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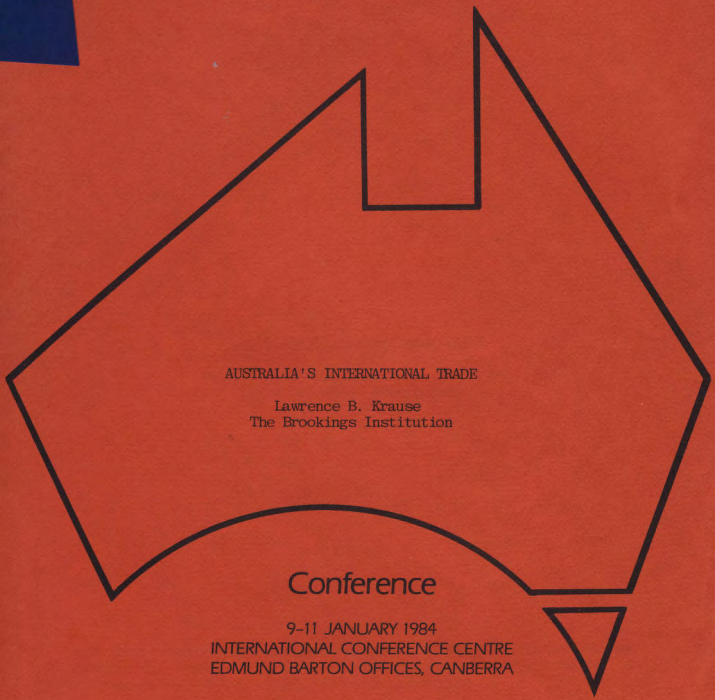

AUSTRALIA'S INTERNATIONAL TRADE

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The Brookings Institution

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TABLE OF CONTENTS

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Australia's International Trade

by Lawrence Krause

The world economy is changing rapidly. Leading those changes have been the countries in the Pacific basin. International trade has been intimately involved having grown faster than output, particularly in the fast growing countries during the period of rapid expansion. However, international trade contracted when the world economy suffered recession. Thus, trade may have been both the handmaiden of growth and the mechanism spreading economic distress. This chapter analyzes the role that Australia has played in these developments. It examines the basis for Australia's comparative advantage and relates changes in trade to factors within the Australian economy. Finally, the policy stance of Australia with respect to both trade and direct investment is investigated.

International Trade and the Economy

It is often said that Australia has always been a trading nation and that is no doubt true. However if we measure commitment to international trade by the ratio of exports and imports to domestic production (GDP), then Australia has become less of a trading nation during the postwar period; this is quite the reverse of other industrial countries. As seen in table 1, Australia's exports and imports of merchandise were each about 20 percent of GDP or even higher

Table 1. Australian Imports and Exports

	1949/50-1953/54	1954/55-1958/59	1959/60-1963/64	1964/65-1968/69	1969/70-1973/74	1974/75-1978/79	1979/80-1982/83
Imports (yearly average, in millions of $ Australia)	1,369	1,539	1,975	2,952	4,139	10,117	15,783
Exports (yearly average, in millions of $ Australia)	1,554	1,647	2,138	2,857	5,122	11,086	15,436
Trade Balance (yearly average, in millions of $ Australia)	185	108	163	-95	983	969	-347
Imports (yearly average, percent to GDP)	19.3	14.0	12.8	12.9	10.6	12.3	14.2
Exports (yearly average, percent to GDP)	21.7	14.9	13.7	12.4	13.0	13.5	14.1

Source: Australian Economic Statistics, 1949-50 to 1980-81, pp. 2-3. Budget Speech 1983-84, p. 42. National Income and Expenditure 1982-83, 1983-84 Budget Paper No. 10, p. 6.

in the early 1950s measured at current prices. But those shares declined rapidly and by the late 1960s and early 1970s, they were no higher than 11-12 percent. The picture is not appreciably altered if goods and services were taken together rather than goods alone. Subsequently, the trends were reversed but not appreciably; in 1982-83, exports were 12.9 percent of GDP and imports 13.4 percent.

A second major development has been change in Australia's trading partners as seen in table 2. In the early 1950s, about 40 percent of Australia's exports and 50 percent of its imports were with the United Kingdom. By 1980 less than 5 percent of Australia's exports were going to the United Kingdom. Japan had become the principal market in the mid-1960s and in the early 1980s was taking almost 30 percent of the total and the United States about 10 percent. Within recent years, however, it has been the developing countries whose markets have been growing for Australian products taking about one-third of the total with the ASEAN and the OPEC countries being particularly important. The picture is only slightly different on the import side. The U.K. share has dropped to less than 10 percent being replaced by Japan and the United States, each of which had a 20 percent share of the Australian market in the early 1980s. Australia is also buying more from developing countries which provided 17 percent of the total in 1982 with the OPEC countries being somewhat more important than the ASEAN countries.

Table 2. Share of Australian Exports from and Imports to Selected Trading Partners (yearly average, percent)

	1949/50-1953/54	1954/55-1958/59	1959/60-1963/64	1964/65-1968/69	1969/70-1973/74	1974/75-1978/79	1979/80-1980/81
Imports:							
U.K.	46.9	41.8	31.1	23.9	19.3	12.3	9.3
E.C.[a]	8.8	10.1	11.2	12.2	13.4	14.1	12.6
Japan	1.9	2.7	5.8	10.1	15.5	18.8	17.4
South & South East Asia[b]	13.2	12.0	9.7	7.2	7.0	9.6	12.4
USA	11.1	12.9	20.0	24.9	23.0	21.2	22.1
Exports:							
U.K.	35.9	31.3	21.3	15.4	9.7	4.4	4.4
E.C.[a]	21.7	21.4	16.2	13.2	9.9	10.5	8.9
Japan	6.7	11.6	16.4	19.8	28.5	31.2	27.1
Pacific basin[c]	8.7	9.6	9.0	11.8	12.9	14.2	16.0
USA	9.6	6.8	9.6	12.3	12.2	10.3	11.0
Canada[d]					2.6	2.5	2.1
New Zealand[d]					5.7	5.2	4.7

Source: Australian Economic Statistics: 1949-50 to 1980-81, pp. 6,9; International Information Paper, pp. 19-22.

a. E.C. excludes the U.K. Ireland, and Denmark are included as of 1973/74.

b. South and South-East Asia includes Bangladesh, Brunei, Burma, Hong Kong, India, Indonesia, Kampuchea, Laos, Macao, Malaysia, Maldives, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand, and Vietnam.

c. Pacific basin includes Taiwan, Hong Kong, Republic of Korea, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Papua New Guinea from 1970/71 inclusive. Before 1970/71 countries included are those listed in footnote b.

d. Data for Canada and New Zealand begins in 1970/71.

From a regional viewpoint, it is the developed and developing countries of the Pacific basin that are Australia's largest trading partners. They provided markets for about 60 percent of Australia's exports since the early 1970s. Australia is also buying more from the Pacific basin with the import share rising from about 49 percent in the early 1970s to 59 percent recently, about the same as exports. In the early 1950s, it was Europe that had 60 percent of the shares, but no more.

A third characteristic of Australian trade that has changed is its commodity composition as seen in table 3. In the early 1950s, wool alone was about half of Australia's exports and other agricultural products were about another 30 percent of the total. By the early 1980s minerals were 30.7 percent of Australian exports, rural products were down to 45.1 percent, and manufactures, 20 percent (special transactions, 4.2 percent). Changes in the composition of imports were much less marked as capital goods remained about 20-25 percent of the total. However the finished consumer goods and motor vehicles share did rise and producers' materials fell. Of course, more dramatic changes would appear with a disaggregated commodity classification.

Explaining the Trends

What accounts for these major changes in Australian trade? With respect to exports, McColl and Nicol have applied a constant market shares analysis for the period 1963-66 to 1975-77.[1] The CMS method attempts to separate causative factors into growth of world trade,

Table 3. Distribution of Exports and Imports by Commodity Group

(yearly average, percent)

	1950/51-1954/55	1955/56-1959/60	1960/61-1964/65	1965/66-1969/70	1970/71-1974/75	1975/76-1979/80	1980-81
Imports[a]							
Food, drink & tobacco	6.7	6.3	5.4	4.9	5.0	5.1	4.3
Minerals, fuels, & other basic materials[b]	19.7	21.1	18.5	14.3	11.6	14.6	18.4
Manufactured goods[c]	68.9	67.7	71.0	75.6	79.2	77.7	74.7
Other	4.7	4.9	5.1	5.2	4.2	2.6	2.6
Exports:							
Meat	6.2	8.2	9.2	9.5	10.3	9.0	8.3
Cereals	12.8	9.9	15.6	12.4	12.1	12.1	12.1
Wool	50.7	43.2	21.2	24.3	13.8	10.3	9.8
Other rural	12.8	13.9	13.3	11.7	11.0	10.0	11.8
Unprocessed and processed minerals					15.8	18.8	17.8
Coal	0.1	0.4	1.3	3.1	5.6	10.8	10.3
Metals	5.3	7.1	7.1	9.8	10.0	9.8	8.8
Simply transformed manufactures[d]					9.1	9.0	7.9
Elaborately transformed manufactures[d]					13.9	10.4	12.2

Source: Australian Economic Statistics: 1949-50 to 1980-81, pp. 5,8. Internal Information Paper, pp. 23-36.

a. From 1965/66, inclusive, the classification of imports was changed from the Statistical Classification of Imports to the Australian Import Commodity Classification. See footnotes b and c to see how the categories changed.

b. From 1950/51 through 1964/65 includes basic materials, fuels, and lubricants. From 1965/66 includes crude materials (inedible), mineral fuels, and lubricants.

c. From 1950/51 through 1964/65 includes textiles, base metals, motor vehicles, electrical machinery and equipment, other machines and machinery, and other manufactures. From 1965/66 includes chemicals, manufactured material, machinery (electric and otherwise), transport equipments, and miscellaneous manufactured articles.

d. Data begins in 1970/71.

commodity compositional effects, market distributional effects, and competitive effects (measured as a residual). While there are legitimate criticisms of CMS methodology, particularly in interpreting the meaning of competitiveness, it does identify certain obvious variables affecting trade.

The facts are that Australian exports did not grow as fast as world trade; that is, Australia was unable to sustain even the small share of world markets that it supplied. In 1938, Australia supplied about 2.2 percent of world trade and its share rose to 3 percent in the early postwar period. However by the late 1950s, it had dropped to 1.5 percent, reversed slightly to 1.65 percent in 1963-66, but declined further to 1.27 percent in 1975-77. McColl and Nicol confine their detailed analysis to the eleven industrial countries buying two-thirds of Australia's exports and in these countries, Australia's share was 2.3 percent in 1963-66, 1.95 percent in 1967-69, 2.05 percent in 1970-72, and only 1.7 percent in 19/5-77.

The findings of the CMS analysis are that all of Australia's lost market shares can be attributed to an unfortunate commodity composition of its exports. Specializing in wool, meat, and grains was very unlucky. Australia's market distribution was positive on balance as

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1. G.D. McColl and R.J. Nicol, "An Analysis of Australian Exports to its Major Trading Partners: Mid-1960s to Late-1970s," The Economic Record, June 1980, pp. 145-57.

the slow growing U.K. market was more than counterbalanced by the fast growing Japanese market. The competitiveness measure was also positive, particularly in Japan. It should be noted, however, that during the end of the period from 19/0-72 to 19/5-77, Australia's competitiveness seemed to decline.

Export successes were found in minerals in which Australia increased its market share in Japan and in alumina (which is classified as an industrial chemical). But at the same time, market loses were suffered for iron and steel, transport equipment, electrical machinery, instruments, and metal manufactures--most of which are so-called Elaborately Transformed Manufactures (ETMs).

As to the fast growing developing countries of Asia, which as already noted, are buying an increasing portion of its exports, Australia was unable to sustain its market share which declined from 4.1 percent in 1964-66 to 3.4 percent in 1974-76.[2]

A similar type of analysis was conducted by the Department of Trade.[3] They established that Australia's share of world markets

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2. Bureau of Industry Economics, Industrialization in Asia--Some Implications for Australia, 1978, Table 3.11, p. 31. If China is excluded, there was no decline over the ten years, but there was a decline from 1969-71 to 1974-76. See also, Kym Anderson and Ross Garnaut, "Australian Protection and Trade with the Developing Countries" (ANU 1983), processed.

3. Department of Trade and Resources, Economic Policy Division, Australian Export Performance in the 1970s: Some Further Analysis, August 1982; and Pattern of Australian Exports, 1970//1 to 1980/81 (April 1983).

declined further to 1.18 percent in 1980. This analysis is less satisfying than CMS because it approaches trade only from the side of the exporters (not market by market) but it does have the virtue of making some distinction between trade value and trade volume (CMS is based only on value data). During the decade 1970 to 1980, would trade volume increased 5.6 percent a year, but Australia's export volume increased only 3.6 percent a year. Most of the difference was attributed to the commodity composition of Australia's exports similar to the finding of the CMS study. Even with respect to fast growing manufacturing, Australia's exports are split about evenly between Simply Transformed Manufactures (STMs) which are growing more slowly and Elaborately Transformed Manufactures (ETMs) where there are large increases whereas world exports are about 80 percent ETMs and only 20 percent STMs.

Some product disaggregation was undertaken which indicated for the period 1971-72 to 1980-81, world agricultural trade volume increased 4.2 percent a year, but Australia's only 0.8 percent; world manufactures trade volume increased 6.7 percent a year, but Australia's only 2.2 percent; on the other hand, world mineral trade volume increased only 1.4 percent a year, while Australia's rose 7.6 percent. However, because of the composition of trade within minerals, the value of Australia's minerals increased less than the world average since Australia has less petroleum in its export basket whose price rose dramatically.

One disturbing finding concerning Australia's market distribution was that Japan's share of Australia's exports peaked in the mid-1970s and began to decline. This reflects the fact that Australia's share of Japanese imports declined from 9.4 percent in 19/2 to 5.0 percent in 1980. The slowing of Japanese growth since the first oil crisis has meant that fewer Australian natural resources are being demanded. Also a belief was expressed that Japan may be intentionally trying to diversify its sources of imports away from Australia. An estimate was made that 1983-84 will be the first year in which Australia will import more from Japan than it sells to them.[4] To replace Japan, Australia must look to the newly industrializing countries of Asia and recently it is having notable success in Korea and some in Taiwan, but less in Hong Kong and Singapore.

Several hypotheses were advanced to explain the deterioration in Australia's export position:

1. the inward orientation of manufacturing policy and performance,
2. the small scale of manufacturing,
3. a foreign investment bias toward natural resources,
4. changes in the real exchange rate,
5. protectionism in overseas markets,

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4. Maximilian Walsh, "Australia's Great Leap Backward; How Japan Stole the Trade Initiative," The Bulletin (June 28, 1983).

6. foreign ownership and control of Australian producers,
7. international transport costs,
8. and the reduction in R&D expenditures in Australia.

Some of these hypothesis are addressed below.

The Resource Content of Australian Trade

While the traditional theory of comparative advantage is still the cornerstone of accepted wisdom concerning the determination of the structure of international trade, the theory has been amplified in recent years. One approach that is particularly useful is to expand the number of factors of production beyond the simple labor, capital, natural resource classification. The three factor model has been expanded to a five factor model as follows: unskilled labor, human capital (skilled labor), physical capital, technology, and natural resources.[5] All five factors are generally required in production and thus they occur in combination. Hence the interesting question is the relative intensity in which they occur. Empirical implementation of the model in a straightforward manner requires data on factors by products that are not available. However, the model can be approximated by classifying products by their dominant factor input,

5. For a more detailed discussion, see chapter four, Lawrence B. Krause, U.S. Economic Policy toward the Association of Southeast Asian Nations (Brookings 1982).

that is, dominant from the viewpoint of location of production which is of interest for international trade. Because physical capital is extremely internationally mobile, it was dropped as a classification item. All commodities were characterized as being either unskilled labor, human capital, technology- or natural resource intensive. Data on production processes in the United States were used to form the classification scheme.[6]

Australian exports and imports by factors for the period 1970-81 are shown in table 4. It comes as no surprise that Australian exports are heavily natural resource intensive. This is by far the major characteristic of Australian exports. However, in the early 1970s, the natural resource share was about 83 percent but it dropped to about 79 percent in the early 1980s. Since these shares are calculated from value data at current prices, a bias is introduced when relative prices change as they did during the 1970s. Hence the decline in the natural resource share may be underestimated. Australian human capital intensive exports also became marginally less important over the decade. At the same time, it is somewhat surprising to find that technology intensive products increased their share from about 7.5 percent in the early 1970s to about 12 percent in the early 1980s.

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6. See appendix A for an explanation and listing. In this classification, aluminum oxide occurs in a category of technology goods so some adjustment is required in interpreting Australian data.

Table 4. Four Sector Analysis of Australian Trade with the World
(percent of total)

Sector:	Human capital intensive commodities	Natural resource intensive commodities	Skilled labor intensive commodities	Technology intensive commodities
Exports:				
1970	7.937	83.224	1.467	7.373
1971	7.606	82.590	1.289	8.514
1972	8.334	82.770	1.311	7.586
1973	7.883	81.251	2.114	8.752
1974	7.908	80.863	1.638	9.592
1975	7.549	82.936	1.246	8.268
1976	6.087	82.406	1.055	10.452
1977	6.342	81.890	0.968	10.800
1978	7.267	79.217	1.498	12.017
1979	6.826	82.621	1.690	8.863
1980	6.311	79.376	2.112	12.201
1981	6.370	79.068	1.869	12.693
Imports:				
1970	25.723	18.601	14.203	41.473
1971	28.222	17.545	14.225	40.008
1972	26.616	18.609	17.197	37.579
1973	26.547	18.657	17.032	37.764
1974	28.710	21.550	15.601	34.139
1975	29.501	20.806	13.609	36.084
1976	30.104	21.403	14.530	33.963
1977	28.121	22.481	14.233	35.165
1978	27.553	20.595	14.455	37.398
1979	26.660	22.210	14.889	36.242
1980	25.460	25.225	12.872	36.443
1981	25.460	23.308	13.618	37.614

Source: UN Commodity Trade tapes. Figures are rounded.

The increase is still present but less marked under an adjusted classification of technology goods. There was little change in the labor intensive share. Technology intensive products, in general, have grown as a share of world trade and Australian exports took part in it.

A confirming picture is seen on the import side. Australian imports are split between technology goods with the largest share, human capital intensive products next, and then natural resource and labor intensive products. However, natural resource intensive products apparently grew as a share of total imports during the decade (remembering the upward bias). A small decline was recorded in the share of both labor-intensive products and human capital intensive products. A larger decline occurred in the technology share which went from about 40 percent in the early 1970s to about 37 percent in the early 1980s. While too much weight should not be placed on these measurements, it does appear that Australia's competitive advantage is moving away from heavy dependence on natural resources to somewhat greater reliance on technology goods.

Australia's largest trading partners are Japan and the United States. These are also the two most competitive countries in the trade of technology goods. Thus, if there was some shift in the resource base of Australia's comparative advantage, it should appear in Australia's bilateral trade with them. The factor basis of Japanese and U.S. trade was examined with respect to the world and with Australia separately as summarized in table 5. Japanese imports are

Table 5. Four Sector Analysis of Trade for Japan and the United States with the World and Australia
(percent of total)

Sector / Trading partner	Human capital intensive commodities		Natural resource intensive commodities		Skilled labor intensive commodities		Technology intensive commodities		
	World	Australia	World	Australia	World	Australia	World	Australia	Australia*
Japan									
Imports:									
1970-1972 average	3.5208	0.4295	77.6903	96.9195	4.1061	0.2874	14.6827	2.3637	.6543
1977-1979 average	3.5288	0.5226	81.4019	96.5423	4.9822	0.2571	10.0871	2.6781	.3778
Exports:									
1970-1972 average	43.5774	41.4838	7.6525	6.6589	22.9584	23.0205	24.8117	28.8369	
1977-1979 average	49.8329	53.8330	4.9949	3.6315	14.2035	12.4100	30.9688	30.1256	
United States									
Imports:									
1970-1972 average	33.2097	3.5582	38.1436	80.9227	12.5479	1.1990	16.0998	14.3201	3.9051
1977-1979 average	25.9687	3.5536	48.7805	65.9195	8.9457	0.6539	16.3051	29.8731	6.2863
Exports:									
1970-1972 average	20.0729	20.5425	30.3817	11.0371	5.8623	5.2648	43.6832	63.1554	
1977-1979 average	18.5862	18.6962	31.8615	9.1657	5.7999	6.7608	43.7524	65.3773	

Source: UN Commodity Trade tapes. Figures are rounded.

a. In this case, Australian exports of technology intensive commodities excludes item 513.6 (SITC code), inorganic bases, ect., nes.
This category includes aluminum oxide (SITC code 513.65) which is the predominant Australian export within the 513.6 category and could be potentially labeled as a natural resource intensive commodity.

If figures do not add to 100, it is due to rounding.

dominated by natural resource goods and even more so are its imports from Australia. During the decade of the 1970s, Japanese overall imports became slightly more natural resource and labor intensive and slightly less technology intensive. These trends did not appear in Japan's imports from Australia. However, Japan imports so few technology goods from Australia, especially under the adjusted definition (which excludes aluminum oxide), that little can be made from the figures.

Japan exports primarily human capital and technology intensive goods. This pattern for the world was duplicated in its exports to Australia. During the 1970s, Japan's overall exports became somewhat more human capital and technology intensive and somewhat less labor and natural resource intensive. These trends were almost mirrored with Australia except that the technology share of Japan's exports did not rise. Thus there is weak confirming evidence of the change; Japan's export share of technology goods rose, but not their technology exports to Australia.

The United States imports natural resource and human capital intensive products and to a lesser extent technology and labor intensive products. U.S. imports from Australia alone are heavily weighted with natural resources and the second largest share is technology goods. During the 1970s, U.S. imports of natural resource goods rose and human capital and labor intensive goods fell. However, the pattern was different with respect to imports from Australia;

namely the natural resource share fell and the technology share rose, again providing some confirming evidence. Even after using a more restrictive definition of technology goods that fits Australia better, the story is much the same. U.S. imports of technology goods from Australia rose considerably during the decade of the 1970s (although the level is less throughout the decade than under the more inclusive definition of technology goods). Large increases were made in U.S. imports of Australia technology goods such as aircraft, mining machinery, pumps, tractors, electrical medical equipment, medicines, electrical apparatus, and electrical power and other specialized machinery.

U.S. exports are heavily weighted with technology and natural resource goods. During the 1970s, there was little change in the structure of U.S. exports, although the heavily weighted share increased slightly. U.S. exports to Australia alone are even more heavily concentrated in technology goods and that share rose slightly during the 1970s. However, U.S. natural resource and human capital exports to Australia declined somewhat and the share of labor intensive products rose. Thus U.S. export shares to Australia did not confirm the hypothesis.[7]

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7. While the overall technology share of U.S. exports grew little over the decade, it resulted from very different trends with different trading partners. The technology share did rise sharply in U.S. exports to pacific basin countries, except Japan. Thus the rise to Australia may be more a regional effect rather than denying Australia's improved competitiveness in these products.

To summarize the results of examining the resource content of Australia's bilateral trade with Japan and the United States, there is weak confirming evidence that whereas Australia's comparative advantage is still heavily in natural resource goods, there may have been some shift toward stronger comparative advantage in technology goods during the 1970s. This was seen in the fact that Japan's own improvement in technology goods was not reflected in its trade with Australia and Australia was able to increase its technology exports to the United States despite the further improvement in U.S. comparative advantage in such goods.

Explanations of Trends in Australia's International Trade

As noted previously, a striking characteristic of Australia's international trade was the decline in exports and imports as a proportion of gross domestic product during the 1950s and its failure to rise subsequently. The fall during the 1950s does not appear to be very surprising. The work of Simon Kuznets concerning structural change during the process of economic growth seems to provide an adequate explanation.[8] He concluded that in "young" countries such as Australia, foreign trade proportions are expected to fall (or not rise)

8. See Simon Kuznets, Economic Growth of Nations: Total Output and Productive Structure, Harvard University Press, 1971; "Quantitative Aspects of the Economic Growth of Nations," Economic Development and Cultural Change, January 1967 (part II), and Modern Economic Growth: Rate, Structure and Spread, Yale University Press, 1966.

with rapid growth. This results from territorial expansion (extensive use of land) and the growth of services as a share of both consumption and output. Australia became a much larger country during the 1950s as a result of massive immigration, and size is inversely related to trade proportions. Indeed, it was the earlier high ratios that were the distortion when Australia, in Kuznets words, was a small offshoot of Europe.

The failure of the trade proportions to rise subsequently does not appear to be a natural result of the evolution of the economy. Several hypotheses noted earlier in this chapter have been advanced to explain the phenomenon. Probably the most important explanation was the choice by Australia of an inward-oriented industrial policy; mainly a strategy of promoting manufacturing through import-substitution policies. High tariffs on imports of manufactures were the main instrument of policy. In its historical context, this policy choice is easily understood. In the early postwar period most independent raw material producers attempted to spur manufacturing in order to become more industrialized and less dependent on the vagaries of nature and unstable world raw material prices just as the older industrial countries had before World War II. By law, tariff making in Australia was vested in an administrative board that could and did make frequent changes in tariffs in response to requests by domestic producers. Australia took the "small country" option during the various rounds of tariff negotiations under the General Agreements on Tariffs and Trade (GATT)

and offered few tariff reductions while knowing that its reluctance would not jeopardise a world agreement. Many Australian tariffs were not even bound under the GATT. Of course, few real concession were given by others on temperate agricultural goods, the products of greatest export interest to Australia at the time. (It is doubtful whether even an aggressive effort by Australia could have changed that outcome.)

High protection was not without its critics in Australia. Indeed, some of the most valuable work on tariffs and their deleterious consequences were done by economists working in Australia or Australians abroad; the work of Max Corden, Peter Lloyd and Wolfgang Kasper are notable in this regard.[9] Furthermore, there have been several government commissions that have investigated the issue.[10]

The trend toward greater protection of Australian industry began to be seriously questioned in the late 1960s to early 1970s probably as a result of the rapid development of the highly competitive minerals industry. It also may have reflected the exhaustion of all reasonably

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9. The works of these authors is so wellknown that references are unnecessary, however, some citations may be useful. Max Corden, The Theory of Protection, Oxford, 1971; Peter J. Lloyd, "Protection Policy," chapter 5, in Fred Gruen, ~~in~~ ??, and Wolfgang Kasper, et al, Australia at a Crossroad. Survey of Australian Economics, Vol

10. Citations to Vernon, Jackson, and Crawford Commissions.

easy opportunities for import replacement. Employment in Australian manufacturing peaked as a share of the labor force in the mid-1960s being replaced at the margin by services and minerals employment. As seen in table 6, by the late 1960s the level of effective rates of assistance to Australian manufacturing had reached 30 percent on average which must be considered a high figure by the standard of industrial countries. Furthermore the assistance given individual industries ranged up to more than twice the manufacturing average (clothing and footwear). There was no hiding of high effective protection in Australia as the information was widely available through the excellent work of the Industries Assitance Commission (IAC).[11] Up to that point Australian protection was mainly in the form of tariffs. The work of the IAC which measured the levels of effective protection provided by nominal tariff rates plus the evaluation of other aids to industry made transparent the cost of industrial assistance to Australian society.

As part of the policy initiatives of the Whitlam Government in July 1973, tariffs were cut across the board by 25 percent. As seen in table 6, average effective protection for Australian manufacturing was reduced from 36 percent to 27 percent. That turned out to be a high

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11. This Australian institution is widely admired in other countries. See appendix B of this chapter for a description of the IAC.

Table 6. Average Effective Rates of Assistance to Australian Manufacturing Sub-Sectors, 1968-69 to 1981-82[a]

(in percent)

	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
		1971-72 production weights					1974-75 production weights			1977-78 production weights				
Food, beverages, and tobacco	16	17	18	19	19	18	21	20	16	10	13	11	9	8
Textiles	43	42	42	45	45	35	39	50	51	52	52	55	61	54
Clothing and footwear	97	94	91	86	88	64	87	99	141	142	145	137	141	204
Wood, wood products and furniture	26	27	26	23	23	16	18	19	18	18	16	14	13	13
Paper and paper products, printing, and publishing	52	50	50	52	51	38	31	30	30	26	29	27	26	30
Chemical, petroleum, and coal products	31	31	31	32	32	25	23	23	21	19	19	17	14	13
Non-metallic mineral products	15	15	15	14	14	11	11	10	7	5	5	5	4	5
Basic metal products	31	30	28	29	29	22	16	16	15	12	12	12	13	14
Fabricated metal products	61	60	60	58	56	44	39	38	34	32	34	33	34	34
Transport equipment	50	50	51	50	51	39	45	59	54	57	63	74	74	79
Motor vehicles	52			51		41	77	116	104	108	130	149	149	158
Other machinery and equipment	43	43	43	44	39	29	24	25	22	20	21	22	22	22
Miscellaneous manufacturing	34	35	35	32	31	24	27	26	25	26	27	26	27	27
TOTAL MANUFACTURING	36	36	36	35	35	27	27	28	27	23	25	24	24	26

Source: Industries Assistance Commission (1976a, 1980a, 1981e, Annual Report 1982-83).

a. The forms of assistance covered by this table include tariffs, quantitative restrictions on imports, production and export subsidies, and special pricing schemes for sugar and petroleum products. The assistance provided by the motor vehicle local content scheme is included only in the estimates based on 1977-78 production weights. Forms of assistance not taken into account include government purchasing practices and assistance from state governments, some descriptive details about which are provided in the Industries Assistance Commission's Annual Report 1980-81, Chapter 2, and Appendices 2.2 and 2.3.

water mark for trade liberalization. Shortly before and after the tariff cut, the Australian dollar was appreciated and the world sunk into a deep recession due to the first oil shock. These two factors plus the tariff reduction put tremendous competitive pressures on import competing manufactures and unemployment in manufacturing rose sharply. This tended to discredit tariff cutting in the eyes of the public, although the consensus of economists is that the tariff reduction was less important than changes in the exchange rate.[12]

Almost immediately industries that faced severe competitive pressures from imports (especially textiles, clothing, footwear and motor vehicles) received increases in assistance even though they were already the most heavily assisted industries in Australia. In addition, the form of assistance changed as quotas, tariff quotas, content requirements, bounties, and export subsidies were introduced. Quotas are more disruptive of trade than tariffs because effective assistance rises automatically as the competitiveness of the domestic industry declines. The dispersion of assistance rates both between different industries and products within the same industry increased. The standard deviation of average effective rates of assistance for broad groups of manufacturing industries are shown in table 7. Since the amount of resource misallocation is positively correlated with

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12. See P.J. Lloyd, "Protection Policy", op cit.

Table 7. Standard Deviations of Average Effective Rates of Assistance to Australian manufacturing Sub-Sectors, 1977-78 10 1981-82[a]

(percentage points)

	1977-78	1978-79	1979-80	1980-81	1981-82
Food, beverages, and tobacco	18	18	17	17	18
Textiles	45	43	49	50	46
Clothing and footwear	38	44	37	38	49
Wood, wood products, and furniture	14	13	10	9	9
Paper and paper products, printing and publishing	14	15	15	15	16
Chemical, petroleum and coal products	11	11	10	12	12
Non-metallic mineral products	7	8	7	7	7
Basic metal products	8	9	9	9	8
Fabricated metal products	13	13	16	17	18
Transport equipment	45	53	62	61	64
Other machinery and equipment	13	13	13	11	11
Miscellaneous manufacturing	17	15	17	15	15
TOTAL MANUFACTURING	30	32	33	34	41

Source: Industries Assistance Commission, Annual Report 1982-83.

a. Standard deviation of average effective rates calculated for each of the ASIC industries with an ASIC sub-division.

See Table 6, footnote a for types of assistance included.

dispersion, it is possible to argue that all of the economic gains of the 1973 tariff cut were subsequently eroded. The import penetration of manufactures into Australia which rose sharply in 1974 was subsequently curtailed.

Few domestic "gains" can be attributed to the high level of assistance afforded certain industries in Australia. As compared to the less assisted industries for the period 1968-69 to 1981-82, the heavily assisted industries had less growth in gross product and had five times the decline in employment. Furthermore, the burden on households is substantial as the IAC has estimated that transfers from consumers to owners of quota entitlements was equal to $3.9 billion or $600 to $800 per household (measured in 1981-82 prices).[13] Thus Australian consumers have paid a heavy price to sustain a widely diversified manufacturing sector which because of the size of the country confines most production into small scale operations. Hence, inward oriented policy does explain why imports have not risen appreciably as a proportion of the economy.

Inward oriented policies also help explain why export shares have not risen. The CMS analysis noted earlier indicated that Australia's share of world trade declined because it specialized in products for which world demand rose very little (temperate agriculture and

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13. Industries Assistance Commission, Annual Report 1982-83, September, 1983, p. 11.

minerals). However, why did not Australian producers shift resources to produce products for which world demand was rising rapidly? The answer is that the structure of assistance directed resources to industries in which Australia was unlikely to have or to create a comparative advantage. Indeed, high protection is the antithesis of what is required to foster world competitive industries. This is not to suggest that foreign protectionism played no role in limiting Australian exports. Australia should have a comparative advantage, for instance, in processed raw materials, but it is known that many countries and especially Japan, escalate their tariffs (and other trade restraints) so as to confine imports of natural resources to their crudest state. Nevertheless, Australia's own policies would seem the more important barrier since other countries did increase their exports of manufactures despite trade barriers.

Given Australia's inward orientation, what explains the export success that was achieved in certain manufactures and in technology goods in particular? Table 8 listed the ten fastest growing Australian exports of technology goods to the United States and the level of assistance they received in Australia.[14] It is notable that the export successes were negatively related to government assistance. Without government assistance producers have to be able to meet foreign

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14. The correspondence was made through general description rather than product codes so errors of interpretation are possible.

Table 8. Comparison of Product Assistance Rate and the Average Effective Protection Rate for the Industry

Industry Sub-Division	Product Assistance Rate[a] (percent)	Average Effective Rate for Industry (percent)	Standard Deviation (percentage points)
Aircraft	-5	79	64
Pumps and compressors	16	22	11
Industrial machinery and equipment, nec	19	22	11
Medicine	-1	13	12
Measuring, professional and scientific equipment	1	22	11
Electrical apparatus	27	22	11
Electrical power machinery	14	22	11
Agricultural machinery	19	22	11
Cameras and optical goods	6	22	11
Hear/cool equipment	27	22	11

Source: Industries Assistance Commission, Annual Report 1982-83.

a. Average effective rate for the industry sub-division (4-digit level ASIC).

See Table 6, footnote a for types of assistance included.

competition at home and thus live in an environment that promotes competitiveness and exports. In the absence of more careful empirical work the hypotheses must be considered tentative, but if substantiated would have strong implications for Australian policy for it indicates a direct linkage between trade liberalization and export success.

Locational advantage appears to be a second factor that helps explain Australia's export success in manufacturing. Much of Australia's exports of manufactures is sold to New Zealand and nearby Pacific island countries. Proximity does provide a basis for comparative advantage. Not only are transport costs minimized, but ease of serving customers, speed of delivery, and cultural inter-penetration are involved. The potential also exists for larger Australian exports to the ASEAN countries, however, greater competition exists for those markets and Australia's import policies may stand in the way of closer trading ties.

Ever since 1966, trans-Tasman trade has been given special treatment under the New Zealand/Australian Free Trade Agreement (NAFTA) which was broadened and strengthened under an agreement for Closer Economic Relations (CER) which became operative in 1983.[15] The NAFTA was only a partial free trade agreement which required item by item bargaining. The difficulties and limitations of a partial free trade

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15. See Appendix C for more complete treatment of CER.

area have been demonstrated in South and Central America and the Australian-New Zealand effort was not more successful.[16] CER improves upon NAFTA in that it automatically provides for eventual free trade of all goods; it covers quantitative import restrictions, export subsidies as well as tariffs. Limiting provisions have been made for "unfair competition" whose meaning is unclear and there are safeguards for severe material injury. Furthermore wheat, dairy products, citrus fruits, grapes, and certain other fruits are excluded which is unfortunate.[17] Furthermore, there is no provision for the free movement of capital between the countries. Nevertheless, CER could become significant for New Zealand if it were used as an incentive to make the whole economy more efficient and reduce government interventions. For Australia, Tasman trade will remain a small share of the total, but very strategic for manufactures and CER can be helpful in this regard.

A third factor that helps explain Australia's success in exporting certain manufactures can be attributed to the structure of the economy and its factor endowment. Australia has a highly literate labor force that has a wide variety of skills. Foreign multinational firms operate

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16. P.J. Lloyd, "Economic Relations Between Australia and New Zealand," Research School of Pacific Studies, Canberra, 1976.

17. P.J. Lloyd, "NZ, CER, and the Pacific," Public Lecture at the University of Auckland Centenary Celebration, processed and undated.

extensively in the country and there are also many successful Australian entrepreneurs. Australian firms expend a moderate amount of their resources on research and development.[18] What this describes is a country that could specialize in middle technology goods and specialized items. There is a tendency for economists and politicians to think only in terms of high technology at one extreme or labor intensive goods at the other. Few products or processes are regularly revolutionized in the laboratory or are made only with unskilled labor. The large middle ground is where Australia fits. Australian successes apparently have come from individual firms (entrepreneurs) making marginal improvements on existing products to fit needs they perceive--such as mining machinery--and then marketing them at home and abroad.

Exchange Rates and Trade

Exchange Rates are examined elsewhere as part of the discussion of monetary policy and natural resources (the Gregory thesis). However, attention need also be drawn to the consequence of changes in real exchange rates for exports of manufactures. Concern has been expressed over the competitive position of Australian manufactures as a result of

18. In 1973, 1.2 percent of Australian GDP went to R&D. This compares to 2.3 percent in the United States, 1.7 percent in Japan, 1.1 percent in Canada, and 0.9 percent in New Zealand. A.T.A. Healy, editor, Science and Technology for What Purpose? An Australian Perspective, Australian Academy of Science, Canberra, 1979.

exchange rate movements or their failure to move to offset inflation differentials. Exchange rates are believed to have a greater impact on the volume of Australian manufactures trade in the short term than on minerals or agricultural trade because the prices of these latter products are set in U.S. dollar markets. Thus when the Australian dollar/U.S. dollar exchange rate changes, it has little effect on the volume of Australian natural resource exports, but has a large effect on profits of producers of those products. Hence, when the Australian dollar appreciates, it discourages manufactures exports (encourages imports) and reduces the manufactures share of the export basket. The reverse occurs when the currency depreciates.

Since the early 1970s, the Australian dollar has gone through a complete cycle. In nominal terms, it was appreciated sharply, if belatedly, in late 1972 and further in 1973 by approximately 16 percent.[19] Subsequently, it was devalued until 1979 reaching a point 27 percent below its peak value. From 1979, it rose 16 percent to the third-quarter of 1981, and then began a gradual slide which culminated in a sharp but temporary drop in the second-quarter of 1983. When the nominal effective exchange rate is corrected for inflation differences between Australia and its trading partners, the size of the changes are reduced by about half, but the distinct cycle remains.

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19. The measurement described is the effective exchange rate measured by the MERM method by the IMF.

Since exchange rates affect trade with a lag of a year or so, the loss of Australia's market shares in the mid-1970s might well be due to this cause. However, the further erosion after the Australian dollar depreciated suggests that other forces must have been more important.

Australian Trade and Industrial Assistance Policy

Prime Minister Hawke on August 8, 1983 said, "Long term growth in our living standards is feasible only if we maintain open investment and trade policies."[20] Thus he endorsed the firm conviction widely shared by academics and given rhetorical support by most Australian politicians. Nevertheless, reality is moving in the opposite direction. As is typical in a recession and mirroring developments in other countries, Australian industries are requesting more assistance from the government questioning whether the line can be held against greater protection. In the case of steel, it was not. The industry was granted an annual subsidy of $17.6 million for five years and other tariff and quota measures are to be taken to ensure that Australian producers supply 80 percent of the domestic market.[21] Even the independence of the IAC is under attack by the Australian Council of Trade Unions (ACTU) which is apparently unhappy with the IAC's analysis

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20. Quoted in the introduction of the IAC, Annual Report, 1982-83.

21. Asian Wall Street Journal Weekly, August 15, 1983, p. 11.

which demonstrates societal losses from greater protection (including losses of jobs in manufacturing).

The obvious question is what explains the persistence of Australian assistance policies which cannot be justified on economic efficiency grounds. In a very interesting paper, Kym Anderson addressed this question employing some econometric techniques.[22] The study suggests that the most significant explanation of why some industries obtain greater government assistance than others are as follows: the lower the average wage per employee, the more the industry is labor intensive, the smaller the value-added share of output, the smaller the number of firms in the industry and the lower the share of output being exported, the greater is assistance likely to be.[23] This suggests that during recessions when unemployment rises and wages are threatened, it is hard to resist protectionist pressures. It also suggests that industries with a few firms employing a large number of workers is likely to be particularly inefficient in Australia.

Other evidence suggests that the reasons for Australian protection may go beyond the rational, self-seeking desires of certain firms and

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22. Kym Anderson, "The Political Market for Government Assistance to Australian Manufacturing Industries," The Economic Record, vol. 56, no. 153, June 1980.

23. The significant relationship between high assistance and low level of exports provides some weak support for the idea that export success is promoted by low levels of assistance.

their employees and the willingness of politicians to respond to those special interests. In a poll conducted in 1979, it was determined that a clear majority of Australians support protection as reported in table 9. With the sole exception of university educated people, Australians believe that domestic producers of manufactured products should be protected from low-priced imports. Very likely the support for protection would be larger at current, higher levels of unemployment. This suggests that Australians are either unaware of their own best economic interests or they are willing to bear an economic sacrifice to serve some other societal goal. The fact that even city voters and university educated clearly support protection from low-priced farm products suggests the latter explanation has some credibility. The issue cannot be resolved without more polling data, but a possible explanation is that Australians want to reduce the pressures and uncertainties that come from closer interdependence.

Australia lost an historic opportunity to reduce its protection as part of past GATT negotiations. Multilateral freeing of trade makes political sense; unilateral free trade makes only economic sense although maybe only in the long run. Thus, Australia should be on the forefront of countries seeking a new round of trade negotiations.[24]

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24. In fact, former Prime Minister Fraser made an initiative to the ill-fated GATT Ministerial Meeting in November 1982 for a stand-still on new protectionist measures but was not supported by other countries.

Table 9. Australian Attitudes Towards Protection from Imports of Manufactured and Farm Products, 1979
(percent)

		Total (2000)	Male (998)	Female (1002)	University educated (192)	Primary educated (230)	Blue collar workers (1084)	White collar workers (839)	Votes LIB. (700)	Votes ALP (872)	City voters (1233)	Non-city voters (767)
Australian manufactured products should be protected from low-priced imports:	Yes	59	56	62	35	71	65	51	55	65	57	63
	No	38	41	35	62	24	32	46	41	33	39	35
	Unsure	3	3	4	3	5	3	3	3	2	4	3
Australian farm products should be protected from low-priced imports:	Yes	73	68	78	52	83	78	66	74	74	70	78
	No	25	30	20	46	13	20	32	24	25	27	21
	Unsure	2	2	3	2	4	3	2	2	2	3	1

Source: Age Poll, The Age, Melbourne, 4 June 1979.

Global freeing of trade would be optimal, but if that turns out to be unobtainable, then regional promotion of trade within the Pacific basin may be a good second best alternative.[25] Several Australians have been instrumental in promoting closer economic cooperation in the Pacific.[26] However, before levels and dispersion of assistance to industry can be reduced, Australians must be convinced that it is desirable. Clearly more effort is required to educate the public and opinion leaders.

Understandably, Australians would like to know where job opportunities will be created to absorb workers displaced by imports. Of course, the only true answer is that they will be absorbed by an expanding economy, but exactly where cannot be forecasted. Wolfgang Kasper in an imaginative paper attempted to give some general guidance toward an answer.[27] However, specifics are beyond the economic science. My work suggests that Australia has export prospects in middle technology goods along with natural resource goods.

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25. On November 22, 1983, Prime Minister Hawke proposed that Pacific basin countries coordinate their efforts to promote a new multilateral round of trade negotiations. He also supported non-discriminatory intra-regional efforts at trade liberalization. The Australian Financial Review, November 23, 1983, p. 1.

26. Sir John Crawford, Pacific Economic Co-operation: Suggestions for Action, Heinmann Educational Books, 1981. See, in particular, references to Peter Drysdale.

27. Wolfgang Kasper, "Where Will the Jobs Come From?", Australian Bulletin of Labour, Supplement no. 2, December 1980.

Government promoting of these industries other than through general market measures are unnecessary.[28] Economists can be more specific about the distortions that come from protection and the costs of existing policies. More use in public should be made of the data provided by the IAC. Education on a multinational basis would be even more beneficial. Wider knowledge of benefits and costs of greater liberation may not be enough, but it may contribute to reversing the tide.

Foreign Direct Investment

Foreign direct investment (FDI) has made a significant contribution to Australia's economic development.[29] Australia's policy continues to provide a reasonable welcome for new FDI but it is far from the wide open door that it once was. During the early postwar years, Australia encouraged investment and there was even incentive competition among the states to land new ventures from abroad.[30] What to do about foreign investment in the future is one of the issues that is likely to be addressed over the next several years.

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28. Large scale help to high technology being proposed according to press accounts by Senator Barry Jones are likely to be unhelpful.

29. Donald T. Brash, "United States Investment in Australia, Canada, and New Zealand," in Peter Drysdale, ed., Direct Foreign Investment in Asia and the Pacific, ANU Press, 1972.

30. G.D. McColl, "Foreign Investment" in Peter J. Lloyd, ed., Mineral Economics in Australia, Allen & Unwin, 1983, forthcoming.

There were two distinct phases of foreign investment in Australia. Up to the mid-1960s, the main investments were by U.S. and British firms in Australian manufacturing. They were attracted by prospects for growth in the Australian market, enticed by the import-replacement strategy of the government, and protected from competitive imports by high tariffs. Subsequently, FDI was attracted to the mining industries and multinational firms played a predominant role in developing Australia's huge industry.[31] Some feeling for the dimension of this investment can be obtained from examining table 10. In the late 1950s and early 1960s, FDI inflow amounted to about $300 to $500 million per year or between 20 percent to 33 percent of all domestic investment. From the later 1960s to the late 1970s, DFI rose from about $500 million to $1.6 billion, but the share of domestic investment provided by DFI dropped from about 16 percent-18 percent to about 10 percent-11 percent. However, several factors induced firms to shift toward debt financing for large scale mining ventures much of which also came from abroad. All of this investment meant that about 40 percent of Australian manufacturing and 50 percent of the mining industry is foreign owned and possibly 60 percent of mining is foreign controlled.[32] Australian firms more recently have been making their

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31. R.B. McKern, Multinational Enterprise and Natural Resources, McGraw-Hill, Sydney, 1976.

32. The Asian Wall Street Journal Weekly, October 10, 1983, p. 16 and R.D. McColl, op cit.

Table 10. Australian Direct Foreign Investment (DFI) Outflow and Inflow and Domestic Investment

	Australian DIF outflow ($M)	DFI inflow ($M)	Domestic investment[a] ($M)	DIF outflow as a percentage of Domestic investment A (%)	DIF inflow as a percentage of Domestic investment B (%)	3 year moving average A	3 year moving average B
1949-50	6[b]	130	454	1.3	28.6		
1950-51	7[b]	134	649	1.1	20.7	1.2	23.3
1951-52	10[b]	161	787	1.3	20.5	1.2	15.5
1952-53	10	42	780	1.3	5.4	1.3	13.5
1953-54	11	137	939	1.2	14.6	1.4	12.9
1954-55	18	198	1,062	1.7	18.6	1.5	17.3
1955-56	18	224	1,204	1.5	18.6	1.7	23.3
1956-57	23	415	1,275	1.8	32.6	1.5	32.0
1957-58	16	607	1,355	1.2	44.8	1.6	30.9
1958-59	25	208	1,372	1.8	15.2	1.3	31.2
1959-60	15	528	1,571	1.0	33.6	1.3	23.4
1960-61	19	375	1,742	1.1	21.5	1.1	22.6
1961-62	20	221	1,725	1.2	12.8	1.0	18.1
1962-63	14	384	1,917	0.7	20.0	0.8	17.5
1963-64	13	425	2,146	0.6	19.8	0.9	20.5
1964-65	32	540	2,493	1.3	21.7	1.1	20.1
1965-66	38	512	2,745	1.4	18.7	1.3	17.7
1966-67	37	363	2,838	1.3	12.8	1.4	16.6
1967-68	47	561	3,044	1.5	18.4	1.5	16.2
1968-69	60	599	3,434	1.7	17.4	2.2	18.5
1969-70	127	728	3,674	3.5	19.8	2.3	19.4
1970-71	72	897	4,302	1.7	20.9	2.6	19.9
1971-72	121	870	4,551	2.7	19.1	2.2	16.2
1972-73	97	391	4,564	2.1	8.6	3.2	13.2
1973-74	244	618	5,191	4.7	11.9	2.8	10.4
1974-75	94	657	6,103	1.5	10.8	2.9	10.3
1975-76	166	578	7,022	2.4	8.2	2.4	11.0
1976-77	255	1,081	7,738	3.3	14.0	2.7	11.3
1977-78	198	1,052	8,735	2.3	11.8	2.6	13.2
1978-79	224	1,437	10,455	2.1	13.8		
1979-80	333	1,637					

Source: Metcalfe and Treadwell (1981), p. 32. Australian Economic Statistics, p. 23. Foreign Investment Review Board Report 1982, p. 28. Commonwealth Treasury, Overseas Investment in Australia (May 1972), p. 148.

a. Private gross fixed capital expenditure, excluding dwellings.

b. Excludes undistributed profits of subsidiaries.

own direct investments in other countries which grew from about $100 million in the early 1970s to between $200 and $300 million by the end of the decade. Thus the outflow of DFI amounted to about 20 percent of the inflow of DFI during the 19/0s and to about 2.5 percent of total domestic investment.

High levels of foreign ownership of both manufacturing and mining has raised sensitive economic and political issues in Australia as it has in Canada and other countries. It was recognized that Australia's development was encouraged by FDI by the introduction of more capital, new products, modern management, advanced technology, and possibly improved foreign market access, but concern was also raised by the prospect of firms making decisions on a global basis which may have adverse consequences for Australia.[33] The country became sensitized to some FDI issues in the mid-1960s because of apparently huge profits reported by some foreign subsidiaries and the balance-of-payments strain therefrom.[34] Subsequently, concern was aroused by the attempted takeover of a wellknown Australian firm (insurance company) by foreign interest. Also, the possibility was discussed that foreign firms were avoiding Australian taxes through transfer pricing of bauxite.

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33. See Thomas G. Parry, Arguments For and Against Foreign Investment in Australia, The Parliament of the Commonwealth of Australia, Legislative Research Service, Discussion Paper No. 6, 1983.

34. At that time Holden (Australia) was reported to be the most profitable division of General Motors (United States).

However, more generally, Australians reflected the concerns felt elsewhere that foreign control might not adequately support Australian national interest whether it be because of excessive profits, or inadequate local employment, too few exports, not appropriate technology, or simply reducing competition.

Some of these industrial organization questions are taken up in the chapter by Richard Caves. Previous research has not established a case against DFI in Australia, the reverse is more nearly the case. Foreign firms appear to have had a positive effect on technical efficiency.[35] The profit levels in industries in which multinational firms are significant are not excessive and the foreign firms are less inward oriented than those Australian owned.[36] Evidence seems to suggest that multinational firms are more dominant in industries with high concentration ratios and with significant product diversification, but causation cannot be inferred. These studies point the finger more toward excessive levels of government assistance to industry and to protection from imports rather than improper behavior of foreign firms.

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35. R.E. Caves, "Multinational Firms, Competition and Productivity in Host Markets," Economica, May 1974.

36. Thomas G. Parry, "Structure and Performance in Australian Manufacturing," in Wolfgang Kasper and Thomas G. Parry, eds., Growth, Trade, and Structural Change in An Open Australian Economy, Canberra, 1978.

Policy Toward FDI

The first comprehensive policy toward DFI was introduced in 1972 at the end of the McMahon Government which began a screening procedure to prevent takeovers of Australian companies unless the national interest of Australia was advanced.[37] The replacement of the Liberal-Country Government by the Whitlam Labor Government saw a significant tightening of controls on FDI in 1973, particularly in the minerals industries. Complete Australian ownership was thought desirable for the energy industries and larger participation in non-energy minerals as well. A period of confusion followed these proposals as they were contested by foreigners and Australians alike including some State Governments. Meanwhile, new explorations came to a halt. Some order was restored in 1975 when the Foreign Takeovers Act of 1975 was enacted which instituted a screening procedure and notification requirements. Under this policy, total Australian ownership was required only for new uranium ventures and foreigners were limited to 50 percent for other mining projects.

The Fraser Government proceeded further to regularize the screening process and established the Foreign Investment Review Board (FIRB). The purpose of the review was to ensure that Australians had a maximum opportunity to participate in investing in their own country.

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37. G.D. McColl, op cit.

Thus public notification has to be given of foreign takeovers to see if there may exist an Australian alternative. Some economic benefit must be indicated by the investment, but a wide variety of indicators is accepted such as increased employment or exports. As a guideline, 75 percent Australian equity and Australian control is required of uranium projects and 50 percent for other natural resource projects. These are targets that need not be achieved immediately. Projects are evaluated on a case-by-case basis and frequently negotiations on Australian equity participation, taxation, and transfer pricing matters are required.

FIRB, during its seven year history, has been given relatively good marks by foreign observers. Decisions are made promptly--average processing time of only thirty days. About 30 percent of applications are approved without conditions, about 64 percent are approved with conditions (mainly relating to Australia equity participation), about 4 percent are rejected and 2 percent withdrawn. Even the rejections are processed on average in less than two months.

Foreign concerns in 1983 have been aroused by the election of another Labor government. Although Prime Minister Hawke and Treasurer Paul Keating have stressed continuity in policy, the concerns have not been put to rest. This is only to be expected since the National Conference of the Labor Party in July 1982 announced as a policy to reverse the trend toward increased foreign domination of the country's economy by increasing Australian ownership and control of resources and

enterprises and by closer regulation of foreign investment.[38] The concern has been heightened by the apparent doubling of the rejection rate by the FIRB in recent months. Finally, the rejection of the proposal by Citibank to takeover an existing totally foreign owned bank (Grindlays Australia) and to sell its share of another bank to Australian interest seemed to be a new departure in policy.

If the government want to maintain Australia's welcome to FDI, there are few grounds for preventing foreign banks from establishing full service branches. This was the recommendation of the Campbell Commission.[39] Alternatively, if the government chooses to become more intrusive in the economy relying less on market mechanisms, then FDI is likely to be further curtailed. More restrictive performance requirements are likely to be added to the review process such as exports and R&D targets as in some other countries.

Conclusions

Australia faces a major choice between outward and inward policies. The differences are profound. Consequences are likely to be found in the domain of domestic politics and foreign policy as well as economics. If the choice is toward inward policies, then levels of assistance to industry and degrees of dispersion will continue to rise.

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38. Asian Wall Street Journal Weekly, October 19, 1983.

39. See the chapter by Andrew Carron.

Temporary measures to sustain threatened industries during the recession will become permanent. Policies controlling foreign direct investment will likely become more intrusive and more discriminatory. And immigration policy is likely to become more restrictive.

The economic costs of inward policies are mainly in the form of foregone opportunities, however, they may become visible if countries such as Japan or even Korea surpass Australia in terms of per capita income. The economy in a relative sense would become more inefficient than it is today. Australia would become more of a rent seeking society with individuals and groups increasingly relying on the government and the political process would be absorbed in determining relative shares. Furthermore, Australian society would become more hostage to powerful domestic vested interests such as labor unions or monopolistic business firms whose political clout could not be overcome. In terms of foreign policy, Australia would find itself isolated from other countries in the Pacific basin. Australian initiative, for example toward ASEAN, would be less credible since these countries are so concerned with their own economic progress.

An outward oriented policy on the other hand would require a facing up to adjustment problems rather than avoiding them. As a result efficiency would be promoted, but the adjustment costs could be quite substantial and they might well fall unevenly on different social groups and geographic regions. However, the costs of not adjusting are also high and not completely within Australia's control. Any adverse

developments in Australia's terms of trade--say as a result of new natural resource discoveries abroad or material saving technological improvements--would result in permanent rather than temporary income loss. The gains from improved efficiency by promoting adjustment should be even greater. Solving distributional inequities is inherently easier with growing rather than shrinking resources.

Within the Pacific basin Australia is not a small country. Its policy with respect to both trade and direct investment will be noted by other countries and it will impact on their policy choices. For example, the expansion of Australian direct investment abroad which has been undertaken in part to promote exports of manufactures from Australia might not be accepted if Australia is not hospitable to DFI itself.[40] Australia has been a positive force for peace and prosperity in the Pacific basin. Its behavior toward Papua New Guinea is the most notable, but not the only example of this desirable influence. Its influence and leverage within the Pacific basin, however, will be directly related to how outward looking is its economic policy.

Australia needs no guidance on how to become more inward looking, however, if the choice is outward, then a question is posed as to when and how fast to attempt adjustment. During the downswing of a

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40. R.B. Bennett, J.E. Merchan, and J.S. Metcalfe, "Motives for Australian Direct Foreign Investment" Working Paper No. 23, Bureau of Industry Economies, revised February 1982 by Denis Waters.

recession is a bad time to adjust, but when is a good time? A case can be made that the very bottom of a cycle is the optimum point to affect resource allocation decisions. That is when resources can be redirected at least cost. Furthermore, in order to avoid the necessity of successive adjustment to existing disturbances, it might well be the best policy changes would be drastic and across the board. Given the short political cycle in Australia, only a drastic and quick change of policy is truly credible. Thus the time for a drastic change may be rapidly approaching. While this may appear to be a high risk strategy, the alternative of temporizing and inadvertently accepting a no adjustment policy also has high risks.

APPENDIX A

Commodity Classification System

International trade in commodities is classified by the United Nations into ten broad groups, labeled by the one-digit numbers 0 to 9 (standard international trade classification, or SITC). These 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.[41]

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.

In order to test the Heckscher-Ohlin theorem for U.S.-ASEAN and Japanese-ASEAN trade, the 105 commodities were classified into four groups according to their relative factor intensities. These groups are natural resource-intensive, unskilled labor-intensive,

41. A detailed listing of the classification system used in this study is presented in the United Nations, Standard International Trade Classification, Revised, series M, no. 34 (New York: UN Statistical Office, 1961).

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

Commodity	SITC, revised	Commodity	SITC, revised
Natural resource intensive		Nonferrous manufactures	6832,6852,6862, 6872,688,689
Meat	00,01	Unwrought aluminum	6841
Dairy	02	Aluminum manufactures	6842
Fish	03		
Wheat	041	Unskilled labor intensive	
Rice	042	Yarn	651
Other cereals	043,045-47	Fabrics	652,653
Corn	046	Textile products	654-57
Prepared foods	048,0713,09	Glass	664-66
Fruit	051-53	Ships	7353,7358,7359
Vegetables	054,055	Firearms	7351,951
Sugar	06	Furniture	82
Coffee	0711,0712	Clothing	82
Cacao	072-75	Footwear	85
Feed	08	Miscellaneous consumer products	81,83,893,895 899
Beverages	11		
Tobacco	12	Toys	894
Hides	21		
Soybeans	22	Technology intensive	
Crude rubber	23	Chemical elements	51
Wood	24	Medicine	54
Pulp	25	Fertilizer	56
Cotton	263	Plastics	58
Fibers	261,262,264-69	Other chemicals	52,57,59
Iron ore	281,282	Power generating equipment	7111-13, 7116-18
Nonferrous ore	283-86		
Crude materials, not elsewhere specified	29	Jet engines	7114
Coal	32	Car engines	7115
Gas, naturaf and manufactured, and electric current	34,35	Tractors	7125
		Agricultural machinery	7121-23,7129
Crude petroleum	331	Office machinery	7141,7149
Petroleum products	332	Computers	7142,7143
Animal and vegetable oils	4	Metal working machinery	715
Leather	61	Textile machinery	717
Plywood	63	Mining machinery	7184
Mineral manufactures	661-63	Other industrial machinery	718,7194-98
Diamonds	667	Heating and cooling equipment	7191
Pig iron	671	Pumps	7192
Unwrought nonferrous metals	681,6831,6851, 6861,6871	Fork lifts	7193
Unwrought copper	6821		
Copper manufactures	6822		

Table A-1 (continued)

Commodity	SITC, revised	Commodity	SITC, revised
Electric power machinery	722	Rubber	62
Telecommunications equipment	7249	Paper	64
Electrical apparatus for medical purposes	726	Steel	672-79
Transistors	7293	Metal manufacturing	691-94,698
Electrical measuring equipment	7295	Cutlery	696,697
Electrical apparatus	723,7291,7292, 7296,7297, 7299	Hand tools	695
Scientific equipment	8617-19	Machine parts	7199
Optical equipment	8611-13	Televisions -	7241
Aircraft	734	Radios	7242
Cameras	8614-16	Domestic electrical apparatus	725
Film	862,863	Trains	731
		Cars	7321
Human capital intensive		Trucks	7322-25
Paints	53	Road motor vehicle parts	7236-28,7294
Perfumes	55	Motocycles	7329
		Trailers	733
		Watches	864
		Phonographs	891
		Books	892
		Jewelry	896,897

Source: SITC numbers from United Nations, Standard International Classification, Revised, series M, no. 34 (New York: UN Statistical Office, 1961). This classification scheme was in effect from 1960 to 1975.

technology-intensive, and human capital-intensive goods (table 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 section 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,[42] 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

42. Ross Garnaut and Kym Anderson, "ASEAN Export Specialisation and the Evolution of Comparative Advantage in the Western Pacific Region," in Ross Garnaut, ed., ASEAN in a Changing Pacific and World Economy (Miami: Australian National University Press, 1980), p. 411. The presentation in Garnaut and Anderson is based on work in Bela Balassa, "A 'Stages Approach' to Comparative Advantage," World Bank Staff Working Paper 256 (May 1977), appendix table 1.

(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.[43] 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.[44] 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 (electric apparatus for medical purposes), 7293 (transistors), 7295 (electrical measuring apparatus), 723, 7291, 7292, 7296-99 (electrical apparatus, not elsewhere specified), 734 (aircraft), 861 (scientific, medical, and optical measuring apparatus), and 862-63 (photographic supplies).

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43. Research and development figures were taken from National Science Foundation, Research and Development in Industry, 1978 (National Science Foundation, 1980); value added were from Bureau of the Census, Annual Survey of Manufactures.

44. See appendix table 2 in Balassa, "The 'Stages' Approach to Comparative Advantage."

A second technology-intensive category was devised which excludes SITC class 5136 (inorganic bases, etc., nes). It was found that Australian exports of technology-intensive goods are dominated by SITC class 51 (chemical elements). Through the investigation of the sub-classes under 51, it was noted that by far the largest export in the technology-intensive category was SITC class 51365 (aluminum oxide, hydroxide). This commodity could be potentially classified as a natural resource-intensive good and since it had such an overbearing influence, one questioned whether or not the technology-intensive category would experience similar trends with the exclusion of the commodity. SITC class 5136 was excluded rather than SITC class 51365 because the data for 51365 was not reliable.

Human capital-intensive goods are those that have relatively lower research and development expenditures to value-added ratios than do 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), /199 (machine parts), 7241 (televisions), 7242 (radios), 725 (domestic electrical apparatus), 7294 (automotive electrical equipment), 735 (trains), 732 (trailers), 864 (watches), 891 (phonographs), 892 (books), and 896-97 (jewelry).

APPENDIX B

The Industries Assistance Commission

The Industries Assistance Commission was established by law in 1973 as an advisory body to the government without any operating or policy determining responsibilities. The reasons for establishing the commission were firstly to assist the government in developing policies for improving the allocation of resources among industries in Australia. Since many industries are being assisted using many different form of assistance, the commission through its studies and findings can help improve government policies by indicating ways policies could be made more coherent. Secondly, the Commission could provide objective and unbiased advise needed by the government since it is independent and not obligated to any special interest group and without political pressure. Thirdly, the Commission can help educate the Parliament and the public through its published reports. Public review and discussion of the reports should strengthen them.

The law establishing the IAC set up certain general guidelines and reporting responsibilities for it, but without circumscribing its independence. The IAC accepts assignments referred to it by the Minister and publicly reports its findings including determination of the existing level of assistance and the level of assistance required to maintain employment in the industry. It indicates reasons why the level of assistance should be raised or lowered and makes other suggestions for improving the structure of the industry. The report

need also include an estimate of the consequences of the commission's recommendations on society, employment, and the economy in general. The Commission invites witnesses to its inquiries to both expand on its sources of information and to involve more interest groups in the issue. The Commission is also required to publish an annual report which provides estimates of the level of assistance given to all industries, the consequences of assistance on the development and economic performance of those industries as well as on the economy in general. The annual reports have been a major source of information for the public on industry assistance.

The Commission has interpreted its responsibility to help bring coherence to government policy to mean that it should suggest changes that coordinate policies to avoid duplication and to avoid where possible private and social costs. Its analysis is based on the belief that consistent government behavior promotes confidence and increases economic growth. It sees as a goal the achievement of an industry structure that requires a minimum level of government support. However, it has recognized that it is not desirable to require adjustment so quickly as to cause undue economic or social disruption. The Commission recognizes that industry restructuring provides private incentives for new investment and creates job opportunities. Furthermore, the Commission has noted that while it is desirable to encourage specialization, it is not the task of the Commission to pick desirable or key industries which receives special treatment. It

accepts that the market mechanism should be the principle determinant of the allocation of resources.

Within recent years the Commission has been given leeway to undertake inquiries at its own initiative and to review the totality of assistance to industry. This has provided scope to bring fundamental and longer-run considerations to its work.

APPENDIX C

The Closer Economic Relations Agreement

The origins of the Closer Economic Relations agreement can be traced back to Australia's and New Zealand's dependence on Europe and, more specifically, Great Britain. Both countries had a major portion of their trade with Great Britain, which included mostly rural and mineral exports. Protectionist policy favored the United Kingdom and in 1933 the Australian-New Zealand Trade Agreement was implemented which gave each country the same trading priviledges with each other as they had given Great Britain. The result of the initial heavy dependence on Great Britain was a development of similar production and export structures in both countries.

After World War II, Australia began to expand its trade with other countries in the Pacific basin. In reducing its dependence on Great Britain, Australia began to develop both its mineral and manufacturing industries while New Zealand still exported mainly from its rural sector. Trade between the two countries also increased. Between 1940 and 1967, New Zealand exports to Australia rose from 3 percent to 5 percent of its total exports, while its imports from Australia increased from 16 percent to 19 percent of its total imports.[45]

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45. C.G.F. Simkin, "Closer Economic Ties With New Zealand--Implication for Industry on Both Sides of the Tasman and for the Two Economies Generally," Discussion Paper No. 8 (The Australian National University, June 1980).

In an effort to expand trade between the two countries and to develop certain growing industries, a partial free trade agreement was implemented in the New Zealand/Australia Free Trade Agreement (NAFTA) in 1966. Its major objective was to expand trade and to progressively remove trade barriers while maintaining fair competition. Over 50 percent of Australian-New Zealand trade was covered under the initial agreement (990 items). These commodities were placed on a schedule A and within eight years were to be duty free.

Provisions were made to expand the schedule and by 1973, 775 items had been added. The process of adding commodities, however, was slowing down and many of the items added were relatively insignificant due to the political negotiations that were required to place a new item on the schedule. Most of the items on schedule A had been duty free even before the agreement. Still excluded were most dairy products, certain other food products, most Australian manufactures, and some new Zealand manufactures. Both countries had to agree on additions to the schedule which made negotiations extremely difficult as each side attempted to protect certain favored domestic industries. Another schedule was included for these industries which allowed the renewal of trade barriers if any difficulties were experienced from free trade. Only two items, however, were added after two years of negotiating.

During NAFTA, there was an increase in the value of trade between Australia and New Zealand, although it is difficult to determine to what extent the increase was due to the agreement. New Zealand exports to Australia increased from $NZ36 million to $NZ818 million, which was a faster increase than New Zealand exports to the world (from $NZ1,481 million to $NZ 11,502 million in the same period). Australian exports to New Zealand increased from $NZ135 million to $NZ1,044 million, an increase rate roughly equal to Australian exports to the world. It is suggested that these statistics may show that NAFTA has a favorable effect on New Zealand.[46] However, during the same period, New Zealand suffered increasing deficits in its current account.

A stalemate was more or less reached in the NAFTA negotiations which called for the more progressive provisions finally implemented in the Closer Economic Relations (CER) agreement, which was signed in December 1982 and put into effect at the beginning of 1983. The major difference in this agreement is that it is an attempt at a complete free trade area rather than a partial one.

In the CER agreement all goods go through a transition period at the end of which the trade barrier protecting the commodity is removed.

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46. U.S. Department of Agriculture, North America and Oceania: World Agriculture Regional Supplement (Washington, D.C., April 1983).

The length of the transition period depends on the type of trade barrier. For example, commodities promoted by export-based subsidies will no longer be supported in three-and-a-half years or by the end of 1986/87 fiscal year and commodities with quantitative restrictions face a deadline of twelve years before the protection is removed.[47] The CER agreement is also more complete than NAFTA by the fact that it covers quantitative restrictions and subsidies as well as tariffs.

The safeguards for industries which may not be able to cope with certain trade problems are much stricter than they were during NAFTA. They can be invoked only as a last resort, after an inquiry, and only if there is proof of severe material injury. They are not a means of avoiding the free trade deadline and are to be used to deal with dumping, subsidisation, and significant trade deflection.

A major advantage of the CER agreement is that it increases the certainty of freer trade progression. There are much fewer negotiations which could leave politicians susceptible to the pressures of special interest groups. There is also a set timetable of deadlines which industries can plan around. In addition, the commitment on the parts of Australia and New Zealand is permanent, not only for ten year periods as in the case of NAFTA.

The CER agreement does contain one major loophole which is that is

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47. P.J. Lloyd, "NZ, CER, and the Pacific," Public Lecture at the University of Auckland Centenary Celebration, processed and undated.

does not include wheat, dairy products, and the group of citrus fruits, grapes, pineapples, and bananas in the agreement for eventual free trade. These commodities have been part of special policies in one of the two countries and have been negotiated out of the agreement as a result. While manufactures are now to face fewer restrictions, the above group of agricultural commodities still have a future of limited trade, if any at all.