

ECONOMIC DEVELOPMENT AND REGIONAL INTEGRATION OF THE ASEAN  
MEMBER COUNTRIES

By  
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DECLARATION

Except where otherwise indicated  
this thesis is my own work.

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### ABSTRACT

The ASEAN member countries are among the fastest growing developing countries in the world. Their high rate of growth during the past two decades and their collective efforts in world affairs have received growing international notice. The objective of this study is to examine the extent to which economic growth resulted from regional integration among the ASEAN member countries.

The study of the characteristics of the ASEAN economies, their growth performance and their experience of economic cooperation, suggests that their economic achievements mainly resulted from the effectiveness of each country's own policies. Outward orientation toward world markets was key, but it was supported by relatively efficient macroeconomic and sectoral policies. The region had relatively high intra-regional trade before the formation of ASEAN, and such trade has persisted. However, apart from Singapore's entrepot trade, it principally consists of complementary trade in primary products which have never become heavily protected. Intra-ASEAN trade in manufactures has not increased appreciably, because ASEAN has not reduced protection substantially either among the member countries alone, or among the member countries and against the rest of the world. Econometric experiments confirmed that little would be gained by a preferential arrangement, and suggested that complete intra-ASEAN trade liberalization would also not lead to a marked increase in the ratio of intra-ASEAN to total ASEAN trade. Much of such an increase would, moreover, consist of trade diversion rather than trade creation. A reduction of trade barriers within ASEAN simultaneously with world wide trade liberalization would in contrast, lead to appreciable output and trade growth for the ASEAN member countries.

## GLOSSARY

- ACM: Arab Common Market - Egypt, Iraq and Jordan (1963)
- AEM: ASEAN Economic Ministers
- AIC: ASEAN Industrial Complementation Program
- AIJV: ASEAN Industrial Joint Venture Projects
- AIP: ASEAN Industrial Projects scheme
- AP: Andean Pact - Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela (1969)
- ASA: Association of Southeast-Asia - Malaya, the Philippines and Thailand (1961)
- ASEAN: Association of South East Asia Nations - Indonesia, Malaysia, the Philippines, Singapore and Thailand (1967), plus Brunel (1984)
- ASEAN-CCI: ASEAN Chambers of Commerce and Industry
- BENELUX - Belgium, Netherlands and Luxembourg (1920)
- CACM: Central American Common Market - Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua (1960)
- CARICOM: Caribbean Community - Antigua, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, St Kitts-Nevis-Anguilla, St Lucia, St Vincent, and Trinidad and Tobago (1973)
- CARIFTA: Caribbean Free Trade Area - predecessor of above
- CEAO: West African Economic Community - Ivory Coast, Mauretania, Niger, Senegal and Upper Volta (1973)
- CEPGL: Economic Community of the Countries of the Great Lakes - Rwanda, Burundi and Zaire (1976)
- CMEA: Council for Mutual Economic Assistance - Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania and USSR (1949); Mongolia (1962); Cuba (1972); Vietnam (1978)
- EAC: East African Community - Kenya, Tanzania and Uganda (1967)
- EC: European Communities - Belgium, France, Federal Republic of

Germany, Luxembourg and Netherlands, (1957); Denmark, Ireland, and the United Kingdom (1973); Greece (1981); Portugal, Spain and Turkey (1986)

ECOWAS: Economic Community of West African States - all those countries participating in UDEAC, CEA0, MRU plus some other West African states (1975)

EFTA: European Free Trade Association - Austria, Denmark, Norway, Sweden, Switzerland with Liechtenstein, and the United Kingdom (1960); Finland (1961); Iceland (1970)

LAFTA: Latin American Free Trade Association - Argentina, Brazil, Chile, Mexico, Paraguay, Peru, and Uruguay (1960); Colombia and Ecuador (1961); Venezuela (1966); Bolivia (1967)

MRU: Mano River Union - Liberia and Sierra Leone (1973)

PTA: Preferential Trading Arrangement of the ASEAN Member Countries

RCD: Regional Cooperation for Development - Iran, Pakistan and Turkey

SACU: Southern African Customs Union - Botswana, Lesotho, Swaziland and the Republic of South Africa (1969)

SITC: Standard International Trade Classification

UDEAC: Central African Customs and Economic Union -Cameroon, Central African Republic, Congo-Brazzaville and Gabon (1966)

Notes: (1) All figures are in US dollars. (2) figures have been rounded where appropriate to avoid spurious implications of accuracy. Percentages in tables therefore do not always add to 100.

Germany, Luxembourg and Netherlands, (1957); Denmark, Ireland, and the United Kingdom (1973); Greece (1981); Portugal, Spain and Turkey (1986)

- ECOWAS: Economic Community of West African States - all those countries participating in UDEAC, CEA0, MRU plus some other West African states (1975)
- EFTA: European Free Trade Association - Austria, Denmark, Norway, Sweden, Switzerland with Liechtenstein, and the United Kingdom (1960); Finland (1961); Iceland (1970)
- LAFTA: Latin American Free Trade Association - Argentina, Brazil, Chile, Mexico, Paraguay, Peru, and Uruguay (1960); Colombia and Ecuador (1961); Venezuela (1966); Bolivia (1967)
- MRU: Mano River Union - Liberia and Sierra Leone (1973)
- PTA: Preferential Trading Arrangement of the ASEAN Member Countries
- RCD: Regional Cooperation for Development - Iran, Pakistan and Turkey
- SACU: Southern African Customs Union - Botswana, Lesotho, Swaziland and the Republic of South Africa (1969)
- SITC: Standard International Trade Classification
- UDEAC: Central African Customs and Economic Union -Cameroon, Central African Republic, Congo-Brazzaville and Gabon (1966)
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## CHAPTER 1

### INTRODUCTION

Regional integration has a long but chequered history. The German *Zollvereins* represent early form of regional integration. In more modern times the formation of the European Communities (EC) was followed by a number of integration schemes in developing countries. However, only the members of the Association of Southeast Asian Nations (ASEAN) have experienced sustained and rapid growth together with a regional integration program. The objective of this thesis is to analyse whether economic growth resulted from regional integration or whether it was independent of it. Since the basic argument for regional integration is concerned with trade, the analytical approach is to measure the actual and potential trade effects of the formation of ASEAN.

#### 1.1 The Concept of Economic Integration

The term 'economic integration' in contrast to the concept and its practice, is relatively recent. Machlup (1977) was unable to find a single use prior to the 1940s. However, since then economic and regional integration have been widely used and have been variously defined. Franz Hartog (1953, p.165) defined economic integration as a "rather advanced type of cooperation, as distinct from the term 'harmonization', which refers to a mutual consultation on important issues of economic policy". A somewhat similar definition was proposed by Robert Marjolin (1953, p.41), who suggested that "any process which brings about a greater degree of unity can rightly be called integration." In contrast, H. E. English (1974, p.19) argued that integration is systematic cooperation, the difference between cooperation and integration is that "the former term is used to identify rather looser forms of association, while integration is reserved for more formal arrangements".

To Jan Tinbergen (1954, p.95), economic integration was a process of "the creation of the most desirable structure of international economy, removing artificial hindrances to the optimal operation, and introducing deliberately all desirable elements of coordination and unification".

In Myrdal's opinion (1956, p.11), integration is a social and economic process destroying barriers, both social and economic, between the participants in economic activities".

Bela Balassa (1966, pp.24-25) defined economic integration as a process and a state of affairs which involves the amalgamation of separate economies into larger regions. It is in this more limited sense that the term is used today. As a process, economic integration encompasses various measures abolishing discrimination among economic units belonging to different national states; as a state of affairs, it can be represented by the absence of various forms of discrimination among national economies. Balassa argued that the concept of economic integration in a dynamic sense can not be restricted to total integration, but encompasses successive forms of integration, moving from a free-trade area, to a customs union, a common market, and an economic union.

Although different authors use different definitions, the common characteristic of economic integration is clear; that is, integration is systematic cooperation that requires separate nation states to give up some degree of sovereignty for a common purpose. The organizational forms representing various degrees of integration can be summarized as follows:

(1) preferential trade area -- member countries give each other preferential tariff treatment on selected or all products;

(2) free-trade area -- tariffs and quantitative restrictions among the member countries are abolished;

(3) customs union -- the free trade area creates a common external tariff against non-member countries;

(4) common market -- the customs union allows free movement of factors of production (labour and capital) as well as goods and services;

(5) economic union -- the common market combines the removal of

restrictions on commodity's service and factor movements with the harmonization of some economic policies;

(6) total economic integration -- an economic union has common economic policies, formulated and administrated by a supranational authority whose decisions are binding for the member states.

(7) complete political as well as economic integration -- all the member countries become one nation; that is the central authority required for total economic integration not only controls economic policies, but is also responsible to a central parliament with the sovereignty of a nation's government (Balassa 1966, El-Agraa 1982)<sup>1</sup>.

Economic or regional integration is thus primarily an economic concept and this is the context in which it is studied here, but its political dimensions can not be ignored. The motivation for economic integration has often been primarily political among both industrial and developing countries. Success or failure must therefore not only be judged by economic criteria.

## 1.2 The Global Experience

Various forms of regional integration reflecting many economic and political considerations have been implemented in many parts of the world. In the 1920s, Belgium, the Netherlands and Luxembourg formed Benelux. The centrally planned economies of Eastern Europe were the first to form a co-operative organization, the Council for Mutual Economic Assistance (CMEA) after World War Two in 1949, covering trade and production agreements. But the European Communities (EC) formed in 1957 by the Benelux members, France, the Federal Republic of Germany and Italy and now numbering 13 members<sup>2</sup> is the most significant and influential integration scheme in operation to-day. During the 1960s the EC together with the European Free Trade Association (EFTA) (which included the principal European market oriented industrial countries not in the EC) contributed in an important measure to the reduction of barriers to trade among all market oriented industrial countries by

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<sup>1</sup>A federal state has many characteristics of political and economic integration, but is usually not a completely integrated economic unit or even an economic union.

<sup>2</sup>See Glossary.

responding to United States initiatives to free up industrial trade. The emphasis of the time was strongly outward oriented and the EC's common external tariff was formulated accordingly.

Regional economic integration also became popular among developing countries<sup>3</sup>. In Africa, several schemes were inaugurated, but with few results. The East African Community (EAC) grew out of colonial arrangements for the running of railways, posts and telegraphs and a customs union including Kenya, Tanzania and Uganda. It expanded to encompass an ambitious regional program, but failed to overcome the political differences of its three member states. A number of countries participated in the Central African Customs and Economic Union (UDEAC), the West African Economic Community (CEAO), and the Mano River Union (MRU) and together with some other west African states formed the Economic Community of West African States (ECOWAS) in 1975. The Economic Community of the Countries of the Great Lakes (CEPGL) is another African grouping. The Southern African Customs Union (SACU) formed in 1969 gave landlocked Lesotho, Swaziland and Botswana access to South African markets. Although dominated by Southern Africa it has been the only effective African regional arrangement to date.

In Latin America and the Caribbean, four ambitious integration programs were inaugurated. The Latin American Free Trade Association (LAFTA) and the Caribbean Free Trade Association (CARIFTA) were formed on the lines of EFTA. A Central American Common Market (CACM) was created on the EC model in 1960 and appeared to be successful for a few years (Cline and Delgado, 1978), although at a very high cost in terms of protection and trade diversion with resulting slow growth in the long term and the ultimate break up of the regional integration arrangements. The Andean Common Market was formed in 1969 with the signing of the Cartagena Agreement by six LAFTA members. In 1973 the Caribbean Community (CARICOM) grew out of CARIFTA. LAFTA has grown slowly and with a considerable degree of trade diversion marked by relatively high capital intensity of intra-LAFTA trade which presumes trade diversion (Krueger, 1980). The other schemes have not been successful.

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<sup>3</sup>The overview of integration arrangements among developing countries is based on El-Agraa (1982), Balassa and Stoutjesdijk (1975), and Vaitos (1978).



Several regional organizations were also formed in Asia, including the Regional Cooperation for Development (RCD) and the Arab Common Market (ACM), while, Egypt, Yugoslavia and India created a preferential arrangement. The Association of South East Asia Nations (ASEAN) is the most recent and the only advanced Asian integration arrangement to survive<sup>4</sup>. Indeed it has emerged as politically the strongest of developing country regional arrangements.

Given the proliferation of integration schemes, it is not surprising that the post World War Two period was referred to as 'the age of integration' by Haberler (1964). The enthusiasm for integration schemes was spurred by the EC's seeming success. It appeared that the arguments for integration as a mechanism for accelerating economic growth were validated. It was argued particularly that regional integration could remove some of the bottlenecks faced by developing countries in their industrialization ambitions.

The United Nations Conference on Trade and Development in 1964 concluded that "regional economic groupings, integration or other forms of economic cooperation should be promoted among developing countries as a means of expanding their intra-regional and extra-regional trade and encouraging their economic growth and their industrial and agricultural diversification with due regard to the special features of development of the various countries concerned as well as their economic and social systems" (Final Act and Report 1964). The Secretariat of the Economic Commission for Latin America even believed that "the common market would offer each and all of the Latin American countries equal opportunities of expediting their economic growth. The common market could play a leading role in mitigating the Latin American countries' vulnerability to external contingencies and fluctuations"(The Latin American Common Market,1959).

However, by the 1970s, integration schemes among developing countries were not progressing. The EAC had broken up formally. After a decade of apparent success, CACM was collapsing. Most of the integration arrangements have not been either effective or lasting

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<sup>4</sup>A new South Asian cooperation movement is , however, becoming evident.

(Vaitsos,1982). Difficulties were clearly evident in Africa from the start. Divergent political systems were a major cause of the failure of EAC, while lack of administrative capacity was a critical obstacle in the implementation of the West African arrangements. However, most of the integration arrangements faced increasing difficulties for economic reasons.

Firstly, difficulties arose if the member countries were at different stages of development, because the greater the difference in levels of development the more difficult it was to share the costs and benefits of integration equitably. The greater the difference in level of development, the more difficulties emerged in the negotiation of tariff and non-tariff barrier reductions. Least developed member countries were afraid that by giving their partners free access to their market, they would impede their development rather than further it. The efficient operation of integrated production meant that projects were allocated to the country which had most labour skills, the most advanced technology and most efficient management. The least developed countries hence argued that the pursuit of maximum regional gains would lead to a skewed distribution of industries favouring the more developed member countries. Infant industries in the less developed countries would stagnate. Complex phasing arrangements were made to avoid this problem, but they were not successful.

Secondly, developing member countries of regional integration arrangements had similar production endowments, lacking modern technology and capital, and are largely rich in unskilled labour. The ensuing industrial structures were not conducive to a growth of mutual trade through specialization and the exploitation of economies of scale. One of the common features of developing countries in the 1950's and 1960's was that they had a high ratio of subsistence agriculture to total output and depended on one or a few primary product exports for their relatively low level of trade. There was little opportunity for regional trade where such products were similar. Even where the products differed they were more likely to be inputs into the production mix of industrial than of developing countries. Raw materials generally faced few trade barriers and there was thus no need for regional integration to stimulate trade. Developing countries at

low stages of development needed to import small volumes of sophisticated industrial goods and to export labour intensive goods in which there was little product differentiation and hence little scope for intra industry trade. That is, not only were natural resource endowments similar, but so were factor endowments. Markets for the integration groupings were too small and transport costs too high to permit the reaping of the benefits of specialization and economies of scale that were the rationale of integration and worked so well at a higher level of development for example in the EC.

Thirdly, conflicts between national economic policies and those required by the integration process lead to difficulties. For example, Venezuela's Andean Pact industrial transactions called for a devaluation of the bolivar, but this policy could not be implemented while its balance of payments was favorable as a result of the Dutch Disease effects of petroleum and iron ore exports (Vaitsos,1982).

### 1.3 The Main Purposes of the Study

ASEAN was set up on 8 August 1967 after several attempts<sup>5</sup> when the Foreign Ministers of Indonesia, Malaysia, Philippines, Singapore and Thailand signed the Bangkok Declaration. Brunei became the sixth member country in 1984<sup>6</sup>. In contrast to failures of other developing country regional integration experiments, ASEAN is an active and successful organization, albeit mainly in political terms<sup>7</sup>. It is not at all clear, whether the grouping has had much economic effect. The bulk of ASEAN member countries' trade is outside the regional arrangement, and most of that within the region is not the result of regional trade liberalization.

This study seeks to examine the economic characteristics of the ASEAN arrangement and analyse the effects of various possible trade liberalisation measures on regional trade. Chapter 2 surveys the

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<sup>5</sup>The Association of Southeast-Asia (ASA) was formed in 1961 by Malaya, the Philippines and Thailand, and MAPHILINDO embracing Malaysia, the Philippines and Indonesia was proposed in 1963.

<sup>6</sup>Brunei is not included in this study.

<sup>7</sup>Malaysian Prime Minister Mahathir at 17th ASEAN Economic Minister's (AEM) Meeting.

theoretical foundations of the concept of regional integration. Chapter 3 discusses the economic characteristics of the ASEAN member countries and reviews the process of ASEAN economic integration to date. Chapter 4 analyses trends in the trade of ASEAN member countries. In chapter 5 , a simulation model has been used to examine the trade effects of the various trade liberalization policies on ASEAN member countries. Chapter 6 concludes with some policy implications for ASEAN in particular and regional integration among developing countries in general.

## CHAPTER 2

### LITERATURE REVIEW

Encouragement of the formation of customs unions is well founded in economic theory. It has long been argued that as freer trade increases welfare, and as a customs union eliminated tariffs among member countries, the formation of a customs union was a movement towards free trade. A customs union thus increased welfare even if it was less favorable overall than general free trade.

Viner pointed out the errors of this argument. In his 1931 work 'The Most Favoured Nation Clause', he defended the principle of non-discriminatory tariffs by showing the possibility of preferential duties causing a greater diversion of trade than uniform protection. In 1950, he went further to point out that the primary purpose of a customs union and its major consequence for good or bad, was to shift sources of supply. Such a shift could be either to lower or to raise the costs of inputs, depending on circumstances (p.44). He pioneered the distinction between the concept of trade creation and trade diversion. This opened the way to the quantitative analysis of the economic consequences of the formation of customs unions. According to Viner, trade creation means the replacement of relatively high cost domestic production by cheaper imports from a partner, while trade diversion means the replacement of cheaper initial imports from the outside world by more expensive imports from a union partner. Viner considered trade creation to be 'good' and trade diversion to be 'bad', stressing that the formation of a customs union would be beneficial only when trade creation dominates over trade diversion (pp.44-46). In particular cases, the gains from the formation of a customs union could be positive or negative, depending on circumstances. He summarized the conditions under which a customs union was more likely to operate in the free-trade direction (Viner, 1950, pp.51-52). These conditions included the following: the larger the economic area of the customs

union; the lower the external tariffs; the less the degree of complementarity of the member countries with respect to protected industries prior to customs union; the greater the differences in unit-costs for the same goods produced in different member countries, and the potential gain from the economies of scale as well as the gains from further specialization.

The next major developments in customs union theory were made by Meade (1956), Gehrels (1956-57) and Lipsey (1960). They distinguished between the effects of the formation of a customs union on production and on consumption, although this distinction is not fully satisfactory, because the consumption effects will ultimately cause changes in production. Lipsey considered that a more satisfactory distinction remained between inter-country substitution and inter-commodity substitution. Viner's trade creation and trade diversion is inter-country substitution, since one country is substituted for another as supplier for some commodities when the customs union is formed. The type of substitution analysed by Gehrels, Lipsey and Meade - inter-commodity substitution - occurs when one commodity is substituted for some other commodity as a result of a relative price shift after the formation of custom union.

Gehrels argued that to examine a customs union in the light only of production effects, as Viner does, gives a biased judgment of the effects on countries joining the customs union. He proved that under certain conditions it is possible for country A to form a trade-diverting customs union and yet gain an increase in welfare. The rationale for this argument is simple. After the formation of a trade diverting customs union, the higher price of imported goods from the partner country will certainly lead to some substitution between domestic products and imported products. The increased consumption of domestic products is equivalent to an increase in the benefits for the home country. Based on a two country and two commodity model, Gehrels established a general presumption in favour of gains from a custom union.

Lipsey (1957) argued that when a customs union was formed, some of the goods formerly imported from non-member countries would be replaced by the same goods imported from a member country, duty free but at a

higher real cost. The shift to a higher cost source of supply tends to lower the country's real income, as well as consumer welfare. However, consumer welfare might outweigh the increased costs resulting from the customs union. Hence, he claimed that "when consumption effects are allowed for, the simple conclusions that trade creation is 'good' and trade diversion 'bad' are no longer valid.

Lipsey and Lancaster published "The General Theory of Second Best" in 1956-57. The optimal patterns of production and consumption held where marginal social costs of products were equal to the marginal value of goods consumed. They argued that the existence of taxes, subsidies, monopolies, customs duties, etc., prevented the satisfaction of optimum conditions. Since some price distortions may offset one another, the removal of certain duties may make matters worse rather than better, that is, they may increase the distance from a 'second-best' position. Lipsey and Lancaster came to a general conclusion that a small variation of any tax or duty is more likely to raise welfare than a large variation would. In a most instructive 1960 survey article, Lipsey further stated the following generalizations with respect to customs unions:" when only some tariffs are to be changed, welfare is more likely to be raised if these tariffs are merely reduced than if they are completely removed"(Lipsey, 1960, pp. 506-507). He pointed out" that it is an absolutely general proposition in the theory of second best, it applies to all sub-optimal situations and customs-union theory only provides a particular example of its application"(p.506).

In his article "Mr Gehrels on Customs Unions", Lipsey pointed out the shortcomings of Gehrels' model and developed a model containing three types of commodities: domestic commodities (A), imports from the union partners (B) and imports from the outside world (C). This model demonstrated that Gehrels' general presumption was not valid (Table 2-1).

Lipsey's model showed that all three optimum conditions were fulfilled in the case of free trade. In a uniform tariff customs union case, the price of goods from both B and C will be higher in A's domestic market than in the world market. When a customs union is formed, the first optimum condition is fulfilled but the third optimum

Table 2-1: Optimum Conditions in Lipsey's Model

Free trade (col.1)		Uniform ad valorem tariff on all imports (col.2)		Customs Union with country B (col.3)	
$\frac{PAd}{PBd} = \frac{PAi}{PBi}$		$\frac{PAd}{PBd} < \frac{PAi}{PBi}$		$\frac{PAd}{Pbd} = \frac{PAi}{PBi}$	
$\frac{PBd}{PCd} = \frac{PAi}{PCi}$		$\frac{PAd}{PCd} < \frac{PAi}{PCi}$		$\frac{PAd}{PCd} < \frac{PAi}{PCi}$	
$\frac{PBd}{PCd} = \frac{PBi}{PCi}$		$\frac{PBd}{PCd} = \frac{PBi}{PCi}$		$\frac{PBd}{PCd} < \frac{PBi}{PCi}$	

Subscripts A, B and C refer to countries of origin, d to prices in A's domestic markets, and i to prices in the international market.

Source: Review of Economic Studies, Vol. XXIV(3), NO.65, 1956-57, pp. 211-214.

condition is no longer satisfied. Thus far Lipsey proved the neo-classical theories that welfare may rise or fall in a customs union. Further examining the conditions after formation of a customs union, Lipsey argued that when the tariff was taken off imports from a country's union partner, the relative price between these imports and domestic goods was brought into conformity with the real rates of transformation. This tends to increase welfare. On the other hand, the relative price between imports from the union partner and imports from the outside world were moved away from equality with real rates of transformation. This tends to reduce welfare. Lipsey therefore argued that what really matters is the relation between imports from the outside world and expenditure on domestic commodities. A customs union is more likely to raise welfare the higher is the proportion of trade with the country's union partner and the lower the proportion with the outside world; a customs union is more likely to raise welfare the more it purchases domestic commodities rather than those from the outside world. He regarded resource reallocation, adjustments of consumption



patterns, and changes in the terms of trade as 'static', and economies of scale, changes in market structures, and changes in growth rates as 'dynamic'.

Meade also contributed to the theory of integration through customs unions. In 1953 he discussed why a partial movement toward a wider economic union was in general preferable to a more complete movement toward a narrower union (p.9). He discussed the economic benefits from integration from three aspects: (1) maximization of production due to reallocation of resources, (2) optimization of trade due to shifts of consumption, and (3) increase in competition due to forced efficiency and relaxation of monopolistic restraints (p.13). In 1955, Meade examined these welfare effects of a customs union in more detail. To determine whether a customs union on balance raises or lowers total welfare, Meade suggested that not only the total volume of trade creation and trade diversion, but also the size of the cost reductions and cost increases for each unit of traded goods, should be considered (p.35). This method provides a much more accurate comparison of the total value of all trade created. In his analysis, Meade took into consideration:

- (1) the effects of commodity substitution (p.33);
- (2) the effects of reduction of government tax revenue (pp.42-43);
- (3) the effects of the tariff structure, especially the effects of marginal reductions in tariff (p.52);
- (4) the effects of elasticity of demand and supply, as well as the effects of the utility of the commodity to the sellers and buyers (p.44);
- (5) the effects due to monopoly positions, external economies and diseconomies in domestic trade (p.65).

Finally, Meade divided the effects of tariff changes on trade into three categories. Primary change is the increases in imports of products from a country which has been granted a preferential reduction or removal of tariffs (p.67); secondary change is the change in international trade in products in which the union partners are close substitutes for or close complements to, so that the trade between union partners is directly affected by the changes in the price resulting from the reduction of the tariff (p.68); and tertiary change,

that is the adjustment of trade flows and exchange rates that are made necessary to restore balance in international payments (p.83).

In Meade's analysis, solutions vary from case to case, but they do not affect the main drift of the argument. Meade argued some generalizations as follows:

(1) A reduction in trade barriers which will lead in all cases to some primary expansion of trade, and on this expansion of trade there will almost always be some important gain.

(2) It is more likely to increase economic welfare if the economies of the partner countries are actually very competitive or similar, but potentially very complementary or dissimilar.

(3) It is more likely to increase economic welfare, the higher are the initial rates of duty on imports into the partner countries.

(4) It is more likely to increase economic welfare, the higher a proportion of trade occurs between union partners.

(5) It is more likely to increase economic welfare, the greater the proportion of the world's production, consumption, and trade which is covered by the members of the union.

(6) It is more likely to increase welfare, the lower the rate of import duties in the rest of the world but the greater the number of independent customs areas into which the rest of the world is divided.

(7) A customs union is less likely to have adverse secondary repercussions upon economic welfare in a world in which trade barriers take the form of fixed quantitative restrictions rather than taxes on imports.

(8) The formation of a customs union is more likely to raise economic welfare the greater is the scope for economies of large-scale production in those industries within the union which are now enabled to expand by undercutting similar industries in other parts of the union.

(9) a partial all-round reduction by the partner countries of their duties on each other's trade is more likely to do good and less likely to do harm than is the subsequent total elimination of those duties (for more detail see Meade 1956, pp.107-115).

Contributions to the integration literature by Prebisch (1949), Cooper and Massell (1965), Johnson (1965), Linder (1966), Kitamura

(1966), and Bela Balassa and Ardy Stoutjesdijk (1975), were mainly concerned with the effects of customs unions on the rate of economic growth rather than with welfare issues. The transformation of traditional economies through industrialization became the main focus.

Prebisch (1949) argued that the static theory of comparative advantage could not be applied to developing countries. "It is true that the reasoning on the economic advantages of the international division of labour is theoretically sound, but it is usually forgotten that it is based upon an assumption<sup>1</sup> which has been conclusively proved false by facts" (p.1). His argument was mainly based on his belief that a persistent deterioration of the terms of trade for primary products was inevitable. The industrial countries could get "the whole benefit of the technical development of their industries, and in addition, the peripheral countries transferred to them a share of the fruits of their own technical progress"(p.10). These propositions are now widely regarded as being dubious factually, but they were and are emotionally appealing and Prebisch's views became very popular. Industrialization in developing countries was regarded as necessary to give those countries a share of the benefits of technical progress and to progressively raise standards of living and in some sense this is correct. But Prebisch argued strongly for protective tariffs to promote industrialization in developing countries and this policy was widely followed in the 1950s and the 1960s. By completely ignoring the similarity of factor endowments among developing countries, Prebisch missed the opportunities for specialization and economies of scale that were already opening up in trade in manufactures between developing and industrial countries. From a dynamic and development point of view this was to prove the most important developmental aspect of trade. But Prebusch's argument again had emotional appeal and thus opened up a new approach to customs union proposals.

Cooper and Massell (1965) followed in this general direction, introducing industrial production as a new dimension of the analysis. They also assumed that economic planners in a developing country would

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<sup>1</sup>According to this assumption, the benefits of technical progress tend to be distributed alike over the whole community, either by the lowering of prices or the corresponding raising of incomes.

be willing to accept some reduction in national income to achieve an increase in industrial production (p.462). That is, accelerated industrial development could be traded off against a loss of national income. This concept gives rise to a stepped supply curve of industrial production as a function of national income foregone. A demand curve is added to this supply analysis to represent a government's desire for industrialization. The optimal level of industrialization is determined by the intersection of the demand and supply curve. Corresponding to this level of industrialization is a set of tariffs that provide enough protection for each industry (figure 2-1). The formation of a customs union between two countries enables the pooling of a market, hence permitting some degree of specialization.

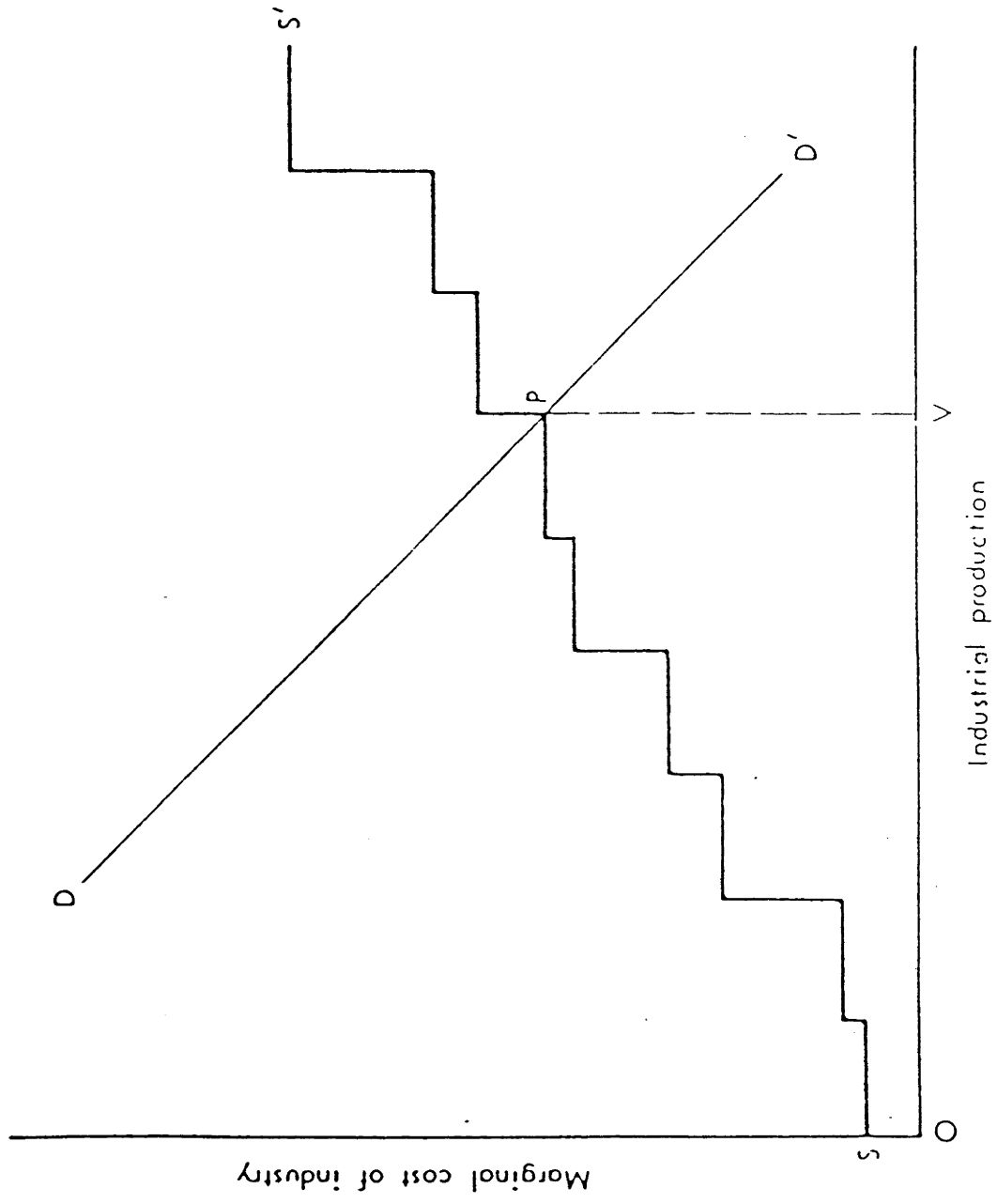
In this model, trade creation and trade diversion can be good or bad; the gains from a customs union depend on what happens to income and industrial output. This in turn depends on the common external tariff chosen, and on the national trade-off between industrialization and national income. The conclusions drawn by Cooper and Massell were that the potential gain from a customs union would be larger if: (1) there were a steeply rising marginal cost of protection in the two countries, (2) the countries had a strong preference for industry, (3) the countries were complementary, and (4) neither country dominated the other in industrial production. They also noted that even if the fourth condition did not obtain, gains could still be obtained from forming a partial union (an arrangement allowing protection within a customs union, that is a common external tariff, but not internal free trade) or from some other device that interfered with free trade within the customs union.

A somewhat similar approach was adopted by Johnson (1965). He viewed customs unions as a means of lowering the excess costs of industrial production which was desired for reasons of national policy and might be required for non-economic reasons. He made three major assumptions:

(1) Governments use trade barriers to achieve certain non-economic objectives.

(2) Government actions are aimed at offsetting differences between private and social costs.

Figure 2-1: Demand for Industry



(3) Governments have a preference for industrial production.

Given such assumptions, the prospective gains from tariff reduction for each union of countries lies in the expansion of exports of industrial products. Therefore, discriminatory reciprocal tariff reduction costs each partner country less, in terms of the reduction in domestic industrial production incurred per unit cost increase in partner industrial production, than does non-discriminatory reciprocal tariff reduction. The generalizations of Johnson's analysis<sup>2</sup> are:

(1) Customs union partners may gain from both trade creation and trade diversion.

(2) Trade diversion is preferable to trade creation for the preference granting countries since a sacrifice of domestic industrial production is not required.

(3) both trade creation and trade diversion may lead to increased efficiency if economies of scale are present.

Linder (1966) also considered economic integration among developing countries as a way of extending import substitution on a regional scale. He evaluated the effects of regional integration among developing countries mainly in terms of an improved environment for economic growth. His argument lay in dynamic aspects of comparative advantage, exploitation of more efficient allocation of resources, economies of scale and further specialization within the region, as well as learning and competition effects. It was argued that in a dynamic context, the cost of import substitution or industrialization will fall and the pace of growth will increase. All these arguments stressed those possibilities which could overcome industrialization difficulties, assuming that industrialization was more important than rising income. The arguments thus explored a second best case. Linder (1966) moreover, followed Prebisch (1949) in arguing that customs union theory derived from a traditionally accepted theory of international trade could not be readily applied to trade problems of developing countries. He argued that the chief obstacle to raw material exports of developing countries was the low price and low income elasticity of demand for such commodities. In the case of manufactures, the obstacle

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<sup>2</sup>Summarized by El-Agraa, 1982.

stemmed not so much from the demand situation abroad as from the supply situation at home. He thought that the export difficulties of the developing countries were structural. Hence, the factors that determined developing countries future foreign exchange earnings were largely beyond their control. He also completely ignored the opportunities for trade inherent in the differences in factor endowment between developing and industrial countries. In his view developing countries thus faced a 'foreign-exchange gap'. He stressed that through the formation of customs unions among developing countries, the member countries would benefit from a more efficient allocation of existing and future productive resources than was possible in individual countries, so that the member countries would be able to create a competitive environment of reasonably sized production units. He also stressed that customs unions would enable developing countries to maintain restrictions on non-input imports from industrial countries, thereby, enhancing capacity utilization and growth. Linder's argument, like Prebisch's, thus turns out to be based on an erroneous balance of payments hypothesis.

Balassa and Stoutjesdijk (1975) pointed out much more realistically than the 'industrialization' proponents of regional integration that economic integration among developing countries was principally a way of extending import substitution, and was hence subject to serious limitations. Regional integration oriented towards import substitution would likely lead to the establishment of inefficient plants and of an inefficient industrial structure, thereby postponing the time and increasing the difficulties of a reorientation of policies outwards. They suggested that regional economic integration should be regarded as one of the policy options available to developing countries in pursuing their strategy for economic development. Its potential benefits and costs should be weighed against other policy options, and in particular against a one country export-oriented strategy. According to Balassa and Stoutjesdijk, the balance of benefits and costs of regional integration in a particular case will depend on market size, resource endowment, geographic location, and access to industrial country markets as well as on the domestic policies followed. They noted that measures that would ensure the

equitable distribution of the benefits and costs of integration among the member countries of a regional arrangement would have to be taken if such an arrangement were to survive.

It is clear from the literature that although some gains may result from the formation of a customs union or regional integration scheme in a highly protectionist world environment, in a reasonably liberal trading environment global trade will always be a superior option to regional trade. An outward-looking strategy that focuses on world markets will therefore be preferable to regional integration. Similarly, if there is a possibility of entering the world market by setting up industrial projects based on economies of scale by producing for a world wide market, regional integration will be an inferior option from the economic point of view. These conclusions are strengthened in a dynamic context which takes the differential factor endowments between developing and industrial countries into account.



## CHAPTER 3

### THE EVOLUTION OF ASEAN

#### 3.1 The Motivations for the Formation of ASEAN

Political and security considerations were the main reason for the formation of ASEAN. The region had a turbulent history in the 1950s. Emergency in Malaysia was followed by Indonesia's 'confrontation' policy against Malaysia and Singapore and U.S involvement in Indochina made the situation even more tense. ASEAN was formed to counteract these tensions. It was hoped that an ASEAN regional stance would persuade the major powers not to intervene in the region and so prevent the area from being converted into an arena for major power rivalry and conflict. By using 'collective efforts', the ASEAN member countries would be able to control their own destinies and sort out their own problems without major power intervention. It was also hoped that a formal ASEAN institutional framework would promote stability among the member countries and resolve conflicts among them efficiently.

However political cooperation is not overtly the primary objective of ASEAN. Formally, it is an organization to promote social and economic development, cultural cooperation and common political interests. Among these, economic cooperation takes the limelight. It was stressed as one of the main objectives of ASEAN from the very beginning. The Bangkok Declaration laid the principles for regional cooperation as being: "to accelerate the economic growth, social progress and cultural development in the region through joint endeavour in the spirit of equality and partnership in order to strengthen the foundation for a prosperous and peaceful community of Southeast-Asian nations; to promote regional peace and stability....; to promote active collaboration and mutual assistance on matters of common interest in the economic, social, cultural, technical, scientific and administrative fields; .....to collaborate more effectively for the greater utilization of their agriculture and industries, the expansion

of their trade including the study of problems of international commodity trade, the improvement of their transportation and communication facilities and the raising of the living standards of the people"(Dow Jones, 1979, pp. 7-8).

The advantages of economic integration in the ASEAN region have long been discussed by the member countries. It was hoped that through the reduction of tariff and non-tariff barriers, intra-regional trade would be stimulated. It was also hoped that potential static gains could be achieved by re-organizing markets and production from existing to new and extended productive facilities and that dynamic gains could be achieved by expanding facilities and improving efficiency, and thus increasing economic growth among the member countries. It was also believed that ASEAN regional integration would improve the bargaining power of the member countries vis-a-vis the rest of the world, so as to obtain a higher share of the benefits of international economic transactions for ASEAN members countries.

### 3.2 The Development of ASEAN Regional Economic Cooperation

Although ASEAN has been in existence since 1967 and economic cooperation was stressed as one of the main objectives of the Bangkok Declaration, economic integration<sup>1</sup> was only initiated at the Bali Summit in 1976. Two documents were signed during the Bali Summit, the declaration of ASEAN Concord and the Treaty of Amity and Cooperation in Southeast Asia. These two documents have an important bearing on ASEAN economic relations. The Declaration of ASEAN Concord sets forth the principles for ASEAN cooperation by stressing cooperation in basic commodities, especially food and energy; industrial planning; intra-ASEAN trade; and a joint approach to international commodity problems and other world economic issues. the Treaty of Amity and Cooperation formally stresses the importance of regional resilience; cooperation and solidarity. The Bali Summit also paved the way for economic cooperation by establishing a Central Secretariat for

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<sup>1</sup>Economic integration of ASEAN member countries follows the path suggested by the Robinson Report, United Nations Development Planning No. 7. 1973

cooperative planning. The most important areas of ASEAN economic cooperation to merge were mutual trade liberalization and common industrial planning, that is, steps toward integration.

### 3.2.1 Preferential Trading Arrangements

Like other developing countries, ASEAN member countries considered trade liberalization within the ASEAN framework to be the keystone of regional actions. The first step in stimulating intra-ASEAN trade was the establishment of the ASEAN Preferential Trading Arrangement (PTA). The agreement was signed on 24th February 1977. The scheme was designed to facilitate, promote and expand intra-ASEAN trade. The instruments of this trade expansion included:

- (1) long term quantity contracts in basic commodities subject to negotiated agreements by contracting parties;
- (2) financial support at preferential interest rates;
- (3) preference in procurement by government entities;
- (4) extension of tariff preferences; and
- (5) liberalization of non-tariff measures on a preferential basis.

The first batch of 71 items under PTA came into effect from 1 January 1978. At the end of 1984, over 18,000 items were covered by preferential treatment. The margin of preference granted was 10% in 1978. It was raised to 20%-25% in 1981 and a small number of items were raised to 40%-50% in 1983. Initially, tariff reductions were negotiated product-by-product. In 1980, an agreement was reached for across-the-board tariff cuts of 20% to 25% to be applied to the items with an import value of less than \$50,000. The ceiling was raised subsequently, initially to \$500,000 in 1981, ultimately to \$10 million in 1983.

The across-the-board approach has avoided some of the problems of the selective approach. Administrative delays were reduced. The number of commodities subject to preference was accordingly substantially increased. However, the success of the PTA should not be judged by the number of items, but rather by its real effects on intra-ASEAN trade. Several studies have shown that the practical impact of PTA on intra-ASEAN trade was negligible. The effect of a 10% across-the-board tariff cut resulted in a less than 2% increase in total intra-ASEAN trade (Naya 1980, PP.22-23). Using a seven digit SITC product analysis,

the trade creation effects of a 20% across-the-board tariff cut with an import value under \$ 50,000, were negligible for both the Philippines (0.06%) and Thailand (0.02%) (Ooi 1981,P.20). It should never have been expected that the PTA would significantly increase intra-ASEAN trade. There was a tendency to offer irrelevant items for concessions or to break down one item into detailed variants to increase the number of items for cosmetic purposes; the ceiling of across-the-board tariff cuts was low, so that, only a small percentage of total imports was included in the program; the rate of tariff reduction was too low to permit a considerable increase in import demand; the price elasticities of import demand of the commodities included in the tariff cuts was not sufficiently high, so that a small change in import prices did not lead to large change in import demand; across-the-board tariff cuts usually ended up on the list of 'sensitive items' and were thus excluded from the preferential list (Reiger, 1985). A closer examination of the distribution of products included in the PTA list indicates that ASEAN countries concentrate their tariff cuts on three broad product categories - organic chemicals, inorganic chemicals, and machinery (Tan,1982) - because they were not competitive in these products and did not expect to become competitive for some time. Thus, the long-term effect of the PTA was to encourage changes in the structure of the ASEAN countries' industries to generate more complementarity through the specialization of production, particularly in intermediate products. Until such changes began to occur, it was unlikely that tariff reductions would be able to generate significant increases in intra-ASEAN trade. This would mean moving in a trade diversion direction to increase intra-ASEAN trade. But the principal gains from trade come through specialization and competition which improves the efficiency of firms and thus leads to trade creation. Deeper tariff cuts on products such as textiles would be necessary to increase both intra-industry trade within ASEAN and raise efficiency so as to lower costs.

### 3.2.2 Industrial Co-operation

Industrial cooperation is the second main aspect of ASEAN's economic program. Industrial cooperation is not only thought to provide an impetus for further industrial growth, but also to stimulate the growth of intra-regional trade. The three main programs of industrial cooperation are:

- (1) The ASEAN Industrial Projects (AIP) scheme.
- (2) The ASEAN Industrial Complementation (AIC) program.
- (3) The ASEAN Industrial Joint Venture (AIJV) projects.

Shortly after the Bali Summit, the first package of AIP was approved by the ASEAN Economic Ministers in Kuala Lumpur in March 1976. Under the AIP scheme each member country is allocated a large scale industrial project: urea projects for Indonesia and Malaysia; a diesel engine project for Singapore; a superphosphate project for the Philippines; and a soda-ash project for Thailand. Each of these projects required an investment of about \$250 million to \$300 million, with the host country taking up 60% and the remainder 40% being shared among the other member countries. The progress of the AIP program has been limited. The Indonesian urea plant has been completed and that in Malaysia has made progress. The soda ash plant in Thailand has yet to proceed past the feasibility phase. The two projects allocated to the Philippines and Singapore have been withdrawn. The Philippines superphosphate plant ran into material supply problem. Indonesia claimed a threat to its mechanical industry from the Singapore diesel engine project. The Philippines selected copper fabrication as a substitute and Singapore has proposed the manufacture of hepatitis B vaccine - clearly not a 'basic' industry - as its project.

The Basic Agreement on ASEAN Industrial Complementation was signed in October 1980. A key provision of the Agreement is to entrust the ASEAN Chambers of Commerce and Industry (ASEAN-CCI) with the task of identifying appropriate products or industries which could be included in an AIC package. The process of approving AIC projects requires interaction between the ASEAN-CCI and the ASEAN Governments. Thus the whole process is extremely time consuming. Another difficulty in the AIC project is that any intended project requires at least four of the five member countries' participation. Thus, by 1982, only two

packages, involving automobile parts and components, had been processed sufficiently to be proposed by the ASEAN-CCI. Neither was considered workable or acceptable to the ASEAN Governments.

ASEAN Industrial Joint Venture Projects are designed as private sector equivalents to the AIP. A Basic Agreement was signed in November 1983. A distinguishing feature of AIJVs is that they can proceed even with only two ASEAN partners from the private sector. Thus, it is easier to formulate a project under the AIJV program. It is also believed that AIJVs can be launched as small projects with low capital investment and risk. They can be approved individually, or separately, by the relevant ASEAN Economic Ministers, avoiding the cumbersome institutional machinery required for an AIC project. According to the Agreement, an AIJV project involving at least two investors from ASEAN member countries holding a combined 51% minimum equity would qualify for a 50% tariff cut within the participating countries. Three years after an AIJV begins production, all ASEAN countries will allow imports of the product at a minimum preferential tariff margin of 5%. The tariff can be zero if government so decide. In May 1984, 21 AIJV projects proposed by ASEAN businessmen were approved at the sixteenth ASEAN Economic Ministers Meeting held in Jakarta<sup>2</sup>. Implementation since then, however, has been slow.

### 3.3 The Major Features of ASEAN Economies and of Their Economic Relations

The ASEAN membership does not consist of a homogeneous group of countries. The member countries differ in terms of colonial heritage, culture, languages, religions, history and traditions. Great disparity also exists among the member countries in respect of physical area, population, natural resource and stages of economic development. Geographically, there are marked differences among them (Table 3-1). At one extreme, Singapore is a city-state with an area of 1000 square kilometers and a 2.5 million population. At the other extreme lies Indonesia, the largest country with 1,919 thousands of square kilometers and a 155.7 million population. The Philippines, Thailand

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<sup>2</sup>The tariff concessions that would be appropriate were not specified.

and Malaysia lie between these extreme. Economically, the ASEAN member countries adopted different growth strategies, and now they are at widely different stages of development. Singapore, one of the newly industrializing countries, had the highest per capita income of \$6,620 in 1983; Malaysia ranked second with a per capita income of \$1,860; Thailand and the Philippines followed with a per capita income of \$820 and \$760 respectively; Indonesia was at the lowest end of the scale with an annual per capita income of \$560. Furthermore, Indonesia is rich in natural resources, but poor in skill and technology; its foreign exchange earnings largely depend on primary product exports and its industrialization is based on an inward-looking strategy. Singapore is poor in natural resources, but rich in skills. Its economy is relatively capital and skill intensive and heavily export-oriented with an outward-looking development strategy. Malaysia, the Philippines and Thailand are all relatively rich in natural resources, but their economies have developed at different paces, with differing emphasis on export orientation. The rate at which traditional export commodities are gradually being joined by exports of manufactured goods differ.

Table 3-1: Basic Indicators - ASEAN Member Countries

	Population		Area (Thousands of Square Kilometers)	GNP Per Capita (\$) 1983
	(millions) mid-1983	Growth Rate (percent) 65-73 73-83		
Indonesia	155.7	2.1 2.3	1919	560
Malaysia	14.9	2.6 2.4	330	1860
Philippines	52.1	2.9 2.7	300	760
Singapore	2.5	1.8 1.3	1	6620
Thailand	49.2	2.9 2.3	514	820

Source: World Development Report, World Bank, 1985

The ASEAN leaders were fully aware of their diversities and accordingly took a cautious approach to economic cooperation and

particularly to integration. As each ASEAN member country pursues its industrialization policy independently from the others, and because this state of affairs is likely to continue for a long time, it is recognized within the region that the formation of a customs union along the lines of the EC would be inappropriate for ASEAN at this time. The ASEAN member countries follow a flexible and open-ended approach, without a specific time frame for a targeted level of trade liberalization. They have set a long-term objective for a free trade area, but each member country is to retain its own tariff structure vis-a-vis the rest of the world for the foreseeable future. Hence, the ASEAN organization only provides a mechanism for the member countries to liberalize intra-regional trade at a speed and in a direction which are acceptable to all member countries (Wong, 1985). This flexible and open-ended approach contributes greatly to 'ASEAN solidarity' by avoiding conflicts over policy and sovereignty.

A slow pace of economic cooperation was particularly important in the early period. The first ten years of existence constituted a period of mutual understanding and the nurturing of consensus. There was no real progress toward economic cooperation in the early years, but the ASEAN countries made significant progress in political cooperation during this period. These achievements could contribute to a greater degree of economic cooperation and even to integration in a later period. Within the region slow initial progress is not regarded as a defect but as an important component of success. "In fact one of the major reasons why ASEAN could have survived such a long period and grown is its reliance on the low-keyed tactic of gradual advance towards regional cooperation, avoiding drastic action that defies consensus. That is perhaps the 'Southeast Asian way' and might well be the only way to achieve lasting regionalism in a region characterized by enormous differences in national interests and expectations" (Wong, 1979, pp.4-5).

Consensus is the mechanism adopted by the ASEAN member countries to deal with their diversities. It has been considered indispensable for the growth of ASEAN. All major decisions of ASEAN have been made by consensus. In practice, consensus involves time consuming negotiations and slow progress in implementation. However, the consensus mechanisms



greatly contribute to the equitable distribution of costs and benefits arising from cooperation and integration schemes. The consensus process is required so that all member countries share fairly in the benefits of cooperation and no one need make disproportionate sacrifices, thus insuring the acceptance and the implementation of the cooperation programs.

Although, there is a spectrum of incomes within the grouping, variance in economic and political conditions, and different development strategies, the ASEAN member countries also have important common features when they are compared with other regional groupings. Except for the Philippines, the ASEAN economies developed very rapidly during the last two decades (Table 3-2). All the ASEAN member countries belong to the middle-income economic group (according to World Bank classification) with Indonesia, the Philippines and Thailand in the lower middle-income group, while Malaysia and Singapore are in the upper middle-income group. During 1965-73, the average annual growth rate of GDP ranged from 5.4% for the Philippines to 13% for Singapore. Although Malaysia and the Philippines had relatively low growth, it was higher than that of all developing and the industrial market economies. During 1973-83, the growth rates of all the ASEAN member countries surpassed those of the industrial market economies, and they were also higher than those of other middle income countries in their respective groupings.

One of the most significant features of all the ASEAN member countries (except Singapore) is the importance of agriculture in the economy and the economic development. As Tables 3-3, 3-4 and 3-5 show, a large percentage of the population is dependent on agriculture for income and employment. For the period of 1965-83, the average 4% real annual growth rate of agricultural output in the four ASEAN member countries has exceeded their population growth rates. Compared to other middle-income economies, this performance is also outstanding. Rapid growth of agriculture contributed markedly to ASEAN industrialization, provided exports (both food and agricultural raw materials) and supplied non-agricultural sectors with 'surplus' labour and capital. It also provided a growing market for non-agricultural consumer and producer goods and services. More importantly, with an adequate food

Table 3-2: Average Annual Real Growth Rate of GDP  
(percent)

	1965-73	1973-83
All middle-income economies	7.1	4.7
Lower middle-income economies	6.6	4.1
Upper middle-income economies	7.4	4.9
All industrial market economies	4.7	2.4
ASEAN member countries:		
Indonesia	8.1	7.0
Malaysia	6.7	7.3
Philippines	5.4	5.4
Singapore	13.0	8.2
Thailand	7.8	6.9

Source: World Development Report, World Bank, 1985

supply, the government could maintain the peaceful political environment that is a prerequisite for development.

Changes in economic structure are other important indicators of ASEAN economic development (Table 3-3). During the last two decades, the annual growth rates of manufacturing industries were higher than the average growth rates in the other sectors (Table 3-4). As a result, except in Indonesia, the share of industry in GDP surpassed agriculture. The total share of agriculture in GDP declined particularly in Malaysia and Thailand. Employment moved in the same direction.

The ASEAN member countries' high growth performance in the past two decades can be traced to many interrelated factors<sup>3</sup>. First and

<sup>3</sup>The conclusions in these paragraphs are largely based on Riedel, 1985 and Hughes, 1985b

**Table 3-3: The Distribution of GDP by Sectors**  
(percent)

	Agriculture		Other Industry		Manufacture		Services	
	1960	1983	1960	1983	1960	1983	1960	1983
	Indonesia	54	26	6	26	8	13	32
Malaysia	36	21	9	16	9	19	46	44
Philippines	26	22	8	11	20	25	46	42
Singapore	4	1	6	13	12	24	79	62
Thailand	40	23	6	8	13	19	41	50

Source: World Development Report, World Bank, 1979 and 1985

**Table 3-4: Production Growth Rate**  
(percent)

	Agriculture		Industry		Manufactures		Services	
	65-73	73-83	65-73	73-83	65-73	73-83	65-73	73-83
Indonesia	4.8	3.8	13.4	8.6	9.0	12.6	9.6	9.0
Malaysia	-	4.4	-	8.7	-	10.6(a)	-	8.2
Philippines	4.1	4.3	7.4	6.4	8.5	5.0	4.8	5.2
Singapore	5.7	1.5	17.6	8.5	19.5	7.9	11.5	8.1
Thailand	5.2	3.8	9.0	9.0	11.4	8.9	9.1	7.6
Middle-Income Economies	3.3	2.5	9.1	4.9	9.3	4.9	7.5	5.3

(a): Data for 1970-82

Source: World Development Report, World Bank, 1985

foremost are effective national policies. Although, government policies

**Table 3-5: The Distribution of Employment by Sectors**  
(percent)

	Agriculture		Industry		Services	
	1960	1981	1960	1981	1960	1981
Indonesia	75	58	8	12	17	30
Malaysia	63	50	12	16	25	43
Philippines	61	46	15	17	24	37
Singapore	8	2	23	39	69	58
Thailand	84	76	4	9	12	15

Source: World Development Report, World Bank, 1979 and 1985

vary from country to country, the following similarities can be seen among the ASEAN member countries. All the ASEAN countries provided an environment of relatively reasonable civil order and the rule of law. In economic terms the ASEAN member countries did not pursue import-substitution to extremes, but turned to export-oriented development, particularly in manufacturing industries, at relatively early stages, that is by the end of 1960s. Only the Philippines and Indonesia lagged behind the group in the early 1970's in this respect. The level of net effective protection was lower than in most other developing countries. Even in the Philippines protection was not as high as in most developing countries, notably the members of regional integration groupings in Latin America. Export-oriented policies led to a relatively efficient allocation of resources, enabled ASEAN member countries access to a worldwide market, and exploited factor endowments without being subject to demand constraints for specialization. Export-oriented strategies exposed domestic industry to world market competition and thus both fostered industries with a lower cost and higher quality of products and imposed cost consciousness on economic planning and policy choices. The favorable policy for exports resulted in rapid export growth and foreign exchange earning, thus, relaxing the foreign exchange constraint on development. Export-oriented strategies

also exerted a pressures for prudent monetary and exchange rate policies which kept prices relatively stable. Hence, the ASEAN economies were less distorted than those of most other developing countries.

The ASEAN member countries had relatively high rates of investment (Table 3-6). Investment was backed by relatively high savings ratios which reflected the development oriented mix of macro and micro economic policies. Domestic savings were, moreover, supplemented by capital import policies which for the most part took into account the economies' capacity to service external debt. Except in the Philippines (and in some instances in Indonesia), the overall developmental character of economic policies led to relatively effective investment, Government policies also strongly supported cost recovery in the public sector.

Because agricultural progress and employment creation was relatively more successful in the ASEAN member countries (except in the Philippines), than in most other developing countries (Riedel, 1985) and public goods were less skewed against lower income groups than in most other developing countries, poverty alleviation was more successful than in other developing countries, contributing to stability.

Finally, the formation of ASEAN contributed to regional stability and thus also contributed to economic development.

**Table 3-6: Savings and Investment as a Share of GNP  
in ASEAN Member Countries**

(percent)

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	Gross Domestic Investment as a Share of GNP		Gross Domestic Saving as a Share of GNP	
	1965	1983	1965	1983
Indonesia	7	24	6	20
Malaysia	18	34	23	29
Philippines	21	27	21	21
Singapore	22	45	10	42
Thailand	20	25	19	20

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Source: World Development Report, World Bank, 1985

## CHAPTER 4

## GROWTH AND DIRECTION OF ASEAN TRADE

## 4.1 Characteristics of ASEAN Trade

The rapid growth of ASEAN economies (Table 3-4) was accompanied by a more than proportional increase in their merchandise trade (Table 4-1)<sup>1</sup>. Except for Singapore, these countries are richly endowed with natural resources and hence are net exporters of food, agricultural raw materials, minerals, fuels and metals. In 1981, these commodities ranged from 95% of exports for Indonesia to 53% for the Philippines. Even for Singapore, because of its entrepot role, more than 40% of merchandise exports were raw materials (Tables 4-2 and 4-3)<sup>2</sup>. But the export structure of the ASEAN member countries changed between 1967 and 1981, reflecting successful industrialization (except in Indonesia). Within primary products, the share of fuels, minerals, and metals increased greatly, while that of other primary products decreased. However, the most important change lay in the contribution of the manufacturing sector to exports. In 1981, the share of manufactured to total exports ranged from 25% in the Philippines<sup>3</sup> to 50% in Singapore. High petroleum exports made Indonesia an exception with only 5% of exports consisting of manufactured goods. The growth of manufactured exports was greatest in Thailand. In Malaysia there was little change in the share of manufactures in exports because of the increased price and volume of petroleum. Moreover, processed raw materials were an important component of manufactured exports in Malaysia even in 1981.

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<sup>1</sup>Although trade in service has been growing in importance in ASEAN trade, the trade analysis is conducted in merchandise terms because service trade data are limited and not available by direction of trade.

<sup>2</sup>It was not possible to separate Singapore entrepot from total trade for this analysis.

<sup>3</sup>The Philippines figure is under estimated, because of the special treatment which Philippine statistics give to SITC 931, which are almost entirely labour intensive manufactures.

The ASEAN member countries remain net importers of manufactured goods. Except for the Philippines imports of manufactures constituted over 50% of the individual ASEAN member countries imports in 1981. During 1967-1981, the value of imports of fuel and capital goods increased, but imports of food and other primary commodities fell. These trends are closely related to the successful agricultural, industrialization and overall economic expansion policies of the ASEAN member countries.

Table 4-1: ASEAN Member Countries' Trade Growth

	Total Trade		Average Annual Real Growth Rate (%)			
	1967	1983	Export		Import	
	(\$bil)	(\$bil)	65-73	73-83	65-73	73-83
Indonesia	1.4	37.5	11.1	1.4	13.9	9.8
Malaysia	2.3	27.4	8.0	4.9	4.4	7.3
Philippines	1.7	12.9	4.2	7.5	3.1	1.3
Singapore	2.2	50.0	11.0	.	9.8	.
Thailand	1.4	16.6	6.9	9.0	4.4	3.3
Total	9.0	144.4	(8.2)	(5.7)	(7.1)	(5.4)

Source: World Development Report, 1979, 1985

#### 4.2 Direction of ASEAN Trade

Although the principal industrial countries are the main trading partners for the ASEAN member countries (Tables 4-4 and 4-5), the ratio of trade with industrial countries is lower than for most developing countries. It is particularly low for Singapore and Malaysia, because of the weight of regional refined petroleum trade products in their export baskets. However, the overall trend does not hold for manufactured goods, for which, as in other developing countries, the industrial countries are the major trading partners.



Table 4-2: Commodity Composition of Merchandise Exports  
(percent)

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Raw Materials(a)					
1967	96.0	70.2	94.3	65.1	93.8
1981	94.7	71.9	53.4	42.7	66.3
Manufactured Goods(b)					
1967	4.0	28.9	5.6	31.1	5.2
1981	5.0	27.6	25.2	49.7	31.9

(a): SITC 0-4

(b): SITC 5-8 minus 6.8

Source: UN Commodity C Series Trade Data, 1967-1981.

Table 4-3: Commodity Composition of Merchandise Imports  
(percent)

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Raw Materials(a)					
1967	10.4	45.7	35.2	54.7	18.5
1981	28.5	33.9	41.2	45.8	39.8
Manufactured Goods(b)					
1967	89.2	52.1	63.0	43.2	75.6
1981	70.9	65.5	45.9	53.1	56.2

(a): SITC 0-4

(b): SITC 5-8 minus 6.8

Source: UN Commodity C Series Trade Data, 1967-1981.

Among the industrial countries, Japan is the largest and the United States is the second largest overall trading partner. Trade between the United States and individual ASEAN countries has undergone

Table 4-4: Share of Imports of the ASEAN Member Countries  
to Principal Industrial Countries, 1981

(percent)

Exports Imports	Japan	United States	EEC(ten)	Total
Indonesia	31	17	15	63
Malaysia	22	15	12	49
Philippines	19	26	10	55
Singapore	19	14	10	43
Thailand(a)	21	19	13	53

(a): Data for Thailand is 1980.

Source: Year Book of International Trade statistics, 1981

Table 4-5: Share of Exports from the ASEAN Member Countries  
to Principal Industrial Countries, 1981

(percent)

Imports Exports	Japan	United States	EEC(ten)	Total
Indonesia	47	27	5	79
Malaysia	19	10	13	42
Philippines	22	34	16	72
Singapore	10	17	11	38
Thailand(a)	15	14	26	55

(a): Data for Thailand is 1980.

Source: Year Book of International Statistics, 1981

geographical changes during the last decade. Traditionally, the Philippines had been the largest market for American goods and the most important ASEAN exporter to the American market. However, for imports,

it has been replaced by Singapore<sup>4</sup>. This change largely results from the role played by American transnational corporations. They imported industrial raw materials and intermediate products from the United States for further processing in ASEAN member countries, particularly in Singapore, and then exported the final products to the American markets. On the export side, Indonesia has taken over the Philippines' position as the most important ASEAN exporter to the American market since 1974<sup>5</sup>. This change mainly results from U.S imports of petroleum from Indonesia (Saw and Hong, 1982).

The EC ranked third as an ASEAN trading partner. It was the most important export market for Thailand. Figure 4-1 shows the share of trade with the three major trading partners as percentages of total ASEAN trade from 1968 to 1980. The share for all these three trading partners reached its peak in 1972, the decline reflected rising commodity prices.

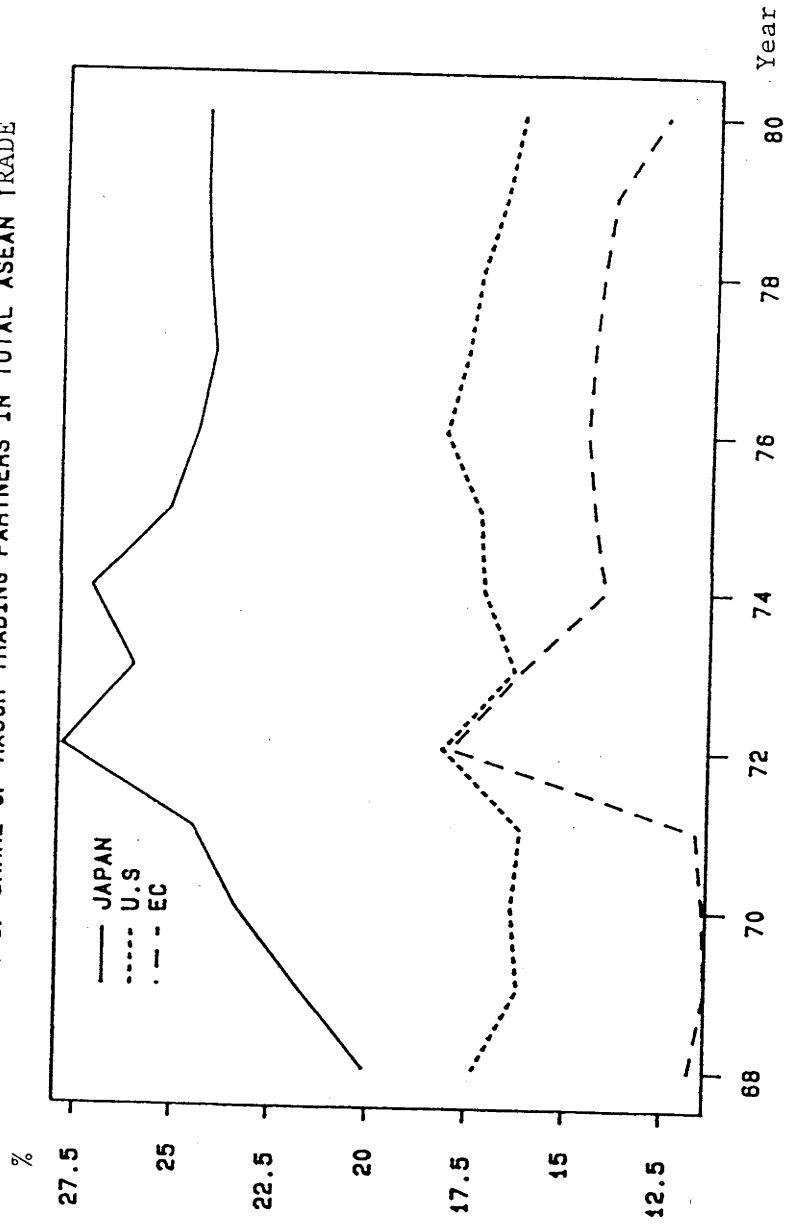
The ASEAN member countries' trade structure reflects the high complementarity of natural endowment (land) and the other principal factors of production (labour and capital ) to the factor endowment of industrial countries. Table 4-6 shows the commodity composition of ASEAN trade with the three major trading partners. Imports are highly concentrated in manufactured goods, notably capital goods including machinery and transport equipment, while agricultural and mineral raw materials such as crude petroleum and petroleum products, rubber, tin, copper, sugar, palm oil and coffee and labour intensive manufactures are the principal exports.

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<sup>4</sup>Year Book of International Trade Statistics, 1975 shows that total Singapore imports from the United States reached \$360 million in 1971, while Philippines' imports from the United States were \$327 million.

<sup>5</sup>In 1974, Indonesia's total exports to the United States reached \$1.6 billion, while the total exports of the Philippines to the United States were \$1.2 billion.

FIGURE 4-1: SHARE OF MAJOR TRADING PARTNERS IN TOTAL ASEAN TRADE



Source = Yearbook of International Trade Statistics, Various Issues.

Table 4-6: Commodity Composition of ASEAN Trade With Major Trading Partners, 1981

	Imports Share of Manufactured Products (percent)	Exports Share of Primary Products (percent)
<b>Indonesia</b>		
Japan	94	99
U.S.	79	98
EEC	93	71
<b>Malaysia</b>		
Japan	96	85
U.S.	87	42
EEC	87	56
<b>Philippines</b>		
Japan	82	72
U.S.	50	36
EEC	78	55
<b>Singapore</b>		
Japan	96	43
U.S.	86	17
EEC	88	23
<b>Thailand</b>		
Japan	93	79
U.S.	63	40
EEC	77	60

Notes: Manufactured products include SITC 5-8 minus 6.8;

Primary products include SITC 0-4.

Source: UN Commodity C Series Trade Data, 1967-1981.

#### 4.3 Intra-ASEAN Trade

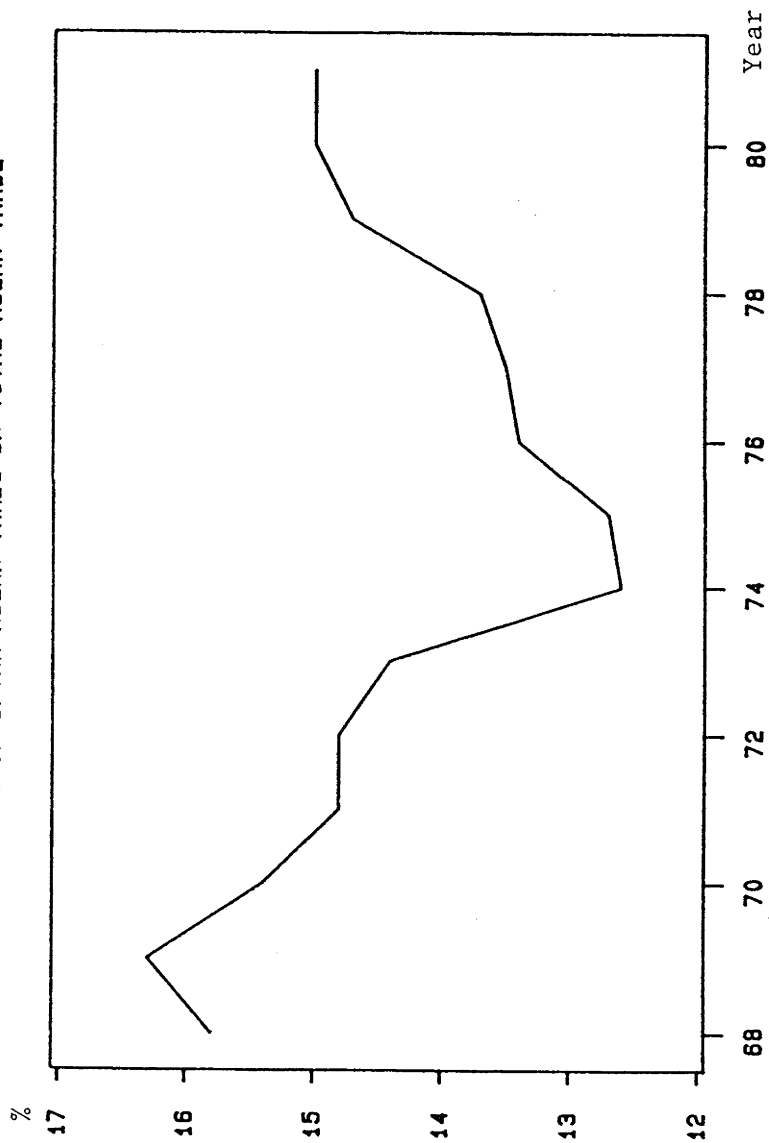
Intra-ASEAN trade existed long before the formation of ASEAN in 1967. It has not progressed very much since then, especially in the period before 1974, when the share of intra-ASEAN in total ASEAN trade in fact consistently decreased. Only after 1974, did the share of intra-ASEAN in the total ASEAN trade grow steadily, mainly as a result of increased petroleum prices. The 1981 intra-ASEAN share was nevertheless still below the level of 1968. The implementation of the PTA in 1977 had no effect on intra-ASEAN trade which stagnated at

about 15% of total ASEAN trade (Figure 4-2). Compared with the EC in which regional trade constitutes about 50% of total trade, the level of intra-ASEAN is very low because of the trade structure of the ASEAN member countries. For this reason preferential trade arrangements might be expected to have only a small effect on the direction of trade of the ASEAN member countries.

Intra-ASEAN trade is not evenly distributed among the member countries. Two major trade flows dominate: Singapore's trade with Indonesia and Malaysia. These two flows accounted for 73% of all intra-ASEAN trade in 1981. Historically, Singapore served as a collecting and distribution centre of Indonesian and Malaysian goods to the other parts of the world. Because it is a city-state, Singapore also depends on the other member countries for foodstuffs and raw materials. For these reasons Singapore accounted for 54% of total imports and nearly 44% of total intra-ASEAN exports in 1981 (Figure 4-3). The Philippines occupied the other end of the spectrum, contributing less than 5% to total intra-ASEAN imports and less than 4% to total intra-ASEAN exports.

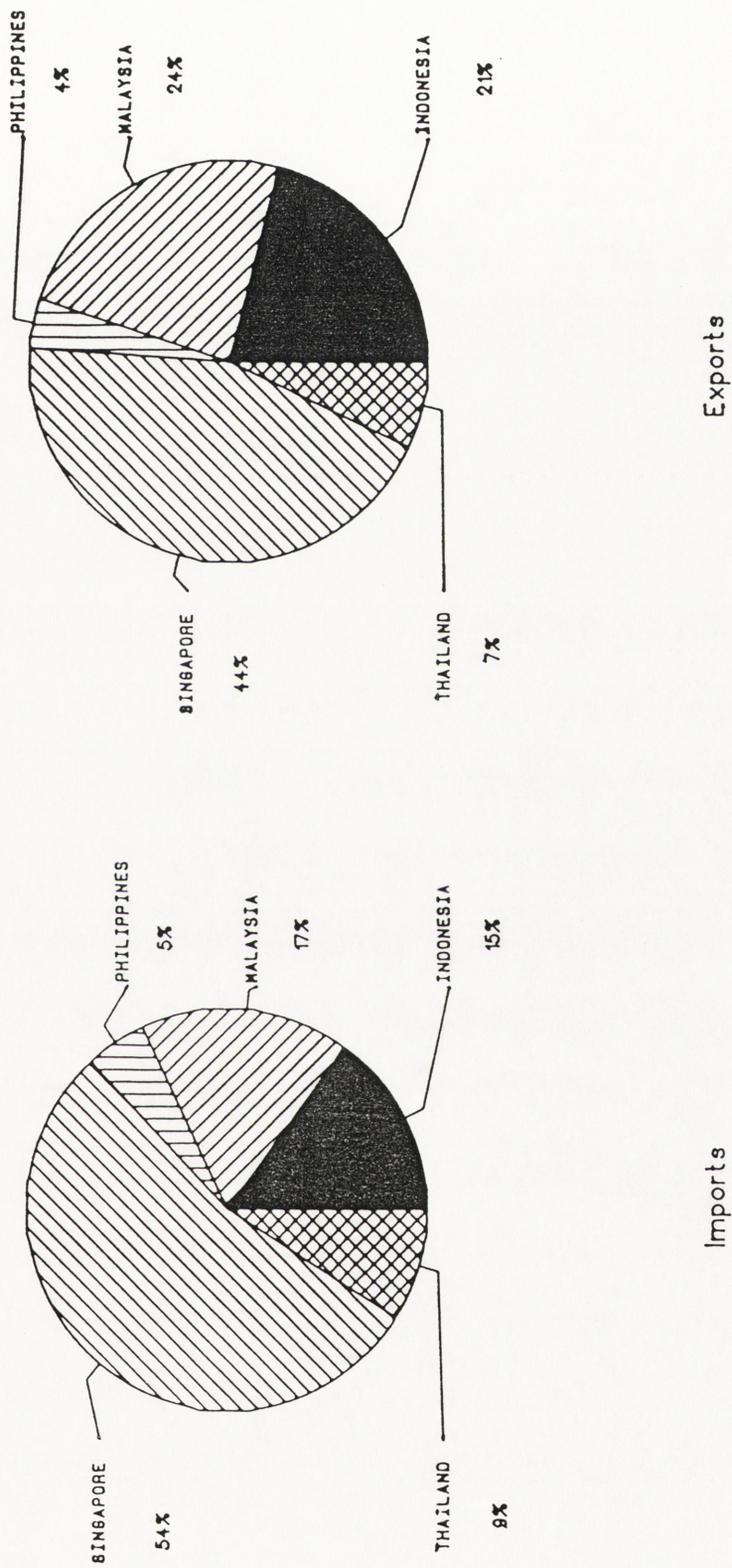
Intra-ASEAN trade has been dominated by agricultural and other primary products (figure 4-4). These products constituted 73% of intra-ASEAN trade in 1981, with petroleum and oil products accounting for 34%. Manufactured goods only made up 25% of intra-ASEAN trade in 1981. Tables 4-9 to 4-12 show the trade matrixes of imports and export of agricultural and manufactured products of the ASEAN member countries. Intra-ASEAN trade in primary products as a percentage of ASEAN global trade in primary products was 26% compared to 12% for manufactured products. The possibilities for increased trade in agricultural products are limited in part by the similarity of the agricultural environments, but in part also by the self-sufficiency agricultural policies followed by the ASEAN member country governments. Singapore's absorptive capacity for raw materials is necessarily limited. Trade in minerals is largely tied to economic growth. The principal opportunities for intra-ASEAN trade are in intra-industry trade following the EC's successful experience. It is here that tariff and non-tariff barriers seriously impede trade. Trade barriers are only low for those sophisticated capital goods for which the ASEAN member

FIGURE 4-2: SHARE OF INTRA-ASEAN TRADE IN TOTAL ASEAN TRADE



Source = Yearbook of International Trade Statistics, Various Issues.

Figure 4-3: Distribution of Intra-ASEAN Trade, 1981

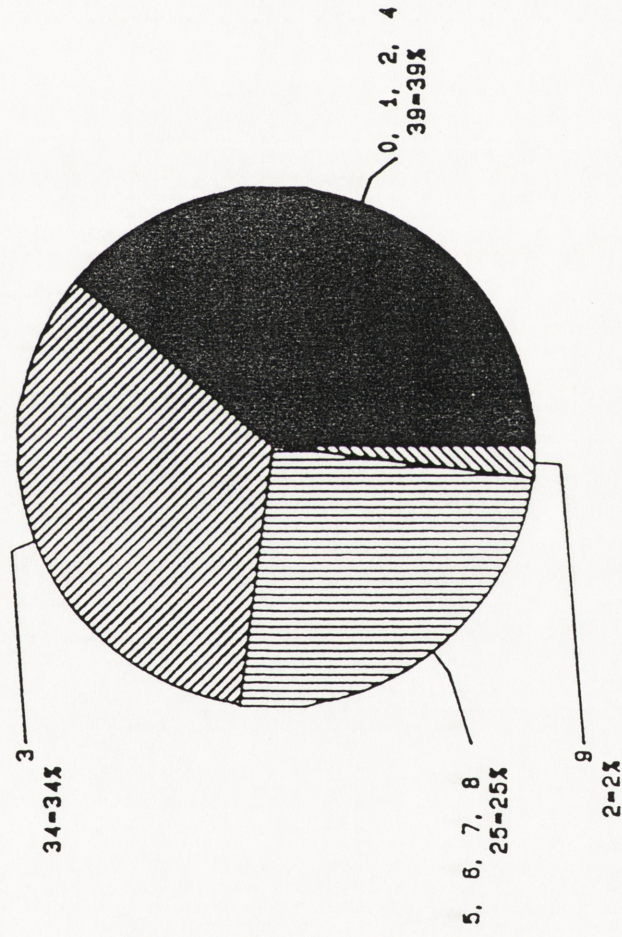


Source = U N Commodity C Series Trade Data, 1981.



countries still for the most part lack productive capacity. The ASEAN member countries could develop the capacity to produce suitable goods for an ASEAN wide and world market, but this would require liberalization outside as well as within ASEAN to exploit economies of scale and competition, otherwise ASEAN would repeat the policy errors of such inward oriented regional integration arrangements as the ACM. Thus it is not surprising that although total value of intra-ASEAN trade has increased from year to year, total ASEAN trade has remained a constant proportion of trade with industrial countries.

FIGURE 4-4: SHARE OF VARIOUS COMMODITIES IN INTRA-ASEAN TRADE, 1981



Source = U N Commodity C Series Trade Data 1981.

Table 4-7: Intra-ASEAN Trade, 1981

(\$ million)

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	Indonesia	Malaysia	Philippines	Singapore	Thailand
Indonesia	-	128	350	3420(a)	157
Malaysia	120	-	286	6683	578
Philippines	664	281	-	382	37
Singapore	3420	4175	239	-	1145
Thailand	181	590	53	1355	-

---

(a): The data of Singapore trade with Indonesia is derived from Indonesia import from and export to Singapore.

Source: UN Commodity C Series Trade Data, 1981.

Table 4-8: Intra-ASEAN Trade as Share of Total ASEAN Trade, 1981

(\$ billion)

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	Total ASEAN Trade (1)	Total Intra-ASEAN Trade (2)	(2) ----- (1)
Indonesia	35.3	4.4	12.4
Malaysia	23.2	5.2	22.3
Philippines	14.2	0.9	6.5
Singapore	48.5	11.8	24.4
Thailand	16.9	1.9	11.3

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Source: UN Commodity C Series Trade Data, 1981

Table 4-9: Intra-ASEAN Trade -Imports of Agricultural Products, 1981

(\$ million)

---

From	To Indonesia	Malaysia	Philippines	Singapore	Thailand
Indonesia	-	55	218	1745	22
Malaysia	30	-	158	2526	240
Philippines	263	22	-	37	11
Singapore	950	1037	42	-	606
Thailand	121	347	24	270	-

---

Source: UN Commodity C Series Trade Data, 1981

Table 4-10: Intra-ASEAN Trade -Exports of Agricultural Products, 1981

(\$ million)

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To	From Indonesia	Malaysia	Philippines	Singapore	Thailand
Indonesia	-	32	136	950	112
Malaysia	37	-	12	1340	250
Philippines	403	147	-	101	12
Singapore	1745	2154	44	-	243
Thailand	28	1718	7	568	-

---

Source: UN Commodity C Series Trade Data, 1981

Table 4-11: Intra-ASEAN Trade - Imports of Manufactures, 1981

(\$ million)

---

To From	Indonesia	Malaysia	Philippines	Singapore	Thailand
Indonesia	-	13	13	215	2
Malaysia	29	-	9	851	27
Philippines	16	73	-	64	8
Singapore	290	432	52	-	66
Thailand	25	46	4	195	-

---

Source: UN Commodity C Series Trade Data, 1981

Table 4-12: Intra-ASEAN Trade - Exports of Manufactures, 1981

(\$ million)

---

From To	Indonesia	Malaysia	Philippines	Singapore	Thailand
Indonesia	-	26	12	290	20
Malaysia	22	-	9	1836	56
Philippines	8	35	-	150	5
Singapore	215	480	25	-	214
Thailand	6	23	9	293	-

---

Source: UN Commodity C Series Trade Data, 1981

## CHAPTER 5

### EFFECTS OF INTRA-ASEAN TARIFF REDUCTION ON THE ASEAN TRADE STRUCTURE IN MANUFACTURED GOODS

#### 5.1 Overview of the Model

In the theory of demand for tradable goods, it is usually assumed that a given good supplied by sellers in one country is a perfect substitute for goods of the same kind supplied by any other country. This does not take into account differences in tariffs, subsidies and other forms of protection, other forms of government intervention, transport and insurance costs. Armington(1969) therefore developed a general theory of demand for products that are distinguished not only by their physical properties, but also by their place of production. In his theory, such products are distinguished from one another in the sense that they are assumed to be imperfect substitutes. Starting with the general Hicksian model, Armington's approach runs through a sequence of progressively more restrictive assumptions leading to a specification of the product demand function which, though highly simplified, preserves the relationships among demand, income, and prices that are relevant for estimation and forecasting. Armington's approach, however, dealt entirely with demand. To account more specifically for the influence of government policies and to permit its use for market forecasting, the analysis presented in this chapter combines Armington's demand function with supply functions and government policy variables as suggested by Uehara and Tyers (1980) to examine the effects of tariff reductions on ASEAN trade in manufactures.

## 5.2 Model Description and Methodology Application<sup>1</sup>

The model is based empirically on a trade matrix ( $x_{ij}$ ) consisting of the trade and production of the five individual ASEAN member countries and the rest of the world (ROW) as a sixth country group. Following Armington's approach, the model is based on the theory of separability in demand. In the model, manufactured goods are distinguished by their location of production. That is, the geographic areas that serve as a basis for distinguishing products by origin are also used as a basis for identifying different sources of demand. Since there are six demand countries for manufactured goods and six supply sources, the demand function contains 36 equations, of which 6 are domestic demand equations and 30 are import demand equations.

Since constant elasticities of demand and supply are assumed, the model is linear in proportional changes:

Value of imports by  $i$  from  $j$ :

$$\hat{x}_{ij} = \frac{\Delta x_{ij}}{x_{ij}}$$

National income in  $i$ :

$$\hat{y}_i = \frac{\Delta y_i}{y_i}$$

Consumer price in  $i$  of imports from  $j$ :

$$\hat{p}_{ij}^i = \frac{\Delta p_{ij}^i}{p_{ij}^i}$$

Border price in  $i$  of imports from  $j$ :

$$\hat{p}_{ij} = \frac{\Delta p_{ij}}{p_{ij}}$$

Domestic producers price in  $j$ :

$$\hat{p}_j = \frac{\Delta p_j}{p_j}$$

From Armington's theory, the proportional change in the demand in country  $i$  for manufactures produced in  $j$  is

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<sup>1</sup>See Mathematical Appendix.

$$\hat{x}_{ij} = \eta_i y_i + \sum_k e_{ijk} \hat{p}_{ik}^i$$

Where  $\eta_i$  is the income elasticity of demand in  $i$ , and  $e_{ijk}$  is the price elasticity of demand in  $i$  for goods produced in  $j$  with respect to the price of goods produced in  $k$ .

$$e_{ijk} = \begin{cases} -[(1 - s_{ij}) \sigma_i + s_{ij} \epsilon_i] & j = k \\ s_{ik} [\sigma_i - \epsilon_i] & j \neq k \end{cases} \quad (5.2)$$

Where  $\sigma_i$  is the elasticity of substitution in  $i$ ,  $\epsilon_i$  is the corresponding price elasticity of demand and  $s_{ij}^m$  is the share of country  $j$  in total consumption in  $i$ .

The corresponding proportional change in production in country  $j$  is

$$\hat{q}_j = \zeta_j \hat{p}_j \quad (5.3)$$

Where  $\zeta_j$  is the medium-run elasticity of supply in  $j$ .

The market is closed in the model with the Walrasian equilibrium condition that there is no excess demand for the product of any country. Thus, the proportional change in the total global demand for the product of  $j$  must be equal to the proportional change in  $j$ 's production:

$$\sum_l s_{lj}^e \hat{x}_{lj} - \hat{q}_j = 0 \quad (5.4)$$

Where  $s_{lj}^e$  is the share of destination  $l$  in the total output of  $j$ .

The market shares,  $s_{ij}^m$  and  $s_{ij}^e$  are drawn from an initial trade matrix and can be assumed constant so long as the proportional changes introduced into the model are relatively small. Thus far, changes can be introduced primarily through the income variable,  $y_i$ . No price distortions have yet been introduced. These can be added in the form of domestic-to-border price ratios which summarize the variety of tariff and non-tariff restrictions affecting trade. On the import side, the nominal protection coefficient is assumed to be exogenous:



(5.5)

$$g_{ij}^m = \frac{p_{ij}^i}{p_{ij}}$$

Where  $g_{ij}^m$  is the ratio of the consumer price in  $i$  of the product of country  $j$  with the corresponding border price. In proportional changes, this becomes:

(5.6)

$$\hat{p}_{ij}^i = \hat{p}_{ij} + \hat{g}_{ij}^m$$

On the export side, the border distortions affecting exports and the infrastructural costs influencing delivery (border) prices in destination countries are summarised by

(5.7)

$$g_{ij}^e = \frac{p_{ij}}{P_j}$$

Where  $g_{ij}^e$  is the ratio of the delivery price in country  $i$  with the producer price in  $j$ . This is also assumed to be exogenous. In proportional changes, this then becomes:

(5.8)

$$\hat{p}_{ij} = \hat{P}_j + \hat{g}_{ij}^e$$

Equations (5.1), (5.4), (5.6), and (5.8) constitute a self-contained system of equations equal in number to the set of endogenous price and quantity variables. In the model, all 6 trading countries are simultaneously producers, importers and exporters of manufactured goods. There are 36 unknowns of  $X_{ij}$ ,  $p_{ij}^i$ , and  $p_{ij}$ , and 6 unknown producer prices,  $P_j$ . To solve for these, there are 36 equations of (5.1), 6 equations of (5.4), 36 equations of (5.6), and 36 equations of (5.8). All equations are linear in proportional changes, permitting solution by simple matrix inversion.

The left hand side of equation (5.1) is the proportional change of the demand in country  $i$  for manufactured goods as produced in country  $j$ . The first right hand side term signifies the effect of income growth in country  $i$  on the overall demand for manufactured goods. The second term gives the effect of the proportional change in the price of manufactured goods on the demand for imports to country  $i$  from country  $j$  (where  $k=j$ ). If  $k$  is not equal to  $j$ , the second term derives the contribution to the proportional change in import demand in country  $i$

for country  $j$  exports which is due to change in the prices at which the same commodity is imported from other countries,  $k$  (see mathematical appendix). The main assumptions of this demand function are as follows:

(1) Buyers' marginal rates of substitution between manufactured goods competing in a given market are independent of their purchases in other markets. Given this assumption, the manufactured goods demanded by each country (e.g., Indonesia's demand for manufactured goods-in-general) can be measured unambiguously. In Indonesia, manufactured goods supplied by different countries or groups of countries (including Indonesia itself) could be said to compete. Moreover, demand for manufactured goods (e.g., Indonesia's demand for Malaysian manufactured goods) can be rigorously expressed as a function of the size of the corresponding market (Indonesia's demand for manufactures-in-general) and of relative prices of the competing products (Armington, 1969A).

(2) The substitution elasticities among manufactured goods are constants; that is, they themselves do not depend on prices or market shares.

(3) The elasticity of substitution between the manufactures of any pair of countries competing in a given market is the same as that between the manufactures of any other pair of countries competing in that market. If both the elasticity of substitution in each market and the elasticity of demand for manufactures in general in each market are assumed to be the same everywhere, differences in the impact of the given price change on the trade of the different countries will result solely from the initial geographic pattern of trade. Armington (1969b) used this assumption to examine the role of trade structure. In this study, however, elasticities of demand and substitution are constant within countries but they differ between countries.

On the production side, each country produces a single homogeneous good for both domestic consumption and exports. Hence, equation (5.4) shows the effect of changes in producers' prices in country  $j$  on the import of manufactured goods of country  $l$  (i) and change in the size of all the countries in the import of manufactured goods from country  $j$ .

Government intervention which directly affects the level of producer and consumer prices in relation to international trading

prices is taken into consideration in equations (5.6) and (5.8). This role is performed by a set of exogenous parameters ( $g_{ij}^m$ ) and ( $g_{ij}^e$ ). These summarise the effects on prices of the tariff, subsidy and exchange rate policies of each consuming country  $i$ .  $g_{ij}^m$ , for example, is the nominal protection coefficient in country  $i$  with respect to goods produced in  $j$ . Differences in international and domestic transportation and insurance costs are also implicit in these parameters. Domestic consumer and producer prices are dependent on world prices and exogenous levels of government intervention (nominal protection coefficients) which are constant in all countries for which no policy change is explicitly implemented. All countries are "large" in that the impacts of their policies on world prices are measured.

The model is an exercise in medium term comparative statics. No attempt is made to measure the time pattern of trade response to price changes. Marginal cost curves are assumed to be upward-sloping in all countries. The model therefore does not permit experiments involving adjustment through specialization, economies of scale, learning by doing and the erosion of quasi rents of intra marginal firms through increased competitiveness, hence the model results may understate the benefits of ASEAN trade liberalization.

Applying this approach, the effects of discriminatory and nondiscriminatory tariff cuts on trade creation and of trade diversion in ASEAN manufactured goods were examined. Three different trade liberalization policies were considered: (1) extending the present partial preferential arrangements to a 20% across-the-board tariff reduction on manufactured goods within ASEAN member countries, while keeping the tariffs of the ASEAN member countries against the ROW country group unchanged; (2) complete intra-ASEAN trade liberalization while keeping the tariffs of the ASEAN member countries against the ROW country group unchanged; and (3) ASEAN and world trade liberalization<sup>2</sup>.

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<sup>2</sup>An experiment to gauge the effects of unilateral trade liberalization by all five ASEAN member countries was also carried out, but as expected, did not lead to favorable results for production or trade because of the short term nature of the model. Unilateral liberalization vis a vis the rest of the world will only lead to trade growth if the liberalizing economies are flexible and the model framework precludes flexibility. It does not represent reality sufficiently closely to be a useful tool of analysis, but it has been included for the sake of completion in Appendix C.

Two different types of experiment were carried out. Firstly, each trade liberalization policy was adopted by the trading partners on the basis of present protection levels. This set of experiments was done with substitution elasticities equal to 1 and 2. All these experiments were completed using single-step solutions of the model- assuming the shares  $s_{ij}^m$  and  $s_{ij}^e$  remain constant. Where the changes of policy resulted in large proportional changes in trade flows, this assumption is violated and accurate results can only be derived from a succession of solutions, subdividing the policy changes into a series of small steps. When this procedure was carried out, however, the results were not significantly different from those derived from single-step solutions.

### 5.3 Data and Model limitations

The principal manufactured trade matrix ( $X_{ij}$ ) is derived from UN C series trade data and based on import data for the year 1981. Manufactured goods have been aggregated from the Standard International Trade Classification (SITC) 3 digit to the 1 digit level and covered from section 5 to 8 minus 6.8 (Table 5-1). The data used in the model has a number of drawbacks. Firstly, the intra-ASEAN trade statistics are not complete, especially for trade between Indonesia and Singapore. Singapore does not publish any statistics on trade with Indonesia. The data for Indonesia's official exports to Singapore have therefore been used as the data of the Singapore's imports from Indonesia. This probably underestimates the flow.

Secondly, there is a significant discrepancy between exports and imports of Singapore and the corresponding imports and exports of its trading partners. These discrepancies are due to the double counting of entrepot trade. For example, when Malaysia imports goods from Japan through the port of Singapore, Malaysia considers it as an import from Japan but Singapore also considers it as an import from Japan and an export to Malaysia. For extra-ASEAN trade such double counting leads to an overstatement of imports from Japan and to a discrepancy between the figures for Singapore's imports and exports. As already noted, Singapore's entrepot trade could not be excluded, and Singapore's data has to be treated with great cautions.

Thirdly, the internal trade data of the five ASEAN member countries, are calculated from the gross value of GDP originating in manufacturing and estimates of various relations between gross value and net value added in manufacturing for each ASEAN member country. The estimation of the internal trade for the country group, ROW, is regarded as a residual since origin and destination are irrelevant for this exercise.

Table 5-1: Manufactured Products Trade Matrix for the ASEAN Member Countries, 1981

(\$ million)

Imports of	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW.	Total sales	Total export
From:								
Indonesia	39133	14	13	505	2	139	39806	673
Malaysia	30	9071	9	850	27	1383	11370	2299
Philippines	16	73	46605	65	8	1167	47934	1329
Singapore	290	432	52	6985	66	9260	17085	10100
Thailand	25	46	4	195	12107	1478	13855	1748
ROW.	8608	6803	3724	12793	5339	4000000	4037267	37267
Total purchase	48102	16439	50407	21393	17549	4013427	4167317	
Total import	8969	7368	3802	14408	5442	13427		53416

Note: Total manufactured trade = 4167317.

Total external trade for manufactures = 53416.

Source: UN Commodity C Series Trade Data, 1981

Fourthly, the model has five important sets of parameters: income elasticities of demand, elasticities of substitution, price elasticities of demand, price elasticities of supply and nominal protection rates of manufactured goods (Table 5-2). The elasticities are parameters that measure the strength of a presumed cause-effect relationship between relative prices and relative quantities demanded. They can be estimated econometrically. However, in this study, the substitution elasticity data for the five ASEAN member countries are based on previous empirical research (mainly Lim) The simple average of the substitution elasticity of all the manufactured goods which have been estimated is 1.75. Since the total value of the manufactured goods for which the elasticity of substitution was estimated was over 50% of all manufactured goods, the average substitution elasticity of manufactured goods for the ASEAN member countries is highly likely to be between 1 and 3. The nominal protection rates of manufactured goods of the five member countries are based on Bautista (1981). The other three sets of parameters are rough rule of thumb estimates. All five sets of parameters are behavioral hypotheses. Sensitivity analysis<sup>3</sup> was conducted to examine how the outcomes of the experiments vary as the values of the parameters are altered, mainly as the elasticity of substitution varies between 1 and 3.

#### 5.4 Model Results

Tables 5-3 to 5-7 provide a picture of the trade effects of the various liberalization options with the estimation of substitution elasticities equal to 2.

(1) With a 20% tariff reduction, trade creation effects occur, but they are very small. Each ASEAN member country has an increase in total imports and exports of manufactured goods (Table 5-3). The export growth rates are higher than those of imports in Indonesia, Malaysia and Thailand. Theoretically, domestic production should increase to take advantage of the trade diversion and creation possibilities.

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<sup>3</sup>Only one of the parameters, that is elasticity of substitution, is subject to sensitivity analysis.

Table 5-2: Selected Parameter Values

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
IED	0.80	1.00	0.80	1.00	0.90	1.00
PED	-1.00	-0.80	-1.00	-0.70	-0.90	-0.90
SE	2.00	2.00	2.00	2.00	2.00	2.00
PES	0.70	1.00	0.70	1.00	0.80	0.80
NPR	1.34	1.16	1.46	1.10	1.29	1.20

## Note:

IED = income elasticity,

PED = price elasticity of demand,

SE = substitution elasticity,

PES = price elasticity of supply,

NPR = simple average of nominal protection rate of manufactured goods.

Source: As indicated in text.

Except in Indonesia, this was the case in the model. However, the amount consumed of own production in each country should decrease, and this was, albeit on a very small scale, also the case in the model (Table 5-4). The compensation for decrease in internal trade mainly comes from the other ASEAN member countries; that is, supplies switch from higher cost domestic producers to lower cost producers in the other member countries; The effect of the 20% tariff reduction on the rest of the world is very small. As Table 5-4 shows, all the ASEAN member countries increase their imports from ROW, but, the percentage increases are all less than 0.01% . Since the Philippines had a higher protection rate previously, the other member countries enjoy the highest (0.12%) increase in exports to the Philippines (compared with 0.1% for Indonesia, 0.09% for Thailand, 0.05% for Malaysia). Singapore, as the most open economy, only has 0.04% increase in its imports from each of the other member countries. The total gains from the tariff reductions of the individual ASEAN member country depend both on their shares in ASEAN markets and on the share of the domestically produced manufactured goods in each country's market. With the most advanced technology and the largest share in intra-ASEAN trade, Singapore would

be the major beneficiary from the 20% tariff reduction. The value of regional trade would increase from \$2.7 billion to \$2.9 billion, or by 5.1% (Table 5-7).

(2) If all intra-ASEAN trade barriers were eliminated (Table 5-4), trade creation effects would be higher than those of a 20% tariff reduction, but the trade increase is still very small. With free intra-ASEAN trade, all the ASEAN member countries would have a higher level of total imports and exports than in the 20% tariff reduction case (Table 5-3). The consumption of domestically produced manufactured goods again only rises in the Philippines (Table 5-4). All the ASEAN member countries increase their exports. The trade creation effects are higher than with the 20% tariff reduction for all the ASEAN member countries as well as for rest of the world; the total value of regional trade increases from \$2.7 billion to \$3.4 billion, or by 25.5% (Table 5-7). Note that there is no difference in the increase of intra-ASEAN trade between the ASEAN liberalization and world liberalization. While this suggests that (with an SE=2) intra-ASEAN has limits equivalent to a 25% increase in present trade. The ASEAN and world liberalization cases will have different qualitative outcomes. In the ASEAN liberalization case, there would be trade creation and trade diversion. In the global liberalization case different goods would be traded and the 25% increase in ASEAN trade would consist of trade creation. A similar result is allowed with SE=3. ASEAN liberalization led to a 39% increase and global liberalization to 40.4% increase (Table B-10).

(3) Trade creation effects are the highest with world trade liberalization, both for the individual ASEAN member countries and also for the rest of the world. Singapore's imports decrease slightly (Table 5-3). A greater volume of exports could lead to greater competitiveness for Singapore in its home markets<sup>4</sup>.

(4) If ASEAN member countries liberalize unilaterally, (Tables 5-5 and 5-6), the country which adopts the liberalization policy increases total imports from the other member countries but it also increases its exports. The percentage change in the exports of the other member

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<sup>4</sup>As the model does not provide for economies of scale, learning by doing etc, this is a puzzling result in terms of the model.



countries reflect the importance of the trading partners in the market of that particular country (Tables 5-8 and 5-9). Thus trade liberalization by Singapore has a major effects on imports from Indonesia and Malaysia which are major trading partners. In the case of Singapore's unilateral liberalization, total imports increase greatly to that country, and the other ASEAN member countries reduce their total imports.

### 5.5 Sensitivity Analysis

Appendix B indicates the trade effects of the various liberalization policies with different estimates of substitution elasticities. With 20% tariff reduction and  $SE=1$ , all the ASEAN member countries increase their total imports and exports of manufactured goods (Table B-1). The export growth rates are higher than those of the imports in all the countries. The consumption of domestically produced manufactured goods (internal trade) decreases. The Philippines is the only exception (Table B-2). A possible explanation is that as the Philippines is the most protectionist country before the tariff reduction, domestic producers are still protected with a 20% tariff reduction and hence, the share of production consumed domestically, remains unchanged. Alternatively,  $SE=1$  is too low for the Philippines. Compensation for the decrease in the consumption of domestically produced goods comes mainly from the other member countries. Since the Philippines had higher protection rates previously, the other member countries benefit from the highest (6%) increase in exports to the Philippines (compared to 5% for Indonesia and Thailand, 3% for Malaysia, and only 2% for Singapore). The effect of the 20% tariffs reduction on the rest of the world is again very small. Trade diversion only occurs in Indonesia and it is less than 0.01%. The value of regional trade increases from \$2.7 billion to \$2.8 billion or by 2.6% (Table B-5).

With free intra-ASEAN trade, all the ASEAN member countries have a higher level of total imports and exports than in the 20% tariff reduction case. The higher cost of domestically produced manufactured goods decrease in all the ASEAN member countries, again, the Philippines is an exception and the offset is distributed among the

other ASEAN member countries according to the percentages shown in the Table B-2. Again, trade diversion effects occur in Indonesia; however, the effect is still less than 0.01%. Total regional trade increases from \$2.7 billion to \$3.1 billion or by 13%. (Table B-5). The trade diversion effect on the rest of the world is again very small, less than 0.01% (Table B-2).

In the 'first best' case, that is, world wide trade liberalization, not only do the individual ASEAN member countries attain the highest level of imports and exports, but so does the rest of the world. Trade effects of the various liberalization policies have a close relationship to the elasticities of substitution. When  $SE=1$  and  $SE=2$ , all the ASEAN member countries have a lower percentage increase in total imports and exports with the 20% tariffs reduction than when  $SE=3$ . However, trade diversion occurs in Malaysia and Singapore in the case of world liberalization (Table B-7). Trade creation occurs in both 20% tariff reduction in ASEAN and ASEAN liberalization with the latter has a higher percentage than the former. Percentage changes in total intra-ASEAN trade are affected by the various trade liberalization policies. With 20% tariff reduction, the total value of intra-ASEAN trade increases by 7.5%; with intra-ASEAN trade liberalization, it increases by 39% and with world trade liberalization by 40.4% (Table B-10).

Table 5-3: Trade Effects of Various Trade Liberalization Policies on Percentage Changes of Imports and Exports, SE = 2

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
(1) 20% tariff reduction in ASEAN						
Imports	0.7	0.8	0.7	0.6	0.6	-0.0
Exports	3.1	1.4	0.7	0.6	0.7	0.4
Product.	-0.1	0.3	0.0	0.3	0.1	0.2
(2) Intra-ASEAN trade liberalization						
Imports	3.4	4.0	3.6	1.7	3.1	-0.0
Exports	15.3	7.3	3.5	3.1	-8.2	1.8
Product.	-0.5	1.3	0.1	1.6	0.4	0.7
(3) ASEAN and World trade liberalization						
Import	28.0	6.3	40.7	-2.9	22.6	18.3
Export	22.1	22.6	31.2	16.0	25.9	12.5
Product.	-0.4	4.4	0.8	9.3	3.2	-12.0

Note: Product.= total production

**Table 5-4: The Effects of Various Trade Liberalization Policies on the Individual ASEAN Member Country, SE=2**

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	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
<b>(1) 20% tariff reduction in ASEAN</b>						
Indonesia	-0.00	0.05	0.12	0.04	0.09	0.00
Malaysia	0.10	-0.00	0.12	0.03	0.09	-0.00
Philippines	0.10	0.05	-0.00	0.04	0.09	0.00
Singapore	0.10	0.05	0.12	-0.00	0.09	-0.00
Thailand	0.10	0.05	0.12	0.04	-0.00	0.00
ROW	0.00	0.00	0.00	0.00	0.00	0.00
<b>(2) Intra-ASEAN trade liberalization</b>						
Indonesia	-0.01	0.28	0.63	0.18	0.45	0.00
Malaysia	0.50	-0.00	0.63	0.16	0.45	-0.00
Philippines	0.50	0.28	-0.00	0.18	0.45	0.00
Singapore	0.50	0.26	0.62	-0.00	0.44	-0.00
Thailand	0.50	0.27	0.63	0.18	-0.00	0.00
ROW	0.01	0.02	0.02	0.01	0.02	0.00
<b>(3) ASEAN and world trade liberalization</b>						
Indonesia	-0.01	0.28	0.63	0.18	0.45	0.33
Malaysia	0.50	-0.00	0.63	0.16	0.45	0.26
Philippines	0.50	0.28	-0.00	0.18	0.45	0.32
Singapore	0.50	0.26	0.62	-0.01	0.44	0.14
Thailand	0.50	0.28	0.63	0.18	-0.00	0.26
ROW	0.27	0.05	0.40	-0.05	0.22	-0.12

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**Table 5-5: Trade Effects of Intra-ASEAN Liberalization by Each Member Country, on the Percentage Change of Imports and Exports, SE = 2**

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	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
<hr/>						
<b>(1) Indonesia free intra-ASEAN trade</b>						
Imports	0.9	0.0	0.1	0.1	0.1	-0.1
Exports	0.4	0.7	0.6	1.3	0.7	-0.2
Product.	-0.7	0.1	0.0	0.7	0.1	0.0
<b>(2) Malaysia free intra-ASEAN trade</b>						
Imports	0.4	2.1	0.4	0.4	0.4	-0.1
Exports	0.6	0.4	1.4	0.9	0.7	0.4
Product.	0.0	0.1	0.0	0.4	0.0	0.2
<b>(3) Philippines free intra-ASEAN trade</b>						
Imports	0.0	0.0	1.3	0.0	0.0	0.0
Exports	1.2	0.3	0.3	0.3	0.2	0.0
Product.	0.0	0.1	-0.0	0.2	0.0	0.0
<b>(4) Singapore free intra-ASEAN trade</b>						
Imports	1.9	1.8	1.8	2.4	1.8	0.2
Exports	13.1	5.5	0.9	0.3	1.9	1.5
Product.	0.1	1.0	0.0	0.2	0.2	0.5
<b>(5) Thailand free intra-ASEAN trade</b>						
Imports	0.1	0.1	0.1	0.1	0.9	-0.0
Exports	0.1	0.5	0.3	0.2	0.2	0.1
Product.	-0.0	0.1	-0.0	0.1	0.1	0.1

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Note: Product. = total production

Table 5-6: Trade Effects of ASEAN and World Liberalization by Individual ASEAN Member Countries, on the Percentage Change of Imports and Exports, SE = 2

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	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
<hr/>						
(1) Indonesia free world trade						
Imports	41.6	-7.5	-8.0	-7.1	-8.0	-0.0
Exports	0.6	0.7	0.6	1.3	0.7	3.3
Product.	-0.7	0.1	0.0	0.7	0.1	-2.3
(2) Malaysia free world trade						
Imports	-9.5	17.9	-9.7	-8.7	-9.7	-0.1
Exports	0.6	0.4	1.4	0.9	0.7	-4.9
Product.	0.0	0.1	0.0	0.4	0.0	-2.8
(3) Philippines free world trade						
Imports	-4.0	-3.9	58.7	-3.7	-4.1	0.0
Exports	1.2	0.3	0.4	0.3	0.2	2.1
Product.	0.0	0.1	0.0	0.2	0.0	-1.2
(4) Singapore free world trade						
Imports	-7.5	-7.3	-7.8	9.9	-7.8	0.2
Exports	13.1	5.5	0.9	0.3	1.9	-2.1
Product.	0.2	1.0	0.0	0.2	0.2	-2.3
(5) Thailand free world trade						
Imports	-11.7	-11.3	-12.0	-10.8	32.7	-0.0
Exports	0.1	0.5	0.3	0.2	0.3	-5.8
Product.	0.0	0.1	-0.0	0.1	0.1	-3.5

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Note: Product.= total production

**Table 5-7: The Effects of Various Trade Liberalization Policies on  
Intra-ASEAN Trade, SE = 2**

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Policy	Percentage Change of Intra-ASEAN Trade
<hr/>	
All ASEAN member countries:	
(1) 20% tariff reduction	5.1
(2) Intra-ASEAN trade liberalization	25.5
(3) ASEAN and world trade liberalization	25.5
Individual ASEAN member countries:	
Indonesia (2)	6.6
(3)	6.6
Malaysia (2)	5.5
(3)	5.5
Philippines (2)	1.8
(3)	1.8
Singapore (2)	10.0
(3)	10.0
Thailand (2)	1.7
(3)	1.7

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Note:

- (2) = intra-ASEAN trade liberalization,  
(3) = ASEAN and world trade liberalization.

**Table 5-8: Import Shares of Each Trade Partner, 1981**


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	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
Indonesia	0.8135	0.0009	0.0003	0.0236	0.0001	0.0000
Malaysia	0.0006	0.5518	0.0002	0.0397	0.0015	0.0003
Philippines	0.0003	0.0044	0.9246	0.0030	0.0005	0.0003
Singapore	0.0060	0.0263	0.0010	0.3265	0.0038	0.0023
Thailand	0.0005	0.0028	0.0001	0.0091	0.6899	0.0004
ROW	0.1790	0.4138	0.0739	0.5980	0.3042	0.9967

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Source: Derived from basic trade matrix, 1981

**Table 5-9: Export Shares of Each Trade Partner, 1981**


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	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
Indonesia	0.9831	0.0004	0.0003	0.0127	0.0001	0.0035
Malaysia	0.0026	0.7978	0.0008	0.0748	0.0024	0.1216
Philippines	0.0003	0.0015	0.9723	0.0014	0.0002	0.0243
Singapore	0.0170	0.0253	0.0030	0.4088	0.0039	0.5420
Thailand	0.0018	0.0033	0.0003	0.0141	0.8738	0.1067
ROW	0.0021	0.0017	0.0009	0.0032	0.0013	0.9908

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Source: Derived from the basic trade matrix, 1981.



## CHAPTER 6

## CONCLUSIONS

Since the formation of ASEAN, the five member countries have continued to experience rapid economic growth. The economic structure of the ASEAN member countries and their patterns of trade have changed greatly. However, this successful economic performance owed little to regional integration. The strength of the ASEAN economies can be traced back to several interacting factors. Among those factors, government policy is the most important. Although government policies vary from country to country, they have the following similarities:

All the ASEAN member countries had export-oriented development strategies. Participating in world trade led to relatively efficient resource allocation, the exploitation of specialization and economies of scale and of other sources of efficiency in exporting industries. Monetary policies focused on price stability, which together with growing exports generally enabled realistic exchange rates to be maintained without damaging devaluations except in Indonesia and the Philippines. Fiscal policies generally supported stability and investment in productive infrastructure. The ASEAN member countries hence had less distorted economies and better resource allocation and utilization than most developing countries. Basically sound policies were also reflected in high domestic saving rates and levels of capital inflows that enabled high investment rates to be sustained without the creation of intolerable debt burdens (except in the Philippines). Agricultural production grew rapidly (except in the Philippines) since the 1960's and particularly in the 1970s, enabling industrialization to take off from a sound base. Poverty alleviation through agricultural progress and employment creation in secondary and tertiary industries was relative successful in all but the Philippines.

Political and security rather than economic considerations were the main reason for the formation of ASEAN in 1967. The ASEAN member

countries at that time differed widely in many respects. Fully aware of these diversities, the ASEAN leaders took a cautious approach to regional cooperation and integration. An insistence on consensus and a flexible, open-ended approach to problems contributed greatly to 'ASEAN solidarity'.

Although ASEAN has existed since 1967, a serious attempt at economic integration was only initiated at the Bali summit in 1976. The most important areas of ASEAN integration were considered then to lie in investment in multinational industrial projects, complementation and joint venture private enterprise agreements, all supported by trade preferences, and in trade liberalization. But progress in industrial cooperation, predictably on the basis of theory and experience in other developing country integration areas, appears to have been negligible. The establishment of a Preferential Trade Agreement in intra-regional trade similarly had very limited effects.

The principal products mutually traded by the ASEAN member countries were complementary agricultural products and raw materials. These were generally subject to low trade barriers. Trade could expand without integration arrangements. Gains could have been made in intra-industry trade, but here a real reduction of barriers was impossible because of highly protectionist attitudes in the Philippines and Indonesia. Trade in manufactures has therefore remained heavily turned towards industrial countries, over 50% of total exports, but more than that percentage of exports of manufactures being with Japan, the United State and the EC. The goods imported from these three major trading partners largely consist of manufactured goods, while agricultural and mineral raw materials form the bulk of ASEAN exports to industrial countries.

Given the diversity of the ASEAN member countries' development levels and of their major domestic interest groups, experience in other integration areas suggests that prospects for expanding intra-regional trade by trade liberalization in manufacturing products are limited. The simulation results confirm the hypothesis that the effects of liberalization of trade in manufactured goods within ASEAN trade would be negligible for a 20% preferential arrangement and low even for free intra-ASEAN trade in terms of trade creation and hence of production

and welfare. Liberalization would, however, have much greater effects if it were part of a world wide trade liberalization. Hence, the important achievement of ASEAN in the economic field has been in the coordination of important economic negotiations with trading partners, rather than in economic cooperation within the region.

ASEAN policies should thus continue to be outward looking rather than leading to trade diversion. The prospects for regional integration are limited although there is continuing scope for the economic cooperation that has already made a contribution to the favorable environment that has fostered economic growth in ASEAN member countries. ASEAN should not take a confrontational stance against the rest of the world: other regional organizations have found such postures self defeating. On the contrary, the ASEAN member countries individually and as a group should continue to benefit from and contribute to global trade, capital and labour flows.

## A. MATHEMATICAL APPENDIX

Derivation of the demand function for manufactured goods is based on the assumptions of imperfect substitution and constant-elasticity-of-substitution (C.E.S. Utility Function). With the assumption of separability in demand, the utility function has the general form

$$U = U(x_{11}, x_{12}, \dots, x_{1m}, x_{21}, \dots, x_{2m}, \dots, x_{n1}, \dots, x_{nm}) \quad (1)$$

Where  $x_{ij}$  is country  $i$  demand for manufactured goods produced by country  $j$ . If  $x_{ij}$  has price  $p_{ij}$ , and if  $y_i$  is total expenditure of country  $i$  on manufactured goods, the consumer's problem is then to maximize:

$$U = U(x_{i1}, \dots, x_{im})$$

Subject to:

$$\sum_j p_{ij} x_{ij} = y_i \quad (2)$$

If the utility to be derived from the consumption of manufactured goods is specified according to a CES function, the consumer's problem for manufactured goods becomes:

Maximize:

$$U_c = U_c(x_{i1}, \dots, x_{im}) \\ = \left( \sum_j b_{ij} x_{ij}^{-\rho_i} \right)^{\frac{-1}{\rho_i}} \quad (3)$$

Subject to

$$\sum_j p_{ij} x_{ij} = y_i \quad (4)$$

With the assumption of CES for the equation (A.3), Armington derives the specific demand function:

$$x_{ij} = b_{ij}^{\sigma_i} x_i \left( \frac{P_{ij}}{P_i} \right)^{-\sigma_i} \quad (5)$$

Where  $\sigma_i = \frac{1}{1 + \rho_i}$

is the elasticity of substitution for manufactured goods competing in the market of country  $i$ . Equation (A.5) also can be written in proportional form:

$$\frac{x_{ij}}{x_i} = b_{ij}^{\sigma_i} \left( \frac{P_{ij}}{P_i} \right)^{-\sigma_i} \quad (6)$$

With some further manipulation, Armington obtains the following expression for percentage changes in country  $i$ 's demand for manufactured goods produced by country  $j$ :

$$\begin{aligned} \frac{dx_{ij}}{x_{ij}} = & \eta_i \frac{dy_i}{y_i} \\ & - [(1 - s_{ij}) \sigma_i + s_{ij} \epsilon_i] \frac{dP_{ij}}{P_{ij}} \\ & + \sum_{k=j} s_{ik} (\sigma_i - \epsilon_i) \frac{dP_{ik}}{P_{ik}} \\ & + \sum_{l=1} \epsilon_{i/l} \frac{dP_l}{P_l} \end{aligned} \quad (7)$$

The bracketed coefficient of the second term is the direct, partial elasticity of demand for  $x_{ij}$ , and the bracketed coefficient of the third term is the cross elasticity of demand for  $x_{ij}$  with respect to the price of any other manufactured goods competing in country  $i$ 's market. Hence, the growth of demand for  $x_{ij}$  is divided into the following components: an income effect (first term), an "own price" effect (second term), the effect of prices of closely-related products (third term), and the effect of all other prices (fourth term). In order to focus attention on how changes in individual prices affect trade, a further simplifying assumption has been considered, It is that the fourth term of equation (A.7) is small enough to be ignored. Equation (A.7) can be written:

$$\hat{x}_{ij} = \eta_i \hat{y}_i + \sum_k e_{ijk} \hat{P}_{ik}^i \quad (8)$$

Where

$$\hat{x}_{ij} = \frac{\Delta x_{ij}}{x_{ij}}$$

$$\hat{y}_i = \frac{\Delta y_i}{y_i}$$

$$\hat{P}_{ij} = \frac{\Delta P_{ij}}{P_{ij}}$$

$$e_{ijk} = -[(1 - s_{ij})\sigma_i + s_{ij}\epsilon_i]$$

$$j = k$$

$$e_{ijk} = s_{ik}(\sigma_i - \epsilon_i)$$

$$j \neq k$$

To take into consideration the effect of government intervention, the consumer's price in country  $i$  is distorted according to:

$$P_{ij}^i = g_{ij}^m P_{ij} \quad (9)$$

Differentiating equation (A.9) and dividing through by  $P_{ij}^i$  leads to the following proportional change form:

$$\hat{P}_{ij}^i = \hat{P}_{ij} + \hat{g}_{ij}^m \quad (10)$$

The producer's price in country  $i$  has the form:

$$P_{ij} = g_{ij}^e P_j \quad (11)$$

Again the expression can be differentiated, leading after division by  $P_{ij}$  to:

$$\hat{P}_{ij} = \hat{P}_j + \hat{g}_{ij}^e \quad (12)$$

If we specify the total quantity of manufactured goods produced, and thereby available for export, as a function of producer's prices, we have a self-contained system of equations equal in number to the number of endogenous price and quantity variables. The supply function takes the following form:

$$\sum_i x_{ij} = a_j P_j^{\zeta_j} \quad (13)$$

With some further manipulation equation (A.13) can be expressed in the proportional change form:

$$\sum_I s_{1j}^e x_{1j} - \hat{q}_j = 0 \quad (14)$$

Where

$$s_{1j} = \frac{x_{1j}}{\sum x_{ij}}$$

And

$$q_j = \zeta_j P_j$$

Combining equations (A.8), (A.10), (A.12) and (A.14) we obtain an expression with  $x_{ij}$  as the only endogenous variable:

$$\begin{aligned} & \left( \frac{e_{ijj}}{\zeta_j} s_{ij}^e - 1 \right) \hat{x}_{ij} + \frac{e_{ijj}}{\zeta_j} \sum_{I \neq i} s_{1j}^e \hat{x}_{1j} \\ & + \sum_{k \neq j} \frac{e_{ijk}}{\zeta_k} \sum_I s_{lk}^e \hat{x}_{lk} \\ & = -K_{ij} \end{aligned} \quad (15)$$

Where  $K_{ij}$  introduces exogenous disturbances to the market due to income or policy changes.

$$K_{ij} = \eta_i \hat{y}_i + \sum_k e_{ijk} (\hat{g}_{ik}^e + \hat{g}_{ik}^m)$$

Equation A.15 can be written in matrix form if we define a grand vector of trade flows  $\underline{X}$ , and a corresponding vector  $\underline{K}$ .

$$\underline{X} = (\hat{x}_{11}, \hat{x}_{12}, \dots, \hat{x}_{nn}) \quad (16)$$

$$\underline{K} = (-K_{11}, -K_{12}, \dots, -K_{nn}) \quad (17)$$

Then (18)

$$\underline{AX} = \underline{K}$$

The solution is obtained by inverting the matrix A:

$$\underline{X} = \underline{A}^{-1} \underline{K} \quad (19)$$

## B. DATA APPENDIX

**Table 1: Trade Effects of Various Trade Liberalization Policies on Percentage Changes of Imports and Exports, SE = 1**

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	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
<hr/>						
(1) 20% tariff reduction in ASEAN						
Imports	0.2	0.2	0.2	0.2	0.1	-0.0
Exports	1.5	0.8	0.3	0.3	0.3	-0.0
Product.	-0.0	0.1	0.0	0.2	0.1	-0.0
(2) Intra-ASEAN trade liberalization						
Imports	0.8	1.1	0.7	1.0	0.5	-0.0
Exports	7.6	3.9	1.7	1.5	1.8	-0.0
Product.	-0.2	0.7	0.1	0.9	0.2	0.0
(3) ASEAN and World trade liberalization						
Imports	23.7	12.4	30.1	7.8	21.1	11.5
Exports	11.0	12.6	15.9	10.6	14.2	16.3
Product.	-0.1	2.5	0.5	6.2	1.8	-1.0

---

Note: Product.= total production



**Table 2: The Effects of Various Trade Liberalization Policies on Individual ASEAN Member Countries, SE=1**

---

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
<b>(1) 20% tariff reduction in ASEAN</b>						
Indonesia	-0.00	0.03	0.06	0.02	0.05	0.00
Malaysia	0.05	-0.00	0.06	0.02	0.05	-0.00
Philippines	0.05	0.03	0.00	0.02	0.05	0.00
Singapore	0.05	0.03	0.06	-0.00	0.05	-0.00
Thailand	0.05	0.03	0.06	0.02	-0.00	-0.00
ROW	-0.00	0.00	0.00	0.00	0.00	0.00
<b>(2) Intra-ASEAN trade liberalization</b>						
Indonesia	-0.00	0.14	0.31	0.09	0.22	0.00
Malaysia	0.25	-0.00	0.31	0.08	0.22	-0.00
Philippines	0.25	0.14	0.00	0.09	0.22	0.00
Singapore	0.25	0.13	0.31	-0.00	0.22	-0.00
Thailand	0.25	0.14	0.31	0.09	-0.00	-0.00
ROW	-0.00	0.00	0.00	0.00	0.00	0.00
<b>(3) ASEAN and world trade liberalization</b>						
Indonesia	-0.00	0.14	0.31	0.09	0.22	0.17
Malaysia	0.25	-0.00	0.31	0.08	0.22	0.14
Philippines	0.25	0.14	0.00	0.09	0.22	0.16
Singapore	0.25	0.13	0.31	-0.00	0.22	0.10
Thailand	0.25	0.14	0.31	0.09	-0.00	0.15
ROW	0.24	0.12	0.30	0.08	0.21	-0.01

---

**Table 3: Trade Effects of Intra-ASEAN Liberalization of Each Member Country on the Percentage Change of Imports and Exports, SE = 1**

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
<b>(1) Indonesia free intra-ASEAN trade</b>						
Imports	0.7	0.0	0.0	0.0	0.0	-0.0
Exports	0.0	0.3	0.3	0.7	0.3	-0.0
Product.	-0.3	0.1	0.0	0.4	0.1	-0.0
<b>(2) Malaysia free intra-ASEAN trade</b>						
Imports	0.0	1.0	0.0	-0.0	0.0	-0.0
Exports	0.3	0.0	0.8	0.0	0.3	-0.0
Product.	-0.0	0.0	0.0	0.3	0.1	-0.0
<b>(3) Philippines free intra-ASEAN trade</b>						
Imports	0.0	0.0	0.1	-0.0	0.0	-0.0
Exports	0.6	0.1	0.0	0.1	0.1	-0.0
Product.	0.0	0.0	0.0	0.1	0.0	-0.0
<b>(4) Singapore free intra-ASEAN trade</b>						
Imports	0.1	0.1	0.1	1.0	0.1	0.0
Exports	6.7	3.0	1.0	0.1	1.0	0.0
Product.	0.1	0.6	0.0	0.0	0.2	0.0
<b>(5) Thailand free intra-ASEAN trade</b>						
Imports	0.0	0.0	0.0	-0.0	0.4	-0.0
Exports	0.0	0.3	0.2	0.1	0.0	0.0
Product.	-0.0	0.1	0.0	0.1	0.0	-0.0

Note: Product.= total production

Table 4: Trade Effects of ASEAN and World Liberalization  
of Individual ASEAN Member Countries, on the Percentage  
Change of Imports and Exports, SE = 1

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
(1) Indonesia free world trade						
Imports	24.6	0.4	0.5	-0.4	-0.5	-0.0
Exports	0.0	0.3	0.3	0.7	0.3	5.3
Product.	-0.4	0.1	0.0	0.4	0.1	-0.1
(2) Malaysia free world trade						
Imports	-0.6	13.2	-0.6	-0.6	-0.6	-0.0
Exports	0.3	0.0	0.8	0.5	0.3	1.9
Product.	-0.0	0.0	0.0	0.3	0.1	-0.2
(3) Philippines free world trade						
Imports	-0.2	-0.2	31.2	-0.2	-0.2	-0.0
Exports	0.6	0.1	0.0	0.1	0.1	2.9
Product.	0.0	0.0	0.0	0.1	0.0	-0.1
(4) Singapore free world trade						
Imports	-0.5	-0.5	-0.5	8.5	-0.5	0.0
Exports	6.7	3.0	0.5	0.0	1.0	2.6
Product.	0.1	0.6	0.0	0.0	0.2	-0.2
(5) Thailand free world trade						
Imports	-0.7	-0.7	-0.7	-0.7	21.7	0.0
Exports	0.0	0.3	0.2	0.1	0.0	0.0
Product.	-0.0	0.1	0.0	0.1	0.0	-0.3

Note: Product.= total production

Table 5: The Effects of Various Trade Liberalization Policies on  
Intra-ASEAN Trade, SE = 1

---

Policy	Percentage Change of Intra-ASEAN Trade
<hr/>	
All ASEAN member countries:	
(1) 20% tariff reduction	2.6
(2) Intra-ASEAN trade liberalization	13.0
(3) ASEAN and world trade liberalization	13.0
Individual ASEAN member countries:	
Indonesia (2)	3.3
(3)	3.3
Malaysia (2)	2.8
(3)	2.8
Philippines (2)	0.9
(3)	0.9
Singapore (2)	5.1
(3)	5.1
Thailand (2)	0.8
(3)	0.8

---

Note:

- (2) = intra-ASEAN trade liberalization,  
(3) = ASEAN and world trade liberalization.

**Table 6: Trade Effects of Various Liberalization Policies on the Percentage Change of Imports and Exports, SE = 3**

---

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
<hr/>						
<b>(1) 20% tariff reduction in ASEAN</b>						
Imports	2.1	2.2	2.2	1.7	2.1	0.0
Exports	4.6	2.1	1.1	1.0	1.1	1.6
Product.	-0.2	0.4	0.0	0.5	0.1	0.4
<b>(2) Intra-ASEAN trade liberalization</b>						
Imports	11.1	11.7	12.1	9.4	11.1	0.2
Exports	1.0	5.2	0.9	6.1	3.4	2.1
Product.	-1.0	2.1	0.1	2.9	0.6	2.2
<b>(3) World trade liberalization</b>						
Imports	13.8	-16.7	33.7	-30.4	5.8	23.8
Exports	33.7	31.4	46.8	22.2	36.6	-11.4
Product.	-1.4	6.8	1.3	13.0	4.9	-23.8

---

Notes: (1) The three different liberalization policies are carried on progressively in simultaneous experiments.  
 (2) Product.= total production

**Table 7: The Effects of Various Trade Liberalization Policies on Individual ASEAN Member Countries, SE=3**

---

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
<b>(1) 20% tariff reduction in ASEAN</b>						
Indonesia	-0.00	0.08	0.19	0.05	0.14	0.00
Malaysia	0.15	-0.00	0.18	0.05	0.14	0.00
Philippines	0.15	0.08	-0.00	0.06	0.14	0.00
Singapore	0.15	0.07	0.18	-0.00	0.14	0.00
Thailand	0.15	0.08	0.19	0.05	-0.00	0.00
ROW	0.02	0.02	0.02	0.01	0.02	0.00
<b>(2) Intra-ASEAN trade liberalization</b>						
Indonesia	-0.01	0.42	0.95	0.27	0.68	0.01
Malaysia	0.74	-0.00	0.95	0.22	0.67	0.00
Philippines	0.75	0.42	-0.00	0.28	0.68	0.01
Singapore	0.74	0.38	0.93	-0.01	0.67	0.00
Thailand	0.74	0.41	0.95	0.27	-0.00	0.00
ROW	0.08	0.09	0.10	0.07	0.10	0.02
<b>(3) ASEAN and world trade liberalization</b>						
Indonesia	-0.02	0.43	0.96	0.27	0.69	0.51
Malaysia	0.73	-0.00	0.94	0.22	0.67	0.35
Philippines	0.74	0.44	-0.00	0.29	0.69	0.48
Singapore	0.72	0.37	0.91	-0.01	0.65	0.17
Thailand	0.73	0.42	0.95	0.27	-0.00	0.36
ROW	0.09	-0.23	0.31	-0.39	0.04	-0.23

---

**Table 8: Trade Effects of Intra-ASEAN Liberalization by Each Member Country, on the Percentage Change of Imports and Exports, SE = 3**

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
<b>(1) Indonesia free intra-ASEAN trade</b>						
Imports	1.1	0.2	0.2	0.3	0.2	-0.1
Exports	1.2	1.1	1.0	2.3	1.2	-0.3
Product.	-1.2	0.3	0.0	0.5	0.1	0.1
<b>(2) Malaysia free intra-ASEAN trade</b>						
Imports	1.9	4.0	1.9	1.9	2.0	-0.0
Exports	0.4	1.8	0.1	1.1	0.6	0.4
Product.	0.0	0.0	0.0	0.0	0.1	0.4
<b>(3) Philippines free intra-ASEAN trade</b>						
Imports	0.2	0.2	2.3	0.2	0.2	0.1
Exports	0.0	0.1	0.2	0.1	0.1	0.0
Product.	0.0	0.1	0.0	0.3	0.0	0.0
<b>(4) Singapore free intra-ASEAN trade</b>						
Imports	7.2	6.6	6.9	6.2	6.9	0.3
Exports	1.2	2.8	0.5	4.2	2.2	1.3
Product.	0.2	1.4	0.0	0.0	0.4	1.4
<b>(5) Thailand free intra-ASEAN trade</b>						
Imports	0.7	0.7	0.7	0.6	1.7	0.0
Exports	0.1	0.2	0.0	0.4	0.5	0.1
Product.	-0.0	0.2	0.0	0.2	0.1	0.1

Notes: (1) Free intra-ASEAN trade policy is suggested as the first step of trade liberalization of each ASEAN member countries.

(2) Product.= total production

**Table 9: Trade Effects of ASEAN and World Liberalization by Individual ASEAN Member Countries, on the Percentage Change of Imports and Exports, SE=3**

---

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
<hr/>						
(1) Indonesia free world trade						
Imports	52.4	-19.1	-20.3	-18.1	-20.2	-0.2
Exports	2.3	1.8	1.6	3.7	1.9	-4.5
Product.	-2.1	0.4	0.0	27.4	0.2	-4.3
(2) Malaysia free world trade						
Imports	-23.0	18.1	-23.5	-21.0	-23.5	-0.1
Exports	1.2	1.4	3.2	1.9	1.4	-16.7
Product.	0.1	0.3	0.0	0.9	0.0	-5.2
(3) Philippines free world trade						
Imports	-10.1	-9.8	83.7	-9.3	-10.4	0.1
Exports	3.9	0.8	2.4	1.0	0.5	-1.2
Product.	0.1	0.2	0.1	0.6	0.1	-2.3
(4) Singapore free world trade						
Imports	-16.1	-15.7	-16.9	8.6	-16.8	0.4
Exports	20.0	8.3	1.6	0.8	3.5	-9.2
Product.	0.3	1.6	0.0	0.5	0.4	-3.9
(5) Thailand free world trade						
Imports	-29.8	-28.6	-30.3	-27.3	36.6	-0.1
Exports	0.3	1.3	0.6	0.6	1.1	-21.4
Product.	0.1	0.2	0.0	0.3	0.1	-6.7

---

Notes: (1) Free world trade policy is suggested as the second step of the trade liberalization in ASEAN member countries.

(2) Product.= total production



**Table 10: The Effects of Various Trade Liberalization Policies  
on Intra-ASEAN Trade, SE=3**

---

Policy	Percentage Change of Intra-ASEAN Trade
<hr/>	
All ASEAN member countries:	
(1) 20% tariff reduction	7.5
(2) Intra-ASEAN trade liberalization	39.0
(3) ASEAN and world trade liberalization	40.4
Individual ASEAN member countries:	
Indonesia (2)	11.0
(3)	16.4
Malaysia (2)	8.7
(3)	10.6
Philippines (2)	3.0
(3)	6.2
Singapore (2)	14.7
(3)	15.5
Thailand (2)	2.3
(3)	4.6

---

Notes:

(2) = intra-ASEAN trade liberalization,

(3) = ASEAN and world trade liberalization.

## C. UNSUCCESSFUL EXPERIMENT

**Table 1: The Effects of Unilateral Trade Liberalization  
of the ASEAN Member Countries, SE=2**

(percent)

---

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ROW
<b>(1) percentage change of total imports and exports</b>						
Imports	8.9	-12.0	21.2	-20.5	3.1	-0.0
Exports	15.3	7.3	3.5	3.1	3.7	-7.4
Product.	-0.5	1.3	0.1	1.6	0.4	-12.2
<b>(2) effects on trade direction</b>						
Indonesia	-0.01	0.28	0.63	0.18	0.45	0.00
Malaysia	0.50	-0.00	0.63	0.16	0.45	-0.00
Philippines	0.50	0.28	-0.00	0.18	0.45	0.00
Singapore	0.50	0.26	0.62	-0.01	0.44	-0.00
Thailand	0.50	0.27	0.63	0.18	-0.00	0.00
ROW	0.07	-0.15	0.20	-0.25	0.02	-0.12

---

Note: The unilateral trade liberalization of the ASEAN member countries would increase total intra-ASEAN trade by 25.5%.

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