siders the most fruitful approach to trade cooperation among developed Pacific countries, the OPTAD. (1) There is no mention of participation, sooner or later, of other Pacific nations than the five developed ones. (Japan, Australia, New Zealand, Canada, and the United States). Again, where would Korea and Taiwan, to mention two, stand? I wonder if the United States would wish to participate in an organization that was restricted to the developed countries only. (2) Since the OPTAD has been described as a kind of OECD in the Pacific, how would Professor Castle regard the widening of OECD membership to include Australia and New Zealand?

Chapter 7

JAPAN, AUSTRALIA, NEW ZEALAND: THE PROSPECT FOR WESTERN PACIFIC ECONOMIC INTEGRATION

Peter D. Drysdale

During the past year, the politico-economic environment in which Australia must ultimately shape her international economic policies has undergone dramatic change. First, the whole sequence of international monetary distrubances, involving devaluation of sterling, speculation in gold against the dollar, and the need for the United States to impose restraints on private overseas investment, produced two significant shifts in American attitudes towards the conduct of international economic policy by the United States' Administration. One was that the upsurge of protectionism in the United States, which followed the completion of the Kennedy Round of tariff negotiations in 1967, was increasingly re-inforced by appeal to concern about the balance of payments (11). The other was that the mood which had already induced substantial reductions in overseas defence and development assistance expeditures gathered strength so that, this financial year, aid was cut by Congress to a record-low figure of $US 1750 millions. Second, on top of all these events, there was the decision of President Johnson to stand down, and the sudden realisation of eventual American military withdrawal from the Asian mainland. That development has given the question of alternative economic and political strategies to ensure stability and progress in the Asian-Pacific region a new urgency.

What direction United States' policies take is of interest to every nation involved through trade and commerce in the world economy, so large is the American economy in relation to the rest of the world and so great is her influence on its economic behaviour. But the direction that United States' policies take is of special concern to Australia, and to Japan, Australia's largest trading partner.

In postwar years, there has been a significant restructuring of Australia's economic relations with the rest of the world, largely through the remarkable shift in the geographic distribution of her commodity trade away from Britain and Europe towards the Pacific and Asia. Over 40 per cent of Australia's trade is now done with advanced Pacific countries - Japan, the United States, Canada, and

New Zealand. About 60 per cent of Australia's export trade and 50 per cent of her import trade is with the Asian-Pacific region. Between 1950 and 1968, Japan's share in Australian exports alone rose from 4 per cent to 21 per cent, the United States' share rose from 8 to 13 per cent, New Zealand's share rose from 3 to 5 per cent, whilst the United Kingdom's share fell from 39 per cent to 14 per cent. Throughout the same period, the United States' share in Australian imports rose from 10 per cent to 26 per cent, Japan's share rose from 1 to 10 per cent, New Zealand's share rose from 1 to 2 per cent, whilst the United Kingdom's share fell from 52 per cent to 22 per cent. Furthermore, the growth of trade between the United States and Australia was closely associated with the growth of large scale American investment in the development of Australian industrial capacity. Add to these developments the fact the Japanese economy remained even more closely involved through trade and commerce with the United States, which takes around 30 per cent of her exports and provides a similar proportion of her import supplies, and the fact that much of the impetus to growth in the rest of Asia still derives from United States' trade and economic and military assistance, and there is evidence enough of Australia's huge stake in the direction of American trade, aid, and investment policies as they affect the Pacific and Asian region.

How should Australia's commercial diplomacy be cast in the light of both these longer-term and more recent developments in regional trade and international economic policies? What initiatives can Australia take to ensure that economic progress and stability in the region which most directly impinges upon her own prosperity is promoted? What restraint can Australia hope to exercise on the United States if she becomes more and more inward-looking and protectionist-minded? With these questions in mind, would closer economic integration among the three advanced western Pacific nations be a step in the right direction?

The Structure of Trade in the Western Pacific Region

Elsewhere, the character of trade, and the prospect for integration, among the five advanced Pacific nations have been analysed in some detail (13). Here the focus of attention is Australia's interest in closer integration among the three advanced western Pacific nations - Japan, Australia, and New Zealand. In this context, the position of other Asian and South East Asian trading partners requires special consideration.

Shifts in the structure of Australian trade with the western

Pacific resulted from three broad sets of factors: the relatively rapid growth of Japan's share in world trade; the underlying complementarity between the structure of Japanese and Australian trade and modest growth in the complementarity of Australia's export trade with New Zealand; and factors affecting the geographical, political, and historical closeness of Australia to both economies.

Two countries trade more or less intensively with each other than they do with the rest of the world because of the particular commodity composition of their trade in relation to world trade - this may be called the degree of complementarity in bilateral trade- and because of their geographical proximity and special institutional and historical ties - this may be called the degree of special country bias in bilateral trade. The degree of complementarity and the degree of special country bias jointly determine the intensity of trade between two trading partners.

The concept of 'complementarity' is often used loosely to describe the extent to which countries have dissimilar resource endowments and structures of production and are therefore likely to trade intensively with each other. Here the concept is defined in a very precise way. It is defined in a relative sense and measures the extent to which one country's export pattern matches another country's import pattern more closely than it matches the pattern of world imports. An index of the degree of complementarity in bilateral trade (C_{ja}) can be derived to measure exactly the extent to which country J's exports to country A are relatively large because the commodity composition of J's exports matches that of A's imports more closely than it matches the commodity composition of world trade. It follows that for each pair of countries, in a many-country, many-commodity world, there are two measures of the degree of complementarity in bilateral trade - one is derived from the flow of J's exports to A, and the other from the flow of A's exports to J.

The concept of special country bias in bilaterial trade (B_{ja}) is defined to measure the extent to which J's exports have more or less favourable access to A's import markets than might be expected from both countries' shares of world trade in each commodity.

Table 1

Complementary, Special Country Bias, and Intensity in Japan-Australia-New Zealand Trade 1966[a].

Exports from	Exports to	Australia	Japan	New Zealand
Australia	c		186	58
	b	-	216	2104
	i		401	1220
Japan	c	148		145
	b	135	-	85
	i	200		123
New Zealand	c	20	125	
	b	1400	119	-
	i	280	149	

a. Row i measures the intensity of trade. An index of 100 indicates that one country exports (imports) exactly that proportion of its total exports to (imports from) another country as that country's share in world trade. Row i equals row c, complementarity in trade, multiplied by row b, special country bias in trade, divided by 100.

Source: Calculations based on data and procedures described in (7).

Complementarity and special country bias together determine intensity of trade. The intensity of trade (I_{ja}) measures the extent to which country A's share in J's total exports is large or small in relation to A's share in world trade.

The results of a detailed study of complementarity, special country bias, and intensity in western Pacific trade flows are presented in Table 1. The methods by which these indexes are calculated, and a brief description of the data upon which the calculations are based, were described in an earlier paper (7). Row c records the degree of complementarity, row b records the degree of special country bias, and row i records the intensity of

trade index for each bilateral trade flow. Take Australia's export trade with Japan. The results of this study reveal that, simply because of the character of Australian export specialisation and Japanese import specialisation in world trade for 1966, Japan's share in Australia's export trade should have been almost twice as large as her share in world imports; further, that Japan's share in Australian exports was slightly more than twice as large as might be expected from both countries' shares in world trade of each commodity; and that, therefore, Japan's share in Australia's export trade was four times as large as might have been expected from her share in world imports. That is, the degree of complementarity in Australia's export trade with Japan was 186, the degree of special country bias was 216, and the intensity of trade was 401.

The general picture which emerges from Table 1 is that trade among advanced western Pacific countries is highly intensive. There is a high degree of complementarity in trade between Japan and Australia, and Japan and New Zealand. The degree of complementarity in trade between New Zealand and Australia is naturally quite low. The degree of special country bias is extremely high in trade between New Zealand and Australia, and Japan and Australia. It is also reasonably high in New Zealand's export trade with Japan. But it is quite low in New Zealand's import trade with Japan. The net result is that even where the degree of complementarity in trade is relatively low, intensity in trade remains high.

Among the three countries, Australia enjoys the highest intensity of trade with other advanced countries in the western Pacific region as a whole. The intensity of Australia's export trade with the other advanced western Pacific countries (472) is extremely high. The intensity of her import trade (202) is also very high. New Zealand's trade with the region, and Japan's too, is more heavily concentrated on Australia alone.

Australia's export trade with Japan reveals the highest degree of complementarity, whilst complementarity in her export trade with New Zealand is still relatively low. A high degree of complementarity has long been a feature of Australia's export trade with Japan. During the postwar period, it was of major importance in causing Japan's overall trade growth to stimulate proportionately larger import purchases from Australia. In the earlier phases of postwar Japanese growth, increased import demand was heavily concentrated on textile raw materials and provided new outlets for exports of Australian wool. In later phases, accelerated heavy industrialisation and new patterns of consumer demand associated with higher

income levels strengthened Japanese import demand for fuels and minerals, such as coal, iron ore, copper, bauxite, and alumina, and footstuffs such as wheat, meat, and dairy products. Complementarity in Australia's export trade with New Zealand, whilst low, is perhaps larger than might have been expected from a superficial consideration of the broad structures of the two economies. The index of complementarity for this trade flow indicates Australia's stronger export specialisation in manufactures, as well as New Zealand's strong import specialisation in wheat, sugar, and other foodstuffs in which Australia's export specialisation has always been strong.

Special country bias in Australia's export trade with New Zealand is extremely high, and it is also very large in export trade with Japan. The extremely high degree of special country bias in export trade with New Zealand results from geographical nearness, preferred tariff arrangements under the Commonwealth Preference Scheme and the New Zealand-Australia Free Trade Agreement, and market homogeneity and familiarity. Australia's manufactured exports are heavily concentrated in the New Zealand market. Much of the special country bias in Australia's export trade with Japan is accounted for by the special nature of Australia's trade with Japan in raw wool, and the influence of transport costs, these latter considerations being a major factor in encouraging the development of Australia's huge deposits of high quality and accessible coal, iron ore, and bauxite for export to Japanese buyers (5).

The degree of complementarity in Australia's import trade with Japan is very high. On the other hand, it is extremely low for import trade with New Zealand. After a period of steady decline throughout the early sixties, complementarity in Australia's import trade with Japan increased sharply from 118 to 148 between 1965 and 1966. The former trend became evident during an intermediate stage in the postwar transformation of Japanese export specialisation away from strong specialisation in light industrial exports towards stronger specialisation in heavy industrial exports. The predicted reversal has come rather dramatically (13, 5). In part, the higher degree of complementarity derived from stronger Japanese export specialisation in commodities across the whole range of machinery and equipment, but there were also special factors influencing Australia's import specialisation in 1966. Significantly, Australia imported three warships. The size of these imports distorted the normal strength of import specialisation for ships and boats in which commodity group, of course, Japan's export specialisation is extremely strong. A large part of the sharp rise in

complementarity in Australia's import trade with Japan during 1966 is attributable to this special cause. Low complementarity in trade with New Zealand reflects the competitive nature of the two economies.

Special country bias in import trade with Japan is quite high but somewhat lower in 1966 than it was for the previous year. The fall is almost entirely attributable to the effect of the purchases of warships from the United States on overall special country bias. More significantly, the breakdown of special institutional and policy biases against trade between the two countries has permitted a remarkable expansion in bilateral trade in recent years. The trend is for the index of special country bias in Australia's import trade with Japan to rise. As might be expected, there is extremely high special country bias in import trade with New Zealand, a product of the same institutional factors which are act to stimulate bilateral trade in the reverse direction.

Trade links between Japan and New Zealand are less well developed. Although complementarity is high for both trade flows, special country biases are not very high. The re-orientation of New Zealand's economic relations away from traditional markets in the United Kingdom and Europe towards nearer growth markets in the Pacific and Asia has proceeded at a much slower pace than for Australia. Partly this is explained by institutional factors and the greater stress placed on British ties in New Zealand; partly it is a consequence of the fact that the structure of New Zealand's export specialisation, notably in coarse carpet wools and dairy products, was less obviously tuned to the growth of Asian-Pacific trade (15).

Alongside developments in Australia's trade with the Pacific area has been the growing importance of Australia's trade with Asia. Between 1950 and 1968, Australian exports destined for Asia rose from 11 to 18 per cent, partly because of large wheat sales to China, and partly because of increased exports of manufactured goods to the region. Exports to developing countries in Asia and the Pacific, excluding mainland China, comprised 16 per cent of total Australian exports in 1968. As observed in an earlier paper, the propinquity of Asian markets and certain similarities in the structure of Australian and Asian demand for industrial goods have facilitated this new trade. Trade in manufactures with Asia and New Zealand assumed special importance in policies designed to strengthen Australia's industrial base through the expansion of export markets (7).

Imports from developing countries in Asia and the Pacific,

excluding mainland China, fell from 13 per cent of total Australian imports in 1950 to only 8 per cent of total Australian imports in 1968. The falling share of Asian imports largely resulted from reduced demand for raw materials. But the performance of Asian exporters in Australian markets was variable. Some Asian countries are increasingly competitive suppliers of textiles and light manufactures and their share in Australian markets for these products has tended to grow at the expense of the United Kingdom and Japan.

A detailed study of complementarity, special country bias, and intensity in trade flows between advanced western Pacific countries and selected developing countries in Asia and the Pacific is presented in Table 2a and Table 2b.

Both Australia's and Japan's export trade with these countries appears highly intensive. The intensity of New Zealand's trade with the region is generally very low.

Complementarity in Australia's export trade with Asian Pacific countries, with the exception of Indonesia, is probably higher than might have been anticipated. Complementarity in Japan's trade is mostly very high as might have been expected. Complementarity in New Zealand's export trade is lower than in Australia's but not low enough to explain the exceptionally low intensities in her trade with the region.

Special country bias in Australian and Japanese export trade with the region is commonly very high. An interesting feature is the inverse variation in the high special country biases of these two countries, closely correlated as it is with the political and institutional closeness of countries with British connections and the facts of geography. New Zealand has exceptionally low special country bias in her export trade with the region. She has been slower to take advantage of the trading opportunities that exist in Asian-Pacific markets, even for a country so heavily specialised in the export of temperate zone primary products.

Intensities in Australian import trade with the region reveal considerable variation. The intensity of import trade with near-

Table 2a

Complementarity, Special Country Bias, and Intensity in Japan-Australia-New Zealand Trade with Asian Countries, 1966

Exports from	Exports to		Hong Kong	Indonesia	Malaysia	New Guinea	Philippines	Singapore	South Korea	Taiwan	Thailand
Australia		c	90	43	80	84	84	62	138	99	54
		b	267	97	424	5088	215	287	47	226	115
		i	240	42	339	4274	181	178	65	224	62
Japan		c	139	222	97	127	140	94	167	140	119
		b	320	211	171	102	441	247	599	621	461
		i	444	469	166	130	617	232	1000	870	548
New Zealand		c	75	15	73	78	67	56	38	78	43
		b	20	45	136	0	203	60	45	27	13
		i	15	7	99	0	136	34	17	21	6

a. Row i measures the intensity of trade. An index of 100 indicates that one country exports (imports) exactly that proportion of its total exports to (imports from) another country as that country's share in world trade. Row i equals row c, complementarity in trade, multiplied by row b, special country bias in trade, divided by 100.

Source: Calculations are based on data and procedures described in 7 .

Table 2b

Complementarity, Special Country Bias, and Intensity in Japan-Australia-New Zealand Trade with Asian Countries, 1966

Exports from		Hong Kong	Indonesia	Malaysia	New Guinea	Philippines	Singapore	South Korea	Taiwan	Thailand
Exports to										
	c	122	79	66	50	26	97	83	74	42
Australia	b	123	813	133	5498	96	144	42	66	29
	i	150	642	88	2749	25	140	35	49	12
	c	27	166	234	171	354	99	101	83	262
Japan	b	236	354	169	67	204	83	594	520	151
	i	64	587	396	115	723	82	600	432	395
	c	106	64	58	30	32	95	78	80	43
New Zealand	b	277	141	131	306	20	165	0	77	33
	i	294	90	76	92	6	157	0	62	14

a. Row i measures the intensity of trade. An index of 100 indicates that one country exports (imports) exactly that proportion of its total exports to (imports from) another country as that country's share in world trade. Row i equals row c, complementarity in trade, multiplied by row b, special country bias in trade, divided by 100.

Source: Calculations are based on data and procedures described in 7 .

by suppliers of raw materials, such as Indonesia and New Guinea, is estremely high because of special country bias in trade. At the same time, the intensity of trade with exporters of light manufactures and processed raw materials, such as Hong Kong and Singapore, is quite high because of complementarity in trade. Almost the reverse generalisations apply to Japan. Intensities in Japan's import trade with the region are mostly very high both because of high degrees of complementarity in trade with raw material exporters and high special country bias in trade with exporters of manufactures. With the exception of Hong Kong and Singapore, intensities in New Zealand's import trade with the region are very low.

This analysis of the structure of trade in the western Pacific region leads to two broad conclusions. First, the nature of intensity, complementarity, and special country bias in trade flows among advanced western Pacific nations suggests that policies designed to promote closer integration, especially between Japan on the one hand and Australia and New Zealand on the other, would be beneficial. However, regional trade constitutes a very small proportion of each of these country's trade, being largest for Australia which, in 1968, sent 26 per cent of her total exports to, and obtained 12 per cent of her total imports from, the other two advanced western Pacific partners. Thus, there is a strong presumption that complete intra-areal free trade is likely to be accompanied by more trade diversion than trade creation. It is nonetheless worthwhile investigating the trade creating effects of such a limited free trade area more closely, and this will be attempted in the next section.

Second, linked by high complementarity in exports and imports with Japan, and high special country bias with both Australia and Japan, the developing countries in the Asian-Pacific region are proportionately much more important to the trade of these two countries than they are to the world at large. Indeed, Japan and Australia have weighty political, as well as economic, interests in the region's prosperity. Thus, there is a strong case for coupling any policy initiatives by advanced western Pacific nations with the extension or adoption of trade policies specially designed to accommodate the needs of developing countries in the Asian-Pacific region.

The Impact Effect of JANFTA on Australia

The effects of a move towards free trade in the western Pacific area upon the Australian economy are impossible to calculate precisely (15). But the likely nature and magnitude of the important direct gains, as well as the important costs of adjustment that would follow the establishment of a free trade area among Japan, Australia, and New Zealand, coupled with the non-reciprocated removal of tariffs by these countries against imports from developing countries in Eastern and Southern Asia, are worth trying to specify roughly. Moreover, it is useful to focus on the impact of the most radical proposals for integration and trade preferences, not because an immediate move towards the establishment of a Japan-Australia-New Zealand Free Trade Area seems on the face of it either desirable or feasible, but because it represents a convenient means of analysing the effects of these and less radical alternatives on Australian trade and industry. Later, some of the important, but even less certain, dynamic effects can be considered.

A detailed study, using national tariff data and three digit SITC commodity trade data for 1966, was made to estimate Australian import and export expansion in consequence of the trade creating effects of tariff elimination amongst advanced western Pacific countries and the elimination of Australian tariffs on imports from developing countries in Asia.

The impact effect of tariff reductions on trade depends upon the height of the original tariff, changes in tariff rates, and the relevant price elasticities of demand and supply. Assuming infinite elasticities of export supply, the change in imports (and exports) can be measured using the formula:

$$\Delta M = \alpha \frac{t}{100+t} \eta M$$

where ΔM is the change in imports due to tariff reduction, α is the rate of tariff reduction, t is the original tariff level, η is the price elasticity of import demand, and M is the original value of imports.

The price elasticities of import demand used in this study are those adopted in an earlier study. They incorporate estimates of price elasticities for agricultural commodities of importance in Australian exports superior to those used in earlier studies (7).

Estimates of the effect of western Pacific area tariff elimination on Australian trade are presented in Table 3. As reported elsewhere, the height and structure of Australian tariffs and relatively high price elasticities of demand for Australian imports suggest that there would be a substantial percentage increase in imports on given trade volumes. On the other hand, lower tariffs and lower price elasticities of import demand for Australia's principal exports to Japan, in particular, restrains export expansion that would follow western Pacific area tariff elimination. However, initial Australian imports from the region are quite small whereas exports to the region are relatively large. Estimated trade expansion is therefore quite modest. Moreover, deterioration in the balance of payments would be insignificant. Trade expansion with western Pacific countries in consequence of tariff elimination may, for example, be compared with the expansion of trade that would follow the elimination of tariffs among the five advanced Pacific basin countries, together with the removal of tariffs on imports from developing countries in Asia. In the former event, Australian imports would increase 9.1 per cent and exports 3.4 per cent. In the latter event, Australian imports would increase 28.8 per cent and exports 7.9 per cent on 1966 trade figures.

These estimates do, however, suggest a larger expansion of imports from developing countries (about $US 74 millions) than Kojima's most recent estimates. The differences in estimation result from the use of slightly different price elasticities, the use of more detailed Australian tariff data, and the use of weighted and selected tariff rates rather than average nominal rates.

Table 3

The Effect of Western Pacific Area Tariff Reductions on Australian Trade, 1966

	Merchandise Imports ($USm)	Merchandise Exports ($USm)
Trade with World	3197	3074
Trade with Japan, New Zealand, and Other Asia	552	719
Increase in Trade with Japan, New Zealand, and Other Asia	291	104
Percentage Increase in Trade with World	9.1%	3.4%

Source: Calculations are based on methods and data described in the text.

A rough attempt was also made to guage the effect of import expansion on production and employment. The largest declines in production would be located in textiles (9-10 per cent), miscellaneous manufactures (9-10 per cent), metals and machinery (2-3 per cent), and chemicals (1-2 per cent). Motor vehicle production accounts for 33 per cent of the decline in metals and machinery, electronics and electrical apparatus account for 18 per cent, and miscellaneous metal manufactures account for 12 per cent. The fall in chemical production is probably underestimated since the prevalence of special protective measures makes it difficult to measure the height of the tariff satisfactorily. Thus, if estimated import expansion were the only effect of tariff elimination, the total decline in manufacturing production would be of the order of 2 or 3 per cent. The structure and size of these changes imply the necessity to redeploy about 40,000 to 50,000 industrial workers or about 3 to 4 per cent of the manufacturing workforce in 1966. These adjustments may be compared with the effect of including North America in the free trade arrangement. In that case, there would be an 8 or 9 per cent fall in manufacturing production, necessitating the redeployment of 9 or 10 per cent of the manufacturing workforce.

The effect of import expansion will not be the only effect on the manufacturing sector. Export expansion should also be taken into account. Export expansion would lead to a compensating expansion in production and employment, most significantly in the metal and machinery industries. Increased exports, for example, would compensate for half the increase in imports of motor vehicles. And no allowance has been made in this study for the effect of non-tariff restrictions on imports of motor vehicles into Japan and New Zealand. Exports of pig iron; primary iron and steel; iron and steel bars, rods, angles, shapes, and sections; crude copper manufactures; crude aluminium manufactures; lead and zinc; wire products; non-electric power generating machinery; agricultural machinery and equipment; and some types of domestic electrical equipment would all expand singnificantly more than imports. The bulk of machinery and equipment produced in Australia would remain competitive. Of course, the largest part of export expansion would derive from primary industries, but the 30-40 per cent contribution from manufactures in very large.

These estimates are simply designed to illustrate the general magnitude of the adjustment problems in consequence of the static trade creating effects of the establishment of a comprehensive western Pacific free trade area. Other effects would also be important. In the first place, trade diversion would probably be substantial. One study hinted that Australian imports valued at about $US 170 millions might be diverted from the United Kingdom alone to new sources of supply in the western Pacific. About half of this shift would comprise pure trade diversion (13). In the second place, the dynamic effects are likely to swamp the static effects of economic integration for relatively small economies such as Australia and New Zealand. They require more detailed study, not only in the context of a comprehensive free trade area but also under alternative arrangements. For Australia, realisation of dynamic gains is at once the most important and least certain objective of Pacific economic integration. Some of the uncertainties may be avoided and the gains preserved if a less comprehensive approach to integration were adopted.

Dynamic Effects and the Scope for Sectoral Integration

The calculations in the previous section serve two purposes. First, as already noted, they specify the impact of adjustment costs. Second, they point to some of the possibilities for initiating larger dynamic changes through economic integration. They provide a useful background for analysing the important dynamic effects whether

integration is approached on a broad front or whether a sectoral approach is adopted. However, measurement of the impact of western Pacific free trade, based on existing supply and demand structures, presents an inadequate description of the total effect of integration. As each economy adjusted over time to new relative prices, changes in the basic structure of each national economy would occur. For example, integration would be associated with capital flows, both within the region and from beyond the region, as production for regional markets re-located to take advantage of economies of scale or cheaper natural resources, as businessmen and officials become more aware of market and investment opportunities, and as firms adjusted to a new dimension in competition.

The dynamic effects are complex and difficult to predict accurately. Their general nature was discussed in a paper delivered in Tokyo last year and it is not necessary to cover that ground again (7). Rather, the discussion here can be confined to a preliminary assessment of the prospects for the integration of a few key industrial sectors within the framework of a complete western Pacific free trade area, a sectoral free trade agreement, or without any tariff re-arrangements at all. The three sectors - motor vehicles, iron and steel and non ferrous metals - discussed below comprise at present about 25 per cent of Australian manufacturing output.

Scope for benefits from sectoral integration exists because national policies or national business institutions can frustrate the optimal regional location of industry from the viewpoints of economies of scale, minimisation of transport costs, and intensive use of high quality resources specific to one part of the region. Tariffs and import restrictions are the most important national policies which have this effect. Autarkic business integration and purchase agreements are the most important business institutions which work in exactly the same direction. The latter are important in every country, but they are, perhaps, of special importance in Japan and advanced western Pacific countries.

The three types of benefit which derive from sectoral integration are clear in principle. First, in industries with access to significant economies of scale, high protective barriers made secure by government support, can lead to the duplication of plants of sub-optimal scale. The automobile industry in the advanced western Pacific countries typifies this situation. Second, protection of basic treatment processes that require large inputs of low value to weight raw materials prevents treatment closer to resource deposits,

and high transport costs are needlessly added to the cost of the product. Pig iron production is a good example of an industry which thrives on location close to sources of raw materials. Finally, protective barriers can lead to the establishment of industries outside countries with important advantages in the quality and costs of inputs. The aluminium smelting industry, which requires large volumes of electricity, is one such case.

Wherever economies of scale are important, and wherever two or more countries are producing sub-optimal outputs at high costs, there is room for gain through more efficient international specialisation. Most commonly this kind of inefficiency results from the imposition of protective tariffs, but it can arise quite independently of the existence of trade barriers (12).

Economies of scale are important in motor vehicle production. It is usual for costs to fall sharply up to an output of about 50,000 units per annum, with a further 15 per cent saving when output is doubled to 100,000 units, a 10 per cent saving with the doubling of output to 200,000 units, and a further 5 per cent saving at 400,000 units (14). There are some economies, especially in pressing, to be realised at outputs above a million units, but an output of 400,000 should ensure the international competitiveness of a fully integrated plant. In fact, much lower outputs can be sustained competitively because motor vehicles are highly differentiable and because of the significance of transport costs.

A fully integrated Australian motor car industry has been operating since the early fifties, first with the assistance of import restrictions, later protected by tariffs. The tariff on fully built-up vehicles was recently raised from 35 per cent to 45 per cent m.f.n. in response to the growing competitiveness of some Japanese imports. High tariffs had earlier encouraged the entry of a number of low-volume competitors to the two well-established manufacturers. Until the early sixties total production of passenger cars in Australia was absolutely larger than in Japan, and Australian costs were generally lower. Japanese motor car production has grown remarkably since 1960 but large-scale production is concentrated in a few among many producers and the industry is still protected by a 40 per cent tariff, to be reduced under the Kennedy Round, and, more significantly, quantitative restrictions on imports of components and parts.

At the end of 1967, Japanese passenger car production, at about 1,400,000 vehicles, was over four times the size of Australian output. However, Japanese production was heavily concentrated in the

small car range, 82 per cent of output being cars of less than 1500 c.c. cylinder capacity, whereas Australian production was concentrated in the medium-large range, with 75 per cent of output being cars of 1400 c.c. and over, and 63 per cent of output in the range above 2,200 c.c. Indeed, the absolute size of Australian output was still larger than that of the Japanese industry for cars of greater than 1500 c.c. capacity. In other words, the Japanese industry could support several producers of small cars operating at optimal scale, and one producer of small-medium cars operating reasonably efficiently. Australian production could support one completely competitive fully integrated producer of medium sized cars operating close to optimal scale or two or three reasonably competitive producers operating at lower volumes.

There appears considerable scope for more effective specialisation in motor car production within the western Pacific region, with Japan specialising in the production and export of small and small-medium sized passenger cars, and Australia specialising in the production and export of medium-sized cars. Costs would fall in both industries and the competitive position of both industries would be strengthened in third country markets. Producers and consumers in both countries would share the benefits of lower cost production. As the structure of motor car demand changes with increasing per capita incomes in both countries, paradoxically the scope for more competitive medium-sized car production will grow in Australia. Meanwhile, it appears quite irrational to subsidise the whole range of passenger car production in both countries where the viability of the important section of the industry in each country is well established.

What kind of arrangement between the Japanese and Australian motor vehicle industries might be beneficial and acceptable? At various times, the reduction of m.f.n. tariffs and removal of other restrictions have been advocated in both Japan and Australia. However, it is very difficult to stage m.f.n. tariff reductions without giving rise to considerable and unpredictable dislocation in production and employment, and without encouraging the encroachment of third country competitors. The only manageable arrangement would seem, therefore, to involve preferred access for Australian medium-large cars in Japanese markets and preferred access for Japanese small cars in Australian markets. There is the North American precedent of a GATT waiver for such an arrangement. But to effect yet another policy reversal on the motor vehicle industry of the kind that this would involve in Australia is wildly improbable unless

the Japanese industry were prepared to make substantial concessions. There are some circumstances under which this might eventuate. The Australian industry is American dominated. It would be quite rational for American firms to service penetration into the Japanese market from their Australian capacity, partly because of lower transport costs, partly because of the suitability of their Australian models for the Japanese market, and partly because of the high marginal gains from larger Australian production (6). To the Japanese industry, and Japanese government, this might appear infinitely preferable to fully integrated American production and investment within Japan itself.

Raw materials are an important element in costs in the basic metal industries. Raw materials account for around 60 per cent of the value of Japanese produced pig iron. Of these costs, between one third and one half, or 20 to 30 per cent of the total cost of pig iron, represents the cost of freight. The cheapest and most convenient raw materials used by the Japanese industry are imported from Australia. It would therefore appear that, provided auxiliary resources were available at comparable prices, large benefits would derive from re-locating in Australia pig iron capacity to serve the Japanese steel industry.

In fact, comparison of Japanese and Australian pig iron price suggests that auxiliary resources are available as cheaply in Australia as in Japan. In 1967, the published price of Australian pig iron at $US 55.05 per ton was 27 per cent lower than that for Japanese pig iron at $US 75.20 per ton. The Australian export price at about $US 42 per ton, is 40 per cent below the Japanese domestic price. The present cost of freight for large lots from Australia to Japan is $US 8.40 per ton or around 20 per cent of the Australian export price. Freight costs on pig iron would probably be lowered if the volume of trade in pig iron grew.

Since the 10-12 per cent Japanese tariff on pig iron does not raise the price of pig iron imported from Australia above the domestic price level, business institutions can be presumed to prevent effective competition in the Japanese market. The degree of autarkic business integration in the Japanese iron and steel industry is large. Moreover, the insitutional structure of the Australian industry has not, in the past, been conducive to pushing large scale export production, so that the opportunities for more efficient regional specialisation have not been realised.

Although published data suggest that the Japanese iron and steel industry might have been slightly more efficient in the production of basic steel products than the Australian industry, there is probably

considerable scope for rationalisation in the production and trade of certain steel products too. This would tend to favour crude steel exports, with a high material input, from Australia, and specialised steel exports from Japan.

What kind of arrangements for the Japanese and Australian iron and steel industries might be beneficial? No discriminatory arrangements would be necessary since the highly efficient Australian basic iron and steel and Japanese steel industries would not be threatened by third country producers. In the longer run, m.f.n. tariff concessions by both countries would give rise to increased regional trade and improve the competitive position of western Pacific producers in other markets, not only in steel products but also in products for which steel is an important input. More significant than tariff concessions would be the initiation of moves to break down protective business institutions. In particular, investment in iron and steel capacity could be planned and encouraged from a regional rather than national point of view. This would be facilitated by joint business ventures and tie-ups, the freer flow of investment within the industry, and direct government intervention.

Economies of scale are important at all stages of aluminium production. The region's bauxite mining and alumina refining industries, both increasingly important suppliers of world markets, are already operating at efficient levels of output. However, in aluminium smelting, where economies of scale are obtained up to production of about 100,000 tons per annum, and beyond if lumpy investments in electric power generation are required, there are plants of sub-optimal capacity operating. Transport costs for bauxite and alumina are an important element in the costs of the Japanese industry, and costs could be reduced by locating alumina production and smelting close to high quality Australian bauxite deposits. However, this discussion will be confined to the third type of potential gain through regional integration: the more intensive use of high quality resources specific to one location within the region.

In this case, the potential for generating electricity cheaply is the specific resource. Electric power is a major input in aluminium production - estimates place requirements at over 17,000 kolowatt hours per ton of metal (1). Thus, the price of electricity is extremely important in determining the cost of smelting. New Zealand, New Guinea, and perhaps other parts of South East Asia, have potential for generating hydro-electricity more cheaply than

electricity can be produced in Australia, and much more cheaply than it can be produced in Japan. Thus, the power costs of aluminium produced at the smelter planned for Bluff in New Zealand will possibly be in the vicinity of $US 38 per ton - compared with typical costs two and a half times as high in Australia and more than five times as high in Japan. The differential is significant, given a world aluminium price of about $US 560 per ton. Production in Japan is sustained only behind an effective rate of protection over 40 per cent, and through high cost aluminium production being carried by efficient fabricating within integrated firms. Australian production is more efficient than Japanese, but even here there may be some scope for more effective specialisation.

A prototype of the kind of development that is possible within the western Pacific region is provided by the Comalco-Showa Denko K.K. - Sumitomo Chemicals venture in New Zealand. Based on the Weipa, North Queensland, bauxite of Comalco, which is refined in Queensland Alumina's Gladstone plant, a smelting industry is to be established at Bluff in New Zealand. A large investment in hydro-electric capacity will be undertaken by the New Zealand government at Lake Manapouri, and power will be supplied to the smelter at a cost around 0.2 cents per kilowatt-hour. The availability of government capital and demand for electricity made Manapouri more attractive than sites in New Guinea. Part of the aluminium produced will be sold by Comalco in New Zealand and overseas and part will be taken by the Japanese parties for fabrication in Japan.

What measures can be taken to stimulate more of this highly desirable rationalisation of the region's aluminium industry? Our conclusions are similar to those for the steel industry: the efficiency of Australian bauxite mining and refining, New Zealand's electricity generation, and Japan's fabricating industry would make m.f.n. tariff reductions by all parties on aluminium and aluminium products a sufficient condition for increased intra-regional trade and output. Again, the breakdown of autarkic business integration would be an important objective. The tripartite venture in New Zealand, and Furukawa's agreement to purchase increased volumes of aluminium ingot from Alcoa's Australian capacity, give ground for optimism in this regard.

The vision of greater economic progress through closer integration of some sectors of the advanced western Pacific economies that is the theme of this paper, has been expressed clearly by Sir Maurice Mawby, Chairman of Conzinc Riotinto of Australia, a major

shareholder in Comalco Industries:

"The formation of the Bluff smelter project (based on Manapouri power) reflected the growing interdependence of countries such as New Zealand, Japan, and Australia.

Our Japanese partners bring with them access to the numerous and growing aluminium markets in Japan, which gives us a base to build a smelter large enough to produce aluminium at competitive world prices .....

By welcoming our Japanese partners into this venture we have forged a link between the markets of Japan and the unrivalled resources of hydro-electric power and bauxite of New Zealand and Australia - to the eventual benefit of all concerned." (10)

A Strategy for Successful Asian-Pacific Integration

Much progress has already been made in the improvement of communication between the private sectors of the three advanced western Pacific economies. But most significantly, government information and understanding have failed to keep abreast of Japan's economic relations with Australia and New Zealand in the past ten years. Thus, an important immediate concern of policy ought to be the establishment of an inter-governmental institution staffed by officials from the three countreis. A Japan-Australia-New Zealand Organisation for Trade, Aid, and Development could relay economic information among participating countries, undertake research and advise independently on questions of trade and aid directly affecting member countries. It could act as the prototype for a broader Organisation for Pacific Trade, Aid, and Development. To date, the Australian government has resisted involvement in the kind of official contact that the formation of JANOTAD or OPTAD implies. Maximising the benefits of intra-regional trade in the western Pacific, and of trade between the western Pacific and the rest of the world, now requires some such positive initiative.

OPTAD's first function would be to facilitate the discussion of trade questions and grievances, real or imagined, in a rational and co-operative atmosphere calculated not to damage profitable national trading interests. In this role it would act as a constraint on ever-present protectionist tendencies in partner countries.

OPTAD could give a fillip to joint aid efforts and more generous trade arrangements towards developing countries in the Asian-

Pacific region. The regional approach to the granting of trade preferences to less developed countries has disadvantages. It will be more difficult to reach agreement on the diversion of imports from developed countries to sources of supply in developing countries. In particular, Japan is unlikely to be enthusiastic about preferences on a wide range of labour-intensive manufactures and Australia and New Zealand likewise about preference schemes for primary commodities. On the other hand, and more significantly, Japan, Australia, and New Zealand have been shown to have a greater stake in Asian development than other advanced countries, and together feel most keenly the prevailing aid and trade cynicism. Political economic, and humanitarian benefits deriving from one country's preferences flow in part to the other two developed countries. There is an important divergence between the 'national' and 'global' benefits to developed countreis of granting preferences to less developed countries. Decisions on the granting of preferences taken regionally would bring national benefits closer to global benefits and lead to a higher total level of concessions.

In this context, a worthwhile immediate objective would be for OPTAD to work towards the implementation by all countries of an extension of the Australian preferences scheme. Several features of the Australian scheme are undesirable. One criterion for the inclusion of a commodity is that it is not produced in Australia, thus ensuring a maximum of trade diversion and a minimum of trade creation. The preferences on several items are less than unity. The right to exclude from preference "any developing country which is already competitive in Australia's imports of that product" has been invoked against Hong Kong and Taiwan (3). Quotas are applied to all preference items with the exception of handicrafts, although the quotas have proved to be restrictive in very few cases. Finally, many commodities that are not produced in Australia have not yet been included in the scheme.

However, modest but significant benefits could flow to less developed countries from preferences granted by Japan, Australia, and New Zealand that were mainly (but not entirely) diversionist, and subject to quotas. Such preferences would find readier political assent and could be the precursor of a more comprehensive scheme. And many of the benefits are realised even if quotas are applied, provided quotas are sufficiently generous. The costs of opening a new export market can be high, and are accompanied by high risk and uncertainty. A preferential quota allows a new competitor a wider profit margin on initial sales. By the time the quota is restrictive, the exporter has greater knowledge and will be

in a better position to decide whether to expand output and compete over the usual tariff barrier. (9) This 'infant export industry' argument, can also be used to justify the 'non-competitive' countries provision of the Australian preference scheme, although this provision seems undesirable on other grounds and would not be necessary for the political acceptability of the scheme.

One final question arises on policies towards regional preference giving: Should the preferences be granted only to countries in the Asian region, or should they be granted on a global basis? The GATT waiver granted to the Australian preference scheme applied to general preferences. However, because of geographical closeness and existing economic and cultural ties, 87.3 per cent of total preferential imports in 1968 were from the member countries of ECAFE. The benefits of general preferences, including the greater moral pressure they would place on other developed countries in view of the slow progress through UNCTAD, seem to be consistent with Australia, New Zealand, and Japan's special interest in the western Pacific.

OPTAD's third major role would relate to the co-ordination of regional commercial policies. In this capacity it would exert pressure to counteract the effects of autarkic business integration which frustrates efficient regional specialisation. It would identify sectors in which intra-regional capital flows could bring gain and it would smooth the institutional channels for international capital movements. And it would, of course, play an important part in tariff discussions within the region and between the region and other countries.

There is some scope for trading remaining British preferences on non-competitive imports against the relaxation of Japanese import controls on foodstuffs, including meat, dairy products, fruit, and less probably rice. The gains from these concessions would need to be weighed against the possible losses in trade with Commonwealth countries. Investigation of these possibilities and formulating policy on the basis of the results could be an early task of OPTAD.

There is some scope for trilateral bargaining on tariff and import controls, concessions to be granted on a m.f.n. basis. (4) This would certainly have advantages over the unilateral dismantling of high Australian protection on some manufactures that has been advocated. Maximum gain from any concessions would require participation by other countries and OPTAD would be in a stronger

position than any one of its members, to put pressure on the Canadian and United States governments for reciprocal concessions. In particular, consultation through OPTAD, with or without reciprocal tariff concessions, would be an efficient way of working towards the sectoral integration suggested by the analysis in the previous section.

There would appear little scope for partial preferential tariff treatment without repediation of GATT membership. Withdrawal from GATT certainly would not be in Japan's best interest. However, as suggested in the discussion of the motor vehicle industry, the North American precedent may allow limited sectoral free trade of a trade creating kind.

Whilst it is almost certinly true that some move towards freer trade would be in Australia's interest at this stage of her economic development, it is extremely doubtful that participation in a limited free trade area would bring net economic benefits. The costs of trade diversion within JANFTA are likely to be high. It would be more useful for the three countries to develop a negotiating bloc for obtaining concessions on a broader front, especially from the United States.

Finally, OPTAD could seek closer contacts with other governments in the Asian-Pacific region. It would place pressure on American governments towards the formation of a broader organisation, just as the Japan-Australia Business Co-operation Committee was a fore-runner to the Pacific Basin Business Co-operation Committee. A more broadly based OPTAD would have objectives similar to those of the origanisation founded by Japan, Australia and New Zealand.

Whether or not a wider Pacific organisation proved possible, a three member OPTAD, with less developed country participation, could be an important instrument for spelling out a positive, non-military, alternative policy in Asia and the western Pacific for the United States.

Notes and References

I am very much indebted to Mrs. Jill Pertoldi for her assistance with compiling data and undertaking some of the calculating for statistical work presented in the paper, to Mr. Gary Potts for similar assistance, and especially to Mr. Ross Garnaut for considerable help with drafting and computing. I am also indebted to officers

of the Australian Bureau of Mineral Resources, the New South Wales Joint Coal Board, and the Department of Trade and Industry for their help with the collection of data.

1. Sterling Brubaker, Trends in the World Aluminium Industry, Johns Hopkins Press, Baltimore, 1967.

2. Commonwealth of Australia, Tariff Board Report: Annual Report for Year 1967-68, Canberra, August 1968.

3. Commonwealth of Australia, The Australian System of Tariff Preferences for Developing Countries, Department of Trade and Industry, Canberra, January 1968.

4. J.G. Crawford, The Development of Australian Trade Policy, Shann Memorial Lecture, University of Western Australia, October 1968.

5. Peter Drysdale, "Japan and Australia: The Prospect for Closer Economic Integration", Economic Papers, Winter School of the Economic Society of Australia and New Zealand, Sydney, August 1968.

6. Peter Drysdale, Japanese-Australian Trade, Australian National University (unpublished thesis) 1967.

7. Peter Drysdale, "Pacific Economic Integration: An Australian View", in Kiyoshi Kojima ed., Pacific Trade and Development, Japan Economic Research Center, Tokyo, February 1968.

8. Peter Drysdale, "Pacific Economic Integration: The Evolution of a New Approach to Regional Trade and Development Policies", Australia's Neighbours, October-December 1968.

9. Ross Garnaut, Australian Preferences for Less Developed Countries: A Step Forward? (forthcoming).

10. Robert Gottliebsen, "Comalco Emerges as a World Aluminium Group Based on Weipa Bauxite" Australian Financial Review, 11th July 1968.

11. Harry G. Johnson, "World Trade Policy in the Post-Kennedy Round Era: A Survey of Alternatives, with Special Reference to the Position of the Pacific and Asian Regions", Economic Record, June 1968.

12. Kiyoshi Kojima, "Towards a Theory of Agreed Specialisation: the Economics of Integration", Essays in Honour of Sir Roy Harrod (forthcoming).

13. Kiyoshi Kojima, ed., Pacific Trade and Development, Japan Economic Research Center, Tokyo, February 1968.

14. George Maxcy and Aubrey Silbertson, The Motor Industry, George Allen and Unwin, London, 1959.

15. I.A. McDougall, "The Prospects of the Economic Integration of Japan, Australia and New Zealand", in Kiyoshi Kojima, ed., Pacific Trade and Development, Japan Economic Research Center, Tokyo, February 1968.