AUSTRALIA—PHILIPPINE TRADE RELATIONS

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I. INTRODUCTION

Australia and the Philippines are both relatively minor trading countries, and for historical reasons — United States colonization of the Philippines and Australia's ties with Commonwealth countries — bilateral trade was generally minimal before 1960. In 1937/38, or example, just prior to World War II, it totalled less than $2 million or just 0.3 percent of Australia's total trade. Even in 1962, the total had increased to only $11.5 million, and each country accounted for less than 0.5 percent of the other's exports. In the last two decades, however, the trade has increased considerably, and each has become more important in the other's trade. In the early 1980's, prior to the Philippines' foreign exchange difficulties, annual trade was in excess of $250 million. Between 1962 and 1981, the Philippine share of Australia s exports doubled, while Australia's share of Philippine exports rose about tenfold, albeit from a very small base.

The two economies differ enormously in terms of their resource endowments and level of development. The pattern and composition of their trade also varies considerably, although in both countries there has been a major transformation during the last decade. Japan is now the most important trading partner for each country. In terms of the commodity composition of exports, the most important developments have been the rise in Philippine manufactured exports (from 7.1 percent of total exports in 1971 to 44.7 percent in 1981) and Australia's mineral exports.

The purpose of this paper is to examine and attempt to explain the pattern, composition and trends in Australia-Philippine trade over the two decades 1962-81. Our organization is as follows. Section II briefly introduces the concept of trade intensity, the main analytical tool which is employed in the study to analyze bilateral trade. Section III provides a general overview of the bilateral trade. Section IV focuses on trade in the major commodities and assesses factors determining the composition of this trade. Section V summarizes our main findings.

II. ANALYTICAL FRAMEWORK

This section summarizes briefly the trade intensity approach to the analysis of trade flows, as synthesized and applied by Drysdale and Garnaut (1982) on the basis of earlier work by Brown (1949) and Kojima (1964). The intensity approach was chosen in preference to the "gravity model," developed by Tinbergen (1962) and others, because it is better suited to the paper's objectives. The gravity model seeks to explain the level of bilateral trade, whereas a disaggregated form of the intensity approach permits a more complete examination of resistances in the commodity composition of bilateral trade.

The intensity of trade index measures the share of one country's trade with another country (or region) as a proportion of its share of world trade. For country i's exports to country j, the index (I_{ij}) is defined as the share of i's exports to j in its total exports (X_{ij}/X_i) relative to the share of j's import in world imports, net of i's imports $(M_w - M_i)$.[1] The index is thus written as:

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1. M_i is subtracted from M_w because a country cannot export to itself; thus the only share of world imports it can have is a share of all countries' imports other than its own.

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

An index exceeding unity indicates the presence of a relatively intense trading relationship because the relative importance of country j in i's trade is greater than j's share of world trade.

The intensity index is a rather crude and aggregated measure which requires further disaggregation for it to be a useful analytical tool. Its major shortcoming, in the words of Drysdale and Garnaut (1982, p. 68), is that:

> it fails to make allowance for the varying commodity composition of countries' foreign trade. Where commodities are not substitutable for each other, opportunities for bilateral trade are limited by the degree of complementarity in the commodity composition of one country's exports and the other's imports.

It is possible, for example, for the composition of two countries' exports and imports to be similar, but for there to be high intensities in the commodities in which they do trade. Accordingly, Drysdale (1967) has refined the index by decomposing it into an index which takes account of the commodity composition of the countries' trade, and one which reflects the intensity of trade in the commodities which are traded. These indexes are:

(i) Index of complementary (C_{ij}), which for i's exports to j is the weighted sum of the products of each commodity's share in country i's exports (X_i^k/X_i) and in country j's imports (M_j^k/M_j) with the commodities weighted by the inverse of the shares in world trade

$$\frac{M_w - M_i}{M_w^k - M_i^k}$$

Thus $\quad C_{ij} = \displaystyle\sum_k \frac{X_i^k}{X_i} \cdot \frac{M_w - M_i}{M_w^k - M_i^k} \cdot \frac{M_j^k}{M_j}$

In this formulation, high trade intensity may, for example, be the result of strong concentration in one country's exports of commodities in which the other country has a high import share.

(ii) Index of country bias (B_{ij}), which is defined analogously to the intensity index for each commodity k, as

$$B_{ij}^{k} = \frac{X_{ij}^{k}}{X_{i}^{k}} \bigg/ \frac{M_{j}^{k}}{M_{w}^{k} - M_{i}^{k}}$$

that is, a country bias index of 1 for country i's exports to country j of commodity k indicates that the share of country j in country i's exports of k is equal to the former's share of world imports of k.

A weighted average of indexes of country bias for all commodities yields an index of country bias (B_{ij}) in country i's total trade with j. Thus

$$B_{ij} = {}_{k} \frac{B_{ij}^{k} \cdot X_{ij}^{k}}{X_{ij}}$$

The indexes are so defined that

$$I_{ij} = C_{ij} \cdot B_{ij}$$

The intensity approach enables key factors contributing to trade between countries and regions to be identified. It does not, however, "explain" trade patterns. This requires an examination of the trading partners' composition of trade, and of factors determining the country bias indexes for particular commodities.

The concept of resistance is particularly useful in the analysis of country bias of trade. Drysdale and Garnaut (1982, p. 2) define these as "any factors which prevent or retard the immediate international movement of commodities in response to price differentials." They further classify them as objective resistances, which an individual firm can overcome only at some cost (e.g., transport costs), and subjective resistances, which derive from factors such as imperfect information. Several factors determine the strength of resistances, including the existence of trading blocs and political alliances, relative distance, and aid and investment flows. One could attempt, in principle, to model the importance of these various resistances econometrically, but attempts in this direction have proved disappointing (see, for example, Yamazawa 1971). But their importance will be summarized at the end of section 4.

III. AUSTRALIAN—PHILIPPINE TRADE: AN OVERVIEW

Trends in aggregate trade and trade shares are summarized in Table 1. Two points deserve comment. The first is the expanding volume of trade and increasing trade shares, already referred to. The second is that the trade balance in favor of Australia, a perennial source of complaint from the Philippines, changed little in absolute terms after 1970, but in relative terms it declined from about 9:1 in 1962 to less than 3:2 in 1981.

Intensity indexes for the bilateral trade, 1962-81, are presented in Table 2. One of the more important features is the low level of the complementarity index, which is well below unity for all years and both sets of trade flows and shows no consistent trend. The reason for this low complementarity is largely that both countries have until recently been predominantly agricultural and minerals exporters, although Philippine manufactured exports have risen rapidly since the mid-1970's. For example, both countries are substantial exporters of sugar and, on a smaller scale, of copper. Australia does not import bananas; and vegetable oil, other tropical fruits and nickel — all significant Philippine exports — are imported in only small quantities. Philippine imports of wool are minimal, not only because domestic demand is negligible but also because it has not yet emerged as an internationally competitive textile (as distinct from garments) producer. Moreover, even though the rapid growth of its manufactured exports has been a factor in the increased complementarity of its exports to Australia (of which more later), the increase has not been as great as might have been expected. One reason for this is that electronic components, now the single largest Philippine export, consist primarily of offshore assembly operations through international subcontracting arrangements, usually under the umbrella of multinational corporations, and direct exports of these to Australia are negligible.

The overall trade intensity index has increased substantially since the early 1960's, especially in the case of Philippine exports to Australia. In 1962, the latter index was just 0.1, that is, Philippine exports to Australia were just one-tenth of what might have been expected given Australia's share of world trade. The index for Australia's exports has always been at least unity; the small absolute trade volumes merely reflect the two countries' small share of world trade. Given the low complementarity, the moderately

TABLE 1
AUSTRALIA-PHILIPPINE TRADE, 1962-81
(US$'000)

Year	Australian Exports		Philippine Exports	
	To the Philippines	Percent of total	To Australia	Percent of total
1962	10,253	.45	1,218	.22
1965	21,081	.71	2,855	37
1970	47,880	1.07	4,209	.40
1975	126,020	1.08	31,526	1.42
1981	171,226	.80	121,547	2.13

Source: ASEAN-Australia Project and Australia-Japan Research Centre Data Bank.

TABLE 2
TRADE INTENSITY INDEXES IN AUSTRALIA-PHILIPPINE TRADE,
1962-81

	1962	1965	1970	1975	1981
1. Australian Export to the Philippines					
Intensity Index	1.0	1.4	2.6	2.5	1.8
Complementarity Index	0.3	0.4	0.5	0.5	0.6
Country Bias Index	3.9	3.4	5.4	4.8	2.9
2. Philippine Exports to Australia					
Intensity Index	0.1	0.2	0.3	1.3	1.8
Complementary Index	0.5	0.5	0.3	0.5	0.6
Country Bias Index	0.3	0.4	1.0	2.6	2.8

Source: As for Table 1.

high intensity indices for Australian exports since the mid-1960's and for Philippine exports since the mid-1970's are explained by quite high country biases in the commodities which are traded between the two countries. The more important of these, and the factors underlying the considerable fluctuations in the value of the aggregate country bias index, are examined in the following section.

Using the intensity indexes, it is possible to examine quantitatively the determinants of the growth in bilateral trade. In particular, changes in the importance of one country in the other's trade may be decomposed into changes in the partner's importance in world trade, and to movements in the complementarity and country bias indexes. The results of this exercise are presented in Table 3 for the periods 1962-70, 1970-81 and 1962-81.

Two main points may be inferred from Table 3. First, the growing relative importance of each country in the other's trade — for Philippine exports throughout the period, for Australian exports except for the 1970's — has occurred in spite of the fact that neither has increased its share of world trade. Australia especially has become a relatively less important trading nation globally. Secondly, different factors explain the growth of each country's exports. In the case of Philippine exports, while increased complementarity was important in the 1970's, the major factor has been the very large increase in country bias, suggesting a marked reduction in resistances in the bilateral trade. By contrast, country bias in Australia's export trade to the Philippines has actually fallen; an increase in complementarity is the only positive factor in the growth for the period as a whole. The Philippines conforms in this respect to the general pattern of Australian exports to ASEAN in the 1970's. Unlike the Asian NICs, whose increased share of world trade has been the most important factor in Australia's growing trade with them, the main source of Australia's trade growth with ASEAN (excluding Singapore) has been increased complementarity (Anderson and Garnaut 1983).

IV. MAJOR COMMODITIES IN AUSTRALIA—PHILIPPINE TRADE

This section examines the major commodities in the bilateral trade and analyzes the factors underlying the determinants of their

TABLE 3
SOURCES OF GROWTH IN AUSTRALIA-PHILIPPINE TRADE, 1962-81

	Partner s share in bilateral trade (%) (Sij)			Partner's share of rest of world's trade (%) (S_{ij})			Complementarity Index (C_{ij})			Country bias index (B_{ij})		
	1962	1970	1981	1962	1970	1981	1962	1970	1981	1962	1970	1981
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia's exports to the Philippines	.45	1.07	.80	.44	.41	.43	.26	.49	.62	3.90	5.36	2.94
Philippine exports to Australia	.22	.40	2.13	1.62	1.50	1.16	.50	.28	.62	.27	.96	2.82

	Changes in partners share of bilateral Trade (%) (ΔS_{ij})			(ΔS_j)			(ΔC_{ij})			(ΔB_{ij})		
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
Australia's exports to the Philippines	138	−25	78	−7	5	−2	88	27	138	37	−45	−25
Philippine exports to Australia	82	433	868	−7	−23	−28	−44	121	24	256	185	944

Source: Cols (1) − (12), as for Table 1.

Notes: The following definitions and identities apply:

$$S_{ij} = \frac{X_{ij}}{X_i} \quad S_j = \frac{M_j}{M_w - M_i}; \; C_{ij}, \; B_{ij} \text{ and symbols are defined in Section 3 of the text.}$$

Columns (16)-(24) show ceteris paribus contribution to total percentage change in partner's share of bilateral trade (i.e., ΔS_{ij}) if each factor of the other two factors had remained constant. Since $S_{ij} = S_j \cdot C_{ij} \cdot B_{ij}$, then $(1 + \Delta S_{ij}/100)$ = $(1 + \Delta S_j/100) (1 + \Delta C_{ij}/100) (1 + \Delta B_{ij}/100)$. Some small errors arise due to rounding.) For the four sets of data beginning with column (13), the first (e.g., column 13) refers to the period 1962-70, the second (e.g., column 14) to 1970-81, and the third (e.g., column 15) to 1962-81.

country bias indexes. Most of the discussion is at the three-digit level of commodity classification available in the Data Bank (cited in Table 1). In some cases, however, a greater level of disaggregation is required, and the countries' trade statistics publications have been consulted. Parts (a)-(h) deal mainly with Australia exports, parts (i)-(k) and the subsequent discussion with Philippine exports. Table 4 provides information on the main items traded, 1962-81.

(a) *Cereal products.* The Philippines has been a substantial importer of wheat, but the United States has been the major importer. Australia last exported a sizable quantity of wheat ($1.1 million) to the Philippines in 1975. U.S. dominance may at first appear surprising: Australia has a proximity advantage, and it exports wheat to other countries in the region. Over a decade ago Garnaut (1972, pp. 269-70) observed that Australian plans to ex· port wheat to the Philippines were frustrated by PL 480 sales and by a shortage of suitable shipping space; neither factor is important in the 1980's. Finally, wheat is an intermediate product, and so the powerful consumer attachment that still exists to U.S. products might not be expected to be such an important factor.

Australian wheat exports are minimal basically because of the ties established during the era of PL 480 sales, because the U.S. wheat is offered on more attractive commercial terms and because a long-established and close relationship exists between the U.S. Wheat Associates, the National Food Authority (NFA, the powerful government body which is the sole importer of wheat) and its predecessors, and Philippine flour millers. Wheat is a good example of the lingering influence of past political and trading relationships, and of the substantial costs of overcoming resistances to a reorientation of trading relationships.

By contrast, Australia is an important supplier of other Philippine cereal imports. The import of malt and malt extracts increased to almost $10 million in the early 1980's, and Australia is the major supplier. The largest importer is the multinational brewer San Miguel Corporation, which has close relations with Australian companies though managerial and consultancy arrangements. Australian sales of wheat flour have also increased substantially, and now accounts for almost three-quarters of Philippine imports. This product has been supplied occasionally under Australia's food aid program.

(b) *Meat.* Beef is the only major Philippine meat import. Philippine meat imports rose more than threefold in the 1970's. During this period the value of Australia's meat exports to the Philippines rose more than tenfold, and its share of Philippine imports increased from one-sixth to two-thirds. The high country bias index for meat exports (7.4 in 1981) is explained largely by relative proximity — New Zealand is the other major supplier to the market.

There has been some concern that recently established trading arrangements, in the form of PHILBAI (a joint venture between the

TABLE 4
MAJOR COMMODITIES IN AUSTRALIA-PHILIPPINE TRADE, 1962-81
(US$'000)

Commodity code description	1962	1970	1975	1981
(a) Australian Exports				
(i) Iron and Steel Products				
672 Iron and steel primary forms	—	23,908 (20.0,1)	15,886 (4.5,2)	21,640 (6.8,2)
281 Iron ore concentrates	—	—	—	2,297 (919,17)
674 Iron and steel plates + sheets	—	769 (3,0,16)	2,242 (7.1,15)	3,717 (2.0,11)
(ii) Agricultural Products				
048 Cereal preparations	1,563 (6.9,1)	4,321 (12.7,2)	10,593 (11.5,3)	24,194 (14.6,1)
022 Milk and cream	328 (0.3,10)	3,279 (2.9,3)	19,329 (6.3,1)	17,710 (5 4,3)
011 Meat, fresh, chilled and frozen	489 (5.5,5)	594 (2.0,20)	5,777 (6.3,5)	11,538 (7.4,41)
024 Cheese and curd	386 (11.0,9)	1,470 (34,2,7)	—	4,496 (15.6,9)
081 Animal feedstuff	585 (27.2,4)	1,196 (22.4,8)	2,426 (11.9,13)	1,954 (6.7,18)
(iii) Machinery and Transport Equipment				
732 Road motor vehicles	—	1,013 (2.0,11)	8,766 (13.7,4)	—
719 Machines, n.e s.	—	1,513 (5.7,6)	4,864 (7.3,7)	9,593 (7.4,5)
718 Machines for special industries	—	976 (4.3,13)	3,045 (4.9,10)	4,979 (8.5,8)
712 Agricultural machinery	213 (4.3,13)	—	—	3,356 (14.6,12)

Table 4 (Continued

Commodity code description	1962	1970	1975	1981
(iv) Nonferrous Metals				
684 Aluminium	—	993	—	—
		(6.7,12)		
685 Lead	212	1,664	1,787	4,248
	(1.6,15)	(2.5,5)	(1.6,18)	(2.2,10)
686 Zinc	1,185	1,958	2,402	2,859
	(7.3,3)	(3.4,4)	(4.1,14)	(1.6,15)
(v) Other				
862 Photo and cinema supplies	—	778	2,621	6,957
		(28.3,16)	(25.3,12)	(22.0,6)
(b) **Philippine Exports**				
(i) Furniture and Wood Products				
821 Furniture	2	159	782	7,017
	(0.6,14)	(20.9,7)	(17.7,13)	(7.1,6)
632 Wood manufactures, n.e.s.	8	366	3,327	4,342
	(3.1,9)	(7.2,3)	(9.9,3)	(10.5,9)
631 Veneers, plywood, etc.	1	94	930	3.073
	(0.1,18)	(0.3,10)	(2.5,10)	(1.9,13)
243 Wood, shaped	159	1,815	4,153	11,706
	(3.9,4)	(7.7,1)	(8.3,1)	(4.7,2)
(ii) Labor-intensive Manufactures				
841 Clothing, not of fur	—	—	4,038	9,794
			(9.3,2)	(2.7,4)
851 Footwear	—	—	610	4,178
			(16.5,16)	(4.6,11)
894 Toys and sporting goods	—	131	1,639	4,687
		(46.7,8)	(13.8,5)	(5.1,8)
831 Travel goods, handbags	10	80	—	2,554
	(14.3,8)	(4.4,11)		(9.8,14)
931 Special transactions	34	19	1,406	11,169
	(6.9,5)	(1.2,18)	(0.4,6)	(1.3,3)

Table 4 (Continued)

Commodity code description	1962	1970	1975	1981
(iii) Other				
051 Fresh fruit	555 (14.6,1)	382 (5.6,2)	3,048 (9.9,4)	8,095 (8.0,5)
732 Road motor vehicles	—	—	1,055 (38.6,9)	3,186 (6.0,12)

Source: As for Table 1.

Notes: Figures in parentheses are indexes of country bias and ranking of export values in the bilateral trade, respectively.
— indicates the commodity is not only among the 20 major export items.
n.e.s. = not elsewhere specified.

Philippine Bureau of Animal Industry, which has a 90 percent equity, and Australian interests), could threaten the growth of the meat trade, but to date such fears have not been realized.

(c) *Dairy products.* The Philippines is heavily dependent upon imports of dairy products, and Australia has traditionally been quite an important supplier to the Philippines, for most years since 1960 being among the two major souces. The result has been high country bias indexes for dairy products, especially cheese and curd. The high intensity is again primarily due to proximity. Other factors have also played a role; the Dairy Corporation has a minority equity in a Philippine dairy producer, and the commercial contact with San Miguel Corporation, which also markets dairy products has been of some importance. The long-term prospects for increased Australian dairy exports to the Philippines are not particularly bright, however, owing to the industry's contraction in Australia and to intense competition in this market from New Zealand (which also has equity tie-ups with a local dairy product) and several EEC producers.

(d) *Energy.* Australian energy exports to the Philippines have been negligible in the past, but they are likely to accelerate in the

1980's. Philippine coal imports are likely to increase in the 1980 s, based on the government's energy plan which aims to reduce the country's dependence on imported oil.

Australia is likely to be a major coal supplier to the Philippines for several reasons. One is its proximity. Coal is a bulky, expensive commodity to ship, and Australia enjoys a relative distance advantage over its main competitors, Canada and South Africa (although not over another potential competitor, China). Another is that strong commercial ties have already been established in this industry between the two countries. Australia recently funded a large coal handling and transportation study as part of its development assistance to the Philippines. Strong links have also been established with the National Coal Authority (NCA), a government body established in 1980 and responsible for the import and domestic distribution of coal. The Philippines has expressed a preference for long-term supply contracts, which is in accord with established commercial practice in Australia. By 1982, two such contracts had already been established, the largest with BHP extending to 1996, although most sales continue to be on a spot basis. The NCA is also actively examining the possibility of investing in the Australian coal mining industry.

On a much smaller scale, Australia may also export uranium to the Philippines in the future. A nuclear power plant is being erected at Bataan, near Manila, originally to commence operations in 1984. Unless there are major additional construction delays or political opposition — in Australia to exports or in the Philippines to nuclear power generation — Australia may be a supplier, especially since a safeguard treaty has already been signed. Nevertheless, the amounts involved are likely to be small (less than $10 million annually), and the Philippine supply tenders to date have specified enriched uranium, effectively excluding Australian firms because Australia does not have enrichment facilities.

(e) *Transportation equipment.* Transportation equipment has been one of the more intensively traded items during the last decade. Although the absolute amounts are not large, mainly because both countries possess small, inefficient industries which are generally not competitive internationally, the country bias indexes have been very high (up to 39 in the case of Philippine exports to Australia of road motor vehicles (SITC 732) in 1975). The high intensity may appear surprising given the extensive control first by American (especially in the Philippines) and more recently by Japanese

firms in each country s automotive manufacturing industry. The explanation is that strong trade and investment interrelationships exist, with considerable intrafirm international trade occurring within the regional organizations of global multinational automotive firms. The most important of these for the bilateral trade is the Ford Motor Corporation, which has based its regional headquarters for Asia-Pacific in Melbourne since the 1960's, and which initiated a strong push for regional complementation programs in the 1970's.

Since the mid-1970's, however, trade intensities have been declining. Local content ratios, which have been quite high in Australia since the early 1950's, have also risen considerably in the Philippines since the early 1970's, when the Progressive Car Manufacturing Program (PCMP) was introduced. This has resulted in reduced intraregional trade in transportation equipment, and a substantial revision of the Ford complementation program, the primary source of the initially very high intensities. The recent decision of Ford to close its Philippine plant will lead to a further decrease in the intensity index. Other factors have also contributed to the decline. One is that, following the introduction of the PCMP (and related schemes for trucks and motor cycles), several Australian components manufacturers, which previously exported to the Philippines, established plants in the country as a means of maintaining their share of the market. Because they were generally free to source their inputs from the cheapest supplier, the result was frequently a net decline in Australian exports. Another reason is that the fastest growing sector of the Philippine industry has been light commercial vehicles, in which the scope for bilateral trade is more limited because they are not produced in Australia. Finally, Japanese producers have made major gains in each country's automotive industry, and these firms have not been introduced to regional arrangements of the type adopted by the North American firms.

(f) *Iron and steel*. Iron and steel have been important items in the bilateral trade, frequently constituting Australia s largest export. The trade has generally consisted of steel plating, billets and slabs, and, more recently, iron ore concentrates. During the late 1960's and the 1970 s the Philippines was a sizable market for Australia, and the country bias index for Australia exports was by far the highest among the ASEAN countries. The Philippine

steel industry was an early developer in the region, possessing no primary steel manufacturing capacity, but concentrating on purchasing semi-finished products.[2] As its steel imports expanded in the 1950's, Australia was well-placed as a potential supplier given its proximity and its then internationally competitive industry. Various items, at the three digit classification, have been important. The major one has generally been iron and steel primary forms (SITC 672), with very high indexes of country bias. In recent years iron ore (SITC 281) has become a major export.[3] Most of it is shipped to the Philippine Sinter Corporation in Mindanao, where it is sintered and then exported to Japan. For iron and steel products as a whole, Australia has usually been the Philippines' second largest supplier.

This picture can be expected to alter substantially in the 1980's however. Australia's share of the Philippine steel market is likely to fall, although it may not necessarily be reflected in a declining country bias index because it is part of a general decrease in Australian steel exports. Two other factors may hasten this trend of declining Australian steel exports to the Philippines. One is that several Australian manufacturers have established plants in the Philippines to produce iron and steel products. The competitive international sourcing arrangements of these subsidiaries, involving purchases from Northeast Asian suppliers, have accelerated the trend towards declining steel exports. The second is the Philippine plan — currently shelved — to develop its own primary steel manufacturing capacity (although this would probably result in increased iron ore exports).

(g) *Machinery*. Australia has been a small but relatively important supplier of various types of machinery to the Philippines. In 1981, three of the 20 major exports were machines (agriculture machinery, machines for special industry, and nonelectric machines n.e.s.), and all had very high country bias indexes. This is not a recent development: these items have figured quite prominently

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2. For information on the industry's development, see World Bank (1980) and IDE (1982).

3. The figure for iron ore exports for 1981 in Table 4 is a substantial underestimate, owing to statistical errors. Unofficial estimates provided by the Australian Department of Trade put the figure for financial year 1980-81 at almost $A20 million.

in Australian exports as far back as the 1960's. The description of the items also provides a clue regarding the type of machines exported — it is highly diverse trade, including a wide range of agricultural, industrial and medical machinery.

There are two main explanations for the relative importance of this trade. One is that low complementarity of trade on the output side may sometimes result in high complementarity on the input side. (For example, both countries export sugar, which has facilitated Australian sales of sugar machinery.) The second is that proximity has, historically, fostered the trade.

(h) *Other Australian exports.* Three additional groups may be mentioned briefly. The first is trade which occurs under the umbrella of MNCs. Apart from the automotive industry, referred to above, photographic supplies and aluminum have high country bias indexes because of this factor. The second is miscellaneous agricultural products, such as animal feedstuffs, and hides and skins. Finally, there is a group of bulky, low value to weight minerals, principally zinc and lead, where Australia's competitive prices, combined with proximity and resultant shipping cost advantages, have facilitated the trade.

The previous discussion refers primarily to Australian exports to the Philippines. As already notes, Philippine exports to Australia were negligible in the 1960's — even in 1970 they totalled just $4.2 million. During this period not only was there low complementarity, as was also the case on the side of Australian exports, but — unlike Australia — there was also low country bias. Since 1970, however, both Philippine exports and the country bias index have grown strongly. The most important items have been furniture and wood products, several labor-intensive manufacturers, and certain food items.

(i) *Furniture and wood products.* This is one of the few product groups which has been exported relatively intensely to Australia since the early 1960's. It has consisted of shaped and sawn timber — characterized by very high country bias — and, more recently, furniture. The quantities are still quite small, but the Philippines is by far the largest supplier of rattan furniture to the Australian market. These have been important items in the trade for several reasons: the well-developed state of the Philippine rattan furniture industry, proximity and transport costs (especially for timber), the establishment of an Australian furniture manufacturer

in Manila and, possibly, the growing number of Australian tourists.

(j) *Food items.* Fresh fruits — mainly coconuts and mangos — and coconut products have traditionally been quite important Philippine exports to Australia. Here also the proximity factor is of some importance.

(k) *Labor-intensive manufactures.* Labor-intensive manufactures have been the major source of growing Philippine exports to Australia since 1970 and one explanation for the increasing country bias index in Philippine exports to Australia. In 1981 more than half the 20 major Philippine exports to Australia were in this category if one includes item 931 (special transactions, which comprises mainly export processing zones) and furniture and wood manufactures.

In addition to the general increase in manufactured exports, special factors hastened their growth to Australia after 1970. One was the trade reorientation in the Philippines away from the United States towards new markets, including Australia. Another was the liberalization in Australian protection policy during 1972-74, and domestic excess demand spilling over into imports, which together coincided with the upsurge in Philippine exports. Finally, several large Australian firms established plants in the Philippines, to take advantage of this rapid growth and as an insurance against the possibility of further substantial reductions in protection for Australian manufacturers.[4] Nevertheless, despite the rapid increase in Philippine manufactured exports to Australia for the decade 1970-80 bilateral trade relations were strained during the latter half of the 1970's, owing to frequent Philippine criticisms of Australia's protectionist policies. Why did these criticisms arise when exports for the decade as a whole grew strongly? Two points need to be made.

First, the most rapid growth in exports to Australia occurred during the first half of the decade. During this period, not only did Australian imports of these products increase extremely rapidly but its share of Philippine exports generally rose, in some cases dramatically. By 1975, Australia was a significant market for several

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4. This motive was assigned particular importance by a large garment manufacturer interviewed in our survey of Australian firms in the Philippines (see Hill 1982).

Philippine exports, especially footwear.[5] The reason for this ex-
tremely rapid growth was, as noted, the coincidence of rising Philip-
pine exports and important policy liberalizations in Australia.

By the mid-1970's Philippine exporters expected continued
rapid growth. But increased protection commencing in 1975 re-
sulted in reduced market access, and for the period 1975-80 Austra-
lia became relatively less important for most manufacured exports,
even though absolute volumes continued to increase quite rapidly.
This explains what might otherwise appear to be a paradoxical
result in Table 4 of substantial increases in Philippine exports to
Australia between 1975 and 1980 but of marked reductions in the
indexes of country bias. The explanation is simply that while the
absolute importance of the Australia market rose substantially,
its relative importance fell quite dramatically and other markets
became more important.

In this light, the subsequent tension in the bilateral relation-
ship is easier to understand. The Philippines reacted with some bit-
terness when earlier expectations of continued rapid growth were
not fulfilled. For a period in the mid-1970's the relationship dete-
riorated to such an extent that the Philippine Ministry of Trade,
in response to the imposition of import controls in Australia of
certain sensitive Philippine exports, instructed the Central Bank not
to issue letters of credit for imports from Australia for a period,
and advised these importers to source elsewhere whenever practi-
cable.[6]

The second general point about Philippine manufactured ex-
ports to Australia, and one which also explains in part the linger-
ing resentment towards the latter's protectionist policies, is that
they comprise a disproportionately large number of products which
are highly protected in Australia. In aggregate, the Philippines is not
a major supplier of manufactures to Australia; however, its major

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5. For example, Australia's share of Philippine exports in 1975 was com-
prised of (1970 share in parentheses): footwear, 20.3% (0.8%); furniture, 15.1%
(11.1%); clothing, 12.2% (0%); and wood and cork manufacures, 7.1% (1.1%).

6. It should be noted that Australia was not the only trading partner to
which the Philippines registered strong protests. As Bautista and Villacorta
(1983, pp. 91-92) observe, Japanese policies towards Philippine manufactured
and agricultural exports also caused considerable resentment.

manufactured exports are among the most protected industries in Australia.

Does Australia's protection policy discriminate — unintentionally — against the Philippines relative to other LDCs, because of the particular commodity composition of the latter's exports to Australia? A recent paper by Warr (1983) has addressed this question. Combining the effects of variations in Australian protection by industry with the commodity composition of Australian imports from ASEAN and other LDCs, Warr devises an index of discrimination computed from the effect on each country's imports of a uniform reduction in Australian protection.[7] He concludes that Australia's protection did not discriminate against ASEAN as a whole in the years for which the analysis was undertaken (1968-69 and 1980-81), because the index was well below unity. However, the Philippines is an exception to this generalization. It had the highest index among ASEAN for both years, its value in 1980-81 being 1.85. The explanation is that Philippine exports to Australia contain the highest proportion of textile, clothing and footwear, and transport equipment, which are the two most heavily protected industries in Australia.

V. CONCLUSION

Three main points emerge from this paper. The first is that, despite both countries' reduced relative importance in international trade, bilateral trade grew quite rapidly over the period under investigation. In the case of Australian exports, the primary source of growth has been increased complementarity, much of it arising

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7. See Warr (1983, Sec. III). The index, for country a, is simply $\dfrac{M_a}{M} \bigg/ \dfrac{M_a}{M}$

where M = total Australian imports

$\quad M_a$ = Australian imports from country a

M, M_a = the increase in imports in response to a given uniform reduction in protection (total, from country a, respectively). That is, the index is a ratio of a country's marginal share of imports to its average share. The index is equal to unity for all countries. In the case of countries for which the index exceeds unity, that share of Australian imports would rise if Australia's protection was reduced. Thus, the greater the index, the more heavily Australia's protection discriminates against imports from that country.

out of the changed structure of Philippine imports. Conversely, increased country bias has been the main source of growing Philippine exports, particularly over the decade 1965-75.

Secondly, although the trade has not been large in aggregate, it has generally been characterized by high levels of country bias. Relative proximity has been an important factor, manifesting itself in shipping cost advantages and facilitating improved information flows and commercial contacts. Other factors include trade-investment interrelationships, and the relatively "familiar" commercial environment of the Philippine encouraging the activities of Australian traders.

Finally, assuming that Philippine foreign exchange reserves are restored to "normal" levels fairly quickly, the prospects for continued modest growth are quite good. The commodity composition of the trade should continue to reflect the two countries' factor endowments: energy and resource-based goods from Australia, and labor-intensive manufactures from the Philippines.

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