THE TENDENCY TOWARD REGIONALISM IN THE PACIFIC TRADE BASIN*

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Patterns of world trade have long been recognized to be the aggregate result of a variety of economic and non-economic influences.[1] Historical and cultural ties, colonial and balance-of-power alliances have continually competed with geographic and economic variables in determining the direction and composition of world trade.[2] As a result, predicted trade patterns based upon a conventional Heckscher-Ohlin factor endowment analysis are often wide of the mark when examined in relation to the actual patterns of world trade.

It is, however, a reasonable hypothesis that trade patterns which reflect the underlying economic complementarity of the trading nations will emerge when the major non-economic forces "distorting" the existing patterns subside. Such a development is apparent in the post-Korean War trade patterns of fourteen Pacific-based nations.

This study deliniates the Pacific Trade Basin in Part I. In Part II, earlier studies of trade patterns will be examined with respect to how they incorporated the Pacific Trade Basin countries into their systems. The main part, Part III, will serve to support the general proposition that patterns of trade within the Pacific Trade Basin suggest an emerging complementary region by employing several measures of complementarity. Finally, in Part IV, the potential for greater intra-regional trade will be evaluated in an

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1 For example, see the following two important studies: League of Nations, *The Network of World Trade,* Genèva, 1942; and A. O. Hirschman, *National Power and the Structure of World Trade,* Berkeley, University of California Press, 1945.

2 Erik Thorbecke in his: *The Tendency Towards Regionalization in International Trade 1928–1956,* The Hague, Martinus Nijhoff, 1960, has presented the following useful schema for categorizing the causes of trade regionalization: "1) Geographical causes; 2) political causes such as: a) the institutional and marketing ties particularly with respect to the relationship between metropolitan countries and their overseas dependent territories and former colonies, and b) defense considerations; 3) Economic causes such as: a) ties of enterprise and foreign investment, and b) changes in competitive position of suppliers and markets, natural complementarity, lack of alternative markets, and finally 4) monetary causes such as: a) monetary and commercial policy arrangements, and b) regional economic integration..." pp. 93–94.

attempt to predict future trends.

I. THE PACIFIC TRADE BASIN

The fourteen countries included in the study and hereafter grouped under the heading Pacific Trade Basin are: Australia, Canada, Ceylon, Hong Kong, India, Indonesia, Japan, South Korea, Malaysia,[3] New Zealand, the Philippines, Thailand, the United States and Taiwan.[4] The economic structures and resource endowments of these nations as reflected in their recent trade patterns suggest that the Pacific Trade Basin is emerging as a fairly complementary economic region. Not all the selected countries have shared evenly in this development. But it will be argued that the overall tendency has been toward greater integration for the Pacific Trade Basin. Furthermore this pattern of integration seems to be evolving along Heckscher-Ohlin lines in that the composition and direction of the PTB nations' trade suggest the efficient utilization of the region's varied endowment base.

II. EARLIER TRADE STUDIES

The complementary pattern exhibited by the trade data of the PTB is quite unique with respect to the region's trade patterns of earlier years. Earlier studies, notably the League of Nations' study of prewar trade patterns (Folke Hilgerdt was the major author) and Thorbecke's postwar study had split up the PTB nations into different groups.[5]

The main finding of the League's study was that prior to world depression most of the major trading countries were knit into a smoothly working multilateral trading system. The balance of trade deficits and surpluses of the major trade blocs reflected the international economy's adjustment to differences in factor endowment and to the requirement to "provide for the transfer along round-about routes, of interest dividends and other payments due from debtor countries to European creditor countries, particularly the United Kingdom."[6] This system broke down with the beginning of the world depression with bilateral trade and payments arrangements taking the place of the multilateral system.

The geographical framework which the League used was considerably altered by Thorbecke in his study because of "structural changes" in the world economy. Thorbecke felt that the continued use of the League's system

3 Including Singapore but excluding Sabah and Sarawak.

4 This group includes the developed Pacific-based nations and most of the developing nations of the United Nations ECAFE region.

5 The League's *Network of World Trade* used the following groupings: The Tropics, Regions of Recent Settlement, Continental Europe, non-Continental Europe, and the Rest of the World; and Thorbecke used these categories: Canada, Latin America, United Kingdom, Continental Europe, Middle East, Japan, Asia, Oceania, Africa and he excluded the Soviet Bloc.

6 League of Nations, *op. cit.*, p. 9.

would "hide, if not altogether eclipse, very important multilateral links in the period following World War II."[7] According to Thorbecke, international trade had passed through three distinct phases. The first (1850–1928) was the fairly complementary system of multilateral trade which was summarized by Hilgerdt in the League's study. The second (1929–1945) was a period of disintegration in which bilateralism and exchange control characterized international transactions. The third (1945–1956) was a period of regionalism which had its roots in the 1930's and the "empire trading" systems, but was strengthened in the postwar period. This regionalism, according to Thorbecke, centered around three distinct nuclei—the U. S. as the center of the Dollar Area, Great Britain as the center of the Sterling Area and Western Europe as the focus for the Continental O. E. E. C. bloc.

As to the causes of this tendency toward regionalism Thorbecke states:

> As a broad generalization it can be argued that political factors were instrumental in bringing about this tendency in the thirties, while the causes which had the greatest impact on regionalization in the post-war II period seem to have been certain structural changes in the U. S. demand for imports in the case of the Dollar Area and commercial policy, monetary arrangements and stability considerations in the case of the Sterling Area and the Continental O. E. E. C. Bloc.[8]

Thorbecke's prediction of continued regionalism in the Dollar Area is supported by Henry Aubrey who also saw the growth of Western Hemisphere trade integration as the likely outcome of the increased import needs of the U. S. economy.[9]

If it can be substantiated that the Pacific Trade Basin is emerging as a complementary trading region, and this is the purpose of this article, then these findings will call into question the projections of the previous studies. It will be argued that the reason this development was not detected in earlier studies was that it was "buried" under a variety of non-economic and quasi-economic forces which prevented its emergence.

III. REGIONALIZATION IN THE PACIFIC TRADE BASIN

The results of this study suggest that several factors have accounted for the emergence of the Pacific Trade Basin as a complementary trading region. The breaking down of colonial ties between mother countries and their colonies facilitated the emergence of new trading patterns. In addition the influence of monetary blocs, especially after the 1958 convertibility movement, has been steadily eroded and this has played an important part in the alterations of the trade patterns of New Zealand, Australia, Hong Kong, and to a lesser extent Ceylon and India.

The hostility among nations of the Pacific existing during the 'thirties culminating in Pearl Harbor was also responsible for disguising the comple-

7 Thorbecke, *op. cit.*, p. 74.

8 *Ibid,* p. 204.

9 Henry Aubrey, *U. S. Imports and World Trade,* Oxford, Clarendon Press, 1957, p. 46.

mentarity of the region. Finally the postwar development drives of some of the fastest growing countries in the world have acted to spur the integration of the region by absorbing growing amounts of PTB exports. This export-led growth of Japan, South Korea, Taiwan, Hong Kong and, to a lesser extent, Australia can be thought of as reinforcing the underlying complementarity of the region.[10]

1. The Data

The trade data for the Pacific Trade Basin countries have been examined for the period 1954 to 1964.[11] Observations have been essentially restricted to this eleven-year period primarily for the following reasons. First the war-associated trade relationships with the large volume of "offshore" procurement generated in both the Korean and Vietnam conflicts distort considerably the trade patterns expected in more peaceful periods. Since many of the PTB countries have experienced substantial increases in trade directly associated with these conflicts it is crucial to the argument in this paper that their influence be minimized. Consequently 1954, two years after the Korean settlement, was the first year selected, and 1964, was included because it represented the last year prior to the commitment of U. S. combat troops in Vietnam.[12] The period chosen also permits comparison with the most important postwar trade pattern study, Thorbecke's, which covered the period up to 1956.[13]

2. General Trends

The aggregate trade data for the Pacific Trade Basin appear in Table 1. Thorbecke's schema is utilized to show intra-PTB trade, total PTB trade and world trade totals. Also given are intra-PTB trade as a percentage of total PTB trade, intra-PTB trade as a percentage of world trade and total PTB

10 Kiyoshi Kojima, in a letter to the author, suggests that the slow growth of the U.K., an important market for many P.T.B. members was an important factor in promoting intra-PTB trade. In addition he suggests that Japan, following the war, had to turn away from Mainland China thus increasing her dependence on the Pacific-Southeast Asian region.

11 The trade data have been gathered from the United Nations' *Yearbook of International Trade Statistics* (various issues). The data cover only the nations' visible transactions on current account and have been converted into U. S. dollar values at official rates of exchange. Exports are recorded f.o.b. and imports c.i.f. with the exception of Australia, Canada, the Philippines and the United States for which imports are recorded f.o.b.

12 Some observations are drawn, however, from 1965 and 1966 since trade developments among the developed PTB members have been quite dramatic. The interpretation of the data of these two years, of necessity, must be qualified.

13 It is interesting to note that Michaely in his study *Concentration in World Trade*, (Amsterdam, North-Holland Publishing Co., 1962) based his measurements on 1954 data. He justified his selection of 1954 as follows: "This was a year in which international trade had already recovered from the convulsions of the early post-war period and began to flow in rather 'normal' channels; and it is about as free from cyclical effects on international trade as any year in the post-war era." p. 2.

trade as a percentage of world trade. The data, in values and percentages, are given for both exports and imports.

Table 2 isolates the intra-PTB trade of just the five developed countries: Australia, New Zealand, Japan, Canada and the United States, treating this time the PTB as if it included only these nations. In addition the percentage of the region's total trade accounted for by the five developed members is also indicated. (Table 2, Line 4.)

As can be seen from Tables 1 and 2 the developed PTB members account for the bulk of total PTB trade and also for most of the increase in intra-PTB trade. The developing PTB members have, with several exceptions, maintained or slightly lessened their typically high dependence on the Pacific Trade Basin. Therefore other measures or approaches are called for to support the general thesis of this paper that they too add to the overall complementarity of the PTB. These measures will be discussed in the remaining sections of Part III. It will be seen that the developing PTB members subdivide into two groups; one quite successful, one less successful, in integrating into the Pacific Trade Basin based upon their respective export structures.

Table 1 indicates the tendency towards regionalization of the entire PTB. This is brought out in the increasing percentage of total-PTB trade accounted for by intra-PTB trade. (Rows 4 and 10 for exports and imports respectively.) Including 1965 (the last year for which all the data are available) would show the export percentage to be 47.26 and for imports, 52.16.

Hilgerdt has described the system of world trade as one which "developed over a succession of generations and [in which] the orientation of balances was determined by the nature of production and of requirements embedded in the economic structure and the consumption habits of the partaking countries."[14] In such a system trade patterns are not volatile but change rather slowly. The change in PTB trade in the eleven years takes on added significance when seen in the light of the general tendency toward trade pattern rigidity. In addition the size of these export and import alterations appear significant in terms of the magnitudes indicated in Thorbecke's work.[15]

Although the aggregate picture presented in Table 1 shows increasing regionalization for the region as a whole, it represents the weighted average of the trends of the individual PTB members. Tables 3-A and 3-B present the export and import performances for the individual PTB members. Averages have been taken for the years 1954–56 and 1962–64.[16] In addition since

14 League of Nations, *op. cit.*, p. 88.

15 For example, Intra-Continental O. E. E. C. trade increased from 52.3% to 57.8% for exports and from 46.2% to 51.4% for imports from 1951 to 1956 which were the years of the most vigorous efforts in the O. E. E. C. liberalization drive and the workings of the E. P. U. The Sterling Area increased intra-region trade over the decade 1928–38 from 40.0% to 47.4% for exports and from 35.1% to 37.5% for imports. Thorbecke, *op. cit.*, pp. 96, 132.

16 Data for the 1954–64 period for all countries with two exceptions, Korea's trade figures for 1954 and Indonesia's for 1963 and 1964 were unavailable. The averages for these countries represent for Korea the years 1955–56 and for Indonesia 1961–62.

Table 1. Intratrade within the Pacific Trade Basin 1954–1964
(in millions of dollars and percentages)

	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
					Exports						
1. Intra PTB[a]	10862	12111	14078	15181	13513	15108	16690	17258	18110	20047	22852
2. Total PTB[b] Trade	27790	29468	34124	36856	32971	34281	38583	39499	41191	44779	51748
3. Total World Trade	86100	93700	103700	112000	108000	115600	128000	134000	141600	154000	172400
Percentages					Exports						
4. $\frac{\text{Intra PTB}}{\text{PTB Total}}$	39.09	41.10	41.25	41.19	40.98	44.07	43.26	43.69	43.96	44.77	44.16
5. $\frac{\text{Intra PTB}}{\text{World Trade}}$	12.61	12.93	13.58	13.55	12.51	13.07	13.04	12.88	12.79	13.02	13.25
6. $\frac{\text{PTB Total}}{\text{World Trade}}$	32.28	31.45	32.91	32.91	30.53	29.65	30.14	29.48	29.09	29.08	30.02
					Imports						
7. Intra PTB	11543	13201	14928	16093	14055	16264	17576	18839	19529	21415	23749
8. Total PTB Trade	24160	26889	30485	32638	29948	33820	35570	37408	38512	41783	46176
9. Total World Trade	88500	98400	108700	119900	114000	121300	135300	140900	149500	162100	181500
Percentages					Imports						
10. $\frac{\text{Intra PTB}}{\text{PTB Total}}$	47.78	49.09	48.97	49.31	46.93	48.09	49.41	50.36	50.71	51.25	51.43
11. $\frac{\text{Intra PTB}}{\text{World Trade}}$	13.04	13.42	13.73	13.42	12.33	13.41	12.99	13.37	13.06	13.21	13.08
12. $\frac{\text{PTB Total}}{\text{World Trade}}$	27.30	27.33	28.04	27.22	26.27	27.88	26.29	26.55	25.76	25.78	25.44

Notes: a. Intra-regional trade of the Pacific Trade Basin.
b. Total trade of all Pacific Trade Basin countries.

Table 2. Intratrade within the Developed PTB, 1954–1966

(in millions of dollars and percentages)

	1954	1956	1958	1960	1962	1963	1964	1965	1966
1. Intra Dev. PTB Exports	6851.94	9293.61	8862.91	10866.66	11987.15	13096.83	15215.06	18108.58	21025.60
2. Total Dev. PTB Exports	23028.69	28758.91	27928.78	32566.24	35162.95	38002.28	43601.54	46999.01	52624.93
3. $\frac{\text{Intra Dev. PTB}}{\text{Total Dev. PTB}}$ (%)	29.75	32.31	31.73	33.37	34.09	34.46	34.89	38.53	39.95
4. $\frac{\text{Total Dev. PTB}}{\text{Total PTB Trade}}$ (%) i.e. Dev. PTB's Share of Total PTB Exports	82.87	84.28	84.71	84.41	85.37	84.87	84.26	86.34	*
5. Intra Dev. PTB Imports	7317.64	9864.74	9231.38	11307.11	12940.82	14167.29	16073.26	18559.32	22174.66
6. Total Dev. PTB Imports	18356.41	23948.04	23493.50	27774.18	30304.29	33030.70	37003.09	41826.64	48482.94
7. $\frac{\text{Intra Dev. PTB}}{\text{Total Dev. PTB}}$ (%)	38.81	41.19	39.34	40.71	42.70	42.89	43.44	44.37	45.74

Note: * Total PTB trade for 1966 was not available.

data were available for the developed PTB members for 1966 an average of 1965 and 1966 is included for these five countries. Table 4 indicates the appropriate weights by ranking the PTB members according to their contribution to the total trade of the area for each of four years: 1954, 1958, 1960, and 1964.

With the exception of Canada[17] and also the imports of Japan, countries

Table 3-A. PTB Dependency: Exports (PTB Exports/Total Exports) (%)

Increases	1954–56	1962–64	1965–66
1. Australia	30	43	47
2. India	34	36	
3. Indonesia	55	61	
4. New Zealand	12	27	29
5. United States	32	35	39
6. Japan	54	57	58
7. Malaysia	44	46	
Decreases			
1. Hong Kong	57	51	
2. Canada	65	63	66
3. Ceylon	28	26	
4. South Korea	89	76	
5. Philippines	80	78	
6. Thailand	84	66	
7. Taiwan	78	74	

Table 3-B. PTB Dependency: Imports (PTB Imports/Total Imports) (%)

Increases	1954–56	1962–64	1965–66
1. Australia	27	41	46
2. Hong Kong	40	44	
3. India	25	45	
4. New Zealand	31	44	45
5. United States	37	42	44
6. Indonesia	46	49	
Decreases			
1. Canada	76	73	76
2. Thailand	65	61	
3. Ceylon	34	30	
4. Japan	63	58	56
5. South Korea	88	86	
6. Malaysia	58	52	
7. Philippines	85	74	
8. Taiwan	86	81	

17 Canada in 1965 and 1966 recorded a quick reversal of the previous declining trend. In 1966 exports to the PTB accounted for about 68% of total exports and imports accounted for 77% of the total.

Table 4. Individual Shares of Total PTB Exports (Ranking by Percentage Share)

	1954 (%)		1958 (%)		1960 (%)		1964 (%)
1.	United States	53.90	United States	51.61	United States	52.63	United States 50.41
2.	Canada	13.97	Canada	14.64	Canada	13.62	Canada 14.47
3.	Australia	6.68	Japan	8.73	Japan	10.51	Japan 12.90
4.	Japan	5.86	Australia	5.57	Australia	5.44	Australia 6.02
5.	India	4.45	Malaysia	3.73	Malaysia	4.21	India 3.39
6.	Malaysia	3.69	India	3.63	India	3.44	Malaysia 2.56
7.	Indonesia	3.09	Indonesia	2.38	New Zealand	2.20	New Zealand 2.04
8.	New Zealand	2.46	New Zealand	2.12	Indonesia	2.16	Hong Kong 1.96
9.	Hong Kong	1.52	Hong Kong	1.59	Hong Kong	1.79	Indonesia 1.64
10.	Philippines	1.46	Philippines	1.49	Philippines	1.45	Philippines 1.48
11.	Ceylon	1.30	Ceylon	1.03	Ceylon	0.97	Thailand 0.90
12.	Thailand	1.21	Thailand	0.90	Thailand	1.03	Taiwan 0.84
13.	Taiwan	0.35	Taiwan	0.47	Taiwan	0.46	Ceylon 0.75
14.	South Korea	0.06	South Korea	0.05	South Korea	0.05	South Korea 0.23

Table 5-A. PTB Concentration—Exports
(Number of PTB Countries Falling within Each Quintile)

	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Percentage											
0–20	1	1	1	1	0	0	0	0	0	0	0
20–40	4	4	4	4	5	5	5	4	4	4	4
40–60	4	4	3	4	3	4	3	4	5	5	5
60–80	1	2	4	4	5	3	5	4	4	4	5
80–100	4	3	2	1	1	2	1	2	1	1	0

Table 5-B. PTB Concentration—Imports (PTB Imports/Total Imports)
(Number of PTB Countries Falling within Each Quintile)

	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Percentage											
0–20	0	0	0	0	0	0	0	0	0	0	0
20–40	6	5	5	5	6	6	3	5	2	1	1
40–60	3	3	3	3	3	2	5	3	7	8	9
60–80	2	3	3	3	4	3	4	5	3	3	2
80–100	3	3	3	3	2	2	2	1	2	2	2

experiencing declining dependence on the PTB over the period have been the smaller trading nations so that they have not come close to outweighing the increasing dependence of the larger countries with the net result begin the increasing regionalization shown for the PTB as a whole.

More importantly, however, is the fact that most of those countries experiencing declines in dependency have been extremely dependent upon the PTB as a market for their exports, and a source for imports. In fact three countries in 1954 imported more than 85 per cent of their total imports from the PTB and four countries exported more than 83 per cent of their total

exports to the PTB. It seems reasonable to assume that this extreme dependency is not a normal state of affairs but marks an early stage of development. Thus it can be argued that these reductions don't represent contradictory evidence that the whole region is becoming more integrated over the period.

This is brought out more clearly in Table 5 which ranks the PTB countries in quintiles showing PTB concentration for both exports and imports over the eleven year period. The number of countries concentrating from 40 to 80 per cent of their exports in the PTB has doubled (from 5 to 10) over the period; and PTB import concentration within the same limits has more than doubled (from 5 to 11).

This range of dependency (from 40 to 80 per cent) is a more reasonable level and yet one which supports the claim of overall interdependency for the Pacific Trade Basin. And within this range by 1964, found 71 and 79 per cent of the PTB members as regards exports and imports respectively.

3. Other Measures of PTB Complementarity

A. Multilateral Trade Balancing Within the Pacific Trade Basin

The basic complementarity of the Pacific Trade Basin can also be seen by computing an index of multilateral balancing first used by Michaely.[18] A country's trade is multilaterally balanced to the extent to which the proceeds from its exports to one country are used to pay for goods imported from a third country. To measure a country's multilateral balancing which takes place within a monetary area (T_{ja}) Michaely used the following index:

$$T_{ja}=100\cdot\frac{\sum_{s=1}^{i}\left|\frac{X_{sj}}{X_{.j}}-\frac{M_{sj}}{M_{.j}}\right|}{\sum_{s=1}^{i}\left|\frac{X_{sj}}{X_{.j}}+\frac{M_{sj}}{M_{.j}}\right|}$$

where X_{sj} stands for the exports of country j to country s, $X_{.j}$ stands for country j's total exports, M_{sj} for country j's imports from country s, $M_{.j}$ for j's total imports, and where countries 1 to i are country j's partners in the monetary bloc.

Michaely used this index to study whether or not the major monetary groupings—the Dollar Area, the Sterling Area, and the Continental OEEC Area—facilitated multilateral balancing for the members of each group. The same index has been used to measure the amount of multilateral balancing within the PTB. Table 6 compares Michaely's findings with the PTB results. Michaely concluded:

> That regionalization of trade cannot count intraregion multilateral balancing of trade as one of its central outcomes. Undoubtedly, common monetary arrangements do facilitate and lead to multilateral balancing, but they are apparently not overly important in comparison with other factors which affect the extent of multilateral trade.[19]

[18] M. Michaely, "Multilateral Balancing in International Trade," *American Economic Review*, Sept. 1962, pp. 685–702.

[19] Michaely, *op. cit.*, p. 697.

Table 6. Index of Multilateral Balancing Within Monetary Regions and the PTB (Regional Unweighted Averages)

Monetary Region	1954	1958
Dollar Bloc	11.8	12.6
Sterling Area	29.0	27.3
Continental OEEC Area	19.8	18.2
PTB	35.7	33.0

Note: Unweighted averages for 1954 and 1958 were used in order to insure comparability with Michaely's findings.

The higher multilateral balancing present in the PTB cannot be explained by saying that the Pacific Trade Basin is made up predominantly of "typical" multilateral countries defined by Michaely to be "small, underdeveloped, primary-goods exporting" economies.[20] For the Pacific Trade Basin is not dominated by such countries.[21] What is suggested is that the high level of multilateral balancing in the area is more a result of the overall economic complementarity of the region.

B. The Intensity of Trade

Developments within the Pacific Trading Basin can be seen more clearly by use of the "intensity of trade" index.[22] The index is constructed as follows:

$$I_{ji}=\frac{\frac{X_{ji}}{X_j}}{\frac{M_i}{W-M_j}}\times 100.$$

Where X_{ji} stands for country j's exports to country i; X_j for country j's total exports; M_i for total imports by country i; M_j for total imports by country j and W for total world imports. A value for I_{ji} above 100 signifies that country j trades with country i more than in proportion to country i's importance in world trade. For instance if 1 per cent of country j's exports went to country i and if country i accounted for 1 per cent of world imports then the index would be 100.[23] The greater the intensity of a country's

20 *Ibid*, p. 698.

21 In a list compiled by James Ingram of the top seventy countries in terms of export concentration in 1962 finds only six of the fourteen PTB countries represented. By defining concentration as the percent of total exports accounted for by the three leading exports, only Ceylon is found in the top twenty-five. The six countries and their respective places in Ingram's concentration list are: Ceylon (24), Indonesia (37), Malaya (38), New Zealand (47), Thailand (62) and the Philippines (64). James Ingram, *International Economic Problems*, New York, J. Wiley & Sons, Inc., 1966, pp. 82–83.

22 Kiyoshi Kojima has made considerable use of this index. See his "A Pacific Economic Community and Asian Development Countries," *Hitotsubashi Journal of Economics*, Vol. 7 No. 1, June 1966, p. 20. Kojima credits A. J. Brown with first using this index (*Applied Economics, Aspects of the World Economy in War and Peace*, London 1947, pp. 212–226).

23 Using Kojima's version of the index with W reduced by j's imports this will yield an index of 100 when the share of i's imports is something less than 1% of world imports. This discrepancy increases with the size of j's imports.

Table 7. Intensity of Trade Indices for the Pacific Trade Basin

Exports to	USA		Canada		Japan		Australia		New Zealand		India		Other PTB Labor Intensive		Other PTB Land Intensive	
Exports from	54–55	63–64	54–55	63–64	54–55	63–64	54–55	63–64	54–55	63–64	54–55	63–64	54–55	63–64	54–55	63–64
USA	—	—	360	419	148	158	63	130	40	58	66	216	115	144	89	88
			23.3	22.4	3.2	9.0	1.1	1.8	0.4	0.9	1.1	3.6	1.7	2.1	3.2	2.4
Canada	496	501	—	—	84	95	66	106	62	83	32	52	1.8	24	17	19
	60.1	53.7			2.3	4.2	1.3	1.6	0.4	0.4	0.5	0.8	0.2	0.3	0.6	0.5
Japan	169	257	36	51	—	—	119	206	30	144	220	183	847	630	473	432
	20.0	27.9	1.7	2.0			2.2	3.2	0.2	0.7	3.4	2.8	11.3	8.7	15.4	11.1
Australia	57	106	28	47	270	386	—	—	630	1192	136	100	121	153	143	167
	6.8	11.2	1.3	1.8	7.1	16.8			4.5	6.0	2.1	1.5	1.6	2.1	4.6	4.2
New Zealand	50	148	30	35	25	107	143	331	—	—	41	19	3	13	9	31
	5.8	16.0	1.4	1.3	0.7	4.7	2.6	4.9			0.6	0.3	0	0.2	0.3	0.8
India	125	165	55	64	148	174	224	159	109	160	—	—	61	38	220	225
	14.7	17.5	2.6	2.5	3.9	7.6	4.1	2.4	0.8	0.8			0.8	0.5	7.1	5.7
Other PTB Labor Intensive	43	198	16	48	624	332	84	125	53	153	85	8	—	—	473	586
	5.0	20.8	0.8	1.8	16.4	14.4	1.6	1.9	0.4	0.8	1.3	0.1			37.3	14.4
Other PTB Land Intensive	194	184	31	33	302	319	193	181	118	129	107	85	174	248	—	—

Note: Lower figures are percentages of total exports sent to the export receiving country.

exports to another country and its imports from the same country "the more complementary their industrial structures are likely to be, the closer they are likely to be geographically, historically, and culturally, and the lower trade barriers are likely to be between them."[24]

Table 7 presents the computed indices for the Pacific Trade Basin. Averages for 1954–55 and for 1963–64 are given for the individual developed countries in the PTB and also for India. The less developed PTB members are subdivided into labor-intensive exporting countries and land-intensive exporting countries.[25] Along with the trade intensity indices in Table 7 are listed the percentages of the exporting country's total exports sent to the corresponding PTB importer.

Turning first to the role of the United States as an importer from PTB members, Table 7 brings out the Key role played by the U.S. in the regionalization of trade in the PTB over the eleven years. Japan, Australia, New Zealand, India, Canada and the labor-intensive developing nations have all shown significant increases in the intensity in which they export to the U. S. Only land-intensive PTB members have failed to share in the movement.

With respect to U.S. exports to the PTB we find an increase in intensity for all countries but in all cases the degree of intensity is less reflecting primarily the particular composition of U. S. exports.[26] In short, the U. S. is more dependent upon the PTB as a source for its imports than on a market for its exports.[27]

24 Kojima, *Ibid* p. 20.

25 The labor-intensive exporting countries are Taiwan, South Korea, and Hong Kong, and the land-intensive exporting countries are Ceylon, Indonesia, Malaysia, the Philippines and Thailand. India will be treated separately due to its size and also because the large volume of commodity imports under the U. S. foreign aid program gives an unrealistic picture of India's increased import dependency upon the PTB. The division of the remaining less developed countries into land-intensive and labor-intensive exporting countries is made on the basis of an eight-category breakdown of the commodity composition of a country's exports according to factor intensity. This approach was developed by Kojima in "The Pattern of International Trade Among Advanced Countries," *Hitotsubashi Journal of Economics,* Vol. 5, No. 1, June 1964, p. 17. This classification is employed using 1964 PTB exports and appears in Table IA of the appendix.

26 In 1964, 42% of U. S. imports came from the PTB but only 36% of its exports went to the PTB. It should be remembered that U. S. imports are valued not on the basis of c.i.f. but f.o.b.

27 It is probably true that the gap between import and export dependence would be larger if allowance was made for U.S. exports to selected PTB countries, due to "tied" aid and also, especially in the case of India, commodity food shipments. Although it should be pointed out that with the exception of India, the percentage of U.S. exports to the developing PTB countries and Japan which is financed by U. S. economic aid has continually decreased over the time period. Excluding India we find in 1957 20% of U.S. exports financed by economic assistance but in 1964 only 8%. Including India, which in the years 1960–1964 received massive commodity assistance from the U. S., the percentage of financed exports is 25% in 1957 and 26% in 1964 (25% in 1965). Thus it can be concluded that the increased U. S. export dependence on the PTB

Australia and, to a lesser extent, New Zealand, represent the countries which are most rapidly realigning their trade patterns with respect to the Pacific Trade Basin. As stated earlier, the reduction in importance of both the Commonwealth payments system and the Imperial Preference system have forced these nations into new trading patterns. In terms of both exports and imports and intensities of trade for both countries have increased for all partner PTB countries, except the land-intensive PTB countries and India.[28]

Japan's export indices have increased for all the developed PTB members and its import indices have increased for all save the labor-intensive and land-intensive countries.[29] Japan also has the highest indices, both import and export, for the labor-intensive and land-intensive PTB members.

Peter Drysdale has argued that the intensity of trade index is not the best index to use to show complementarity among trading partners.[30] According to Drysdale the intensity of trade index lumps under a single heading both complementarity and "special country bias." The latter is a catch-all category referring to such considerations as preferential tariff treatment, geographical proximity, political and cultural ties and other institutional arrangements. Thus a high intensity of trade between two countries (see for example Australia—New Zealand or U. S.—Canada in Table 7) may be due to geographical proximity or cultural ties and not to the basic complementarity in their export and import structures. This points up the need not to pay too much attention to the size of the index. However, the movement in the index over time can be interpreted as a proxy for emerging complementarity if no major institutional alterations have occurred. In the period 1954–1964 no specific tariff agreements were adopted by the PTB countries.[31]

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cannot be attributed to merely tying a larger amount of U. S. economic aid to the area. (The amounts of U.S. economic assistance financed exports [beginning with 1957] were made available to by the Statistics and Reports Division, Agency for International Development, Washington, D.C.)

28 New Zealand's import index with respect to India did increase.

29 The decrease in the import index for the labor-intensive countries points up one of the weaknesses of this formulation. Two of the three countries classified as labor-intensive, South Korea and Taiwan began the period extremely dependent upon the Japanese market and also the distance to Japan from each country is extremely small. Thus the reduction in the average index from 1224 to 523 must be seen in this light.

30 Peter Drysdale, "Pacific Economic Integration: An Australian View," *Pacific Trade and Development* (Papers and Proceedings of a conference held by the Japanese Economic Research Center in January, 1968). Japanese Economic Research Center, February, 1968.

31 In 1965 two agreements were reached which are likely to influence PTB trade of the nations involved in the future. In January, 1965, the Canadian-U. S. Automobile Pact was signed creating a free trade zone between the two countries with respect to motor vehicles and parts. B. W. Wilkenson credits this agreement with much of the credit for reversing Canada; downward trend in exports and imports with the U. S. over the last ten years. This is reflected in Table III. B. W. Wilkinson, "Canadian Trade, The Kennedy Round and a Pacific Free Trade Area," *Pacific Trade and Develop-*

Turning to the less developed PTB members Table 7 brings out the fact that the labor-intensive export countries have faired much better in the PTB during the period than have the land-intensive export countries. The only major improvement for the latter group came in its trade with the labor-intensive developing countries. This is largely due to the concentration of the exports of the land-intensive countries in the traditional primary product areas for which world demand and developed PTB demand has been less than vibrant.

The labor-intensive countries, on the other hand, have experienced important gains with all the developed countries, except Japan. The differences between the two groups of developing PTB members is also seen in their changing shares of total PTB exports indicated in Table 4.[32] Of the five land-intensive developing countries Thailand and the Philippines have been the most successful in maintaining their shares of PTB trade. Thailand has been also to shift away from the traditional primary exports to some extent. For example, corn exports from Thailand to Japan have increased sevenfold.[33]

C. Trade in Labor-Intensive Manufactures

The combination of the labor-intensive export countries with four high per capita income countries makes the trade in labor-intensive manufactures one of the major ingredients in the overall complementarity of the Pacific Trade Basin. A recent National Bureau of Economic Research study by Hal Lary shows the importance of this trade to the PTB.[34] In this work Lary has aggregated the developing nations' exports of labor-intensive manufactures to all the developed countries based upon value-added, per employee, into four main groups and twenty-four sub-groups according to 3 digit S. I. T. C. classes.[35]

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ment, op. cit. Also in August of 1965, the Australian New Zealand Free Trade Agreement (NAFTA) was signed. This agreement is extremely limited with respect to the commodities covered see: I. A. McDougall, "The Prospects of Economic Integration of Japan, Australia and New Zealand," *Pacific Trade and Development, op. cit.* pp. 109–144.

32 In 1965 the respective shares of Hong Kong, Taiwan and South Korea had grown further to 2.10%, 0.83% and 0.32% respectively.

33 S. Naya, "The Commodity Pattern and Export Performance of the Developing Asian Countries to the Developed Areas," *Economic Development and Cultural Change,* July 1967, p. 431.

34 Hal B. Lary, *Imports of Manufactures from Less Developed Countries,* New York, National Bureau of Economic Research, 1968.

35 The four major groups of products are: Group 1–Textiles, Clothing and Accessories; Group 2–Other Light Manufactures, Except Food; Group 3–Labor-Intensive Food Manufactures; Group 4–Labor-Intensive Industrial Materials. *Ibid.* pp. 89–90. Lary, after surveying the recent literature on both sides of the factor intensity reversals argument concludes that the strong-factor-intensity hypothesis required for the Heckscher-Ohlin analysis is of general validity. Thus he bases his selection of labor-intensive manufactures on the U. S. pattern of factor intensities. Although reversals may take place in the PTB it seems unlikely that these would affect a significant amount of PTB trade.

Table 8. Imports of Labor-Intensive Manufactures by Developed from Less Developed Countries, 1965 (Percentage Distribution)

Importing Country	All Items	Group 1	Group 2	Group 3	Group 4
U. S.	41.4	36.4	54.5	24.5	48.9
Canada, Australia and New Zealand	8.5	9.5	6.1	3.1	12.7
Japan	2.7	0.6	3.7	7.0	1.6
Developed PTB	52.6	46.5	64.3	34.6	63.2
Other Developed	47.4	53.5	35.7	65.4	36.8

Note: Compiled from Lary's Table 13, p. 101. Other developed countries include the EFTAand EEC members.

Table 9. Exports of Labor-Intensive Manufactures by Less Developed Countries 1965 (Percentage Distribution)

Exporting Country	All Items	Group 1	Group 2	Group 3	Group 4
India	18.2	12.8	7.7	1.3	42.7
Hong Kong	28.3	49.7	57.6	1.3	1.2
Taiwan	5.6	3.7	4.9	11.4	4.6
South Korea	2.4	3.9	2.0	0.4	2.1
Philippines	3.5	3.2	2.0	3.1	5.3
Other Far East	6.7	4.2	3.8	9.4	10.0
Total Less Developed PTB	64.7	77.5	78.0	26.9	65.9
Other Less Developed	35.3	22.5	22.0	73.1	34.1

Note: For Less Developed Countries, Lary uses the U. N. definition "Economic Class II." Data for this Table comes from Lary's Table 14, pp. 103–104.

First with respect to total imports of labor-intensive manufactures from less developed countries, the developed PTB members account for 52.6 per cent. The high-income, PTB countries take varying percentages of the component groups of products ranging from 34.6 per cent of the labor-intensive food manufactures (group 3) to 64.3 per cent of the other light manufactures except food (group 2).[36] Table 8, compiled from Lary's data, indicates the distribution of imports among the developed PTB countries.

The distribution of the exports is even more impressive in bringing out the important role played by labor-intensive manufactures in the PTB. Of the total exports of labor-intensive manufactures, the less developed members of the Pacific Trade Basin account for at least 57.9 per cent.[37] Table 9 summarizes the distribution of these exports according to Lary's four categories.

The high income developed PTB members complement the low-wage, labor-intensive developing PTB members. As will be seen in the next part, trade in labor-intensive manufactures gives promise of continuing to play an

[36] In this category are included such important PTB exports as footwear, plastic goods, glassware, china, furniture, sporting goods, toys, musical instruments and jewelry.

[37] This is a minimum figure because 6.7% of the total exports were attributed to a category entitled other Asia. Undoubtedly Singapore and Thailand accounted for a major portion of this residual.

important role in the trade regionalization of the PTB. If the developed PTB members do not take steps to restrict the inflow of labor-intensive imports through the imposition of additional quotas this trade should promote even greater regionalization in the years to come.

IV. THE FUTURE OF THE PACIFIC TRADE BASIN

Several impediments preventing greater trade regionalization within the Pacific Trade Basin should be mentioned here. First of all, the use of so-called "voluntary" export restrictions, at other times euphemistically referred to as "orderly marketing arrangements," appears to be widespread within the Pacific Trade Basin.[38] Other PTB countries which have chosen to, or been forced to, employ such restrictions are India, Hong Kong and Taiwan.[39]

Most of these restrictions have been employed to curtail the export of labor-intensive, light manufactures. Their removal would quite likely lead to even greater regionalization within the Pacific Trade Basin because the major exporters and importers are concentrated within the region.[40]

A second factor preventing greater PTB regionalization is the continuation of the Commonwealth Preference system. Although it has become less important through the years due to the increase in prices and the reduction in general tariffs, it remains a factor in Britain's exports to the PTB commonwealth nations and imports from these nations.[41] The removal of this margin of preference, because of Britain's entry into the EEC or for some other reason, would undoubtedly increase PTB trade.

A third important factor has to do with the concept of the "effective rate" of tariff protection.[42] Calculating the effective rate of tariff protection as being that amount of protection afforded to the value added in the final stage of the production process Balassa has computed the average effective tariff on manufactures for both the United States and Japan as being approximately twice as high as the average nominal rate in each country as of 1962.[43] The average of nominal rates for the United States and Japan were

38 As of the end of May, 1964, Japan was reported exercising quantitative export control over 67 commodities, 44 of which apply to textile products. Japan External Trade Organization, *Foreign Trade of Japan, 1964,* Tokyo, 1964.

39 For a good discussion of this device for trade control see Gardner Patterson, *Discrimination in International Trade, The Policy Issues 1945–65*, Princeton, New Jersey, Princeton University Press, 1966. Chapter VI. Also see GATT's *Restrictions and Other Measures Relating to the Problem of Market Disruption,* L/1164 (Genèva: GATT, May 1960).

40 Lary, *op. cit.* Chapter 4.

41 Sidney Wells, "Trade Policies for Britain—A Study in Alternatives," London, Oxford University Press, 1966. Wells cites a British Board of Trade estimate that the margin of preference enjoyed by Britain's exports was from 6 1/2 to 7 1/2% on all exports to the preference region, and somewhat narrower for Commonwealth exports to the U. K. pp. 22–23.

42 For a good discussion of this concept see Harry Johnson's *Economic Policies Toward Less Developed Countries,* Washington D. C., The Brookings Institution, 1967, pp. 96–101.

43 Bela Balassa, "Tariff Protection in Industrial Countries: An Evaluation," *Journal of Political Economy,* December 1965, p. 591.

11.6 and 16.2 per cent respectively while the effective rate averages were 20.0 and 29.5 per cent. Although actual computations remain to be published there is reason to believe a similar situation exists with respect to the tariffs of Australia and Canada.[44]

Balassa has also shown that the effective protection rates of the developed countries are higher than average on the manufactured exports of the less developed countries.[45] Moreover he has estimated the likely increase in the export of manufactures by the developed nations to the less developed nations in the event of tariff elimination. His results underline the potential for trade expansion within the Pacific Trade Basin.

Based upon separate computations for each of 29 industries Balassa estimates the total expansion of exports of manufactured goods by the developed countries as being over $700 million. The distribution of this estimated increase in trade is indicated in Table 10.

Table 10. Estimated Increased Exports of Manufactured Goods by the Developing Areas (million of dollars)

	U. S.	Canada	Japan	Other Industrial Countries	Total
Latin America	46.0	0.6	3.9	12.4	63.0
Africa	0.7	—	1.9	9.7	12.3
Middle East	13.8	0.6	0.2	28.2	42.9
Asia	416.4	21.3	8.8	136.9	583.4
Total	477.4	22.5	14.7	187.3	701.9

Note: Balassa, *op. cit.*, p. 377—Balassa's estimate excludes trade expansion under the Commonwealth Preference System. Other Industrial Countries include the EEC and EFTA members.

Thus we find that the three PTB developed countries covered in Balassa's estimates accunt for over 73 per cent of the total estimated increase in imports, and that Asia accounts for over 83 per cent of the predicted exports of manufactures from the less developed world. Consequently, the high protection prevailing among the developed PTB countries can be judged an important barrier to greater intra-PTB trade. Although, as Lary has shown, the developed PTB countries are relatively important as importers of the manufactured products of the less-developed PTB countries, it is apparent that considerably more of this trade remains "damned-up" by the high tariffs of the developed PTB countries.

All of these factors suggest that a considerable amount of potential complementarity remains to be tapped within the Pacific Trade Basin. The future of the region, of course, is intimately tied to future developments in the cold

44 W. Corden, "The Tariff," in Alex Hunter, ed., *The Economics of Australian Industry* (Melbourne University Press) 1963, p. 197; and J. R. Melvin and B. W. Wilkinson, *Effective Protection in the Canadian Economy,* forthcoming.

45 Bela Balassa, "The Impact of the Industrial Countries' Tariff Structure on Their Imports of Manufactures from Less Developed Areas," *Economica,* November 1967, pp. 375–377.

war and to the form of the eventual settlement in Vietnam. It is possible, with the return to peaceful conditions in Asia, that the Pacific Trade Basin will grow in size and importance and it will begin to rival in importance the North Atlantic Community.[46]

Appendix

Table I-A. 1964 PTB Distribution of Exports by Commodity Categories According to Factor Intensiveness

	N	N_1	N_2	N_3	N_4	L	L_1	L_2	K	K_1	K_2
Australia	84.2	15.2	24.6	37.2	7.2	3.8	2.2	1.6	12.0	7.2	4.8
Canada	56.3	16.9	8.6	11.1	19.7	3.6	1.1	2.5	40.1	26.0	14.1
Ceylon	98.9	67.9	30.6	0.4	—	0.6	0.6	—	0.5	0.5	—
Hong Kong	7.2	0.5	4.5	0.9	1.3	85.8	78.5	7.3	7.0	1.8	5.2
India	55.5	—	38.4	8.0	9.1	42.3	41.3	1.0	2.2	1.5	0.7
Indonesia	99.7	—	11.0	51.4	37.3	0.2	0.1	0.1	0.1	0.1	—
Japan	7.2	0.1	4.7	2.0	0.4	41.0	33.4	7.6	51.6	22.4	29.2
South Korea	50.5	2.0	20.4	11.1	17.0	39.9	38.9	1.0	9.6	7.7	1.9
Malaysia	67.3	1.6	9.2	42.4	14.1	9.3	7.1	2.2	23.4	17.2	6.2
New Zealand	94.7	—	51.5	42.9	0.3	2.2	2.1	0.1	3.1	2.8	0.3
Philippines	93.9	—	31.9	53.2	8.8	5.7	5.5	0.2	0.4	0.4	—
Thailand	98.0	49.0	12.0	28.2	8.8	1.4	1.4	—	0.6	0.5	0.1
U. S.	33.4	10.4	7.4	9.4	6.2	15.5	9.9	5.6	51.2	14.6	36.6
Taiwan	60.0	5.2	49.2	4.1	1.5	25.8	24.7	1.1	14.2	11.9	2.3

Note: The Kojima breakdown is as follows: 4 Natural resource-intensive categories: N_1-goods: staple foods (rice, wheat and other grains); N_2-goods: other foodstuffs including manufactured food products; N_3-goods: agricultural raw materials; N_4-goods: minerals, metals, and fuels; 2 labor-intensive categories; L_1-goods: labor-intensive goods of light industry, both intermediate and final goods; L_2-goods: labor-intensive final goods of heavy and chemical industry origin; and 2 capital-intensive categories; K_1-goods: capital-intensive intermediate goods of heavy and chemical industry origin (steel, fertilizer, chemical fibres, etc.); K_2-goods: capital-intensive heavy machines and equipment. K. Kojima, "The Pattern of International Trade Among Advanced Countries," *Hitotsubashi Journal of Economics,* Vol. I. No. 1 June 1964, p. 17.

46 The increasing westward orientation of the U.S. is brought out in a study published by the Stanford Research Institute. The westward shift in the U.S. population, income origin, and manufacturing employment is documented for the following thirteen western states: Washington, Oregon, California, Idaho, Nevada, Arizona, New Mexico, Utah, Colorado, Montana, Hawaii and Alaska, they jointly accounted for 11% of the total population in 1938, 17% in 1964; 13% of income in 1938 and 18% in 1964; and 7% of manufacturing employment in 1938 and 12% in 1964. S.R.I., *Pacific Trade,* Number 1, Vol. 1, Stanford, Cal. 1967, p. 11.