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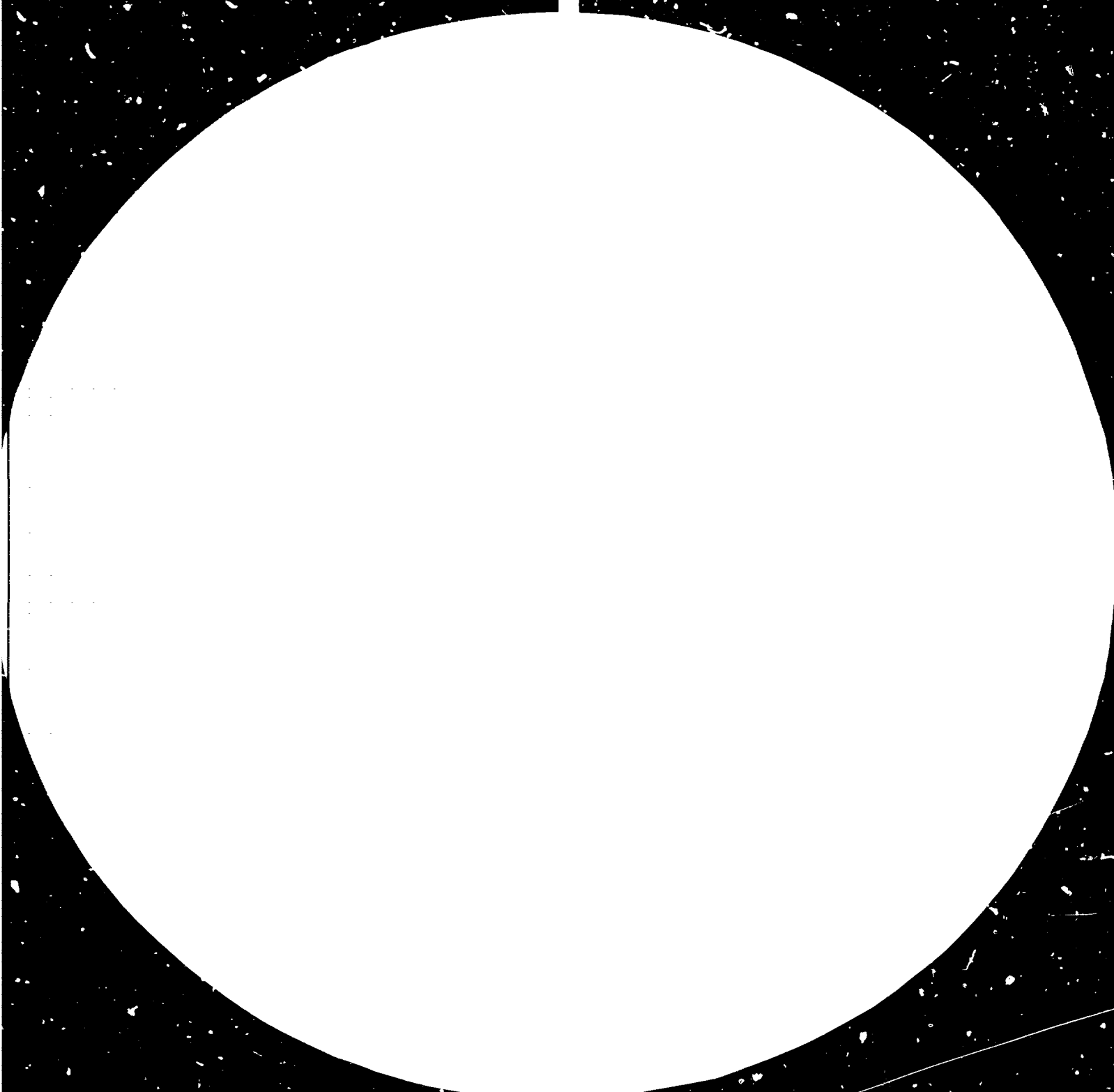

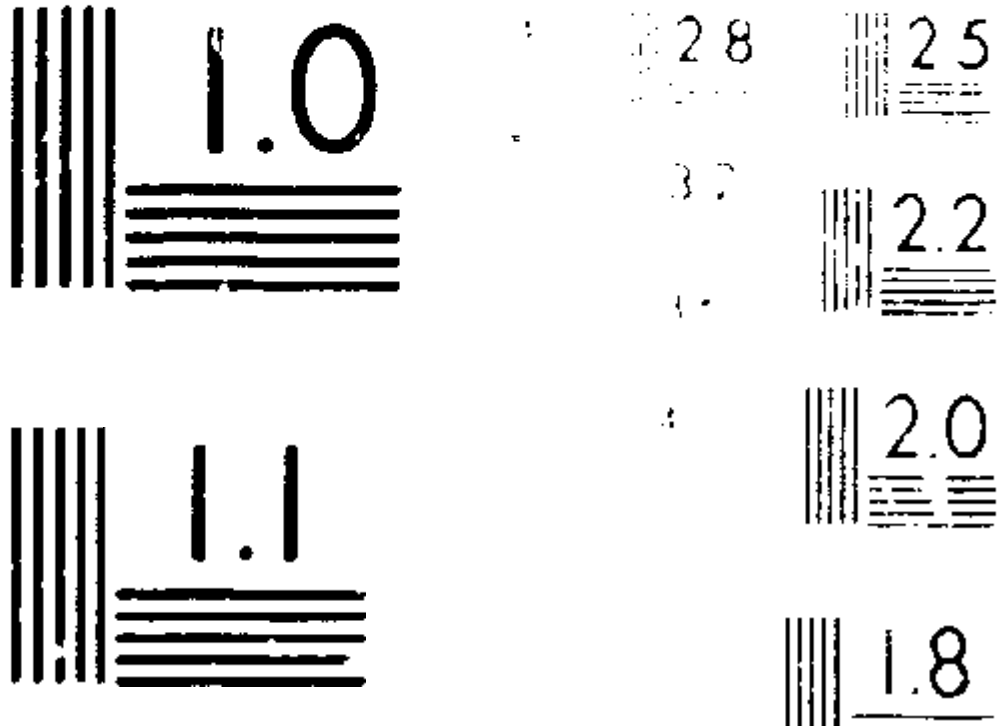
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ASEAN INDUSTRIAL JOINT VENTURES (AIJVs) IN THE PRIVATE SECTOR*

Studies on regional co-operation in the field of industry

Prepared by

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in co-operation with
Regional and Country Studies Branch
Division for Industrial Studies

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PREFACE

The Regional and Country Studies Branch of the Division for Industrial Studies, UNIDO, within its studies and research programme, is giving particular attention to the potential of co-operation between developing countries in the context of sub-regional schemes; emphasis being placed on the pursuance of the most effective modes of co-operation in the field of industry.

Thus, as part of the programme for 1981, a series of issue-oriented studies or analyses were carried out on various aspects of industrial co-operation within the regional co-operation schemes of ASEAN and the Andean Group. The main objective of the studies was to provide guidance for future regional and sub-regional co-operation in industry between developing countries through analysis of the ASEAN and Andean Group experience in the various forms of industrial co-operation which have been pursued.

The ASEAN studies aimed to bring out and analyse critical issues in the industrial co-operation; the various forms of co-operation employed; the methods and modalities used in identifying, preparing and analysing various factors at the branch or products level as well as at the project level. The studies were not intended to present a chronological expose of the industrial co-operation in the region; the past experience was looked at merely as reference in the analysis of the key issues involved, how further progress may be achieved and of the various measures which may be taken to that effect.

The specific areas in respect of which issue-oriented analytical studies have been carried out are:

(i) ASEAN industrial co-operation - a long-term perspective;

(ii) ASEAN industrial product or branch co-operation through industrial complementation programmes and technical co-operation arrangements;

(iii) regional industrial projects - the present large-scale ASEAN Industrial Projects (AIPs) as well as prospective ASEAN joint-venture projects sponsored by the private sector;

(iv) ASEAN co-operation in industrial financing and promotion.

The present study concerning the ASEAN Industrial Joint Ventures (AIJVs) in the private sector has been prepared for UNIDO by Professor Lee Sheng-Yi, Department of Business Administration, National University of Singapore, Kent Ridge, Singapore.

Regional and Country Studies Branch
Division for Industrial Studies
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Chapter I

INTRODUCTION

(a) Overview

ASEAN industrial co-operation has evolved into three types of projects up to the present stage:

(i) ASEAN Industrial Projects (AIPs), whereby each country was assigned a large industrial project;

(ii) ASEAN Industrial Complementation (AIC), whereby each ASEAN country manufactures some parts or components of an industry and exchanges those components among themselves under Preferential Trading Arrangements (PTA);

(iii) Private sector ASEAN Industrial Joint Ventures (AIJVs), which is the subject of this paper.

ASEAN Industrial Projects (AIPs) refers thus to large-scale government-sponsored industrial projects, the first (and as yet only) "package" of which was announced in early 1977 consisting of urea projects for Indonesia and Malaysia, soda ash project for Thailand, ammonium sulphate project for the Philippines and diesel engines project for Singapore.

Hitherto, also the work on ASEAN Industrial Complementation has proceeded to large extent from government level to the private sector. It has, however, early been recognized that the private sector can take the initiative and can suggest concrete ways of ASEAN Industrial Complementation. The ASEAN Automotive Federation proposed and the ASEAN Economic Ministers approved in 1980 the first and second packages of automotive complementation projects. 1/

The private sector has, however, found it difficult to identify other industrial complementation projects similar to the automotive one, in which all five countries are involved in the manufacture of the component parts

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1/ See Annex C of the study 'ASEAN Industrial Complementation' prepared for UNIDO by Vicente T. Paterno (document UNIDO/IS.282 of 25 January 1982.

with roughly equal distribution of benefit. Besides, the rate of industrial co-operation would be very slow.

Because of such difficulties, Wee Cho Yaw, the ASEAN-CCI President, proposed a new concept, called "ASEAN Industrial Joint Ventures",[1/] whereby even two or three ASEAN partners from the private sector can form a joint venture, and the capital fund for one project may not be too great. These AIJVs can also be alloted to different ASEAN countries on an equity principle, and conditions and rules which are more flexible in order to speed up the rate of industrial co-operation.

The AIJVs are thus different from the ASEAN Industrial Complementation (AIC) projects, because the former are individual projects and not usually considered together with other projects in a package manner or with other restrictive conditions which may perhaps hamper the speed of industrial co-operation. AIJVs can be approved individually by the ASEAN Economic Ministers who will have to maintain an equitable distribution of benefits accruing from the AIJVs in the long run. The proposed guidelines on AIJVs, the draft Basic Agreement, is analyzed in Chapter III. A comparative analysis between AIJVs and AIC projects is given in Chapter VI

The ASEAN-CCI meetings in Manila in June 1981 and in Bangkok in November 1981 saw much deliberation on the AIJVs. The various ASEAN industry clubs and federations, such as ASEAN Chemical Industries Club, ASEAN Iron and Steel Industry Federation, ASEAN Automotive Federation, and ASEAN Federation of Textile Industries were requested to identify potential joint ventures. The proposals will be submitted to the COIME and hence to the ASEAN Economic Ministers.

(b) Methodology used in the research study

The methodology used by the Consultant for the research and study comprises the following:

(i) Information gathering through interviews with industrialists, businessmen, government officials and scholars in the ASEAN countries. The Consultant visited Jakarta, Kuala Lumpur, Bangkok, and Manila on 14 June - 1 July 1981. In private talks some of

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1/ See his address to the 14th ASEAN-CCI Council Meeting, held in Jakarta on 11 December 1980, as reported in the ASEAN-CCI Newsletter, June 1981.

the true feeling and worries may be expressed, which are not explicit in official meetings or announcements.

(ii) Participation in a series of ASEAN-CCI meetings in Manila on 24 June - 1 July 1981. The Consultant took part in these meetings as a delegate and adviser of Singapore Chinese Chamber of Commerce and Industry. In the meetings, various views of different ASEAN delegates were expressed, which were not necessarily recorded officially in the reports on the proceedings of the meetings (including that of the 10th Plenary Meeting of the Working Group on Industrial Complementation).

(iii) Analysis of statistical and other information. Tariff levels of the ASEAN countries and the tariff rates of the products of potential joint ventures were studied. In order to identify the potential joint ventures, three approaches were considered:

(a) From the trade statistics of the ASEAN countries, the import and export values and quantities of the products of potential joint ventures of each country in the recent years, and hence the total ASEAN countries can be ascertained. Similarly attempts can be made to find out the quantities and values of those products, manufactured locally. Import plus local production would be equal to the requirement of a country. From the aggregated import demand of ASEAN, estimates may be made of firstly, the imports from other ASEAN countries and, secondly, the imports from outside the ASEAN. Theoretically, it may thus be possible to identify those products which can be suitable to joint ventures with a enlarged ASEAN market. But unavailability of data limits the practical application of this approach. Names of commodities in trade statistics vary from country to country.[1/] Furthermore, the ASEAN countries do not have comprehensive statistics of local manufactures in such a way as to enable a compilation of local

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1/ The ASEAN countries use either the SITC (Standard International Trade Classification) or the CCN (Customs Co-operation Council Nomenclature, formerly known as Brussels Tariff Nomenclature or BTN) in trade statistics. Philippines uses their own PSCC Grouping (Philippines Standard Commodity Classification) which is close to the SITC. In ASEAN countries there is a trend towards changing from SITC to CCCN and also a dispersion of tariff lines at the 6- and 7-digit level. The ASEAN Economic Ministers have agreed to adopt the 7-digit CCCN Code.

manufacture and trade figures within one country and to have inter-country comparison.

(b) The second approach is to study the lists of priority industries encouraged by the five ASEAN countries and to see what industries are commonly encouraged by them, and what industries, if any, are reserved for domestic enterprises. Generally speaking, machinery and equipments, chemicals, and some intermediate goods are in the high priority lists of all the countries. The manufacture of those products may therefore be suitable for potential ASEAN joint ventures. However, the broad grouping of priority industries would cause great difficulty in specifying a certain commodity for the ASEAN joint venture.

(c) A more practical approach is to enlist the support of the various ASEAN industry clubs or federations to propose such joint ventures because industrialists in the same business may know much better the technical aspects of co-operation, and the ways of avoiding a clash of interest among themselves. At the same time, this approach may be supplemented with statistics and analysis as envisaged under (a) and (b).

The last approach is the one used in the research study, and the potential AIJVs, presented in Chapter V, were in fact suggested by the ASEAN industry clubs or federations.

Chapter II

Industrial development strategies of the five ASEAN countries affecting ASEAN co-operation

It is very important to understand the background of the ASEAN industrial co-operation, the different stands of the individual ASEAN countries, and the conflict between national and regional interests in a realistic manner in order to assess the possibility of success in the potential AIJV and hence the rate of progress of industrial co-operation. Accordingly, a brief review of the position and outlook of industrialization in the individual ASEAN countries is given below.

Indonesia has the biggest home market of 150 million people. Its industries are mainly for import-substitution. Most of the industrialists interviewed are interested in the local market of Indonesia, rather than in the hopefully enlarged ASEAN market. As one government official remarked clearly: "we do not want ASEAN economic co-operation just for the sake of co-operation, but first and foremost our national interest must be safeguarded". What Indonesia worries about is that ASEAN co-operation may adversely affect her infant industries, which would have great socio-economic impact on the economy. ASEAN Industrial Complementation or ASEAN Industrial Joint Ventures can only be acceptable to Indonesia so long as they do not jeopardise the development of national industries. To Indonesia, the enlarged ASEAN market is something of a distant advantage. The immediate impact, it is feared, is that their infant industries may suffer, because of their lesser competitiveness (except for some resource-based industries) vis-a-vis industries of other ASEAN countries. The Indonesian economy can be said to be a highly regulated one with a relatively high degree of protectionism; her industries were developed under a substantial tariff wall. Her comparative advantage lies in resource-based industries, such as petroleum-related industries, wood industries and food processing industries. Potential projects for Indonesian AIJVs might be concentrated in these fields.

The Philippines is also a rather protected economy. Traditionally the industries were developed under a tariff wall for import-substitution. In the 1950's, such industries were rapidly established. But in the 1960's and 1970's, the scope of import-substitution seemed to be rather

exhausted as the local market of 48 million people was limited. The country's exports of sugar, timber, coconut products, copper, etc. are mainly to the USA and Japan. The country has not yet to significant extent developed export markets in South East Asia. Thus ASEAN economic co-operation and enhanced ASEAN trading relationships are enthusiastically promoted. The Philippines took an active part in proposing the potential AIJVs, such as the projects of security-paper, mini-tractor, ferroalloy, and chemicals.

Singapore is in a different position. The country has a small population of 2.4 million. Apart from the three specific import items of tobacco, liquor and petroleum, its tariff rates approach zero, as protective tariffs which were set up in the early 1960's for new manufacturing industries have been gradually dismantled during the 1970's in the country's effort of export-orientation. Hence with respect to ASEAN Preferential Trading Arrangements (PTA), she has little to offer to other ASEAN partners in order to divert imports from non-ASEAN source to ASEAN source. From the side of other ASEAN countries the ideas of "external tariff" or "mandatory source" may possibily be put forward. The former means that if there is no tariff rate on a product, Singapore may put up a tariff for import from non-ASEAN source, following the example of EEC. The latter means that there can be a regulation that a certain proportion of import of a product must come from ASEAN source. Such measures would show preferences or favour to ASEAN countries. But, apparently Singapore is not inclined to accept either one of them, as that would hinder the development of Singapore as a trading and financial centre. Singapore has practically no natural resources. Its comparative advantage does not lie in resource-based industries as in other ASEAN countries, but in service - and - skill industries, such as engineering, chemical and petroleum industries. An enlarged ASEAN market is obviously the aspiration of Singapore.

Malaysia's development strategy is more export-oriented or outward looking than that of Indonesia and the Philippines. Malaysia is keen to develop its resource-based industries and is interested in the AIJV mechanism.

Similarly, Thailand is interested in developing its resource-based industries which have a comparative advantage. The country is active in proposing AIJVs, such as the magnesium clinker and mini-tractor projects.

Chapter III

The proposed guidelines on AIJVs

The Committee on Industries, Minerals and Energy (COIME) in conjunction with ASEAN-CCI is drafting the Basic Agreement on ASEAN Industrial Joint Ventures with the following general principles:

(a) Participation in an AIJV will comprise at least two ASEAN countries but is not limited to only ASEAN countries, provided that membership by the ASEAN nationals is at least 51 per cent. (Article I of the draft Basic Agreement). ASEAN investors in AIJV projects are to be accorded national status by the host country for the purpose of qualifying the projects for national treatment.

(b) An approved AIJV product is to be granted ASEAN Preferential Trading Arrangements (PTA) to the extent of 50 per cent preferential treatment; further tariff cut can be negotiated among the participating ASEAN countries.[1/] "ASEAN countries may consider not to encourage new or additional capacity for approved AIJV products for a period of two years for existing products and 3 to 4 years for new products" (Article IV). This exclusivity with respect to production and marketing is reckoned as from the date of actual production.[2/] This exclusive preference is exempted from the Most Favoured Nation (MFN) Clause of the ASEAN Preferential Trading Arrangements (PTA)

(c) The host country, where the AIJV is located, will accord to it a treatment no less favourable than that enjoyed by her own nationals provided that ASEAN nationals' ownership ratios meet the host country's national ownership investments requirement (Article IV, Clause 4).

1/ This was the decision of ASEAN Economic Ministers in a meeting in Jakarta on 29-30 May 1981.

2/ COIME proposed originally "as from the data of ASEAN Economic Ministers' final approval", but ASEAN-CCI desired to change to "as from the date of actual production".

(d) Other ASEAN countries, which choose not to join the AIJV, are free to do so but their similar products cannot enjoy such a exclusive and special tariff preference.

(e) COIME will recommend for the consideration of the ASEAN Economic Ministers (AEM) the allocation of AIJV projects to the participating countries.

(f) "Without prejudice to the right of identification by ASEAN Governments, the ASEAN-CCI shall identify AIJV products for possible allocation to member countries" (Article II). The principle is to have equitable distribution of benefits for the ASEAN countries. "Whenever feasible, AIJV products are to be equitably allocated to the participating ASEAN countries" (Article III).

(g) "An AIJV product shall be of internationally accepted quality, the price should be relatively competitive and there should be an assurance of continuity of supply" (Article III).

It is evident that much flexibility for easier implementation has been sought in the draft Basic Agreement. For instance, at least two ASEAN countries can propose an AIJV; this can be considered as a further extension of the "five minus one" principle, as originally proposed by Mr. Lee Kwan Yew, the Prime Minister of Singapore, for AIC.

Another indication of flexibility is that foreign enterprises or multinational corporations are allowed to participate in an AIJV provided that their shares would not exceed 49 per cent, i.e. they are not to be majority share-holders. It is recognized that the developing ASEAN countries need technical know-how, management skill, overseas marketing connections, and capital funds of multi-national corporations.

The proposed AIJVs would seem to rely much on ASEAN Preferential Trading Arrangements (PTA) and exclusivity arrangements with respect to production and marketing as catalysts to start such projects; the idea being to create a protected and enlarged ASEAN market for products of ASEAN joint ventures. Concern may, however, be expressed that at the end of the exclusivity period, political lobbying, particularly in the country where

the AIJV is located, may induce the exclusivity period to be extended further and further, so that the regional protection may become a permanent feature. This would defeat the ultimate objective of regional co-operation, i.e. to exploit the economy of scale in an enlarged market for the sake of efficiency and productivity. It is in this view that Mr. Wee Cho Yaw, the ASEAN-CCI President, once remarked that it would be better if the AIJVs would not rely too much on PTA and other protective measures for their successful implementation, and that really competitive joint ventures have to be identified.

One further aspect of flexibility is shown in point (d) above of the general principles, i.e. each ASEAN country is free to join a certain AIJV or not to join, in accordance with its own circumstances.

In this early stage, the approach is towards regional import substitution, although in country terms there is an enhanced encouragement for exports from one ASEAN country to another. No attention has yet been given for regional export-orientation, i.e. to encourage exports to non-ASEAN countries. This idea is, however, very desirable, because, firstly, exports to non-ASEAN countries would avaoid the conflict against national interest owing to the earnest desire of each ASEAN country to develop its own industries; and, secondly, the acid test of competitiveness and efficiency is the capability of exporting to the non-ASEAN countries without the regional protectionism. Hence, tax incentive measures for exporting to the non-ASEAN countries may perhaps be considered for possible inclusion in the Basic Agreement. For example, a reduced income tax or even tax holidays for such exports can be included so that the AIJVs may be encouraged to look for markets in the non-ASEAN countries as well. However, that would involve the final decision of the home country concerned. Perhaps, in the later stage, when some AIJVs have been set up, the ASEAN countries may amend the Basic Agreement to encourage regional export orientation.

The location of a certain AIJV may affect to certain extent its efficiency and competitiveness, because, firstly, ASEAN countries may have different philosophies of management -- some giving more emphasis on productivity and efficiency; whilst others may be giving relatively more weight to social and political considerations. Secondly, factor endowments in ASEAN countries are different. Here arises the conflict between efficiency and equity. One of the guiding principles of ASEAN co-operation is that the benefits should be equitably distributed among the ASEAN countries. How to strike an optimum balance between efficiency and equity may be a problem of ASEAN co-operation.

Items (f) and (g) of the general principles may perhaps be in conflict in practical implementation. It seems that the ASEAN countries collectively tend towards emphasising equitable distribution of benefits, rather than the efficiency aspect. Furthermore, the concept of equity in ASEAN co-operation may vary from country to country. If the criterion is based on the local market of an ASEAN country, measured by the size of its population only, then Singapore with its tiny population of 2.4 million people has certainly a limited role. If on the other hand, the criterion is based on the practical contribution of an ASEAN country in terms of service, skill, organization, management and income per capita, Singapore would play a much greater part in ASEAN co-operation.[1/]

In the ASEAN-CCI meetings in Manila in June 1981, a view was expressed by a Philippine minister, which was echoed by the Philippine delegates that there should be "ASEAN Joint Ventures" (AJVs) instead of "ASEAN Industrial Joint Ventures" (AIJVs), meaning the scope to be widened to include other economic activities.

These are the deliberations, dilemmas and difficulties. In spite of all comments, the proposed guidelines on AIJVs should be heralded as an important milestone on the road of ASEAN industrial co-operation. Schemes have to be implemented step by step. At this early stage, the draft Basic Agreement may serve the purpose of starting the AIJVs. The aforesaid comments may help to realise the ultimate target and stimulate thought for future amendments.

The heart of the matter may not really be the Basic Agreement on AIJVs, but rather the identification of potential AIJVs and the implementation of these joint ventures by ASEAN businessmen who invest their capital and work together.

1/ Mr. Vicente Paterno in his study on ASEAN Industrial Complementation has put forward the suggestion that, while distribution among countries of "primary" production projects should be made according to efficiency and availability of major resource inputs, the allocation of "secondary" and "tertiary" complementation projects to an ASEAN country should be in accordance to its market contribution, that is, the production volume of its complementation projects (relative to all countries' complementation projects) should equal the (similarly relative) market volume made accessible for complementation projects from the other countries. (Ref. "ASEAN Industrial Complementation" prepared by Mr. Vicente Paterno, UNIDO/IS.282, dated 25 January 1982.) In practice, it may, however, be difficult to estimate the product volume and market volume of each ASEAN country.

Chapter IV

Suggested principles of identifying AIJVs and general characteristics

In order to avoid conflicts of national and regional interests, it would be better to move rather cautiously, so that each AIJV would have the whole-hearted support from the ASEAN countries and consequently a better chance of success. Some of the guiding principles for selecting the AIJVs can be suggested as follows:

(a) Although the draft Basic Agreement for AIJVs covers both existing and new products, it might be better if initially new products rather than existing ones are selected. This is because if the AIJV is exclusively favoured with the 50 per cent or more tariff preference, the products of other existing producers can only enjoy the usual PTA of 20/25 per cent in the ASEAN countries and hence cannot compete on equal ground with those of the AIJV. There would be much complaint and political lobbying.

(b) It is advisable to select producer or intermediate goods, rather than consumer goods, because in each of the ASEAN countries in their early phases of industrialization a wide variety of consumer goods industries have already been set up mainly for import-substitution. The ASEAN countries, however, have generally not yet come to the manufacture of producer or intermediate goods because of the economy of scale, and of the need of a higher level of technology. To illustrate, it would be difficult for the ASEAN textile industries to propose any yarn spinning mill for the AIJV. Even though most of the spinning mills in, say, Malaysia produce 45 counts or under, they would not like to see an AIJV to be set up to produce 100 counts fine yarn or above, because they claim that if they were given that exclusive preference they could produce such high-quality fine yarn themselves. The industry is more interested in organizing AIJVs for manufacturing spareparts and accessories for the textile machinery.

(c) For the similar reasoning, an AIJV should be of a fairly large or medium-size scale in order to exploit the economy of scale of regional co-operation, but non small-scale, which can be achieved by national plants. An AIJV may not be as bigh a project as the AIP type, but may be bigger than the small national plants.

With those suggested principles in mind, we may envisage the general characteristics of the AIJV, at least initially, to be for a new product, an intermediate goods, and of medium-size scale. AIJVs with such characteristics may be expected to be easier to implement early, which may lead the way to further development of ASEAN joint ventures, once the confidence of industrial co-operation has been gained. The AIJVs for magnesium clinker, and graphite electrode, may provide a ground of co-operation in the ASEAN iron and steel industries; similarly the AIJVs for mini-tractors and ferro-alloy, in the ASEAN metal and machinery industries; the AIJVs for the five chemicals (see the subsequent Chapter V), in the ASEAN chemical industries; the AIJVs for the spareparts of textile machinery, in the ASEAN textile industries. It is a noteworthy characteristic that the identified potential AIJVs aim primarily at import substitution in the ASEAN markets and only secondarily at exporting to the non-ASEAN countries. As already noted, the draft Basic Agreement (Chapter III) has no provision for tax incentives or other measures to encourage exports to non-ASEAN countries. Nevertheless, for example, among the potential AIJVs reviewed in Chapter V below, titanium dioxide may have a high potential for exporting to non-ASEAN countries, as tin tailings are available in good supply in Malaysia, Indonesia and Thailand. Magnesium clinker can be competitive in world market if dolomite and natural gas are found in plentiful supply in Thailand and other ASEAN countries. Ferrosilicon may have a prospect of exporting to non-ASEAN countries, if available raw material resources are effectively utilized and the hydro-electric potential in Mindanao developed. Other proposed AIJVs such as spare and accessory parts of textile machinery, mini-tractors, security paper, and graphite electrode may have less possibility of exporting to the non-ASEAN market at least in the early stage, because their production involves high technology and it would be difficult for them to compete with well-established manufacturers in developed countries.

Unless the AIJV products are competitive in price and quality, it would be difficult or uneconomical to compel ASEAN industries to use those products.

It is realistic to presume that the proposed AIJVs may only command about 60-70 per cent of the ASEAN markets of those products, but not 100 per cent. In reviewing the potential AIJVs in the subsequent chapter, we would realise that in most cases the optimum or minimum scale of production of those products exceeds considerably the volume of demand in the whole ASEAN-region. Therefore the balance quantitites have to be exported to the non-ASEAN countries. This explains why the ASEAN countries have to pay attention to the potential non-ASEAN markets in the long-run prospective -- i.e. ASEAN export-oriented strategy instead of merely ASEAN import-substitution strategy. This implies that the production must be very efficient and competitive in the world market, which is indeed a challenging task.

It can be argued that the industrialization of many countries, such as the Federal Republic of Germany, USA, and Japan, in their long history, and, for instance the Republic of Korea in recent years, started from import-substitution strategy and shifted to export-oriented strategy as their infant industries became well established with technical skill and marketing connections. Likewise, we may apply the same argument to the ASEAN industrial projects, so that in the short run or in the early phase of establishment the AIJVs can only work primarily on the basis of import-substitution in the ASEAN markets. But in the long run, as they gain experience in technology and marketing, they may attempt to export more and more to the non-ASEAN countries. Nevertheless, it is important that the ASEAN countries should emphasize productivity and efficiency rather than merely equity in benefit, and should provide some tax-incentives for exporting to non-ASEAN markets in the Basic Agreement, and should consider the potential of non-ASEAN marekts as well as the ASEAN markets. This also means that the AIJVs would have to go through a long gestation period and the participants have to be prepared to take a long-term view on their venture capital.

Is it possible to establish an AIJV with the main purpose of exporting to the non-ASEAN countries? To be realistic, the ASEAN-CCI takes a cautious view by aiming at ASEAN import-substitution first. In future, when the ASEAN industrial co-operation has gained momentum, it may perhaps be fruitful to think of an AIJV of the nature of export-orientation to the non-ASEAN markets.

Chapter V

Potential AIJVs

ASEAN industrial clubs or federations are requested (according to the draft Basic Agreement) to identify potential AIJVs. For example, the ASEAN Iron and Steel Federation has proposed the magnesium clinker,[1/] graphite electrode and ferro-alloy projects. They support proposed feasibility studies of the AIJV projects. The ASEAN Agricultural Machinery Federation has proposed the mini-tractor project. The ASEAN Pulp and Paper Industry Club has proposed the security paper project. The ASEAN Chemical Industries Club has proposed five projects, namely, chlorinated parafin wax, acetylene black, high test sodium hypochlorite, titanium dioxide, and feron. The Institute of Textile Technology at Bandung has been requested to identify potential of manufacture of spare and accessory parts of textile machinery for AIJVs.

It is interesting to note that the projects so far proposed, have conformed to the principles in Chapter IV. Although new as well as existing products are acceptable according to the AIJV guidelines, existing ones are in fact avoided. The proposed projects are, furthermore for new products of a nature of intermediate goods. The volume of demand from one individual ASEAN country is not great enough to warrant the establishment of a project, because of the economy of scale. Hence the projects are fairly large or medium-size ones, appropriate to ASEAN co-operation.

The 13th Meeting of the Committee on Industry, Minerals and Energy (COIME) in Kuala Lumpur in January 1981 agreed to recommend the pre-feasibility studies on a magnesium clinker plant, mini-tractor plant and security paper mill for UNDP/UNIDO assistance. This assistance proposal has been included in the 1982-86 UNDP Inter-Country Programme for Asia and the Pacific, for execution by UNIDO.

1/ This proposal has also been endorsed by the ASEAN Cement Manufacturing Federation.

(a) Magnesium clinker

Magnesium clinker is a raw material for basic refractory, i.e. it is used for making heat-resistent bricks for the furnaces of the iron and steel industry and cement industry. Purified sea-water, dolomite and energy (petroleum, natural gas or electricity, for burning the materials) are required for the manufacture of magnesium clinker. Dolomite, which is a mineral containing calcium carbonate and magnesium carbonate, is found in Thailand and perhaps in other parts of ASEAN countries. According to the proposed project document,[1/] in steel reproductio, about 14 kilograms of basic refractors per ton of steel are consumed, of which about 9 kilograms are magnesia-based.

The current apparaent steel consumption in the five ASEAN countries totals about 8 million tons per year while the projected steel demand in the region, according to the Southeast Asia Iron and Steel Institute, by 1985 is 11.3 million tons and 23.1 million tons by the year 2000 (Table 1). However, even after adjustment for expansion plans, the total ASEAN production of crude steel by electric arc furnance is expected to be about 3 million tons in 1984 (Table 2).[2/] If we apply the requirement of 9 kilograms of magnesium clinker per ton of steel to the 3 million tons of steel, the volume of demand for magnesium clinker in the ASEAN steel industries can be estimated to be about 27,000 tons.

1/ See Report of the Proceedings of the 8th Council Meeting of the ASEAN Iron and Steel Industry Federation (AISIF) in Kuala Lumpur, on 11 March 1981, Annex 6 "Proposed Project Document for the Pre-Feasibility Study of an ASEAN Magnesium Clinker Project" p.2. This document was prepared by Dr. Kasem Balajiva of Thailand.

2/ Dr. Kasem Balajiva's document, op.cit stated "a total of about 8 million tons per year are planned and can be presumed to be produced within the region by the electric steel making process.....". Mr. Kek Soon Eng of Singapore has subsequently in a more detailed analysis of data derived from SEAISI newsletters and quarterly journals arrived at the forecast production figure of 3 million tons, instead of 8 million tons by 1984 Table 2).

Table 1. ASEAN demand for crude steel, 1978-2000

(million metric tons)

	1978	1985	2000
Indonesia	2.1 (15)	3.3 (20)	8.5 (37)
Malaysia	1.3 (100)	1.8 (120)	3.8 (180)
Philippines	1.7 (39)	2.4 (45)	4.9 (63)
Singapore	1.1 (490)	1.2 (520)	1.7 (550)
Thailand	1.6 (36)	2.4 (45)	4.2 (54)
Total ASEAN	7.8 (30)	11.3 (34)	23.1 (56)

Source: Journal of the South East Asia Iron and Steel Institute 'Steel Statistics for Member Countries; Guide to Possible Future Steel Demand in the Region", Quarterly Issue, April 1979 issue. See also Dr. Kasem's report, op.cit.

Note: Figures in parenthesis show the steel consumption per capita in kg.

The present production of cement in the ASEAN countries is estimated to be 21 million tons per year, and if the annual growth rate is assumed to be 10 per cent, the total cement production by 1985 would be 37 million tons. According to the general practice in most countries, the cement kilns are lined at the hot zones with fire-stabilized dolomite bricks; dolomite ramming compositions being used for patching purposes. For the normal campaign life of cement kilns of conventional sizes, about 1 kg. of dolomite refractory per ton of cement produced would be required.[1/]

For the production of one ton of steel, 1,5 kg. of dolomite and 9 kg of magnesium clinker are required. To produce one kg. of magnesia, 2 kgs. of dolomite are required. Hence the requirement of magnesium clinker in the cement industry is a sort of derived demand, and also the production of the basic refractories of magnesia and dolomite can be a complementary or integrated process.

1/ Quoted from the "Proposal for an ASEAN Industrial Complementation Project on Establishment of a Regional Basic Refractory Industry", submitted by Dr. Kasem Balajiva for the Thai Delegation in September 1979. See also Dr. Kasem's document on ASEAN Magnesium Clinker Project, op.cit.

Table 2. Production of crude steel by electric arc furnance in ASEAN countries, 1967-1984

(metric tons)

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN total
1967			37,040		12,460	
1968			35,070		14,808	
1969			56,790	114,000	32,888	
1970			66,570	114,000	153,329	
1971	10,000	160,000	91,510	130,000	169,960	561,470
1972	30,000	187,000	91,440	198,000	282,628	789,068
1973	50,000	180,000	128,660	211,000	323,524	893,184
1974	80,000	157,672	148,700	194,000	326,159	906,531
1975	100,000	182,592	198,280	196,000	250,911	927,783
1976	139,000	189,613	241,590	203,000	280,721	1,053,924
1977	250,000	194,331	234,440	215,000	308,532	1,202,303
1978	225,000	203,217	237,870	281,000	385,242	1,332,329
1979	305,000	216,000[a]	286,000[a]	326,000	363,000[a]	1,495,000[a]
1980	360,000[a]	227,000[a]	311,000[a]	350,000	381,000[a]	1,629,000[a]
1981	379,000[a]	237,000[a]	336,000[a]	339,000[a]	400,000[a]	1,691,000[a]
1982	423,000[a]	247,000[a]	361,000[a]	358,000[a]	418,000[a]	1,807,000[a]
1983	467,000[a] (767,000)[b]	257,000[a]	386,000[a]	378,000[a] (450,000)[b]	437,000[a]	1,925,000[a] (2,297,000)[b]
1984	511,000[a] (911,000)[b]	267,000[a] (717,000)[b]	412,000[a]	398,000[a] (500,000)[b]	455,000[a] (665,000)[b]	2,043,000[a] (3,205,000)[b]

Source: Kek Soon Eng of Singapore "Working Paper on the Graphite Electrode Project", and South East Asia Iron and Steel Institute (SEAISI) Newsletter, 2 February 1981.

Note: a/ = forecast, based on trend equations

b/ = figures in parenthesis are the forecast after adjusting for expansion plans:

Indonesia - Krakatau Steel will expand capacity by about 1 million tons per year by 1983/84

Malaysia - the DRI plans will enhance capacity of about 750,000 tons per year by 1984

Philippines- no basis to modify

Singapore - expected to increase output by about 247,000/255,000 tons by 1983/84

Thailand - incremental capacity is expected to be 300,000/400,000 by 1984.

The requirement of refractory materials in the ASEAN countries is summarized as follows:-

(1) Magnesia requirement:

Steel industry (9 kg. per ton steel) = 27,000 tons magnesia.

(2) Dolomite requirement:

Magnesia production (2 tons of dolomite (per ton of magnesia)	= 54,000 tons dolomite
Steel industry requirement (5 kgs. of dolomite per ton of steel)	= 15,000 tons dolomite
Cement industry requirement (1 kg. of dolomite per ton of cement)	= 37,000 tons dolomite
	106,000 tons dolomite

It should be noted that the dolomite requirement includes the magnesia requirement.

Considerable advantage, therefore, would be gained if a fully integrated dolomite refractory and sea water magnesia plant were to be considered to maximize the use of the manufacturing equipment and machinery. Any surplus of the sea water magnesia produced in the early years of operation could be aimed for the export market.1/

The investment cost of the project depends much upon the scale of production, location of the project, fuel charges, labour costs, ect. A preliminary estimate of total investment is of the order of US $40 million for a workable size. The current price of magnesia is US $300 per ton and that of dolomite refractory is about US $247 per ton.

(b) Mini-tractors

Attention is focused on the agricultural type of mini-tractors project which was proposed by the ASEAN Agricultural Machinery Federation. In Thailand and Indonesia there are many small tractors in the rice fields and in other agricultural areas, and the two countries have some small assembly plants for the small tractors. Indonesia plans also to have a larger national

1/ Quoted from Dr. Kasem's Perposal, op.cit.

project. "By 1984, 4-wheel tractors from 15-40 horsepower are expected to be wholly manufactured in Indonesia. The Indonesia government is expected to protect local industry, but it is also encouraging private companies to participate in its manufacturing programme."[1/] It is envisaged that the mini-tractor of an AIJV would be of about 15-25 horsepowers, with a low cost of production and is simple to operate. It can be applicable for wet-and-dry land farming.

The demand for mini-tractors is expected to increase year after year, in view of the schemes of agricultural mechanization in the ASEAN countries. It is preliminarily estimated that about 10,000 units would be demanded every year in the ASEAN countries.

If the mini-tractor AIJV is established, the surplus production may possibly be exported to other developing agricultural countries in Asia and Africa.

The project will help to improve the technological capability in agricultural equipment manufacturing and will stimulate to the manufacture of other agricultural machinery and components. The project will result in substantial foreign-exchange savings through import-substitution.

(c) Security paper

The ASEAN security paper mill project would involve the manufacture of security paper for bank notes, bank cheques, legal tender currency, certificates of indebtedness, stock certificates, revenue and postage stamps, contracts, legal documents, lottery tickets, postal money order, etc. The porject was initiated by the Philippines in view of the availability of principal raw materials (i.e. abaca, a long-fibre plant) in the region.

It is extremely difficult to estimate the ASEAN demand for security paper, which cannot be defined precisely, as high quality paper can be used as security paper. Some countries have their legal tender notes printed traditionally in England, USA, or some other distant land for security reason.

1/ Quoted from the Report on the Proceedings of the 3rd Council Meeting of the ASEAN Agricultural Machinery Federation (AAMAF), held in Manila on 24 June 1981.

(d) Graphite electrode

Graphite electrode is used for the electric arc furnance in steel production. It is in the form of solid round cylinder with the diameters of 12, 14, 16, 18, 20, 22 and 24 inches and the length of about 1.8 meters. Electrode consumption per ton of crude steel is about 5.5-7.0 kgs. The total ASEAN demand for graphite electrode is about 10,000-11,000 tons in the current year 1981, and is expected to go up to 19,000 tons by 1984,[1/] as Indonesia, Malaysia, Thailand and Singapore implement their expansion plans (see Table 3).

For the production of graphite electrodes the following inputs will be of crucial importance:

(a) Metallurgical coke (if suitable, in place of petroleum coke).
(b) Fuel cost
(c) Labour cost

Hence it is often a by-product of the petro-chemical industries.

It has been estimated that the optimum scale of production for the ASEAN region is about 20,000 tons per year, with the capacity of expansion up to 30,000 tons.[2/] The capital cost of the plant would be about US $200 million. Petroleum coke can be made available but metallurgical coke cannot be used, or suitable in the ASEAN countries. The cost of petroleum coke is about US $1,000 per ton and the pitch cost is about US $500 per ton. The fuel cost and labour cost would depend upon the location of the AIJV. The current price of graphite electrode is about US $2,500 per ton. ASEAN countries usually import from USA, Japan, Federal Republic of Germany, Italy and United Kingdom.

The import duty in the ASEAN countries is rather low, ranging from zero in the case of Singapore, to 10 per cent, in the case of Philippines (see Table 6) as all the ASEAN countries have the policy of low tariff rates for intermediate goods in order to encourage manufacturing industries.

1/ See Report on the Proceedings of the 8th Council Meeting of the ASEAN Iron and Steel Industry Federation (AISIF) in Kuala Lumpur on 11 March 1981, Annex XI, "Working Paper on the Graphite Electrode Project", by Mr. Kek Soon Eng of Singapore.

2/ Source: Union Carbide Asia Ltd., Singapore.

Table 3. Actual and forecasted consumption of graphite electrode in ASEAN countries, 1979-84

(metric tons)

	Indonesia	Malaysia	Philippines	Singapore	Thailand	ASEAN total
1978	1,350	1,219	1,427	1,686	2,311	7,994
1979	1,830	1,296	1,716	1,956	2,178	8,976
1980	2,160	1,362	1,866	2,100	2,286	9,774
1981	2,274	1,422	2,016	2,034	2,400	10,146
1982	2,538	1,482	2,166	2,148	2,508	10,842
1983	2,802 (4,602)[a/]	1,542	2,316	2,268 (2,700)[a/]	2,622	11,550 (13,782)[a/]
1984	3,066 (5,466)[a/]	1,602 (4,302)[a/]	2,472	2,388 (3,000)[a/]	2,730 (3,990)[a/]	12,258 (19,230)[a/]

Source: Table 2 and adaptation from Kek Soon Eng "Working Paper on the Graphite Electrode Project"

Note: The estimate is based on the consumption rate of 6 kgs. of graphite electrode per ton of crude steel produced..

a/ figures in parenthesis are the forecast after adjusting for expansion plans.

At the 8th Council Meeting of the ASEAN Iron and Steel Industry Federation (AISIF), Mr. Kek Soon Eng of Singapore presented a working paper on the graphite electrode project. After some discussion, the meeting decided to request the Indonesia National Committee to conduct a pre-feasibility study on the possibility of establishing a graphite electrode plant as an ASEAN project in view of the availability of raw materials and energy in Indonesia.

Two foreign grapite electrode manufacturers have expressed their interest in the project, i.e. Great Lakes Carbon and Union Carbide. The manufacture of graphite electrode is included in the list of projects to be given priority in Indonesia. A private investor has filed an application to build graphite electrode plant in Indoneisa and their license is now being reviewed by the Indonesian Government.

Thus, if Indonesia decides to have a national plant for graphite electrode that would be in conflict with the proposed AIJV.

(e) Ferro-alloy

In the 9th ASEAN Iron and Steel Industry Federation (AISIF) Council Meeting held in September 1981, the Philippine delegation proposed to form an AIC package for steel-related products.[1/] The Philippines, through Maria Christine Chemical Industries Inc. (MCCI), proposed that ferrosilicon be the Philippine product in the AIC package. The Philippine Ferro-Alloy Association is being formed. The other ferro-alloy producers include Electro Alloys Corporation (EAC) and Ferro-Chemicals Inc.

Ferrosilicon is one of the ferro-alloys vital and necessary to steel making. It is used as an alloying additive and a deoxidizer in the production of most grades of fine and semi-fine steel.

Demand in the ASEAN region is about 12,000-15,000 tons. The Philippines (with MCCI and EAC) is a producing country, exporting some quantities to Japan, and other countries in the Asia-Pacific region. Other ASEAN countries

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1/ See Proceedings of the 9th AISIF Council Meeting held in Manila on 4 September 1981, Annex XII, "Discussion on the Working Paper Made by the Philippine Delegation regarding the Ferro-alloy". The Philippines position paper was dated 10 June 1981.

import ferro-silicon from countries with low-cost power, including Norway, Venezuela, Iceland, Brazil, and Australia as well as some centrally-planned economy countries.

Basic inputs to the production of ferro-silicon include:

(i) electric power

(ii) raw materials
- reductants (charcoal, coal or coke)
- silica quartz
- iron (mill scale or steel scraps)

(iii) manpower

For every ton of ferro-silicon 75 per cent, about 9,000 KWh of electric power is consumed, and 1.5 mt of reductants, 2.1 mt of silica quartz and about 300 kgs. of mill scale iron are needed. Direct labour input per metric ton of product is about 8 man-hours.

Philippines claims to have comparative advantage in the production of ferro-silicon, because (a) the country has tremendous hydroelectric potential now being developed in Mindanao; (b) it has man-power and technology; MCCI has experienced personnel in electro-metallurgical operations and has been active in this field for more than 25 years; and EAC has Japanese technology through Nippon Denko, and (c) she has abundant raw material reserves. There are large sources of charcoal found in waste wood from logging areas and lumber yards, as well as trees felled in clearing for resettlement areas and mangrove wood cut in clearing for fishpond areas. Large quantities of charcoal are also generated from coconut shells and industrial tree farms. Various coal sources are also available. Silica quartz is found in many parts of the Philippines. Iron sources, such as mill scale (a waste product in the rolling of steel billet), scrap iron and iron ore are readily available.

In short, Philippines declares that she has confidence to meet the three criteria for AIC products, namely, (a) internationally accepted quality, (b) competiveness in price and (c) continuity of supply.

The AISIF has directed the Philippines to prepare a project proposal on the ferro-alloy plant, based on the COIME format for such a project, which

should include a complete study on the potentials of the project not only within the South East Asian region but also related to international markets.

(f) Chemical projects

Cholorinated parafin wax is used as a secondary plasticizer, flame retarded additive, extreme pressure additive and other industrial uses. Parafin wax is a by-product of the petro-chemical industry; chlorine is then compounded into it to form the cholorinated parafin wax. Singapore and Indonesia have refining capacity of parafin wax. Imperial Chemical Industries (ICI) Ltd imports regularly chlorinated parafin wax in shipments of 500 tons each from the United States, Japan and China to be distributed in the area of Singapore and Malaysia. It is in liquid form packed in drums. The current price is about US $800 per ton. It is estimated that the potential demand in Singapore is about 2,000 tons per year and that in the ASEAN region, about 10,000-15,000 tons.[1/] The minimum economic capacity of production is about 20,000 tons per year. So if the AIJV is set up, it must aim at exporting a substantial portion of the product to the countries outside ASEAN, implying that it must be very competitive in price and quality.

Acetylene black is used for making (a) dry cell batteries (b) battery parts (electrodes of all forms), and (c) lubricants. It is in the form of fine black powder, imported from Japan, USA and Australia. Carbon is extracted from coal, graphite or other materials and is then treated to form acetylene black. The volume of demand in the ASEAN countries is estimated to be 4,000 tons per year. A Philippine/Thai joint venture has been proposed. The Philippines' existing 500 tons/year acetylene black plant would be expanded to 2,000 tons a year to serve the domestic market plus Indonesia. A second 2,000 tons plant would be constructed in Thailand to provide the Thai market with 800 tons, Singapore with 700 tons, and Malaysia 300 tons. The project's cost is estimated at US $6 million. However, Singapore has recently objected to the AIJV for acetylene black in the meeting of the ASEAN Chemical Industries Club; possibly it plans to have a national plant in the downstream of its petro-chemical complex.

1/ Information from Mr. Paul Tan, executive of ICI, Singapore.

High test sodium hypochlorite is used for making bleaching power. It is produced in small-scale in Singapore and Malaysia[1/]

Titanium dioxide is a mineral ilmenite recovered from tin tailings. It is used for making white paint pigment. Malaysia with many tin mines produces about 200,000-300,000 tons of ilmenite or 50,000-100,000 tons of finished products.[2/] Thailand and Indonesia produce some quantities. The price of ilmenite is about $15 - $20 per ton and that of finished product ranges from $1,000 to $2,000 per ton. As there are numerous tin mines in ASEAN countries, the large amount of ilmenite produced may support an AIJV in a titanium dioxide pigment plant. However, competition in this commodity is rather keen in the world.

Freon. There are two major types, namely, solvent freon and refrigerator freon. The refrigerator freon is used for cooling purposes. The solvent freon is a fluorinated solvent for metal degreasing, flux removal and general purpose production cleaning. Dupont Far East Inc. (an importer) and its distributor, L.E. Tels Ltd. Singapore report that the volume of demand for freon in Singapore is around 4-5 million pounds. It is a fluorcarbon and is a by-product of petro-chemical industries. The input materials for its manufacture include fluorspar, chlorine and carbon tetrachloride. Thailand has made a pre-feasibility study on the freon manufacture. Fluorspar is found in Thailand. But all other materials have to be imported. A full-fledged feasibility study is needed to see whether the ASEAN market big enough to support a freon AIJV, what the planned volume of production and the production cost would be and whether the product would be competitive in price and quality.

All the above-mentioned five chemical projects have been discussed in the ASEAN Chemical Industries Club.

1/ The Chemical Industry (Far East) Ltd., Singapore imports the ingredients and produces the sodium hypochlorite.

2/ Information from the Straits Trading Company, Singapore.

(g) Spare and accessory parts of textile machinery

It is expected that after careful study the Institute of Textile Technology, Bandung will propose some spare and accessory parts of textile machinery for AIJV. The number of spindles in the ASEAN countries is around 5 million - Indonesia, 2 million; Thailand, 1.2-1.4 million; Philippines, 1.2 million; Malaysia, 400,000; and Singapore 150,000-200,000 (Table 4).

Table 4. Numbers of spindles and weaving looms in the textile industries in ASEAN countries

	No. of spindles '000	No. of looms '000
Indonesia	2,000	70
Malaysia	400	9
Philippines	1,200	25
Singapore	150/ 200	1.5
Thailand	1,200/1,400	50/60
ASEAN total	4,950/5,200	155.6/165.6

Source: Information from Textile Association in ASEAN, and from Mr. John Lu of South Grand Textile, Singapore

There are some spareparts which are worn out rather quickly and may be considered for the AIJV - namely, (a) spindle tape, (b) bearing, and (c) traveller[1/]. The manufacture of bearing and traveller involves very high technology and, besides, the famous brands for bearing, such as SKF and NTN, are very well established in the world market. It would be difficult for the developing ASEAN countries to establish AIJVs for those spare parts to compete in quality with those firms that have had so many years of experience in technology and research. Serious consideration may, however, be given to a spindle tape producing AIJV, because this manufacture does not require such a high technology.

1/ This was the impression acquired during visits to Kuala Lumpur, Bangkok and Jakarta. In particular, Mr. John Lu of South Grand Textile, Singapore kindly provided with relevant technical information.

The number of weaving looms in the ASEAN countries is around 160,000 (Table 4); in Indonesia, there are 70,000; Thailand, 50,000-60,000; Philippines, 25,000; Malaysia, 9,000 and Singapore, 1,500. The spare and accessory parts for the weaving looms, which may be considered for AIJVs, include (a) shuttle, (b) reed and (c) picking stick.

There are no manufacturing industries producing those spare and accessory parts in the ASEAN countries.

Chapter VI

Analysis of tariff rates and supporting measures for AIJVs

At this juncture, it is important to analyse the tariff levels of the five ASEAN countries, and in particular, the tariff rates of the products of the prospective AIJVs, because the different tariff levels would enable us to understand the attitudes of the ASEAN countries towards the proposed expansion of intra-ASEAN trade as well as their attitudes toward industrial co-operation.

Singapore, being an international port, has adopted a policy of maintaining the lowest level of tariff rates. Apart from the traditional items of liquor, tobacco and petroleum, there is practically no import duty on other items, including the products of the prospective AIJVs. Since the 1970's, Singapore has gradulally eliminated the protective import duties. which were set up in the early 1960's to protect the infant manufacturing industries. Philippines, Indonesia and Thailand have much higher levels of tariff rates (Table 5). Malaysia in in-between.

Table 5. Levels of tariff rates in ASEAN countries, 1976

	Simple average (%)	Weighted average (%)
Indonesia	33.0	20.2
Malaysia	15.3	6.6
Philippines	44.2	23.0
Singapore	5.6	3.7
Thailand	29.4	30.4
ASEAN total	25.5	20.9

Source: Republic of Philippines, National Economic and Development Authority, Tariff Commission, Tariff Profiles, January 1979 Table I(b).

Table 5 provides a picture of average tariff levels in the ASEAN countries with respect to 1976. Since 1976, Singapore has progressively eliminated the protective duties; Philippines has reduced the level of tariff rates to the "simple average" of about 27 per cent whereas Indonesia and Thailand have increased some of their tariff rates, because of balance

of payments difficulties. Hence the difference in tariff levels may deviate to some extent from what Table 5 describes. "Simple average" in Table 5 means the simple average tariff rates of all items, whereas "weighted average" means the average weighted by the volume of import trade.

The simple average of 25.5 per cent is greater than the weighted average of 20.9 per cent, because whenever a tariff rate is high, the import of that commodity tends to be lower, which is in fact a result of the normal protection of domestic manufacturing industries. For this reason, the simple average is the better indicator of the degree of nominal protection than the weighted average.[1/] Singapore had in 1976 a simple average of 5.6 per cent, and a weighted average of 3.7 per cent, only as a consequence of the import duties on liquor, tobacco and petroleum. Philippines had the highest simple average, 44.2 per cent (now 27 per cent); Indonesia, 33 per cent, Thailand, 29.4 per cent and Malaysia, 15.3 per cent. However, in terms of weighted average, the order was slightly changed -- Thailand, 30.4 per cent; Philippines 23 per cent; Indonesia 20.2 per cent; and Malaysia, 6.6 per cent.

As the ASEAN countries have the common policy of low tariff rates for intermediate goods for encouraging manufacturing industries, the tariff rates on the commodities of the proposed AIJV are not great. Therefore, tariff preference is really not a very effective supportive measure for the joint venture. Secondly, the industries' demand for those intermediate goods may not be elastic with respect to price, because the expenditure on the intermediate goods may not constitute a large proportion of the total cost of the product. Hence, a favourable price consideration on account of the tariff preference may not be a great inducement for the ASEAN industries to purchase their requirement from the AIJV. Instead, they would be more concerned with the quality of the AIJV products. Thirdly, the tariff preference would have no or little effect on Singapore and Malaysia, whilst it may have some effect on the relatively high tariff

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1/ The degree of protection should be more appropriately measured in terms of effective tariff rates by taking into consideration the value-added of import-substitution industries and the import duties of accessary parts used in domestic manufacturing. However, no study has ever been made on the effective tariff rates of the ASEAN countries.

countries of Philippines, Indonesia and Thailand. Therefore, the favourable effect would depend largely upon the demand for those intermediate goods of the latter three countries.

Table 6 shows that the tariff rates of the prospective AIJV commodities are in harmony with the levels of tariff rates with respect to the ranking of high or low tariff among the ASEAN countries (Table 5). On one extreme, Singapore has no import duty on all those prospective AIJV commodities. Philippines has the tariff rates of 10-100 per cent on those commodities (simple average = 30 per cent); Indonesia, 5-60 per cent (simple average of import duty = 17.3 per cent plus import sales tax of 5-100 per cent): Thailand, 3-30 per cent (simple average = 18.9 per cent). Malaysia imposes no tariff on the majority of those commodities (simple average = about 5.5 per cent). The implication is that the preferential tariff cut may be a supporting measure for the joint ventures in the relatively high tariff countries of Philippines, Indonesia and Thailand. In the case of Singapore and Malaysia to a great extent, those commodities are imported free from duty, no matter whether they are from ASEAN or non-ASEAN sources. No deep research study has yet been made on the non-tariff barriers in the ASEAN countries, but according to several United Nations studies, non-tariff barriers are even more restrictive than tariff barriers. Perhaps, with the full support of the ASEAN governments, the possible elimination of non-tariff barriers on the AIJV and AIC products may be of very great importance for the development of the projects.

Another consideration of the supporting measures for the AIJVs is by way of finance. The ASEAN Finance Corporation has been launched in Singapore in June 1981, with the main objective of financing industrial projects in the ASEAN countries.[1/] The paid-up capital is S$100 million, divided equally among the five ASEAN countries. The Corporation operates as a merchant bank in a market economy, with a regional characteristic.

1/ For a critical review, see Lee Sheng-Yi, "ASEAN Finance Corporation", Singapore Chinese Chamber of Commerce and Industry Souvenir Magazine, for the commemoration of the 75th Anniversary, 1981.

AIJV commodities (CCCN Code No.)	Indonesia		Malaysia	Philippines	Singapore	Thailand
	Imp. duty (per cent)	Imp. sales tax (per cent)		(per cent)		(per cent)
1. Magnesium clinker (2519000)	15	5	Nil	10	Nil	30
2. Mini-tractor (8701910)	20	10	20% for pedestrian control types Nil for other types	30	Nil	5
3. Security paper (4815900)	60	10	5%	100	Nil	30
4. Graphite electrode (3801100)	5	5	5%	10	Nil	3
5. Ferro-alloy (7302100, 7302200 Or 7302900)	5	5	35% for ferro-silicon, 7302200 Nil for ferro-manganese and other types	30	Nil	5
6. Cholorinated parafin wax (3819900)	20	5	Nil	50	Nil	30
7. Acetylene black (2803200)	10	5	Nil	50	Nil	30
8. High test sodium hypochloride (2831200)	15	5	M$246.05 per ton	10	Nil	30
9. Titanium dioxide (2825000)	15	5	Nil	20	Nil	30
10. Freon (2902500)	15	5	Nil	10	Nil	30
11. Spare parts of textile machinery (8438100)	10	10	Nil	10	Nil	30

Sources: 1. Customs Tariff and Import Statistics, October 1979 (Indonesia)
2. Trade Classification and Customs Tariff, 1978 (Malaysia)
3. Tariff and Customs Code of 1978 Presidential Decree No. 1464 (Philippines)
4. Singapore Trade Classificatior and Customs Duties 1979
5. Customs Tariff and Business Tax (Thailand)

Note: 1. Tariff rates in percentages are on ad valorem basis.
2. CCCN = Customs Co-operation Council Nomenclature (formerly known as Brussels Tariff Nomenclature or BTN)

At the 15th ASEAN-CCI meeting in Manila in June 1981, Philippines delegates propo. ` the establishment of an "ASEAN Investment Corporation" with the sole task of identifying and organizing potential joint ventures in order to implement the AIJV scheme effectively. Subsequently, at the 16th ASEAN-CCI meeting in Bangkok in November 1981, a concept paper of "ASEAN Trading and Investment Corporation" was submitted by Jose Concepcion, Jr. The scope of the Corporation is thus widened to include both trading and industrial investment activities. The proposed authorized capital is S$100 million to be divided equally among the five ASEAN countries, and the proposed initial subscribed capital is S$20 million. It is proposed that the capital investment of each ASEAN country should be offered to as many enterprises and individuals in industry, agriculture and trade as possible. "The responsibility for overall policy-making and decision-making of the proposed ASEAN Trading and Investment Corporation shall be lodged with a Board of Directors consisting of 15 members elected proportionately to the shareholdings of the member countries. The Board may designate five of its members to an Executive Committee to whom the Board may delegate its pover and authority. The Board shall elect a Chairman and appoint a President who shall perform the day-to-day administrative and management tasks."[1/]

Apart from some principal objectives and proposed activities, there is no concrete programme for the setting up of such an ASEAN Trading and Investment Corporation. However, a steering committee has been formed in order to prepare the establishement of the corporation. Whether the Corporation can successfully support the AIJVs depends much upon the attitude of ASEAN businessmen who have to invest their capital funds and work together. This corporation is expected to complement the function of ASEAN Finance Corporation in the sense that it would organize ASEAN joint ventures and would be a borrower of funds, whilst the ASEAN Finance Corporation would be a lender.

Intensive discussions have been held during the last 2-3 years with the Japanese financial and business community, a result of which is the establishment in November 1981 of the ASEAN-Japan Development Corporation (AJDC). The AJDC is to 50 per cent owned by AFC and 50 per cent by the

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1/ Quoted from the concept paper "ASEAN Trading and Investment Corporation".

Japan ASEAN Investment Co. (JAIC), which in turn is owned by 100-125 leading Japanese firms, including the city banks, the leading secruites companies and other major trading and industrial companies. The AJDC will strengthen the financial co-operation between ASEAN countries and Japan. It is hoped that AJDC will provide some "soft" loans and may help the AIJVs in a direct or indirect way.

An ASEAN-USA financial conference was held in Kuala Lumpur in November 1981. One of the items discussed was "financing investments in ASEAN". It is hoped that USA may play a role in financing the AIJV.

A third consideration of the supporting measures is to request the ASEAN Governments to participate directly in AIJVs so that the joint ventures include the equity interest of both public and private sectors. The Governments would thus share the risk of the venture capital and would therefore be more directly concerned with the performance of the AIJVs and Government representatives or directors in the AIJVs may fulfil very important roles.

It should be noted that priviledges under ASEAN Preferential Trading Arrangments (PTA) include, inter alia, the following:

(i) long-term quantity contracts
(ii) preference in procurement by Government bodies
(iii) purchase finance support with preferential interest rates
(iv) extension of tariff preferences
(v) liberalization of non-tariff measures on a preferential basis
(vi) others that may be agreed upon by consensus.

It is relatively easier for Government bodies to exercise preference in procurement (item (ii)) than for commercial Although all ASEAN countries have state trading agencies (e.g. Intraco for Singapore and Pernas for Malaysia), the degree of state trading varies. In Singapore, it is rather insignificant.

Also, it is more feasible for Government bodies to have long-term quantity contracts (item (i)) than for commercial firms.

With regard to item (iii), the difficulty is to find a financial institution or ASEAN Government to offer finance at preferential rates. See also the discussion above on the proposed ASEAN Trading and Investment Corporation.

In this connection, it is interesting to make a comparison between AIJVs and AIC projects. They involve different approaches. Firstly, in AIC, after the ASEAN economic ministers have approved the packages of automotive components) and have granted them with special Preferential Trading Arrangements, it is up to the industrialists (private sector) in each ASEAN country to invest and work in the manufacturing of those components. In some cases the industrialists may not find that manufacture potentially profitable. Secondly, both the ASEAN government officials and businessmen realise the difficulty of identifying another industry for the AIC, in the case of which the components can be manufactured in five ASEAN countries with equitable distribution of benefits. Thirdly, and more important still, if the production of components are not very carefully allocated to the ASEAN countries, in order to then be assembled together, there is a risk of losses of economies of scale, of added transportation costs, and of less than optimum utilization of factor endowments and comparative advantages of a country, etc. The situation may sometimes call for one whole industry in a country. For this reason, the idea of AIJVs was brought up.

Relatively speaking, the AIJV projects need not conform to so many formal guidelines or agreements as the AIC projects. The AIJV projects involves only a few basic principles and concepts for operation. Each project can be dealt with on a case-by-case basis and incentives and preferences can be conferred by governments.

Since the AIJV projects are not so big as the AIP ones, conditions for AIJVs need not be so stringent. There is room for much more flexibility and it is hoped that the projects can be more speedily implemented.

A study of the tariff rates of automotive components in the ASEAN countries (Table 7) shows that the tariff rates of AIC products are slightly higher than those of the prospective AIJV products, except in the case of Philippines (Table 6). Indonesia has the tariff rates of 30-100 per cent (simple average = 53.1 per cent, plus import sales tax of 5-20 per cent)

Table 7. Tariff rates of automotive components of AIC products

AIC products (CCCN Code No.)	Allocated to	Indonesia		Malaysia	Philippines	Singapore	Thailand
		Imp. duty (%)	Imp. sales tax (%)	(%)	(%)	(%)	(%)
First package of automotive components							
1. Diesel engine (80-135 HP) (8406300)	Indonesia	40	10	0	20	0	15
2. Motor cycle axles (8709)	Indonesia	40	10	25	20-30	0	60
3. Wheel rim for motor cycle (8709)	Indonesia	30	10	0	20-30	0	60
4. Spokes and niples (8709)	Malaysia	30	10	0	30	0	30
5. Drive chains and timing chains (7329300)	Malaysia	40	5	0	20	0	30
6. Crown wheels and pinions (8706)	Malaysia	50	10	0	30	0	50
7. Seat belts (8706)	Malaysia	50	10	0	30	0	50
8. Body panel for passenger cars (8702)	Philippines	100	20	0	30	0 (REM) 45 (OEM)a/	80
9. Transmissions (8702)	Philippines	100	20	0	30	0	80 (REM) 40 (OEM)
10. Rear axles (LCV and below) (8702)	Philippines	100	20	0	30	0	80 (REM) 40 (OEM)
11. Universal joints (8706199)	Singapore	50	10	0	30	0	50
12. Oil seals (8465200)	Singapore	10	10	0	50	0	15
13. V-belts (4010200)	Singapore	10	5	45	20	0	50
14. Body panels for commercial vehicles of one ton and above (8705400)	Thailand	100	20	30	20	0	60
15. Brake drums for trucks (8706018)	Thailand	50	10	25	20	0	50
16. Heavy duty shock absorbers (8706)	Thailand	50	10	25	20	0	50
Second package of automotive components							
17. Steering system (8706099)	Indonesia	50	10	0	30	0	50
18. Headlights for motor vehicles (8509129)	Malaysia	40	10	0	30	0	30
19. Heavy duty rear axles for commercial vehicles (8706017)	Philippines	50	10	0	30	0	50
20. Fuel injection pumps (8410860)	Singapore	30	10	0	30	0	0
21. Carburators (8406920)	Thailand	40	10	0	10	0	15

Source: See as Table 6.

Notes: 1. The rates are mainly based on the reports of the respective ASEAN countries to the requesting country, to which the automotive component is allocated; some rates which are not reported are then obtained from the tariff and customs codes of the ASEAN countries shown in the previous Table 6.

2. REM = replacement equipment market, meaning imports of the distributors or dealers.

3. OEM = original equipment market, meaning imports by the assembly plant or car manufacturer.

a/ Since Singapore has phased out the car assembly, the 45 per cent rate for OEM is not applicable.

for the first package of automotive components; Thailand, 48.1 per cent; Philippines, 26.9 per cent; Malaysia, 9.4 per cent; and Singapore, nil. Such a ranking order of the tariff rates is somewhat different from that of the level of tariff rates in ASEAN countries, (simple average in Table 5). Nevertheless, Singapore always remains the lowest and Malaysia, the second lowest.

The ranking order is also different from that for the prospective AIJV products (Table 6), with respect to the relatively high tariff countries of Philippines, Indonesia and Thailand.

In the second package of automobile components, both Singapore and Malaysia have no tariff rates at all. Indonesia has the tariff rates of 30-50 per cent (simple average = 42 per cent plus import sales tax of 10 per cent); Thailand, 0-50 per cent (simple average = 29 per cent); Philippines 10-30 per cent (simple average = 26 per cent).

According to the Basic Agreement on Industrial Complementation, "there should be at least four participating ASEAN countries in an AIC package, unless otherwise recommended by COIME and approved by the ASEAN Economic Ministers" (Article I.3).[1/] It should be noted that the original idea was to have participation of all five ASEAN countries in an AIC package. Realizing the difficulties inherent in this Mr. Lee Kwan Yew, the Prime Minister of Singapore, suggested to have at least four countries participating (five minus one principle). Recently, the ASEAN-CCI has proposed to change to "at least three participating ASEAN countries in the AIC package", in order to allow more flexibility.

Similar to the AIJVs, an AIC package can enjoy the exclusivity privileges for two years for existing products, and for three to four years for new products, as from the date of actual production. There would be a 50 per cent preferential tariff cut for the AIC packages; further tariff cuts can be negotiated among the participating ASEAN countries.

As the Automotive AIC Package involves the manufacture of existing products (there are many small plants already making different components in the ASEAN countries), some of the existing firms may suffer from

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1/ See "ASEAN Industrial Complementation", UNIDO/IS.282 of 25 January 1982, Annex B.2

competition arising from the AIC package. For example, as diesel engines (80-135 HP) are assigned to Indonesia, the small diesel engine plants in the Philippines may face competition vis-a-vis the AIC package not only in the ASEAN market but also in the home market to some extent. This may pose a conflict of national and regional interests. So far, there is no such a problem in the case of the prospective AIJVs, because all the proposed products are new ones.

Finally it may be mentioned that a new idea of AIC was proposed in the WGIC meeting in Bangkok on 10 November 1981, whereby packages can cross industry lines, e.g. products from chemical industry or steel industry can be included in an AIC package to complement the exchange of rubber products.

Chapter VII

Problems and prospects of AIJVs and recommendations

Trade and industrial co-ordination are inter-related. Discussions are taking place on the rate of ASEAN integration, i.e. whether the ASEAN countries should proceed on economic co-operation at a fast or slow rate. The idea of "free trade area within ten years" has been proposed. In the meantime it had been suggested that the ASEAN countries should attempt to have uniform tariff rates vis-a-vis the outside world (custom union concept). In view of the divergent levels of tariff rates (Table 5), different trade policies, and development strategies, it may not be easy to achieve that common aim. To Singapore, it means the raising of the tariff wall from zero level, to Philippines and Indonesia, it means the lowering of the tariff wall. The ASEAN countries should avoid the pitfall of simply extending the tariff walls from countries' boundaries to regional boundaries. They should not forget that the major economic advantage o. regional integration is to exploit the economy of scale of large industries.

Another matter for serious consideration is the exclusivity clause of AIJVs which is for 3-4 years. At the end of the period there may perhaps be a political lobbying to extend the period, if the AIJV does not work well. However, this is only a fore-warning, which may not come true

The performance of AIP, AIC and AIJV projects will depend to a large extent upon factors, such as the location of the projects, and the resource endowments. Singapore, being a small country with limited resources, emphasises productivity and efficiency in its services, while the other countries, with abundant manpower resources may give relatively more weight to certain socio-economic aspects, such as possible effects on large groups of small industry producers of the establishment of a modern large industrial plant in the same field.

For the same reasoning, the pricing policy may also cause management problems, as may be illustrated with the Indonesia's urea fertilizer AIP project as follows. Granting that, from socio-economic standpoint, a low price would be charged to the small poor farmers. Would it be possible, at the same time that the ex-factory price be based on marginal cost or

approximate world market price or from the standpoint of efficiency and productivity? The pricing problem has not been raised yet, but eventually it has to be considered carefully, because it is hinged to the profit or loss of a project.

The ASEAN countries should aim at careful co-ordination of their national plans, in order to make sure that the ASEAN projects, AIP, AIC and AIJVs, would not clash with their national plants, thereby cause a conflict between national and regional interests. For example, Indonesia may desire to develop her national security paper and graphite electrode projects.

Since non-ASEAN countries can participate in the AIJVs as minor shareholders, ASEAN countries may make use of the technical skill and marketing facilities of multi-national companies for the AIJVs. This may provide a good prospect.

The special preferential tariff cut of 50 per cent or even more may not be a very decisive supporting measure, as the ASEAN countries have no or low tariff rates on intermediate goods. The measure may be of significance primarily in the case of those products and countries with relatively higher tariff rates. Removal of non-tariff barriers and provision of financing facilities through the ASEAN Finance Corporation or ASEAN-Japan Development Corporation or other international financial institutions may be the better supporting measures for the AIJVs. Government equity participation in the AIJV could also be a strong supporting measure.

Some of the proposed AIJVs may stand a good chance of success. It is recommended, however, that ASEAN-sponsored pre-feasibility studies be carried out by special team(s) in the case of prospective AIJVs, at the suggestion of the proposing country in respect of the project in question. In that context following aspects should be considered.

1. Before a pre-feasibility study of a project is started, it is very important that full information is obtained from the five ASEAN countries whether any one of them has also a similar project in the planning stage. If so, how can the regional planning be reconciled with the national one?

2. The pre-feasibility study team should comprise an economist as team leader, who has good knowledge in industries and in business management, and one or two engineers. In the case of the five chemicals projects, magnesium clinker and graphite electrode, they should be chemical engineers or applied chemists who have experience in the chemical field. In the case of mini-tractors, security paper plant, and spareparts of textile machinery, they should be mechanical engineers.

3. The team should be familiar with and possibly visit relevant production plants in the USA, Japan and/or EEC to study their production cost relative to the scale of production, their techniques of production, machinery used, management, marketing etc.

4. The team should then study, at the site where the AIJV is proposed to be located, the transportation problem, labour supply, and the various aspects of infrastructure. These would be related to the production cost.

5. The volumes of demand should be assessed in respect of the total ASEAN market and of each individual country? To be realistic, the team should presume that the AIJV may only be able to sell to the ASEAN countries to the extent of 60-70 per cent of their requirement but not 100 per cent.

6. Other important considerations include:
   (a) What is the optimum or minimum scale of production? Since cost per unit varies with the scale, they should estimate a range of costs relative to different scales.
   (b) What is the choice of technique in the production? Would the level of technology and the supply of engineers and skilled labour force be adequate for the production in the country, where the AIJV is located. What is the economy or comparative advantage in choosing such a site?
   (c) What are the alternative supplies of those products in the world market? Since the AIJVs may have to sell a part of their products in the world market, it is important to know the competitive supplies.

It is an encouraging sign that with respect to trade liberalization the ASEAN countries have shifted from product-by-product approach to across-the-board approach. The vigorous effort to seek closer ASEAN industrial co-operation in AIP, AIC and AIJVs will bear fruit in times to come. With stronger political will, economic integration will follow. It would be a prudent approach if the ASEAN countries explore fully the areas where they can join hands together without, or with the least, conflict with national interests, and avoid the areas where each country holds strongly her national interest.

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