Australia's trade, shows that all of the growth in trade with developing countries has been with the Middle East and East Asia.¹ The petroleum-related trade growth with the Middle East is not surprising, and has been roughly commensurate with the region's increased shares of world trade. Australia's trade growth with East Asia, on the other hand, has been considerably greater than their increased world trade shares. This is partly the result of increased complementarity in trade between Australia and newly industrializing

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¹ The term East Asia is used in this paper to cover the major economies of both Northeast Asia (Hong Kong, Japan, the People's Republic of China, South Korea, and Taiwan) and Southeast Asia (Indonesia, Malaysia, the Philippines, Singapore, and Thailand). Brunei, Burma, Macao, Mongolia, North Korea, and the Indochina states are excluded because of the very small volumes of their trade with market economies.

TABLE I
DEVELOPING COUNTRY SHARES OF VARIOUS INDUSTRIAL COUNTRIES' TRADE, 1979
(%)

	Developing Countries' Share of Manufactures Trade		Developing Countries' Share of Total Trade	
	Imports	Exports	Imports	Exports
Australia	21(9.9)	40(3.6)	24(7.0)	32(4.2)
Canada	6(2.1)	10(2.1)	11(3.6)	9(3.4)
EEC ^a	15(1.6)	25(1.0)	23(2.1)	22(4.6)
Japan	39(3.8)	51(1.1)	60(4.3)	46(2.5)
Sweden	10(1.9)	n.a.	15(4.6)	17(7.4)
United States	33(3.6)	42(1.6)	47(6.8)	36(2.1)
Total ^b	19(2.0)	30(1.4)	30(4.0)	27(3.5)

Sources: International Bank for Reconstruction and Development, Market penetration tapes, 1982; International Monetary Fund, *Direction of Trade*, 1975 and 1981 editions.

Note: The numbers in parentheses are average annual rates of growth in shares over the previous decade assuming a linear trend between 1970 and 1979.

^a The three smallest members of the EEC-9, Denmark, Ireland, and Luxembourg, are not included here.

^b Refers to the above-listed countries only.

East Asia, and partly due to the strong bias in Australia's trade with its Asian-Pacific neighbors.

The third section of the paper examines the reasons for the three main factors affecting Australia's trade with developing countries: the increased importance of East Asia's developing market economies in world trade, their increasing trade complementarity with Australia, and the strong bias in Australia's trade with them. The role of a fourth factor, protectionism, is discussed in the final section. The paper concludes that the shares of Australia's trade with Asian developing countries is likely to continue to increase, but that the extent of increase will depend to a considerable extent on the ability of governments to resist the pressures to protect declining industries from import competition.

I. AUSTRALIA'S TRADE REDIRECTED TOWARD EAST ASIA

The large changes in the direction of Australia's foreign trade over the past three decades are summarized in Table II. By the late 1960s, Japan had displaced the United Kingdom as Australia's major trading partner.² The importance of other East Asian countries and the United States as export markets for Australia, and of the United States as an import supplier, also grew rapidly over the 1960s. The 1970s saw a further decline in trade with the United Kingdom, rapid growth in trade with developing East Asia and the Middle East, and reduced

² See Arndt [4] and Drysdale [8] for analyses of the extremely rapid growth of Australia's trade with Japan at the expense of the United Kingdom during the latter 1950s and 1960s.

TABLE II
DIRECTION OF AUSTRALIA'S TRADE, 1951-52 TO 1981-82

	Exports			Imports		
	1951-52 to 1954-55	1968-69 to 1971-72	1978-79 to 1981-82	1951-52 to 1954-55	1968-69 to 1971-72	1978-79 to 1981-82
Industrial countries:						
United Kingdom	36	11	4	45	21	9
Other Europe	27	16	17	15	19	17
United States	7	13	11	12	24	23
Japan	8	26	28	2	13	18
New Zealand	4	5	5	1	2	3
Total	84	73	66	79	87	74
Developing countries:						
East Asia	6	12	18	7	7	13
Southwest Pacific	3	4	4	1	2	1
South Asia	4	3	2	6	2	1
Middle East	1	2	5	4	5	10
Africa	2	2	1	2	1	1
Latin America	1	2	1	1	1	1
Total	16	27	34	21	13	26

Source: Australian Bureau of Statistics, *Overseas Trade*, various issues.

shares with other country groups. Thus the importance of East Asia to Australia's trade has more than trebled over the past three decades. It now accounts for almost half Australia's exports and a third of its imports. Over the 1970s the countries which have enjoyed the most rapid trade growth with Australia are the resource-poor, newly industrializing countries of Hong Kong, Singapore, the Republic of Korea, and Taiwan, hereafter called the Asian NICs.

Some of this transformation in the direction of Australia's trade is due to the changing importance of various countries in world trade, while the rest is attributable to changes either in trade complementarity or in biases toward certain trading partners.

To net out the effects of changing world trade shares, it is useful to compute the intensity of trade index, defined as the share of Australia's export (or import) trade with a particular country or region relative to that country or region's share in imports from (exports to) the rest of the world (Kojima [17]). These indices, reported in Table III, show that Australia's trade with the United Kingdom has fallen considerably faster, and its trade with East Asia has grown considerably faster, than these countries' shares of world trade. By the late 1970s, the share of Australia's exports going to Japan was almost five times Japan's share of imports from the rest of the world. Australia's trade shares with developing East Asia have also become relatively high, averaging almost twice those countries' shares of world trade. By contrast, the growth in Australia's trade with the Middle East has barely kept up with the latter's trade

TABLE III
INTENSITY OF AUSTRALIA'S TRADE, 1951-52 TO 1979-80

	Exports			Imports		
	1951-52 to 1954-55	1965-66 to 1969-70	1975-76 to 1979-80	1951-52 to 1954-55	1965-66 to 1969-70	1975-76 to 1979-80
Industrial countries:						
United Kingdom	3.8	2.0	0.8	5.2	3.5	2.1
Other Europe	0.7	0.3	0.4	0.4	0.4	0.4
North America	0.5	0.9	0.8	0.7	1.5	1.6
Japan	3.0	4.2	4.9	1.2	2.0	2.7
New Zealand	5.7	13.2	17.9	1.1	4.1	11.4
Total	1.2	0.9	0.9	1.2	1.1	1.0
Developing countries:						
ASEAN	0.9	2.9	2.6	1.6	1.6	1.8
Other East Asia	0.5	1.1	1.3	0.1	0.7	1.5
Southwest Pacific	18.0	20.4	17.8	11.7	11.9	10.4
South Asia	1.5	1.6	1.8	1.9	1.3	1.1
Middle East	0.3	0.8	0.9	1.3	1.4	1.0
Africa	0.4	0.7	0.7	0.5	0.3	0.3
Latin America	0.1	0.3	0.2	0.1	0.1	0.2
Total	0.6	1.4	1.3	0.8	0.9	1.0

Sources: Australian Bureau of Statistics, *Overseas Trade*, various issues; United Nations, *Yearbook of International Trade Statistics*, various issues.

Note: The intensity index is defined as the share of Australia's export (or import) trade with a particular country or region relative to that country or region's share in imports from (exports to) the world net of Australia's imports (exports). See footnote 2 in the text.

growth with the rest of the world. Also noteworthy is the growth in intensity of trade with New Zealand which, with the Southwest Pacific developing countries, enjoy trade shares with Australia that are more than ten times these countries' shares of world trade.

The remaining reasons for the growth in Australia's trade with East Asia are growth in trade complementarity and reduced resistances to trade with East Asia vis-à-vis other countries. Drysdale [7] has shown that the trade intensity index can be expressed as the product of a complementarity index and a bias index. The complementarity index measures the extent to which the commodity composition of country i 's exports (or imports) matches that of country j 's imports (exports) more or less closely than it matches the commodity composition of world trade. The bias index indicates the degree of resistance to i 's trade with j relative to the average degree of resistance in i 's other bilateral trading relationships. For both indices a value greater than unity indicates a positive influence on trade intensity while a value less than unity measures a negative influence.³

³ The intensity of trade (I_{ij}) is defined for country i 's exports to country j as the share of i 's exports going to j (X_{ij}/X_i) relative to the share of j 's imports (M_j) in world imports

Using these concepts it is possible to disaggregate quantitatively the growth in East Asia's shares of Australian trade into the three elements mentioned above: that due to the growth in these countries' shares of world trade; that due to increasing complementarity between their trade and Australia's; and that due to reduced resistances to Australia's trade with them as compared with other countries. Table IV presents the results of such a disaggregation of Australia's trade growth with East Asia and the United Kingdom over the 1970s.

There are three points to note from Table IV. The first is the exceptionally high bias throughout the 1970s in Australia's trade with East Asia (columns 7 and 8). The average of the bias indices is about 2, which means that any increase in East Asia's share of world trade, or in its trade complementarity with Australia, is reflected in an increase in Australia's trade share with East Asia which, in percentage terms, is twice as large as it would be if resistances to trade between all countries were equal.

The second point is that complementarity in Australia's trade with East Asia is above average only in the case of exports to Japan, although both export and import trade complementarity with the developing countries of the region increased considerably over the 1970s (columns 5 and 6 of Table IV). It should be kept in mind, however, that this index reflects *actual* trade specialization rather than to differences in comparative advantage. The more countries protect their least competitive industries from import competition, the closer this index will be to unity and so the less it is an indicator of *potential* trade complementarity.

Third, it is clear from columns 10 to 12 of Table IV that the increased importance of the East Asian developing countries in world trade explains much of their increased importance to Australia, although increased complementarity has also contributed substantially. In addition, the very strong bias toward exporting to ASEAN fell somewhat, while the bias toward importing from Northeast Asia strengthened at the expense of bias in trade with the United Kingdom. (Almost all of the 50–60 per cent decline over the 1970s in Australia's trade with Britain is explained by this reduction in bias.)

net of i 's imports ($M_w - M_i$). That is,

$$I_{ij} = \frac{X_{ij}}{X_i} \bigg/ \frac{M_j}{M_w - M_i}$$

The complementarity and special country bias indices (C_{ij} and B_{ij}) for country i 's exports to country j are,

$$C_{ij} = \sum_k \left(\frac{X_i^k}{X_i} \cdot \frac{M_w - M_i}{M_w^k - M_i^k} \cdot \frac{M_j^k}{M_j} \right),$$

and

$$B_{ij} = X_{ij} \cdot \sum_k \left(\frac{M_w^k - M_i^k}{X_i^k \cdot M_j^k} \right),$$

where k refers to individual commodities. Notice that the intensity index, I_{ij} , is the product of C_{ij} and B_{ij} . Similar indices can be defined for i 's imports from country j . For further discussion on these indices, see Drysdale and Garnaut [8].

TABLE IV
SOURCES OF GROWTH IN AUSTRALIA'S TRADE WITH EAST ASIA, 1970 TO 1979

	Partner's Share of Australia's Trade, S_{ij} (%)		Partner's Share of Rest of World's Trade, S_j^a (%)		Complementarity Index, C_{ij}		Bias Index, B_{ij}		Change in Partner's Share of Australia's Trade, ΔS_{ij} , 1970-79 (%)		Ceteris Paribus Contribution to Change in Partner's Share of Australia's Trade, b 1970-79 (%)	
	1970 (1)	1979 (2)	1970 (3)	1979 (4)	1970 (5)	1979 (6)	1970 (7)	1979 (8)	(9)	ΔS_j (10)	ΔC_{ij} (11)	ΔB_{ij} (12)
Asian NICs:												
Exports	5.4	9.0	3.0	4.5	0.7	0.9	2.5	2.3	69	48	22	-6
Imports	2.3	8.0	2.3	4.0	0.9	1.2	1.1	1.6	242	77	27	52
Other ASEAN:												
Exports	4.3	5.3	1.7	1.9	0.5	0.9	4.7	3.0	25	11	73	-35
Imports	1.9	3.3	1.6	2.4	0.5	0.6	2.1	2.1	76	49	24	-4
Japan:												
Exports	26.2	27.8	6.5	7.1	2.0	1.7	2.1	2.3	6	9	-12	10
Imports	12.7	15.5	7.0	6.8	1.1	1.2	1.6	1.8	22	-2	10	14
U.K.:												
Exports	11.4	4.4	7.4	6.6	1.2	1.0	1.3	0.6	-61	-11	-11	-51
Imports	21.2	10.6	7.0	6.1	1.2	1.1	2.6	1.6	-50	-13	-3	-41

Source: Australian National University's trade data tapes, based on United Nations international trade statistics.

Note: A partner's share of Australia's exports (imports) is the product of its share of world imports (exports) and of the indices of complementarity and bias in Australia's export (import) trade with the partner. That is, from columns 1, 3, 5, and 7, $S_{ij} = S_j \cdot C_{ij} \cdot B_{ij}$, where C_{ij} and B_{ij} are defined in the footnote. The Δ signs refer to percentage changes between 1970 and 1979.

^a The "exports" ("imports") rows in the case of columns 3 and 4 refer to the rest of the world's (net of Australia's) exports to (imports from) those countries.

^b Columns 10 to 12 show the hypothetical percentage change between 1970 and 1979 in a partner's share of Australia's exports (imports) due to one of the three factors shown if the other two had remained constant. They are derived from the formula $(1 + \Delta S_j / 100) = (1 + \Delta S_j / 100) \cdot (1 + \Delta C_{ij} / 100) \cdot (1 + \Delta B_{ij} / 100)$.

II. REASONS FOR TRADE GROWTH WITH EAST ASIA

The lack of growth in world trade shares for South Asia, Africa, Latin America, and the Pacific island developing countries over the 1970s, together with relatively little change in their trade complementarity or trade bias with Australia, has meant that their trade shares with Australia have not grown in recent years. The growth in Australia's trade with the Middle East has been almost solely due to the latter's increased world trade shares, again with little change in complementarity or bias with Australia. (These facts are reflected in the lack of change in their trade intensity indices in Table III.) It is only Australia's trade growth with the East Asian developing countries for which all three elements have changed. The reasons behind each of these changes are discussed in turn.

A. *Rising World Trade Shares*

Consider first the increasing importance of East Asia in world trade. The very rapid rise in the world trade shares of developing East Asia, shown in columns 3 and 4 of Table IV, resulted from rapid growth in both real GDP and the share of GDP traded. Real GDP has grown at 9.3 per cent per year over the past decade in the Asian NICs and at 7.3 per cent in the other ASEAN countries. This performance compares with about 5 per cent in other developing countries and 3 per cent in industrial countries. In addition, the share of GDP exported has risen from 48 to 61 per cent between 1970 and 1979 for the Asian NICs and from 20 to 30 per cent for other ASEAN. These shares are now well above the 20 per cent average for middle-income (and industrial) countries.

The growth of GDP in East Asia has not been unrelated to this greater trade orientation. In R.O.K. and Taiwan in particular it has been directly related to deliberate changes of trade policy toward export-oriented industrialization, while in Hong Kong and Singapore the maintenance of virtually free trade policies has facilitated the continuation of their strong economic growth (Frank, Kim, and Westphal [9]; Hsing [12]; Hong and Krause [11]). In addition, international conditions have been favorable for export-oriented growth by these developing countries. In the 1960s and early 1970s the strong growth of industrial countries together with some liberalization of their trade policies opened up opportunities for import penetration of labor-intensive manufactures as structural adjustments occurred in the high-wage countries, particularly in neighboring Japan. More recently, a similar adjustment process in the Asian NICs has assisted the lower-wage ASEAN countries and China to compete in the world's marketplace for simple manufactures (Garnaut and Anderson [10]).

B. *Increasing Trade Complementarity*

To explain the growth in trade complementarity between East Asia and Australia in the process of the former's rapid economic growth, it is useful to draw on the modern theory of dynamic comparative advantage. The Heckscher-Ohlin-Samuelson model of international trade indicates that, under various assumptions,

each country would export commodities which require relatively intensive use of the country's relatively abundant factors of production. Empirical tests in the early postwar years failed to support this model of comparative advantage in its simplest form, giving rise to numerous attempts to modify the theory to make it more applicable to the real world. Many of the earlier modifications have been synthesized by Johnson [13] in his Wicksell Lectures. He suggests that the two-sector, two-factor, Heckscher-Ohlin-Samuelson model is more applicable, at least for manufactured goods, if capital is defined broadly to include not only physical capital equipment but also human skills, social capital, technological and organizational knowledge, and natural resources, while labor is defined in the narrow sense of human labor time availability. The relative capital intensity of different activities is then reflected in flow terms by relative value added per unit of labor time input.

Krueger [18] has further modified the model to allow it to explain trade in primary products as well. This modification separates out natural resources from Johnson's broad definition of capital, and integrates the model with the Ricardo-Viner specific capital model that has recently become popular again (Jones [14]). The model then becomes one of an economy with two tradeable sectors, producing primary products and manufactures, and three factors of production: natural resources which are specific to the primary sector, capital which is specific to the manufacturing sector, and labor which is used in both sectors, is intersectorally mobile and exhibits diminishing marginal product in each sector. In this model, at a given set of international prices, the wage rate is determined by the overall per worker endowment of natural resources and capital, while the structure of production is determined by the economy's relative factor endowments and production functions.

An underdeveloped country with little capital will produce mostly primary products and export them in exchange for manufactures. As the stock of capital per worker expands, wages increase and labor is attracted to the manufacturing sector. The country gradually switches from being predominantly a primary producer to being predominantly an exporter of manufactured goods, with the capital intensity of manufacturing activities increasing over time. Labor begins to be attracted to manufacturing at an earlier stage of economic development, and the manufactured goods initially exported use unskilled labor relatively more intensively, the lower the country's natural resources per worker.

The fact that capital is required in addition to natural resources and labor in primary production strengthens the conclusion that natural-resource-poor, densely populated countries will begin manufacturing at an earlier stage of capital availability per worker than resource-rich countries. At a particular level of capital per worker, a country would tend to employ a greater share of its available capital in primary production rather than in manufacturing the greater its agricultural land and mineral resource endowment per worker. And the fact that capital is internationally mobile allows the possibility of a country proceeding faster along its path of economic growth than its domestic savings rate alone

would allow. The changes in comparative advantage can proceed more rapidly where barriers to foreign capital inflow are slight.⁴

The demand for food increases with population and per capita income while the demand for industrial raw materials increases with manufacturing production. Thus a country's export specialization in food products tends to be lower the higher its GNP per hectare of agricultural land, while its export specialization in minerals tends to be lower the greater its mineral resources per unit of manufacturing output, *ceteris paribus*.

While domestic economic growth, capital accumulation, and industrialization in a country tend to weaken that country's export specialization in primary products, it has the opposite effect on other countries insofar as it results in increased foreign demand and a consequent terms of trade improvements for food and industrial raw materials. Rapid economic growth in industrial countries in particular also generates an improvement in the terms of trade for labor-intensive manufactures due to the increasing relative scarcity of (particularly unskilled) labor in industrial countries. Thus, although industrial country growth may strengthen export specialization in primary products for resource-rich countries, it may also strengthen export specialization in simple manufactures for resource-poor developing countries. Relatively rapid growth in the latter countries in turn further strengthens the primary-product export specialization of slower-growing, resource-rich countries.

The above elements of a theory of changing comparative advantage in the process of economic growth suggest a number of explanations for the changes in trade complementarity between resource-rich Australia and the rapidly growing countries of East Asia. First, they suggest the more resource-poor and densely populated a developing country, the earlier the stage of economic development at which it switches from exporting to importing primary goods and begins exporting unskilled-labor-intensive manufactures. Second, within manufacturing, countries gradually switch from exporting only unskilled-labor-intensive manufactured goods to exporting a wider range of manufactures which are increasingly more capital-intensive (including human capital) as capital availability per worker expands. Third, developing countries make these switches more rapidly the faster their economic growth and their increases in capital availability per worker. For these reasons, industrial countries' import trade complementarity with rapidly industrializing, resource-poor countries increases in the absence of increases in trade barriers. In addition, the export composition of slower-growing, resource-rich industrial countries like Australia becomes more complementary to the import composition of these rapidly developing countries as their demands for food and industrial raw materials rise.

To use the above theory to help explain Australia's increasing trade complementarity with East Asian developing countries requires data on changing relative factor endowments and economic growth rates. Crude proxies for relative factor

⁴ These and other modifications are discussed in more detail in Garnaut and Anderson [10]; Anderson [1]; and Anderson and Smith [3].

endowments are given in columns 2 and 3 of Table V. Population density can be used as a rough index of the ratio of labor to natural resources (Keesing and Sherk [15]), while GNP per capita provides, again very roughly, an index of broadly defined capital per worker.

As noted above, Japan and the Asian NICs of Singapore, Hong Kong, Taiwan, and R.O.K.—all of which are extremely densely populated and poorly endowed in natural resources per capita—have been growing very rapidly relative to other countries. So too have the moderately densely populated other ASEAN countries over the 1970s. Densely populated South Asia and lightly populated Africa and Latin America, on the other hand, have been growing relatively slowly (with a few notable exceptions such as Brazil). This suggests that industrialization and the switch in comparative advantage from primary products to manufactures should have been occurring much more rapidly in East Asia than in other developing country regions. The manufacturing shares of exports from Africa, Latin America, and the Middle East should be low relative to the shares in densely populated Asia, as should the shares in Australia and Canada relative to the shares in densely populated Japan and Europe. The relatively rich endowment of natural resources per capita in the Middle East and Latin America should ensure that despite their high capital-labor ratios relative to other developing country regions, their exports have remained predominantly primary products, as in resource-rich Australia (and Africa).

These expectations are born out by the evidence, some of which is summarized in columns 6 to 11 of Table V. Manufacturing value added has grown extremely rapidly in East Asia over the 1970s, at about twice the pace of other developing countries and four times the pace of industrial countries (column 6). The share of GDP from manufacturing in the four Asian NICs now exceeds the average share in industrial countries—as does their share of exports from manufacturing, which doubled from 42 to 79 per cent between 1960 and 1978 (columns 7 to 10). These four countries alone supplied 60 per cent of the manufactured exports of developing countries in 1978 (column 11).

The pace of industrialization in China and other ASEAN countries has also increased recently. Despite rather low capital-labor ratios, their manufacturing exports expanded rapidly during the 1970s and in 1978 equalled in value those of Latin America, or of South Asia, Africa, and the Middle East combined. With the Asian NICs they accounted for 70 per cent of all manufactured exports from developing countries in 1978. While this amounted to only 6 per cent of the world's total manufactured exports, it represented a much higher proportion of labor-intensive items. In particular, the East Asian developing countries supplied 28 per cent of the world's textile and clothing exports in 1978.

The rapid export-oriented industrialization of first Japan, then the four Asian NICs, and now the other ASEAN countries and China has been associated with and, along with increases in world energy prices, partly the cause of, Australia's more intensive exploitation of its mineral reserves and expansion of its exports of primary products. The share of manufactured goods in Australia's exports has risen during the 1960s and 1970s, but much of the increase is due to metals

TABLE V
SELECTED CHARACTERISTICS OF THE WORLD'S MARKET ECONOMIES AND CHINA, 1960 TO 1978

GDP (Current US\$ Billion)	Population Density (Person/ Km ²)	GNP per Capita (Current US\$)	Average Annual Real Growth of GDP per Capita (%)		Average Annual Real Growth of Manufacturing (%)	Share of GDP from Manufacturing (%)	Share of Exports from Manufacturing (%)		Value of Manufacturing Exports (US\$ Billion)
			1960-70	1970-78			1960	1970	
1978 (1)	1978 (2)	1978 (3)	(4)	(5)	1970-78 (6)	1978 (7)	(8)	(9)	1978 (11)
Industrial countries:									
United Kingdom	277	5,030	2.3	2.0	0.6	25	84	85	58
Other Europe	1,782	6,590	4.2	2.3	2.9	29	73	76	374
United States	2,112	9,590	3.0	2.2	2.9	24	63	70	99
Canada	205	9,180	3.7	3.1	3.8	19	30	51	24
Japan	974	7,280	9.4	3.8	6.2	29	79	94	94
Australia	116	7,990	3.3	1.6	3.9	19	8	21	4
New Zealand	18	4,790	2.1	1.1	n.a.	21	3	12	1
Total	5,969	8,070	4.0	2.5	3.1	27	66	74	654
Developing countries:									
Asian NICs ^a	92	1,450	7.1	7.0	13.9	28	42	71	37
Other ASEAN	110	450	2.9	5.0	10.7	15	2	6	4
Pacific	5	700	4.0	0.2	n.a.	7	n.a.	n.a.	0
South Asia	153	180	2.3	2.5	4.4	16	33	42	5
Middle East	281	2,060	5.1	4.5	10.1	12	1	5	3
Africa ^b	228	510	2.6	2.4	6.0	12	6	8	2
Latin America	507	1,390	2.7	3.2	6.3	26 ^c	3	11	10
Total	1,373	620	3.1	3.6	7.2	23	15	18	61
China	220	230	3.3	3.9	8.7 ^d	47 ^d	n.a.	0	5

Sources: International Bank for Reconstruction and Development, *World Development Report*, 1980 and 1981 editions; United Nations Conference on Trade and Development, *Handbook of International Trade and Development Statistics, 1979* (Geneva, 1980); United Nations, *Yearbook of National Accounts Statistics, 1979* (New York, 1980); Asian Development Bank, *Key Indicators of Developing Member Countries of ADB*, Vol. 12, Nos. 1 and 2 (Manila, 1981).

^a Singapore, Hong Kong, Taiwan, and R.O.K.

^b Excluding South Africa.

^c The manufacturing share of GDP for Latin America other than Brazil, Mexico, and Argentina was 18 per cent.

^d Manufacturing data for China are not available. Those shown are for the total industrial sector, for the period 1970-79.

and in any case it still remains extremely low by industrial country standards (columns 8 to 10 of Table V).⁵ The substantial increase in real wages in Australia over the 1970s, especially for female and unskilled workers, has in addition caused a particularly strong increase in comparative disadvantage for Australia's unskilled-labor-intensive manufacturing industries. This explains why Australia's trade complementarity with East Asia increased substantially over the 1970s, both absolutely and relative to its trade complementarity with other developing regions, especially resource-rich Africa and Latin America.

C. *Proximity and Regional Trade Bias*

It is clear from column 8 of Table IV that the value of Australia's trade with East Asia is now about twice as large as might be anticipated from this region's share of world trade and its complementarity in trade with Australia. The relatively low resistances to Australian trade with East Asia (and other Western Pacific countries) that is reflected in high country bias have its origins in relative geographic proximity.⁶ But closeness has not always been the major determinant of Australia's trade partners. Within the British Empire, as within most of the imperial blocs prior to World War II, tariff preferences, investment ties, similar institutions, and a common language together ensured that intra-empire trade biases were strong. Only after the 1940s did trade discrimination within former imperial blocs begin to be removed. Even then, established intense bilateral trading relationships that had their origins in discriminatory government policy often continued because of familiarity between businessmen and firms and relatively high levels of direct foreign investment.

As the scale of potential trade between Australia and East Asia increased with economic growth and growing complementarity, pressures built up for restructuring Australia's trade away from Europe. Potential benefits from pioneering new trading relationships and organizing new transport and communications networks increased. The changes came most quickly with Japan where the potential for low-cost intra-regional trade was greatest. They proceeded rapidly with all of the ASEAN countries through the 1960s and 1970s and with Taiwan and R.O.K. through the 1970s. Relative resistances in the trade of the latter two resource-poor countries with Japan and the United States remained low, but as their total trade expanded it became profitable to build more intense trading relationships with a number of additional countries, including resource-rich Australia. The advan-

⁵ The share of minerals and metals in Australia's exports rose from 7 per cent in the early 1960s to 40 per cent in the early 1980s, reducing agriculture's share during that period from over 80 to less than 45 per cent.

⁶ It is the relative and not the absolute geographic proximity of two ("primary") countries that is relevant in this context: the closer are pairs of third countries to each other and the lower are resistances to trade between them, the more they will tend to trade with each other, the less they will trade with each of the two primary countries, and the more the two primary countries will trade with each other. Similarly, the lower are resistances to trade between one of the two primary countries and the rest of the world, the more that country will trade with the rest of the world and the less it will trade with the other primary country.

tages that high historical levels of trade bestowed on Australia's trade with the United Kingdom, on the other hand, were gradually eroded.

Discriminatory policy has continued to affect the direction of Australia's trade, but over the past decade mainly in a manner that has strengthened rather than weakened Australia's regional trading links. The emergence of the European Economic Community as an inward-looking trading bloc and the entry of the United Kingdom reduced the relative cost of overcoming trade among excluded countries, that is, relative to intra-European trade and to excluded countries' trade with Europe. This contributed very substantially to the increase in regional trade bias among Western Pacific countries. The Australian system of preferences for developing countries has had a minor effect in the direction of encouraging imports from (mostly Asian) developing countries (Warr and Lloyd [20]). A similar effect has probably resulted from discrimination in the administration of import quotas for textiles, clothing, and footwear in favor of neighboring countries.

III. PROSPECTS FOR FURTHER TRADE GROWTH WITH DEVELOPING COUNTRIES

Clearly, all three elements identified above have contributed to the growth over the 1970s of Australia's trade with East Asian developing countries. The first, growth in these countries' shares of world trade, can be expected to continue through the 1980s as their economies grow more rapidly than the rest of the world and the share of their GDP that is traded remains high. In addition, it is possible that the lessons from East Asia's success will have a positive impact on trade and development policies in other developing countries. For example, changes in trade policy in South Asia could generate much faster trade growth in these countries which would have important consequences for Australia, given Australia's proximity to and established Commonwealth connections with South Asia.

The second element, growth in complementarity of trade between Australia and East Asian developing countries, is also likely to continue through the 1980s, and would accelerate if other relatively densely populated, resource-poor developing countries also experience rapid trade growth (e.g., South Asia). This is because in the latter event developing countries' increased exports would be predominantly labor-intensive manufactures and their increased imports would comprise relatively high proportions of food and industrial raw materials in which Australia will continue to have a strong comparative advantage. The Asian NICs are likely to export an ever-wider range of more sophisticated manufactures as lower-wage developing countries of Southeast Asia, China, and possibly Sri Lanka become more competitive suppliers of technologically simple, unskilled-labor-intensive manufactures (Garnaut and Anderson [10]).

Third, the increase in country bias in trade with some neighboring developing countries may also continue for some time, since for a few of them (most notably R.O.K. and Thailand) the bias index is still well below levels that have been reached in Australia's more intense trading relationships. Moreover, the entry

into the European Economic Community of the low-income economies of Greece, Spain, and Portugal is likely to reduce the intensity of Western Europe's trade with the rest of the world, including other developing countries and Australia. This will further increase country bias in trade between Australia and Asia.

All three elements of Australia's trade growth with developing countries, but especially trade complementarity with East Asia, have been reduced in importance because of protectionist import barriers, removal of which would boost substantially the prospects for Australia's further trade growth with developing countries in the 1980s.

Of particular importance is Australia's protection against textiles, clothing, and footwear imports, because these items are the most common exports of newly industrializing countries. They have typically been among the most protected manufacturing industries in industrial countries (Keesing and Wolf [16]). But Australia's rates of protection, even relative to those of other industrial countries, have been extremely high for these industries, as shown in Table VI. In 1973, the effective protection afforded Australia's textiles, clothing, and footwear averaged just over 50 per cent, about twice that of other two-digit manufacturing sub-sectors. By 1978, however, the rate of effective assistance had risen to about 100 per cent, or five times that of other sub-sectors (Industries Assistance Commission [6]). This explains the difference between the growth rates in developing country import penetration for textiles, clothing, and footwear as compared with other manufactures. Table VI shows that import penetration of all manufactures from developing countries grew considerably faster during the 1970s into Australia than into any other industrial country, while import penetration of textiles, clothing, and footwear into Australia grew at well below the industrial country average (11 compared with 15 per cent per annum).

A reduction in Australia's protection against textiles, clothing, and footwear imports would undoubtedly benefit developing countries. This is supported by a recent empirical study by Warr and Lloyd [20] on the effects of protection on Australia's trading partners, the results of which are based on the ORANI general equilibrium model of the Australian economy. Those results suggest that an across-the-board protection cut for all industries in 1977-78 would have resulted in almost no change in the developing countries' shares of Australia's imports, though the value of trade would certainly have risen. A protection cut for textiles, clothing, and footwear alone, however, would have raised the value of imports from developing countries by almost as much as an across-the-board cut. Thus from the developing countries' point of view, reduced Australian protection on just textiles, clothing, and footwear would be a substantial trade stimulant. No large reduction is likely before the present import quota arrangements expire in 1988, however, although those arrangements do allow for some modest growth in imports of these items from developing countries.⁷

⁷ For details of the new arrangements, see Joint Statement [5]. In particular, the "fixed quota" basis of the arrangements provide for more rapid growth in times of more buoyant Australian demand, as in 1981-82, but less rapid growth when domestic demand is sluggish, as in 1982-83.

TABLE VI
TARIFFS AND DEVELOPING COUNTRY IMPORT PENETRATION IN TEXTILES, CLOTHING, FOOTWEAR, AND ALL
MANUFACTURES, VARIOUS INDUSTRIAL COUNTRIES, 1970 TO 1979

	Average Tariff Rates, 1975			Share of Textiles, Clothing and Footwear Imports from Developing Countries in Domestic Sales ^a			Share of All Manufactures Imports from Developing Countries in Domestic Sales ^a		
	Textiles	Clothing	Footwear	All Manufactures	1970	1979	1970	1979	1970
Australia	24	44	28	13	7.4	18.9	2.1	5.0	(10)
Canada	19	25	13	8	3.5	9.4	1.4	2.1	(5)
EEC ^b	8	16	6	8	3.4	12.8	2.7	4.1	(5)
Japan	4	18	12	11	2.3	7.2	1.3	2.3	(6)
Sweden	10	13	7	5	9.3	20.0	2.8	4.1	(4)
United States	13	27	12	6	2.5	8.3	1.3	2.8	(9)
Total ^c					3.0	10.2	1.8	3.2	(7)

Sources: International Bank for Reconstruction and Development, Market penetration tapes, 1982; Australia, Industries Assistance Commission, *Annual Report, 1977-78* (Canberra, 1978), Table 1.3.3.

^a The numbers in parentheses are average annual growth rates over the previous decade assuming a linear trend between 1970 and 1979.

^b The three smallest members of the EEC-9, Denmark, Ireland, and Luxembourg, are not included here.

^c Refers to above-listed countries only.

The share and intensity of Australia's export trade with East Asia also would have increased more rapidly over the 1970s were it not for increased protection for agricultural and mineral processing industries in some newly industrializing countries, notably R.O.K. and Taiwan (Anderson and Smith [3]). Protection against food imports in R.O.K. especially has increased dramatically over the 1970s, in much the same manner as in Japan (Anderson [2]; Saxon and Anderson [19]). This increased protection has origins that are in some ways similar to the increase in Australia's textiles, clothing, footwear, and motor vehicles protection in the 1970s: it is largely a response to pressures for structural adjustment resulting from rapid changes in comparative advantage.

The degree to which Asian countries close off opportunities for expansion of exports of Australia's most productive industries through protection is unlikely to be independent of the trade policy stance of Australia and other industrial countries. An Australian government that was prepared to accept substantial liberalization of imports of textiles, clothing, and footwear, would be in a much stronger position to secure Australian interests in the maintenance of liberal trading policies elsewhere in the region. This constitutes a reason for trade liberalization that is just as strong as the improved efficiency in Australian resource allocation and the interests of Australian consumers that have figured more prominently in trade policy discussion.

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