The Potential Benefits of a Hypothetical ASEAN Free Trade Area

C. H. CHAI

Summary

The study makes an attempt to appraise the potential benefits for ASEAN moving towards closer economic co-operation through the formation of a Free Trade Area. Part I examines the recent trends in ASEAN intraregional trade structure. Part II assesses the static gains in terms of trade expansion due to tariffs elimination among the five ASEAN countries. Part III estimates the dynamic gains in terms of manufacturing output expansion as a result of the enlargement of the market. The conclusion reached is that the chance of success for an Asean Free Trade Area is likely to be rather slim because (1) the basis for such a form of economic co-operation in ASEAN is rather fragile; (2) the static gains will be rather insignificant; and (3) the potential dynamic gains may be considerable, but they are unlikely to materialize through the mere formation of a Free Trade Area.

I. Introduction

The purpose of this paper is to evaluate the potential benefits of an upgrading of the present lower form of economic co-operation among ASEAN countries to a higher form through the establishment of an ASEAN Free Trade Area as envisaged by some of the founders of the Association.

Table 1: **Population, National Income and per Capita National Income of ASEAN Countries 1969**

Country	Population (million)	National Income in market prices (in million US$)	Per Capita National Income (in US$)
Indonesia	117.9	9.551	81.0
Malaysia	9.0[1]	2.783[1]	309.0[1]
Philippines	35.7	8.332	233.0
Singapore	2.0	1.626	806.0
Thailand	33.5	5.765	172.0
ASEAN	197.7	28.057	141.9

[1] West Malaysia only.
Source: UN Statistical Year Book 1972.

First, intra-regional trade of the region during the past decade will be analyzed. This will be followed by an assessment of the possible static effects of tariff elimination among the five member countries on the basis of their 1969 trade figures. Finally an attempt will be made to examine the dynamic implications of such a scheme for the individual member countries as well as for the region as a whole.

Table 2: **ASEAN Areal Distribution of Exports**
(per cent)

Exports from \ to	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN	Other Asian countries	Japan	Australia & N. Zealand	U.S.A.	Western Europe	Latin America	Other Countries	Total exports
Indonesia	—	9.01	3.00	—	1.18	13.18	3.70	5.31	4.97	30.08	28.62	0.47	13.68	100.00
	—	—	3.06	—	1.10	4.16	3.29	1.28	8.90	24.74	33.96	0.60	23.06	100.00
	—	4.08	3.81	—	0.98	8.87	2.76	38.19	9.42	18.15	18.73	0.32	3.55	100.00
Malaysia	1.52	—	0.12	—	0.95	2.58	4.49	18.30	5.68	11.76	42.80	2.21	12.18	100.00
	—	—	1.57	—	0.84	2.41	8.15	31.16	4.13	20.24	27.76	1.86	4.28	100.00
	1.20	—	1.68	—	0.82	3.71	4.88	23.39	3.29	18.95	19.93		25.84	100.00
Philippines	0.04	—	—	0.11	—	0.15	2.72	24.01	0.22	49.93	19.58	1.82	1.58	100.00
	1.99	0.04	—	0.48	0.16	2.67	5.11	33.69	0.52	43.12	12.92	0.87	1.09	100.00
	0.09	0.05	—	0.55	0.47	1.17	6.67	40.94	0.57	39.03	9.39	1.25	0.97	100.00
Singapore	—	—	3.48	—	6.47	9.95	16.35	9.44	11.36	14.58	4.73	6.42	27.17	100.00
	—	—	1.67	—	4.53	6.19	32.95	12.86	3.34	6.23	23.58	2.90	11.95	100.00
	—	—	0.46	—	4.86	5.32	23.05	9.20	4.21	13.92	21.46	2.62	20.22	100.00
Thailand	4.12	14.36	0.10	11.36	—	29.93	11.38	18.03	0.67	14.13	14.26	0.45	11.16	100.00
	3.97	8.59	2.10	6.81	—	21.48	20.57	21.56	0.56	14.00	14.70	0.03	7.12	100.00
	1.90	7.53	0.31	7.76	—	17.51	18.96	19.03	0.46	14.27	20.61	0.04	5.71	100.00
ASEAN	1.00	3.91	1.33	1.56	1.71	9.50	7.09	14.86	4.89	23.48	24.71	2.29	13.18	100.00
	1.26	1.71	1.63	1.46	0.84	6.90	10.68	22.15	3.53	24.33	22.69	1.07	8.65	100.00
	0.63	1.68	1.17	1.23	1.70	6.41	11.61	24.82	3.50	20.41	18.39	0.94	13.91	100.00

[1] Upper column, 1960: middle column, 1967: lower column, 1969.
[2] Singapore's trade with Malaysia and Indonesia is excluded.
Sources: 1960, 1967: IMF, Direction of Trade, 1958–1962 and 1963–1967, 1970: UN. **Commodity Trade Statistics** 1970, Vol. XX and IMF, Direction of Trade, 1967–1971.

II. Intra-regional Trade Structure in ASEAN

Intra-regional trade ratio in terms of the percentage "share" of the five member countries' total exports to ASEAN in their total exports to the world amounted to 21.5 per cent in 1969, a ratio which is regarded as relatively high as compared with those of other developing regions. However, a large proportion of this trade is believed to be Singapore's re-export trade with Malaysia and Indonesia, although its exact proportion has never been made known officially. If the whole of Singapore's trade with Malaysia and Indonesia is treated as re-export trade and excluded from the intraregional trade figure, the 1969 intra-regional trade ratio drops to a mere 6.4 per cent, a ratio which is roughly comparable to those of other developing regions.

Over the past decade, the intra-regional trade ratio, either in gross term (including Singapore's trade with Malaysia and Indonesia) or in net term (excluding Singapore's trade) has been declining: the gross ratio from 27.7 per cent in 1960 to 21.5 per cent in 1969, and the net ratio from 9.5 per cent in 1960 to 6.4 per cent in 1969. Accordingly, the importance of the ASEAN market has been decreasing for most of the individual member countries. As shown in Table 2, the significance of this market has been considerably reduced for Thailand, Singapore and Indonesia, while Malaysia and the Philippines reported marginal increases of their exports to the ASEAN region only.

The trade relations between the ASEAN countries can described be more exactly in terms of their trade intensity indices[1]. Country i may export only a small percentage of her exports to country j, but trade between them may well prove to be intensive if it can be shown that the former exports more to the latter than might be expected from latter's share in the world trade total. It follows that to assess the trade intensity between countries, their relative importance in world trade total has also to be taken into account.

Trade intensity within the ASEAN region was more than 100 in the past decade as shown in Table 3. This implies that the five member countries traded intensively with each other, however, the intensity has been decreasing from 424 in 1960 to 275 in 1969. The centres of ASEAN intra-regional trade have been Thailand, Indonesia, Singapore and Malaysia while the Philippines have been lagging behind. The order of trade intensity in 1969 was 751 for Thailand, 381 for Indonesia, 228 for Singapore, 159 for Malaysia, and only 50 for the Philippines. Over the decade the trade intensities of Thailand, Indonesia, and Singapore with ASEAN dropped almost by one half.

During the same decade ASEAN also traded intensively with non-ASEAN countries such as Japan, The United States, Australia, New Zealand and the other Asian countries. The ASEAN trade intensity with Japan was the highest and maintained consistently at a high level of about 400. ASEAN trade intensity with other Asian

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[1] The trade intensity is measured by the ratio $\dfrac{X_{ij}}{X_i} / \dfrac{M_j}{W}$, where X_{ij} is country i's export to country j, X_i country i's total exports, M_j country j's total imports and W world trade total. A ratio of more than 100 indicates that country i exports more to country j than might be expected from country j's share in the world trade total. See Asian Development Bank: Southeast Asia's Economy in the 1970's, Longman, London, 1971, p. 262.

Table 3: ASEAN Intensity of Trade

Exports from	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN	Other Asian countries	Japan	Australia & N. Zealand	U.S.A.	Western Europe	Latin America	Other Countries
Indonesia	—	2.253	698	—	347	588	80	154	206	261	65	7	53
	—	0	519	—	208	191	68	22	405	184	67	12	146
	—	1.237	762	—	192	381	60	639	473	127	38	7	22
Malaysia	370	—	28	—	279	115	97	532	236	102	97	36	48
	0	—	266	—	159	111	168	534	188	150	55	37	27
	400	—	336	—	160	159	106	391	165	133	40		122
Philippines	9	0	—	17	0	7	59	698	9	433	45	30	6
	585	11	—	130	30	123	105	575	24	320	26	17	7
	30	15	—	89	92	50	145	685	28	273	19	27	6
Singapore	—	—	809	—	1.903	444	354	274	471	127	11	105	106
	—	—	283	—	855	284	678	220	152	46	47	57	76
	—	—	92	—	952	228	500	154	211	97	43	56	72
Thailand	1.005	3.590	23	1.721	—	1.336	246	524	28	123	32	7	44
	1.168	2.454	356	1.841	—	985	423	369	26	104	29	1	45
	633	2.281	62	1.251	—	751	411	318	23	99	41	1	35
ASEAN	244	978	309	236	503	424	154	432	203	204	56	37	51
	371	489	276	395	159	317	220	379	161	181	45	21	55
	210	509	234	198	333	275	252	415	176	143	37	20	84

1 Upper column, 1960; middle column, 1967; lower column, 1969.
2 Singapore's trade with Malaysia and Indonesia is excluded.
Sources: See Table 1.

countries has been increasing from 154 in 1960 to 252 in 1969, while that with the United States, Australia and New Zealand has been decreasing.

An analysis of the commodity structure of the intra-regional trade in 1969 (see Table 4) in terms of the UN Broad Economic Categories (BEC) reveals that the largest commodity group traded was Fuel and Lubricants which amounted to about 34 per cent of the total identified intra-regional trade[2].

The major items within this group were crude petroleum and petroleum products which accounted for 99 per cent of the total value of this group. The second largest commodity group traded within the ASEAN region was Food and Beverages which accounted for another 33 per cent of the total intra-regional trade. The major item within this group was rice with a share of 72 per cent of this group's value. The third largest commodity group was Industrial Raw Materials, its total share being 24 per cent. Maize, bags and sacks of textile and fertilizers n.e.s. were the major items within this group. Other less important commodity groups within the ASEAN trade were Transport Equipment and their Accessories, Consumer Goods, Machinery, and other Capital Equipments and their Accessories.

Thus the analysis of recent trends of the ASEAN intra-regional trade structure reveals that the overall intra-regional trade ratio has dropped and that trade ties have become less intensive. Moreover, the ASEAN export trade has shifted away from the regional market to other Asian countries and Japan. Finally, the intra-regional trade is confined mainly to crude and semi-processed primary products such as minerals, fuels, rice, maize, bags and sacks of textiles, fertilizers n.e.s. etc.

Table 4: **ASEAN Intra-Regional Trade Structure by Commodity Group, 1969**

BEC Commodity Group		SITC	%
Total intra-regional imports			100
1: Food and Beverages			33.2
of which	Rice	042.1 + 042.2	23.8
2: Industrial Raw Materials			24.2
of which	Maize unmilled	044	3.9
	Bags, Sacks of Textiles	656.1	1.7
	Fertilizers N. E. S.	561.9	1.0
3: Fuels and Lubricants			33.9
of which	Crude Petroleum	331	22.9
	Petrol Products	332	10.6
4: Machinery, Other Capital Equipments and Accessories thereof			1.2
5: Transport Equipment and Accessories thereof			3.4
6: Consumer Goods			2.5
7: Other non-specified Goods			1.7

Note: Imports of Singapore from Malaysia and Indonesia, Imports of Malaysia and Indonesia from Singapore, other identified entrepot items and non-specified trade items are not included.
Source: UN Commodity Trade Statistics 1969.

[2] Total intra-regional trade excluding Singapore's trade with Malaysia and Indonesia, other identified entrepot trade items, and non-specified items.

Apart from the mineral fuels most of these commodities belong to the category of "stagnant trade sector" which, due to its relatively low income elasticity, has very little growth prospects.

III. The Static Effects

The immediate or static impacts of tariff eliminations on intra-regional trade are determined by the rate of increment of the import value for each of the intra-regionally traded commodities, $\dfrac{\triangle M}{M}$, where $\triangle M$ is the increment in import value due to tariff elimination and M the original import value for each commodity. Under the assumption that export prices will remain unchanged, $\dfrac{\triangle M}{M}$ will be determined by[3]

$$\frac{\triangle M}{M} = \frac{t}{100 + t} \cdot \eta,$$

where t is the original tariff level, $\dfrac{t}{100 + t}$ the rate of decline of the import price due to tariff elimination, and η the price elasticity of the import demand. The importance of an import increment of a particular commodity in relation to the total intra-regional imports, which is $\dfrac{\triangle M}{\Sigma M}$, where ΣM is the total intra-regional imports, is further determined by $\dfrac{M}{\Sigma M}$, which is the share of this particular commodity in the total intra-regional imports in the base year[4]:

$$\frac{\triangle M}{\Sigma M} = \frac{\triangle M}{M} \cdot \frac{M}{\Sigma M} = \frac{t}{100 + t} \cdot \eta \cdot \frac{M}{\Sigma M}.$$

Thus the overall static effects of tariff elimination on intra-regional trade will depend not only on the height of the original tariffs and the price elasticities of the import demand for the commodities traded but also on their relative shares in the total intra-regional trade in the base year.

Commodities which have a relatively large share in the total identified intra-regional trade in 1969 are listed in Table 5 together with their original tariff rates and their sources of regional supply and demand. They cover 74 per cent of the total identified intra-regional trade. Most of the major commodities such as rice, crude petroleum, bags, sacks of textiles, leguminous vegetables, fertilizers n.e.s., bovine meat, vegetable oil residues, non-wheat meal and flour, fish, tins, cement, woven cotton, crude vegetable materials, and soya bean, which made up 57 per cent of the total identified intra-regional trade in 1969, were subject to a tariff rate of 10 per cent or less and in many cases no duty at all. The price elasticities of import demand for most of these commodities are likely to be relatively low as they are mainly crude and semi-processed primary products. These two factors, namely the relatively low tariff rate and the low price elasticity of import demand would

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[3] K. Kojima, Japan and a Pacific Free Trade Area, University of California Press, Berkeley and Los Angeles, 1971, pp. 32—33.
[4] Ibid.

Commodities	SITC	% share in Total identified intra-regional imports	Exporting country/ countries[1]	Importing country/ countries[1]	Tariff in %
Rice	042.1+042.2	23.8	T P	S M P	0 0 0
Crude Petroleum	331	22.9	I M	S P	0 10
Other Petroleum Products	332.2—332.6	9.0	I M S[2] P	T	20.7—42.9
Maize unmilled	044	3.9	T	M P S	0 50 0
Bags, sacks of textiles	656.1	1.7	T	I S	10 0
Leguminous vegetable, dry	054.2	1.5	T	M S	2.8 0
Motor spirit	332.1	1.5	I M S	T P	135 30
Coffee, green, roasted etc.	071.1	1.3	I	T M S	40 13.5 0
Motor Vehicles parts n.e.s.	732.8	1.1	S	P	10—20
Fertilizes n.e.s.	561.9	1.0	P M	T	0
Bovine meat, fresh, frozen	011.1	0.7	T	S M	0 0
Vegetable oil residues	081.3	0.7	T	S M	0 0
Meal and flour, non wheat	047	0.7	T	M S	0 0
Fish fresh, chilled, frozen	031.1	0.6	T I P	M S	0 0
Salt	276.3	0.6	T	M S I	0 0 70
Palm oil	422.2	0.5	I M S	P	15
Tins, alloy unwrought	687.1	0.5	M	P	0
Cement	661.2	0.5	M	I T	10 10
Woven cotton, blchd, etc.	652.2	0.4	T	S	0
Crude vegetable materials	292	0.4	T	M S	0 0
Soya bean	221.4	0.3	T	M S	0 0
Polishes etc.	554.3	0.3	S	T	17
All major commodities		74.0			

[1] Listed in order of importance. I, Indonesia; M. Malaysia; P, Philippines; S, Singapore, and T, Thailand.
[2] Net exporting country.
Source: Trade data: see Table 3. Tariff data: Custom Tariffs of the Five ASEAN Nations.

therefore leave most of the major commodities traded in ASEAN unaffected by tariff elimination. Only a limited amount of the commodities in Table 5 such as petroleum products, coffee and maize, which were subject to relatively high tariff rates, would be strongly affected by tariff elimination. However, due to their relatively small share in the total identified intra-regional trade volume, which amounted to only slightly more than 10 per cent, the importance of their import increments due to tariff elimination would become insignificant with respect to the total intra-regional trade. Thus, the overall immediate or static effects of tariff elimination on the ASEAN intra-regional trade would be rather limited.

The relatively small static impact of tariff elimination on the intra-regional trade is — as might be expected — mainly due to the autarchic policies of development pursued in most of the ASEAN countries. In line with this type of policy the tariffs are necessarily kept high for those goods in which the member countries strive for self-sufficiency. As a result, the intra-regional trade in these types of commodities is likely to be low or even non-existent. Consequently their static impacts of tariff elimination tend to be insignificant inspite of their high tariff level since their share in the total intra-regional trade in the base year are relatively low or nil. For those commodities, the member countries are not in a position to implement import substitution and hence have to import from other member countries, the original tariff levels are likely to be relatively low or non-existent. Therefore, their static effects of tariff eliminations will again be rather limited inspite of their relative large shares in the total intra-regional trade.

It can also be shown that gain and loss resulting from any immediate marginal increment in the intra-regional trade due to tariff elimination would be unevenly distributed among the five member countries. The potential beneficiaries would be Singapore, Malaysia and Indonesia, as these countries imposed relatively low duties or no duties at all for their major imports from other ASEAN countries whereas their major exports to the other ASEAN countries were subject to relatively high import duties, particularly in Thailand and the Philippines (see Table 4). Consequently tariff elimination would cause their exports to rise more than their imports and effect an improvement in their trade balances with the other ASEAN countries. On the other hand the trade balance of Thailand and the Philippines with the other ASEAN countries would deteriorate since their major exports were subject to relatively low or no duty at all in their ASEAN importing countries, while both countries maintained a relatively high original tariff level for imports from other ASEAN countries.

Apart from the possibility of errors due to the limitations of trade statistics the assessment of the static effects in the preceding paragraphs is subject to two additional important qualifications. Firstly, only the static effects of elimination of the tariff barrier have been considered while those of the non-tariff barrier have been neglected so far. Since a number of non-tariff restrictions do exist in ASEAN either openly or covertly, their elimination would certainly provide an additional source for intra-regional trade expansion. Secondly, a certain part of Singapore's trade with Malaysia and Indonesia which is genuine intra-regional trade has been neglected because the whole of Singapore's trade with these two countries is treated as entrepot trade and has not been considered. Thus the formation of a Free Trade Area in the ASEAN region will not only enhance the position of Singa-

pore as an entrepot port but also stimulate the genuine intra-regional trade between Singapore and its two neighbours. However, since the existing trade tariffs in Singapore for commodities imported from ASEAN countries are low and in most cases non-existent, the direct impact would be an increase of Malaysian and Indonesian imports from Singapore rather than an increase of Singapore's imports from these two countries. This again would cause an improvement of Singapore's trade balance and a deterioration of Malaysia's and Indonesia's trade balance with ASEAN!

IV. The Dynamic Effects

The basic economic argumant for a closer economic co-operation among the developing countries, however, lies not in the static gains derived from such a scheme under the existing framework of production but rather in the dynamic gains derived from economies of scale through enlargement of the market for many kinds of industry. It has been shown that the optimal scale of a plant for many industries is usually larger than that which can be sustained by a relatively small domestic market of the individual country, and that the size of the domestic market thus sets the barrier for the level of industrialization which the individual country can achieve through national import substitution policies. Closer economic co-operation therefore provides a leeway for the developing countries to break through this barrier. First of all, the expansion of the market will enable some existing producers to increase their output and to reduce the unit cost via a larger and more economic scale of plant. Secondly, together with the preferential treatment granted to the member countries by each other the enlargement of the market will induce the development of infant industries and sectors. Finally it is hoped that in response to the extension of the market several growth points i.e. industrial complexes with strong backward and forward linkage effects will emerge and provide investment opportunities in other sectors.

To assess the possible impact of the above mentioned dynamic forces upon the manufacturing sector one can compare the 'normal' manufacturing output of the region in case of being integrated with the 'normal' manufacturing output of each individual country not integrated. The difference in the manufacturing output level in the two alternative situations could then be attributed to the market size and the economies of scale, i.e. to closer economic co-operation.

The studies of industrial growth by Chenery and United Nations[5] reveal that the 'normal' output level of the manufacturing sector in a country is primarily determined by the level of its per capita income and its market size, namely its population. The regression equation for the total manufacturing industry which resulted from the United Nations study was as follows:

$$\log V_o = -1.637 + 1.369 \log Y + 1.124 \log P$$

where V_o is the value added in the manufacturing industry, Y the per capita income and P the population.

[5] H. P. Chenery, Patterns of Industrial Growth, in: American Economic Review, Sept. 1960, and United Nations: A Study of Industrial Growth, New York, 1963.

The application of the above regression equation to the five ASEAN countries based on the 1969 population and per capita income figures (see Table 1) yields the following results:

'Normal' Manufacturing Output in ASEAN, 1969
(in million US$)

'Normal' value added. Five ASEAN countries separately	6,849.3
'Normal' value added. ASEAN as a region	7,995.0
Difference — reflecting the effects of integration	1,145.7

The dynamic gain would be an increase of the manufacturing output level by 16.7 per cent. This would imply not only a considerable improvement in the region's degree of industrialization but also in its rate of growth of national income and per capita income. But how relevant is this estimate to ASEAN?

To begin with, the concept of 'normality' refers only to what can be anticipated on the average on the basis of the information in the sample of the countries examined. The ASEAN case can hardly be considered as average or normal as its 'actual' level of industrialization in 1969 is only about 50 per cent of its 'normal' level.

Secondly, the relationships derived in the studies are based on a very simplified model which comprises only a limited number of the most important explanatory variables. The specific institutional and other important economic characteristics of any particular region or country are only partly reflected in these relationships. For instance it is assumed in the above estimate that the lack of demand constitutes the principal constraint in the industrialization process. In ASEAN as well as in other similar developing economies, however, lack of supply of such valuable factors as capital, organizational skill, and technical know-how may well act as equally important constraints as the lack of demand for industrial development. It may be argued that foreign investors would readily offer to provide these scarce factors, but this would create the additional problem of non-locals being the major beneficiaries of a close economic co-operation in ASEAN.

Thirdly, in view of the fact that a considerable proportion of the population is still living in subsistence agriculture the possibility of the imperfect functioning of the market mechanism has also to be taken into account. The imperfect market mechanism together with the now existent inadequate transportation facilities between the ASEAN countries would prevent potential dynamic gains, if any, from being realized.

Finally, even if the market mechanism does function perfectly in the region, the free play of market forces in such an economic grouping like ASEAN, which is made up of states at different levels of development, would work in favour of the more developed countries and discriminate against the less developed members through the concentration of the investment and growth of the manufacturing industry mainly in the former countries. The economic distance between the more developed and less developed would be widened and the lagging countries would soon threat to withdraw from the grouping.

V. Conclusions

From the above findings it may be concluded that the chance of success for ASEAN moving towards closer economic co-operation through the formation of a Free Trade Area is likely to be rather slim. The basis for such a form of economic co-operation is rather fragile as indicated by the small and shrinking intra-regional trade ratio, declining trade intensity and the stagnant type of commodities traded within the region.

The static gains in terms of trade expansion are likely to be rather insignificant as the existing trade and tariff structure is such that only a limited amount of intra-regional trade would be affected by tariff elimination.

The dynamic gains in terms of manufacturing output expansion as a result of the enlargement of the market may be considerable. However, unless something is done to break the supply bottlenecks and to eliminate the market imperfections these gains are very unlikely to materialize.

Finally it has been shown that the pattern of distribution of expected gains from this kind of economic co-operation would be so unequal that a consensus towards the establishment of such a type of economic co-operation would hardly be obtained or if so, hardly sustained.

Thus, to increase and intensity economic co-operation under the constraint of the balanced distribution of the potential benefits among the member countries, the mere formation of a Free Trade Area will not be sufficient for ASEAN. A closer type of economic co-operation in the form of co-ordination of development planning with the aims of deliberately promoting the static and dynamic effects of co-operation and to ensure a balanced regional growth may well prove to be unavoidable.