

Study on Economic Development Policy in the Transition Toward a Market-oriented Economy in Viet Nam (Phase 2)

FINAL REPORT

VOL. 2 Participation in AFTA/APEC/WTO and Industrial Policy

February 1998

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**Ministry of Planning and Investment
The Socialist Republic of Viet Nam**

**Japan International
Cooperation Agency**

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Participation in AFTA/APEC/WTO and Industrial Policy

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State Enterprise Reform

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Foreword

This study entitled "Economic Development Policy in the Transition toward a Market-oriented Economy in Viet Nam" was conducted within the framework of the technical cooperation program of the Government of Japan, in response to a request from the Government of the Socialist Republic of Viet Nam.

The study was carried out as joint research by professionals specializing in economic policy from both Japan and Viet Nam. The research groups headed by Prof. Shigeru Ishikawa, Professor Emeritus of Hitotsubashi University, for the Japanese side, and by Dr. Nguyen Quang Thai, Vice President, Development Strategy Institute, Ministry of Planning and Investment, for the Vietnamese side were set up in each country, assisted by consultant teams consisting of leading research institutes in both countries.

The research groups and consultant teams held a series of discussions, and conducted several field surveys. This report was prepared jointly by the Japanese and Vietnamese research groups based on a mutual understanding.

I hope that the useful suggestions presented in this report will contribute to the formulation of policies for economic transition and sustainable development of Viet Nam, and it would be my great pleasure if the report would be used practically by concerned organizations, officials and experts.

I wish to express my sincere appreciation to Professor Ishikawa, Dr. Thai and each research member for their close cooperation in the study, and to the officials concerned for their valuable opinions.

February 1998



Kimio Fujita
President
Japan International Cooperation Agency

Preface

This Final Report of the project on the Study on Economic Development Policy in the Transition toward a Market-oriented Economy in Viet Nam (Phase 2) aims at collecting all the important reports on the research results and policy suggestions which have been produced on the subjects of the title during September 1996 and November 1997, and thereby concluding the Phase 2 study. Moreover, the Final Report of Phase 2 combines with the Final Report of Phase 1 which was published in August 1996 in five separate volumes, to conclude all the formal research activities of the whole study project. The project itself was decided on April 1995 on the basis of the consultations between the governments of Japan and Viet Nam during 1994 and 1995, and was implemented under the Social Development Studies Program of the Japan International Cooperation Agency (JICA). The project was formally inaugurated in August 1995.

Under the agreement, the project was to be conducted in two phases. The general purpose of Phase 1 was to study the "Five-year Plan for Social and Economic Development in Viet Nam" (1996 - 2000), which was then being drafted for consideration by the Eighth Congress of the Vietnamese Communist Party. The phase 1 was brought to a close by the submission to the government of Viet Nam of a "Summary Report" in June 1996 and a "Final Report"¹ in that August. The general purpose of Phase 2 that followed Phase 1 has been to research the implementation of the "Five-year Plan" and the new issues raised during the course of it.

The agreement also stipulated that this was to be a joint Japanese and Vietnamese project. To accomplish this, research groups consisting of scholars and high-ranking experts were organized and worked under the direction of relevant steering committees on both sides. The general leaders of the research group were Professor Shigeru Ishikawa of Japan and Dr. Nguyen Quang Thai of Viet Nam. The project consisted of Subgroups to research selected priority topics, to which both Japanese and Vietnamese researchers were assigned. Both Phase 1 and Phase 2 had four priority topics, though the topics themselves changed a bit between the phases:

Phase 1:

Macro economic growth and its relationship with inflation and stability

Capital mobilization policies in the fiscal and monetary sectors

Industrial policy and industrialization

1 Ministry of Planning and Investment, the Socialist Republic of Viet Nam = Japan International Cooperation Agency, "Summary Report - Study on Economic Development Policy in the Transition toward a Market-oriented Economy in Viet Nam Phase 1, Opinions on the Draft New Five-year Plan for Social and Economic Development in Viet Nam (1996-2000)," June 1996, Hanoi and Tokyo.

Agriculture and rural development

Phase 2:

Agriculture and rural development

Participation in AFTA, APEC, and the WTO, and industrial policy

Fiscal and monetary policy

State enterprise

As for the concrete procedures for implementing the joint research, the general leaders from both sides met together for consultations at the start of each phase and draw up minutes of those meetings,² thereby ensuring that the project does become a real "joint research."

To ensure that joint research was fruitful, opinions were exchanged, materials and literature provided for each other, joint field studies and interviews conducted, and research findings discussed closely at the overall project level, the subgroup level, and the individual researcher level. At the overall project level there were five workshops held during Phase I and three during Phase 2, in either Tokyo or Hanoi.³

The results of the joint research can be seen, first and foremost, from the research findings themselves. In many aspects, the Vietnamese economy suffers from a lack of basic data, statistics, and information, which combined with the complexities involved in the transition from a centrally planned economy to a market economy (this overlaps the problems found in the process of rehabilitation and reconstruction from an economy long on a wartime footing) to produce the many inadequacies that remain in our research. But these details aside, during Phase I we were able to elucidate four problems in the Vietnamese economy and advise that they be taken note of in the drafting of the Five-year Plan.

The four points we called attention to were: 1) restraining an excessively high growth rate; 2) improving domestic savings rates; 3) recognizing that the development of agriculture and rural economy (including rural industrialization) was a major prerequisite to industrialization; and 4) recognizing that it was desirable to take a dualistic economy approach to industrialization, having a modern industrial sector with modern industrial technology and equipment existing side by side with a small industry sector using traditional technologies and facilities.

The importance of these four points was in no way diminished during Phase 2. However, new conditions that emerged or became apparent in the Vietnamese economy in 1996 and

2 August 30, 1995, "Minutes on Guiding Principles of Joint Studies"; August 9, 1996, "Minutes on the Conduct of Vietnamese-Japanese Joint Studies for Phase 2."

3 Phase 1: 1) Hanoi Preparatory Meeting (May 1995, Hanoi); 2) First Hanoi Workshop (August 28-29, 1995, Hanoi); 3) Consultations on the work plan for joint research (November 27-28, 1995, Tokyo); 4) First Tokyo Workshop (January 28-29, 1996, Tokyo); 5) Second Hanoi Workshop (March 1-2, 1996, Hanoi). Phase 2: 1) First Tokyo Workshop (March 22-23, 1997, Tokyo); 2) Consultations on the progress of joint research and announcement of results (May 22-23, 1997, Tokyo); 3) First Hanoi Workshop (June 6-7, 1997, Hanoi).

after resulted in the addition of a new research priority, namely new issues of the Vietnamese economy emerged in its international economic dimension. The priority here was to consider how Viet Nam should draft and implement its trade and investment policies in the circumstance that Viet Nam have joined AFTA and applied for membership in the WTO and APEC. This, by way of conjunction, also raised new issues directly and indirectly in state enterprise reform, industrial policy, fiscal and monetary policy, and agriculture and rural policy.

The second result of the joint research can be found in the evolution of the mechanism for joint research itself. This mechanism was devised experientially as a means of furthering the cooperative relationship between developed and developing countries concerning industrialization for economic development. It was obviously anticipated that there would be many difficulties in the realization of this mechanism, but as a matter of fact, the results outweighed the difficulties. In a word, a relationship of mutual trust has begun to take root between Japan and Viet Nam at all levels of the joint research. In the process of researching topics together, we were able to understand the sincerity and good faith of our counterparts. Naturally, differences of approach sometimes remain regarding analysis and policy options, but both sides understand the arguments behind these differences and indeed the background that has produced them, and from that have developed trust and confidence in one another.

In proceeding with this study project, we have obtained profound support from a wide circle of the people. We would like to acknowledge this with warmest gratitude.

The Japanese side of the joint research project feel extremely fortunate to have been given many opportunities to meet with Secretary-General Do Muoi and other Vietnamese leaders and seek their opinions. These opportunities were instrumental in bringing depth and strength to our findings.

The Vietnamese side of the project expresses sincere thanks to JICA and its Vietnam Office for supporting its research activities particularly in Japan.

In addition to submitting this Final Report to the leaders of Viet Nam, we will be providing it to other interested parties in order to seek comments and opinions.

February 1998, Hanoi and Tokyo



Nguyen Quang Thai
Vietnamese Cochair of
the Research Group
Doctor of Economics



Shigeru Ishikawa
Japanese Cochair of
the Research Group
Doctor of Economics

Introduction

1-A: Participation in AFTA/APEC/WTO and Industrial Policy

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University of Tsukuba
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1. Introduction

In January 1995, Viet Nam applied to join the WTO. Later the same year, Viet Nam became the seventh member of the Association of South East Asian Nations, ASEAN, committing herself to cutting import duties on inter-ASEAN trade less than five percent by the year 2006. And at the same time, Vietnamese and American officials have started to preparing for detailed negotiations on the draft of a bilateral trade agreement which is expected to precede WTO but to pave a way to the membership of WTO.

It is likely that Viet Nam has reasonably decided to promote modernization and industrialization by utilizing opportunities given by the current trend of globalization through trade and investment. For successful industrialization in Viet Nam, it is undoubtedly essential to realize and enjoy the gains from trade and investment liberalization. At the same time, these opportunities should be carefully and strategically utilized in consideration of dynamic effects and long-run economic development.

This study tries to point out some important issues to be considered for industrial development in Viet Nam, and to examine the current conditions and future prospects of several considerable industry sectors — i) electrical and electronics products, textile products, parts of automobile, metal mold products; ii) cement, urea fertilizer, petrochemicals, iron and steel, and oil refinery. We can not go into proposing a comprehensive industrial plan, but focus on sector-wise analysis in detail. Our findings on individual industries will be beneficial to drafting the industrial master plan, although further studies to examine the consistency between macroeconomic growth and sectoral development plans are necessary.

1. Alternative Strategies: Export-Led and Import-Substitution

Until recently, traditional and dominant arguments on industrial development have suggested that since the potential comparative advantage could be revealed in the liberalized trade regime such as in East Asian countries, export-led growth with trade liberalization is the promising (as if sufficient) development strategy for developing countries. These arguments, however, have been remarked on

their unsatisfactory explanation of how the increases in exports in these countries can finance their overall industrialization. Recently, there is increasing concern about some implications and rationales of industrialization with government intervention, which include industrial policies and import substitution policies, referring to successful experiences of East Asian countries.

In reality, the forerunners of ASEAN and other East Asian countries are rather lucky in the sense that these countries were involved in globalization through trade and investment, only after (or simultaneously) having established the minimum base of industry complex and industrial technology capability under considerably long period of import substitution. (Box 1)

Table 1 shows the patterns of total factor productivity growth in Korea, Japan, and Taiwan in the early stage of industrial development. Here, it is possible to observe that, not only labor-intensive manufacturing sub-sectors but also capital-intensive sub-sectors which were heavily protected in the period, present high growth rates of total factor productivity in these countries. This means that the overall productivity growth occurred in the manufacturing sectors of these countries and suggests that export expansion in the countries could be explained much by the technological capabilities, not just by factor endowment. When observing the pattern of manufacturing exports in Korea, the high rates of growth in manufacturing exports in the period can be explained mainly by the very rapid appearances of new export products, not simply by expanding the labor-intensive products. For example, even within textiles industry, its contents of exports were changed in very short time, from the early stage of garment products to the stage of thread products.

Contrary to the forerunners of East Asia, Viet Nam has not yet attained even the minimum level of industry complex and technological capabilities even though there exists rather well-educated people. In that sense, there seems to be reason for Viet Nam's considering to foster the minimum base of industry complex and technology capability as well, while export promotion is undoubtedly necessary for economic development in the process of trade and investment liberalization. This suggests it will be necessary for Viet Nam to proceed not only export promotion, but also import substitution simultaneously, which have been generally regarded as alternative and exclusive targets.

Of course, such a twin-target strategy should be carefully examined and proceeded. Biases against exports should be offset or removed. Application of import substitution policies should be limited to the industries which are essential for forming the core of industry complex and technological capability. Considering large deficit in current account (about ten percent of GDP in 1995), it is advisable to select the down stream of the individual industry which can be expected to be relatively labor-intensive and to need rather the limited amount of investment. It is also important to timely implement the related projects. In addition, these industries are to be possibly established within the time limit of 2006 (AFTA), which suggests that it will be necessary to make use of foreign direct investment.

2. FDI and National Competitiveness

The East Asian economies have been involved in global competition among the multinational enterprises since the mid-80s, as policy barriers to trade and investment have fallen in the region, and as it has become (technologically) more feasible to manage the complexities of cross-border transactions. The explosion of foreign direct investment inflows into the region since the mid-80s has served to highlight the fact that the multinational enterprise has been propelled to the central scene in formulating future development strategy in these countries.

The globalization of national economies has grown steadily in the region since the early 70s. Cross-border flows of money, information, trade and investment have grown more quickly than domestic GDP. These trends have served to make obsolete the common and often untold assumption that the external economy could be something separate and safely ignored from consideration of policy for the

domestic economy. Many developing countries are becoming more and more outward oriented—more open to trade and investment.

However, while the global bandwagon toward the integrated world economy has gathered momentum since the 1980s, another began rolling in the opposite direction. There has been a flowering of attempts to put issues of 'national competitiveness' centrally on domestic economic policy agendas not only in these developing countries but also in developed countries. There have been serious calculations of the possible sources of national advantage in many countries. The East Asian countries, particularly the ASEAN countries, have designed the solidarity pact among political, business and union interests to increase the attractiveness of a unified individual country as a fresh place for both domestic and foreign investment.

Even formation of AFTA can be understood to be a 'competitive collaboration' among the ASEAN countries to attract foreign direct investment into the region. Such a region of countries with the diversified comparative advantages under free trade system would stimulate the multinational enterprises to operate the international division of labor in the region as a part of their worldwide networks. It could be pointed out that concerns about shifting foreign direct investment away from the region to China is another motivation for formulation of AFTA (Table 2).

For Viet Nam, however, only affiliating to AFTA is not a sufficient strategy to attract foreign direct investment and to foster the base of industry. While participation in AFTA will be possibly a good opportunity for being integrated into the globalization process, Viet Nam will face the competition in 'location advantage of investment' between AFTA countries. It will depend on the domestic conditions for trade and investment, 'national competitiveness,' to what degree Viet Nam could realize and enjoy possible benefits from AFTA.

It has been recognized that when multinational enterprises (as well as domestic companies) select their investment location, they strike a balance between the two-way pulls—the forces for integrating operations across borders ('harmonization') and those for recognizing and exploiting the differences among national markets. The first forces can be strengthened by the provisions of administrative infrastructure services:

- 1) Maintaining political stability as it has been;
- 2) Keeping transparency in administrative and business procedures in general;
- 3) Maintaining the prudent macroeconomic management to control inflation, excessive deficit in current account and budget;
- 4) Keeping transparency in international transactions,
 - a) abolishing the non-tariff barriers and tariffication of all protective measures
 - b) deregulation on foreign exchange transactions and foreign direct investment;
- 5) Clarifying and making transparent the process and procedures of foreign firm's establishing the joint venture with the state-enterprise;
- 6) Indicating the priority sectors of industry by establishing the investment promotion law or by drafting the industrial master plan, and specifying the types of incentives to be given to these priority sectors.

The second forces, which are rooted in immobile resources of the location, could be made operational by the provision of physical infrastructure services such as utilities, transportation, communication, and etc. While much has already been said about the importance of physical infrastructures, it should be emphasized here that investment in physical infrastructures is to be made in a few concentrated location, especially on the initial stage of industrialization. It could be expected that concentration of investment will generate 'agglomeration benefits' there.

3. Industry Cluster and Learning Capabilities

The last point is closely related to creation of 'industry cluster,' which is recognized essential in exploiting the differences among national markets. It has been pointed out that, globalization has made factors of production such as educated workforce, capital, or natural resource, so readily available elsewhere in the world that they no longer provide enough sources of advantage as they used to. Contemporary national competitiveness have been said to arise from highly specialized clusters of related skills, technologies and infrastructures, especially when these are hard to duplicate.

In addition, greater attention is paid, in contemporary arguments, to the efficiency of communications and the learning capability of industry cluster. Localization of some leading practice could be efficiently made by the clustering of leading firms in the same location, while the importance of the specialized infrastructures should not be underscored as a source of national competitiveness. Also, it has been suggested that a competitive relation between firms in a cluster would stimulate innovative competition among firms and strengthen their efficiency and competitiveness.

It should be recalled that the ultimate objective of industrialization is to create a dynamic and diversified industrial sector that can contribute to the overall and sustainable expansion of the economy. World Bank defined industrial policies from the dynamic view point, as government efforts to alter industrial structure to promote productivity-based growth, and also pointed out that productivity-based growth may derive from learning, technological innovation, or catching up to international best practices. (*The East Asian Miracle*, p.304)

The notion of learning and innovation rests on the hypothesis that the exposure of individuals to new phenomena, new ideas, and new things produces learning. At the same time, the new to which exposure is made must be near that which is familiar. It should be linked in some way to the familiar to be recognized and acknowledged, yet novel enough to provoke new understandings and new insights. Learning applies to a variety of activities, most obviously to production, but also to consumption, and of life styles in general.

In the context of developing economies where a variety of manufacturing activities are very limited, industrial policies to extend the scope of manufacturing activities, could be recognized as their efforts to foster technological and learning capabilities. In this sense, import substitution of manufacturing activities in developing countries, together with export promotion efforts, would be even a prerequisite for successful export expansion in the long run.

In Viet Nam, there is currently no significant cluster of industry. It could be recommended to consider that Viet Nam should pursue some import substitution as a long-run development policy, as well as export promotion. When taking into consideration the macroeconomic constraints and the international pressures of liberalization, however, Viet Nam's import substitution policy should be a very careful one in the sense that the schedule of protection must be in line with that stipulated under AFTA, and that the protective measures should not impede export incentives. These consideration will lead us to the notion that Viet Nam's industrial development strategy should be pursued in line with building industry clusters in both export sectors and import substitution sectors, collaborating with foreign direct investment.

4. Scope of the Study

(1) Promotion of traditional exports

When taking account of large deficit in current account, rather heavy debt services, and expected increase in the induced imports, export promotion policy must be effectively implemented in Viet Nam. As Table 3 shows, the traditional labor-intensive and domestic resource-intensive goods have

comparative advantage. It can be therefore expected that there is enough potentiality in expanding exports of these traditional products simply by eliminating the disincentive effect of protective measures for other industries and by promoting the medium and small-scale firms for export production of these products. Export promotion center is advised to be established in order to provide information on international markets and technologies for the medium and small-scale firms in particular. In addition, the current system of export license had better be abolished since this scheme seems to hinder export expansion by the private medium and small-scale firms.

(2) New export products

Expansion of exports in these traditional products, however, will not be enough to finance the expected increase in imports. New products will have to be added as the exportable products. In this part, the electrical and electronics products, textile products, and some of parts of automobile industry are picked up as possible new export products. At the latter stage of development in the electrical and electronics industry, metal mold industry will be induced to gain a foothold as a possible supporting industry. Promoting new export products, however, should be very carefully pursued by paying attention to the existing international division of labour in ASEAN in particular and domestic macroeconomic balance. As have already been pointed out, foreign direct investment is expected to play an important role.

(3) Prospects for import substitution industries

Since domestic investment ratio is expected to rise to the level of 30 percent of GDP by 2000, and since introduction of the new export products mentioned above may induce additional import requirements (export elasticity of import requirement in textile products for 1991-95, for example, is 0.3), it will be necessary to substitute the additional import requirements through inter-industry transactions for domestic production in the long-run. By taking account of the backward linkage effect through input-output relation, five industries—cement, urea fertilizer, petrochemical, iron and steel, and oil refinery, are carefully examined as the possible candidate industries for import substitution in this part.

Each industry above is divided into three stages : down stream, middle stream, and upper stream. Each stage is carefully examined in selecting the specific stage with respect to the amount of the backward linkage demand for each stage of industry to realize economies of scale, the multinational enterprise's interest to invest in each stage and incentives given to foreign direct investment, and the required amount of investment. Our examinations indicate that protective measures are required at the early stage of development to successfully implement import substitution. However, it should be remarked that schedule of protective measures for these industries will be constrained by that stipulated under AFTA.

The last point is very important because it is essential for Viet Nam to successfully participate in international division of labour within the framework of AFTA which is expected to be intensified and spread by foreign direct investment. Further, Viet Nam's affiliation to WTO should be considered in parallel with her affiliation to AFTA, in order to expand exports of the traditional products to the vast markets of developed countries through MFN treatment and GSP.

Box 1**Experience of Dual-Industrial Growth in Korea**

“...dual-industrial growth in Korea in the 1960s and 1970s could be abstracted in a hypothetical scenario such as the following: (i) It is misleading to assume that industrial development took place under a free trade regime. Actually, it was marked by the coexistence of alternative strategies — export promotion and import substitution; (ii) Under such regime, labor-intensive industries have increased export and production, supported by export-promotion policies; (iii) At the same time, in response to rising demand for intermediate goods induced by exports, capital-intensive industries producing intermediate products were able to expand, thanks to protection under import-substitution policies and large inflows of foreign capital, (which were) sufficient to realize economies of scale.”

“Thus, from the mid-1960s to the late 1970s, the Korean economy was managed under a dualistic policy (regime) consisting of export-promotion and import-substitution measures. It should be noticed that such a dualistic policy regime is not identical to the one of free trade. While export-promotion measures could offset the cost of import protection, only for producers of exporting goods, on the other hand, import-substitution measures still remained effective for the domestic market as a whole.”

Source: K. Ohno and H. Imaoka, “The Experience of Dual-industrial Growth: Korea and Taiwan” *The Developing Economies*, XXV-4 (December 1987)

Table 1 Long-term TFP growth rates by sector

Sector	TFP growth rate		
	Korea 1966-85	Japan 1960-79	Taiwan, China 1966-86
Food	7.30	- 1.76	2.0a
Beverages	7.90	0.0	—
Tobacco	13.40	—	—
Apparel	—	1.98	10.5
Textiles	10.70	0.47	7.6
Leather	12.60	1.03	—
Shoes	—	1.03	—
Wood	9.40	2.81	0.3b
Furniture	12.10	1.74	—
Paper	8.20	1.44	2.3c
Printing	10.70	- 0.18	—
Chemicals	13.10	3.36	3.3
Petroleum	- 0.30	- 3.55d	0.0b
Rubber	11.40	1.02	6.3b
Nonmetallic minerals	2.80	—	2.4
Basic metals	—	—	7.2
Iron and steel	3.70	1.34	—
Metal products	7.60	3.41	4.4
Nonelectrical machinery	8.00	2.30	6.7e
Electrical machinery	10.70	5.37	—
Electrical equipment	—	—	7.1
Transport equipment	11.20	4.32	2.7
Precision instruments	—	—	11.0
Plastic products	—	0.92f	0.0
Other manufacturing	7.50	- 1.76	—
Average	8.8	1.2	4.6

Not available.

a. Food and beverages

b. Rubber, petroleum, and wood products

c. Paper and paper products

d. petroleum ref. and coal

e. All machinery

f. Plastic

Source World Bank (1993), *The East Asian Miracle, Economic Growth and Public Policy*, p. 304.

Table 2 Foreign direct investment to the major developing member countries of the ADB (US\$ Million and %)

Year	1982	1985	1988	1990	1991	1992	1993	1994
Value				120.0	213.0	260.0	300.0	1048.0
Share, %				(1.3)	(1.4)	(1.5)	(0.8)	(2.4)
Indonesia			576.0	1093.0	1482.0	1770.0	2004.0	2109.0
Share, %	225.0	310.0	(7.9)	(11.9)	(9.7)	(10.4)	(5.6)	(4.9)
Singapore	1298.0	809.0	3537.0	3541.0	3885.0	1034.0	3232.0	3411.0
Share, %	(34.6)	(21.5)	(48.8)	(38.5)	(25.3)	(6.1)	(9.1)	(8.0)
Thailand	189.0	162.0	1081.0	2304.0	1847.0	1969.0	1505.0	147.0
Share, %	(5.0)	(4.3)	(14.9)	(25.1)	(12.0)	(11.6)	(4.2)	(0.3)
Malaysia	1397.0	695.0	719.0	2332.0	3998.0	5183.0	5006.0	4348.0
Share, %	(37.2)	(18.4)	(9.9)	(25.4)	(26.1)	(30.4)	(14.0)	(10.1)
Philippines	16.0	12.0	936.0	530.0	544.0	228.0	763.0	1861.0
Share, %	(0.4)	(0.3)	(12.9)	(5.8)	(3.5)	(1.3)	(2.1)	(4.3)
China, P. R. of	386.0	1030.0	2344.0	2657.0	3453.0	7156.0	23115.0	31787.0
Share, %	(10.3)	(27.3)	(32.3)	(28.9)	(22.5)	(42.0)	(64.8)	(74.1)
Others	243.4	751.7	-1945.2	-3388.3	-86.7	-557.6	-276.7	-1834.9
Share, %	(6.5)	(20.0)	(-26.7)	(-36.9)	(-0.5)	(-3.3)	(-0.6)	(-4.1)
Total DMCs	3754.4	3769.7	7247.8	9188.7	15335.3	17042.4	35648.3	42876.1
Share, %	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Source The Asian Development Bank. Key Indicators of Developing Asian and Pacific Countries 1966 (Vol. XXVII).

Table 3 Change of revealed comparative advantage in Viet Nam

	1991		1992		1993		1994	
	Code	Description	Code	Description	Code	Description	Code	Description
1	042	Rice	042	Rice	042	Rice	042	Rice
2	899	Miscellaneous manufactured articles, N.E.S.	32.4	223 Other seeds for "soft" fixed oil	33.2	Crustacean, molluscs and aquatic invertebrates fresh, frozen	23.4	232 Natural rubber
3	264	Jute and other textile fibres	31.1	075 Spices	25.2	232 Natural rubber	22.6	071 Coffee and substitutes
4	075	Spices	27.9	687 Tin	24.2	075 Spices	19.5	056 Crustacean, molluscs and aquatic invertebrates fresh, frozen
5	036	Crustacean, molluscs and aquatic invertebrates fresh, frozen	25.8	036 Crustacean, molluscs and aquatic invertebrates fresh, frozen	22.9	899 Miscellaneous manufactured articles, N.E.S.	19.3	264 Jute and other textile fibres
6	687	Tin	23.5	232 Natural rubber	21.7	037 Fishes prepared, preserved	18.3	075 Spices
7	232	Natural rubber	19.7	899 Miscellaneous manufactured articles, N.E.S.	21.4	071 Coffee and substitutes	16.3	899 Miscellaneous manufactured articles, N.E.S.
8	037	Fishes prepared, preserved N.E.S.	16.5	071 Coffee and substitutes	16.8	074 Tea and mate	14.6	261 Silk
9	071	Coffee and substitutes	14.4	037 Fishes prepared, preserved N.E.S.	14.5	687 Tin	14.4	687 Tin
10	223	Other seeds for "soft" fixed oil	13.1	245 Fuel wood and wood charcoal	11.9	264 Jute and other textile fibres	14.0	074 Tea and mate
11	261	Silk	12.3	025 Eggs, birds's, fresh, dried or otherwise preserved	11.2	261 Silk	12.7	025 Eggs, birds's, fresh, dried or otherwise preserved
12	222	Seeds for "soft" fixed oil	9.0	074 Tea and mate	10.6	223 Other seeds for "soft" fixed oil	12.2	223 Other seeds for "soft" fixed oil
13	025	Eggs, birds's, fresh, dried or otherwise preserved	8.5	333 Crude petroleum	6.9	025 Eggs, birds's, fresh, dried or otherwise preserved	11.0	612 Manufactures of leather or of compound leather
14	074	Tea and mate	5.8	679 Iron, steel castings, unworked	6.2	222 Seeds for "soft" fixed oil	7.9	265 Vegetable textile fibres (exc. cotton and jute)
15	282	Iron and steel scrap	5.3	222 Seeds for "soft" fixed oil	5.4	333 Crude petroleum	6.7	222 Seeds for "soft" fixed oil
16	333	Crude petroleum	5.1	291 Crude animal materials, N.E.S.	5.3	635 Wood manufactures N.E.S.	6.4	245 Fuel wood and wood charcoal
17	679	Iron, steel castings, unworked	5.0	322 Coal, lignite and peat	5.0	291 Crude animal materials, N.E.S.	5.3	333 Crude petroleum
18	247	Wood in the rough or roughly squared	4.9	264 Jute and other textile fibres	4.6	245 Fuel wood and wood charcoal	5.2	291 Crude animal materials, N.E.S.
19	655	Knitted or crocheted fabrics	4.4	612 Manufactures of leather or of compound leather	4.2	612 Manufactures of leather or of compound leather	4.4	635 Wood manufactures N.E.S.
20	211	Hides and skins, raw	3.9	261 Silk	4.2	322 Coal, lignite and peat	4.0	037 Fishes prepared, preserved N.E.S.
21	322	Coal, lignite and peat	3.8	247 Wood in the rough or roughly squared	4.0	679 Iron, steel castings, unworked	3.8	696 Curly
22	266	Synthetic fibres for spinning	3.8	054 Vegetables fresh, simply preserved	2.8	658 Made-up textile articles...	2.8	322 Coal, lignite and peat
23	612	Manufactures of leather or of compound leather	3.8	057 Fruits, nuts, fresh, frozen	2.7	847 Clothing accessories	2.6	841 Ready-made cloths all kinds
24	658	Made-up textile articles...	3.1	841 Ready-made cloths all kinds	2.5	851 Footwears and parts thereof	2.5	035 Fish, dried, salted or smoked
25	054	Vegetables fresh, simply preserved	2.9	655 Knitted or crocheted fabrics	2.4	841 Ready-made cloths all kinds	2.5	851 Footwears and parts thereof

1-B: Strong Export Oriented Industrial Development in Viet Nam

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I . Performance of Industrial Exports by Viet Nam over the Past Years (1991-1995)

(1) During the period 1991-1995, Viet Nam has recorded a high annual export earning growth rate of 24.6%, reaching USD. 17 billion in five years. In 1996 alone, its export earnings were USD 7.1 billion, up by 35% over that in 1995 and accounting for nearly 32% of GDP.

A rapid increase in exports has contributed to the foreign exchange balance for importing materials, equipment and essential consumer goods for economic development.

Viet Nam has had ten exports with an annual export earnings value of over USD 100 million each, namely: crude oil, rice, fishery products, forest products, textiles-garments, shoes, coffee, rubber, pepper, groundnuts. Of these, the following have the largest export earnings:

- Crude oil: USD 1 billion accounting for 23.6% of total export value
- Textiles-garments: USD 0.8 billion; 16% total export value
- Fishery products: USD 0.6 billion; 13.7% of total export value
- Coffee: USD 0.6 billion; 1.37% of total export value
- Rice: USD 0.56 billion; 12.1% of total export value

Industry has greatly contributed to export earning value, and its share in total export value has been increasing, accounting for about 50% of total export value, of which light industrial exports represent 20%, and heavy and mineral ones occupy nearly 30%.

(2) However, there have still been problems in exporting industrial products:

Structure of exports have slowly improved. Although export structure has been positively changed towards the direction of gradual increase in the share of processing and manufactured goods, it has been slow. To date, materials (by SITC definition) have still been dominant and accounted for 70% of export earnings.

This is a big problem in exporting industrial products from Viet Nam. Viet Nam has limited resources and raw material-based exports can not bring about an efficient and sustainable growth rate. This type of export fails to exploit the country's abundant human resources.

Foreign capital has been rapidly attracted to industries over the past several years, reaching over USD 4 billion and accounting for 33% of foreign investment capital in the economy as a whole (excluding oil and gas). However, export in the industry sector has not yet been proportional.

Contribution to export by joint ventures has still remained small and products by these joint ventures have been mainly directed to domestic consumption in Viet Nam.

Table 1 Economic, industrial and export growth rate during 1991-1995 (%)

	1991-1992	1992-1993	1993-1994	1994-1995	1991-1995
GDP	8.6	8.1	8.8	8.7	8.2
Industry	14.6	12.1	12.9	13.2	12.5
Export	23.6	15.6	35.8	28.2	24.6

Source MPI

Table 2 Structure of exports during 1991-1995 (%)

	1991	1992	1993	1994	1995
Agro-products	52	49	48	51	46
Heavy industrial and mineral products	33	37	34	29	29
Light and handcraft industrial products	14	14	18	20	25
Total	100	100	100	100	100

Source DSI

Such a situation of foreign investment attraction leads to an observation that, in fact, Viet Nam has been implementing an import substitution-oriented industrial policy.

Competitiveness of industrial exports has still been limited due to the following:

- Processing technology remains obsolete and subject to slow renovation, leading to limited quality, thus making products less competitive in the market. Technology attracted through foreign direct investment by joint ventures, as well as equipment imported over the past time are, in general, not advanced, resulting in unqualified exports.
- Export scale has still remained small, with no major exports of large earnings, and intensively processing industrial exports occupied a negligible share. Garments and shoes have brought about high export earnings, but they have been mainly produced by subcontracts with foreign partners, thus having low added value, and failed to take initiatives in production and doing business.
- Under the condition that world market has been already divided and international labor force division established in a stable manner, the participation by Viet Nam's enterprises will meet with difficulties.

Viet Nam's young enterprises have accepted competition with commercial groups who have had a lot of experience in the market. Viet Nam's enterprises have still been subject to poor qualification in management, regulation of export activities, and marketing.

With regard to its integration into regional foreign trade, Viet Nam has made appropriate and timely decisions, but a lot of problems have remained. A path for integration so that mechanisms and policies can be adjusted to being suitable to each stage of development, thus bringing into full play the competitive edge of industry, has been slowly worked out. Viet Nam has not yet done the forecast of structural adjustment trends in industries after its full participation into AFTA as well as other free trade areas. At the same time, Viet Nam has not yet prepared an adequate contingent of officials for efficient participation as a member of the World Trade Organization.

II . Export-oriented Industrial Development

(1) The Eight Party Congress had affirmed "to build up an open economy integrating into regional and world economy, strongly orienting to exports and at the same substituting imports for efficiently domestic-made products" (page 85 in the Eight Party Congress document).

As such, export promotion is both an important objective of industrial development and a condition for high GDP growth rate. At the same time, it is also an important precondition for the country's industrialization and modernization. Demand for importing equipment, machines and technology, with an aim to renovate technology in industrial production can only be secured by export promotion.

However, with the country's population of over 100 million by early next century, and with its increasing purchasing power, Viet Nam will be a large market. Many industries can easily obtain their efficient production scale for meeting only domestic consumption. This is one of the attractive factors to domestic and foreign investors which need to be taken advantage of and brought into full play.

As a result, building up a strong export-oriented economy and import substitution for that which can be produced efficiently within the country is not dividing the market for Viet Nam's commodities, but in fact putting industry in the process of product adjustment structure for ensuring that products made must be competitive in regional and world markets, as well as in the domestic market under the conditions of an open economy in which trade will be gradually liberalized.

(2) Measures for structural renovation, and improvement of export's competitiveness should be worked out soon; policy mechanism for encouraging industrial exports issued:

Formulation of strategy for building up major exports:

- Improvement and maintenance of competitiveness of one nation depends on accurate selection of industries which have comparative advantages. To accelerate economic structural adjustment according to selected the direction, in turn, depends on a dynamic policy system, including an industrial protection policy. Policies which have impacts on industry, like financial, credit and export promotion policies, and other trade policies, aim at strengthening the competitiveness of national industry in the international market.
- Effective policies by the government should intervene in the development of the following industries:
 - a) Export-oriented industries.
 - b) Basic industries, not only with impact on accelerating the growth of many industries in the economy, but also with impact on strong export-oriented industries.
 - c) New industries which need to be fostered and developed for maintaining comparative advantages for the country in the future. During the period up to the year 2000 and after the year 2000, attention will be given to accelerating the exports of labour-intensive industries with low investment rates for one employment and quick investment return, like textiles, garments, shoes, electronic assembling, agro-processing industries, and other light industries.

In the period after the year 2010, when economic potential is relatively strong and domestically attracted investment capitals considerably increased, the scale of economic industrialization and modernization can be expanded. By this time, in addition to further development of the already developed industries in the previous period, it will be necessary to develop production and export industries with intensive processing technology for creating high value products like mechanical-electronic products, components for export, chemical and petro-chemical products, etc.

Protection policies the Government are very necessary in the process of the economy's integration into the world. However, the selection of industries for protection is very important. Massive protection must be avoided because the past lesson of excessive protection had created a less dynamic industry and no competition in the market.

General protection principles are as follows:

- Protection is only given to domestically-made products which can meet domestic demand and have potential for development.
- Protection principles are applied in a unified manner to all economic sectors, including enterprises with foreign funded capital, for creating equal condition for economic competition.
- Protection is stipulated for some industries in a specific duration, rather than for any industry forever. That is the time required for one industry to renovate technology, and improve the competitiveness of its products in the market.
- Protection must be suitable to the process of commercial liberalization and international agreements signed by the Government.

Based on the requirements for protection level, a tariff reduction schedule for items in the temporary list will be appropriately formulated. Items required the highest protection level will be included in the list in the final stage, and the items required less protection will be subject to early tariff reduction.

At present, items in the temporary exclusion list account for 36% of all items in the import tariff table. They are as follows:

- All kind of cars, motorcycles (excluding the 16-seat car, which is included in the full exclusion list)
- Bicycles, children's toys; they are items with a high tax rate and can be made in abundance within the country-require protection through the import tariff.
- Home appliances (washing machines, air conditioners, electric fans, etc.)
- All of the making-up products and non- essential products
- All of the fabrics or textiles, and several of garments
- All types of iron and steel
- Generally used mechanical products

Flexible and appropriate combination of tax reductions with elimination of non-trade barriers should be done so that protection can be maintained for production industries when necessary.

Modern technology should be promoted for producing processed commodities for export. At present, some items produced by Viet Nam are less competitive in comparison with those by other countries in the region, because they are inferior in quality, type, and quantity. Thus, technological renovation for producing high-quality products which are of competitive with products made by other countries is a measure of decisiveness.

The development of small and medium enterprises should be promoted for contributing efficiently to the process of industrialization and export promotion. The advantages of small and medium enterprises in using less capital will be made use of for attracting capital from the private sector for development investment. Referring to their performance, small and medium enterprises are flexible and dynamic in using appropriate technology and very sensitive to meeting the market demand. The role of the Government is to support in organization of creating industrial linkages among small and medium enterprises themselves and between small and medium enterprises and large enterprises, and in establishment of a subcontracting network between large enterprises and small and medium ones in assembling and component industries.

Competitive power of the national industry is not simply the addition of the competitive power of each individual enterprise. It is the chaos competition to weaken the competitiveness of the national industry. Compatible coordination of industries from the service system to the consulting system, as well policy support by the Government for creating a favourable environment for enterprises to

develop towards export orientation, is very important. Those compatible factors will promote and multiply the competitiveness of each enterprise in the country.

(3) Investment capital attraction from countries within and outside AFTA should be promoted for exploiting the existing advantages of Viet Nam in natural resources, labour force, and new markets. A more favourable investment environment over that of other countries in ASEAN, with stable and clear preferential policies, should be created for attracting foreign investment.

Further attention should be focused on improvement of infrastructure related to foreign investment attraction, like power, water, transport network, ports, and telecommunications. Industrial parks and export processing zones, especially the focal economic areas, should be promoted in the areas where infrastructure is in favourable conditions, especially where big ports with favourable conditions for export are available. The development master plan for industrial parks must be compatible with the development of a master plan for infrastructure and urban areas.

Administrative procedures, like procedures for granting investment, import and export licenses, procedures for land allocation and for granting construction permits, custom office procedures, tax payment, etc., should be improved for facilitating foreign investment activities.

Specific lists of occupations and industries requiring priorities for FDI promotion, especially export-oriented industries, and for appropriate modern technology should be formulated.

In addition to direct foreign investment, attention and support should be given to domestic investment by introducing appropriate policies on export encouragement.

(4) Preconditions, especially human resources and institutional framework, should be actively prepared for maintaining and bringing into full play comparative advantages.

Viet Nam has had very important advantages in human resources over other countries in Southeast Asia. At present, 50% of the country's population are under 20. They will be a labour force of full vitality in the next two decades. This potential only becomes true when they are equipped with knowledge suitable to the development trend. They need to be trained in the appropriate vocations, skills and management, which are suitable to modern production. As such, initial advantages in cheap labour costs in a low-income country will become a more competitive advantage with an increasingly high skill level at a relatively attractive wage rate. This, in combination with renovated investment environment, will certainly attract investment and technology inflow and the market will be open to both within and outside the country.

In short, international context, as well as practices in Viet Nam's industry, show that there is no other way than working out the strategy for export-oriented industrial development. We will fail to be successful if we integrate into the world economy with an industrial strategy which places emphasis mainly on import substitution. Export-oriented industrial development must be the main axis in industrial development policy and be considered as the most important direction.

To encourage export-oriented industrial development, it is necessary to strengthen our already gained position and further expand commercial relations in the region and in the world following multi-lateralization and diversification policy in external relations. Compatible policies on capital, technology, market, and tax preferences, should be formulated. A favourable and competitive environment over other countries in the region should be created for strongly attracting foreign investment. Economic sectors are encouraged to produce for export and can directly export. Effective measures should be taken for strengthening competitiveness of domestic industry, thus gradually taking the initiative in integrating into regional and world markets.

2-1

Industrial Policy Options for the Development of Export Industries in Viet Nam

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I . Electric and Electronics Industry

1. Potential for the Development of a Competitive Electronic and Electronics Industry

We believe that Viet Nam will have a reasonable chance to develop an internationally competitive electrical and electronics industry in the long run, because of its relatively favorable endowment of quality labor over other ASEAN countries and because of the size of its latent market. Moreover, Viet Nam is situated in the ASEAN region where the electric and electronics industry is growing rapidly (Exhibit 1). Production of electronics products in East Asia is expected to continue to shift from NIEs to ASEAN and China. The ASEAN production of electronics products is forecast to increase from US\$94 billion in 1996 to US\$138 billion in 2000 at 10% p.a. Parts production is expected to grow slightly faster than the production of sets. As seen in Exhibit 2, in East Asia outside of Japan, the production of industrial electronics products is expected to grow faster than that of consumer electronics products, and parts production is expected to grow faster than the production of sets.

However, as Viet Nam is a late-comer by a wide margin to the very internationalized industry, it will be able to develop the industry only by attracting FDI. Viet Nam's domestic firms in the electrical and electronics industry are mostly controlled by the state and municipalities and their management and technologies are generally obsolete. Thus, they try to form joint ventures mainly with Japanese and Korean firms in order to establish consumer electronics assembly plants.

Moreover, Viet Nam should develop the industry step by step by taking into account the characteristics of electronic and electronic products and the development stage of its electronic and electronics industry in the overall development process of the industry in neighboring countries such as Malaysia and Thailand. The policies pursued by Japan and Korea are also of some reference, but they are not as directly relevant as those of other ASEAN countries since they did not utilize FDI as much as ASEAN countries. In the long run, a more broadly based electric and electronics industry should be established with the development of domestically owned firms and research and development functions.

Exhibit 1 The production outlook for East Asian electronics industry by area
(billion US \$)

	1990			1996			2000			1996-2000 % p.a.		
	Sets	Parts	Total	Sets	Parts	Total	Sets	Parts	Total	Sets	Parts	Total
NIES	38	23	61	45	37	82	54	60	114	4.7	12.8	8.6
ASEAN	8	4	12	61	33	94	88	50	138	9.6	10.9	10.1
China	9	3	12	23	9	34	48	18	66	17.7	18.9	18.0
Total	55	30	85	131	79	210	190	128	318	9.7	12.8	10.9
% Composition												
NIES	69	77	72	34	47	39	28	47	36			
ASEAN	19	13	14	47	42	45	46	39	43			
China	16	10	14	19	11	16	25	14	21			
Total	100	100	100	100	100	100	100	100	100			

Source Nomura Research Institute

Exhibit 2 Production forecast by product type

	1990			1996			2000			1996-2000 % p.a.	
	World	East Asia	% Share	World	East Asia	% Share	World	East Asia	% Share	World	East Asia
Final sets	543	55	10	712	131	18	861	190	22	4.9	9.7
Industrial Electronics	455	33	7	610	91	15	750	138	18	5.3	11.0
Consumer Electronics	88	22	25	102	40	39	111	52	47	2.1	6.8
Parts	179	30	17	236	79	33	280	128	46	17.7	18.9
Total	722	85	12	948	210	22	1141	318	28	9.7	12.8
% Composition											
Final sets	75	65		75	62		75	60			
Industrial Electronics	63	39		64	43		66	43			
Consumer Electronics	12	26		11	19		10	16			
Parts	25	35		25	38		25	40			
Total	100	100		100	100		100	100			

Source Nomura Research Institute

Thus, major issues for the development of the electric and electronics industry in Viet Nam are as follows:

- 1) Promotion of export oriented industry
- 2) Maximizing utilization of the capital and technology of MNCs
- 3) Securing international competitiveness by developing supporting industries
- 4) Promoting technology transfer and development
- 5) Planning and implementing of consistent industrial development policy

2. Promotion of Export-Oriented Industry (as Opposed to Industry Oriented Toward the Domestic Market)

In the area of major home electric appliances, the yearly demand within Vietnam currently comes to about 600,000 TV sets, 150,000 VCRs, 100,000 refrigerators, 10,000 washing machines, and

100,000 air conditioners (mainly for office use). The major reasons for the low level of diffusion of electric and electronic products in Viet Nam are the low income levels and low rate of electrification. Government plans call for a rise in the rate of electrification to 70 percent by 2000. If this target is achieved and income levels rise, the yearly domestic demand by 2000 could reach 1.5 million CTV sets, 150,000 refrigerators, 120,000 air conditioners, and 50,000 washing machines.

Over the longer term, the rise in income levels along with economic growth could very well deepen the attractiveness of the market of Viet Nam as its population nears 100 million. Nevertheless, the latent scale of the Vietnamese market alone in this field is very limited. There is no prospect for economy of scale effects to cultivate industry solely on the strength of this level of demand. For example, the required scale of production for strategic locations for CTV sets and VCRs, the typical AV products, is a few million units per plant. Similarly, for white goods such as refrigerators and washing machines, the yearly demand must be in the range of at least 300,000-400,000 units to justify siting for production from components because of the huge capital investment entailed. Even as of 2010, however, industrialization in Viet Nam will still be in the formative phase, and it would not be very worthwhile (or realistic) to consider measures for promotion of electric/electronics industry siting aimed at the domestic market alone.

The implication is that policy should be developed with a view to the growth of industry targeted at the global market and capable of participating in export markets. The term "global market" here refers especially to the developed country markets of Japan and the West, the semi-developed countries from Central Asia to Eastern Europe, the Russian Federation, and South America, and the markets of other ASEAN members and neighboring countries. Naturally, the domestic market will also become a target over the long term as the level of the domestic economy rises.

An analogous situation applies for the component industry. Although there is a possibility of a rise in the share of total component production occupied by domestic market sales as the domestic set production expands, emphasis should be placed on the export market for the foreseeable future.

3. Maximizing Utilization of FDI

MNCs in the industry, which have invested in ASEAN countries to develop strategic export facilities, are now in the midst of relocating production facilities in the area to cope with the formation of economic blocks such as EU and NAFTA, the expansion of emerging markets such as China and Eastern Europe with increasing internal production, and the rapid growth of ASEAN markets and the formation of AFTA. Facing worsening labor shortage and rising wages in Singapore, Malaysia and Thailand, where they have built major production centers, MNCs are being forced to relocate labor-intensive operations to low-income countries in the region such as Viet Nam, Indonesia and the Philippines and to upgrade the operations at the existing facilities for the production of more technology-intensive products.

Moreover, the purpose of strategic export facilities is now changing to include sales to local markets, as the global export capacity in the electronic and electronics industry has outgrown demand and the potential of the local market has become an important criterion for investment. Therefore, MNCs have high expectations for Indonesia and the new ASEAN members – Viet Nam and Myanmar. In fact, MNCs regard Viet Nam as one of the most promising countries for investment by them because of the quality and quantity of labor, and the size of its latent market.

Although ASEAN countries, particularly Malaysia and Thailand, were able to attract FDI to develop their electronic and electronics industry by shifting industrial policy from import substitution to export promotion policy, Viet Nam will find it difficult to duplicate such a clearly differentiated policy. Since MNCs have already established more or less adequate export capacity, they may

demand access to Viet Nam's domestic markets as well to justify their investments. Viet Nam may need to pursue a two-pronged strategy of import substitution and export promotion. Therefore, excessive requirements of export obligations and local content will be counterproductive to attract FDI in the industry.

The changing investment behavior of MNCs offers a great opportunity for Viet Nam to develop its electric and electronics industry from a very backward state. If Viet Nam misses this opportunity and is unable to utilize FDI effectively by the middle of 2000s, its electric and electronics industry may find it difficult to grow into an internationally competitive one.

In order to attract FDI, Viet Nam should improve its investment environment significantly and offer better incentives for investments. Viet Nam's investment environment is often said to have problems such as the inadequacy of infrastructure, long delays in obtaining necessary permits for investment and operation, and high income taxes, difficulty in obtaining visas, inadequate housing, and inequality in the pricing of public utilities such as electricity for foreign residents.

Viet Nam's lack of intra- and inter-ministry coordination of policy measures relating to FDI is an even more serious problem than these individual problems. In order to offer attractive incentives to possible investors, such policies measures as a variety of incentives including the exemption or reduction of income taxes and import duties, the improvement of infrastructure of industrial parks, including the supply of electricity and water, telecommunication and transportation and the one-stop handling of permits application, overseas remittance, royalty payments, local content requirements, custom duties, equity ownership restrictions, environmental restrictions and export requirements, need to be carefully coordinated.

In order to construct an electric and electronics industrial cluster in a pragmatic manner, sequence of attracting FDI to particular areas of the industry could be as follows:

The first phase (present to the year 2000)

- 1) Manufactures of consumer electronics sets mostly for import substitution and partially for export and their suppliers of customized parts
- 2) Assemblers of information technology (IT) products such as personal computers and assemblers of key components mostly for export and their suppliers of customized parts
- 3) Independent manufactures of labor-intensive assembled parts mainly for export

The second phase (the year 2000 to 2005)

- 1) Consumer electronics and parts manufactures which are relocating their strategic assembly facilities for export to take advantage of AFTA
- 2) Japanese and American firms which try to relocate their strategic production facilities of material-based parts and the "back-end" production of IC products in ASEAN
- 3) Information equipment and parts manufactures which are trying to build volume production facilities in ASEAN
- 4) Small and medium sized firms of machining parts from countries like Japan

The third phase (the year 2005 to 2010)

- 1) Integrated manufactures of white goods with relatively heavy investments in factories
- 2) Japanese and American manufactures of assembled parts with mechatronics technology such as hard disc drives (HDDs) and printers
- 3) Japanese manufactures which are trying to relocate the "front-end" processing of materials-based parts

4. Securing International Competitiveness by Developing Supporting Industries

In order to develop an internationally competitive electric and electronics industry with long-term viability, the development of efficient parts industries will be crucial. Japanese manufactures have already shifted production of labor-intensive assembled parts such as resistors and condensers with lead lines, switches, volume controls, speakers, transformers, and small-sized motors to ASEAN. Moreover, more upstream operations -- such as the manufacturing of individual parts using molded metal, sheet metal, and plastic -- are also beginning to be shifted offshore. This has improved cost competitiveness of the set manufacturers.

In Viet Nam, however, local supplies are limited more or less to packaging materials and instruction documents, and there are no parts manufactures -- either domestic or foreign -- which can satisfy the quality requirements of foreign set manufactures. Moreover, there are virtually no internationally competitive machining firms, which form a foundation for the electric and electronics industry. Thus, parts used for final assembly of sets are mostly imported.

Viet Nam requires foreign manufactures to achieve local content ratios higher than 20 percent in order to enjoy the 5 percent tariff rate on imported materials for IKD production. However, it is difficult to invite capable foreign parts manufactures, for example from Japan, since they are mostly medium and small sized firms that lack negotiating capabilities in joint ventures with state-owned enterprises. Thus, Japanese manufactures of audio-visual equipment, for example, feel that the current local content requirements are too heavy for them to be internationally competitive producing in Viet Nam.

It is essential to develop basic supporting industries in addition to parts industries in order to secure the international competitiveness of Viet Nam's electric and electronics industry and the industry's unique development by differentiating itself from its counterparts in other ASEAN countries. Supporting industries are mainly born by medium and small firms and need much technological knowhow in such areas as forging and casting, metal molding, cutting, surface treatment, jig manufacturing, and CAD.

A policy option to develop supporting industries in Viet Nam is to facilitate technology transfer from Japan, where extensive supporting industries have grown with the support of investment by small and medium sized enterprises. Although one means of technology transfer is human resource development programs supported by ODA, technology transfer through business experiences including involvement with foreign enterprises is most effective.

5. Promote Technology Transfer and Development

Although the export activities by foreign enterprises based in export processing zones will generate foreign currency and employment in the short run, the technology transfer effect will be limited mostly to simple assembly technologies. Therefore, it is necessary to have policy measures to facilitate technology transfer to domestic firms through technology cooperation agreements or joint ventures involving domestic firms, particularly in supporting industries. In order to have such relationship, domestic firms should be reformed to make their business practices compatible with international standards.

There should be schemes to support the spinning out of capable managers, engineers, and skilled workers from state and foreign enterprises.

Policy support will also be necessary for the export activities of local manufactures, which are expected to grow from around the year 2000. Incentives should be offered for the transfer of technology and managerial knowhow from foreign enterprises. Moreover, export by local

manufactures should be promoted with a variety of measures such as international trade fairs jointly held with foreign organizations such as the Japanese External Trade Organization (JETRO), participation in foreign trade exhibitions, the compilation of lists of manufacture export firms and international trading firms, and opening of Viet Nam Trade Centers in major countries in the world.

More detailed measures to support small and medium sized firms are discussed in a separate section which deals with small and medium sized enterprises.

As far as Viet Nam's own research and development is concerned, state and private enterprises will not be able to play a major role for some years in view of their limited resources. Therefore, a policy option is to expand research and development activities of universities and public research organizations gradually with cooperation of advanced countries. Research themes could include the information and communication field, electronics devices, and materials research for the production of ICs and other materials.

Finally, dissemination of industrial standards and human resource development are urgently needed to facilitate industrialization. Universities and engineering schools should be upgraded to produce more qualified engineers and managers.

6. Planning and Implementation of Consistent Industrial Development Policies

Government's role is vital to develop an electric and electronics industry with long-term viability for Viet Nam with the effective utilization of FDI. In order to attract FDI to appropriate segments of the industry, a carefully considered, consistent policy framework is necessary. The government's role should be to develop an overall master plan for the electric and electronics industry in Viet Nam, to lay the general legal framework, and to prepare adequate infrastructure.

The government's role is particularly important for building physical and social infrastructure to develop the industry. In addition to the development of physical and regulatory infrastructure, particularly in export processing zones and industrial parks aimed at the improvement of investment environment, information systems should be developed to introduce public services and management systems of international standards. Moreover, smuggling and tax evasion should be controlled to stimulate business activities.

Government should not become directly involved in industrial affairs. This is because the industry is too broad and complex to be managed by government and the entrepreneurship of MNCs and domestic private enterprises needs to be valued. The government authorities involved in the planning and implementation of the sector policy, which are currently dispersed among a number of ministries such as the Ministry of Planning and Investments and the Ministry of Industry, should be coordinated effectively or integrated.

For the planning and implementation of consistent and concrete policy measures it would be worthwhile to learn from experiences in more advanced countries like Japan, Korea, Singapore, Malaysia, and Thailand.

The main features of the policy for developing the electronics industry in Japan are as follows:

- 1) MITI has shown an initiative to coordinate a variety of related policies such as industrial policy, trade policy, financial policy and science and technology policy;
- 2) MITI has shown the industry guidelines for future policy directions by utilizing policy councils and industry organizations;
- 3) MITI has shown "administrative leadership" in industrial restructuring, coordination of investment plans, and production allocation at critical times;
- 4) Subsidies were offered to some industries such as components, that need to catch up with their

counterparts in the U.S. and Europe.

However, the Japanese policy framework has shifted gradually to more indirect measures such as developing future visions, and subsidies, low rate loans and tax incentives have been curtailed as trade friction has intensified. The Korean policy framework has evolved in a similar manner with a time lag.

ASEAN countries such as Singapore, Malaysia and Thailand have pursued a different type of policy in developing the electric and electronic industry and other industries. They have adopted policies to favor FDI of MNCs for the purpose of gaining export markets.

Since Viet Nam needs to pursue a two-pronged policy of import substitution and export promotion by utilizing FDI, a Thai type industrial development policy may be most relevant in the initial stage and a Japanese type industrial policy, which focused more on the technological development of national companies, may become more relevant in the later stage.

Moreover, Viet Nam should tailor its policies to be compatible with the rules of AFTA, APEC, and WTO. It should avoid protectionist policies as much as possible.

7. Sample Scenario of a Phased Development Strategy

Taking such factors into account, a tentative policy option (or a hypothetical scenario) for Viet Nam to develop its electric and electronics industry is to pursue the following phased development strategy.

Stage 1 (from the present to 2000)

Laying the foundation of the electric and electronics industry

- Stage of laying the foundation of the electric and electronics industry by attracting assembly-type investments of consumer electronics manufactures from Japan and other countries with reliance on imported components and clarifying the role of state enterprises
- Policy for parallel promotion of import substitution of audio-visual (AV) products by CKD assemblies and production for export of assembly-type customized key components (sub-assemblies) for personal computers and other IT products
- Flexible and pragmatic application of export and local content requirements
- Development of infrastructure, maintenance of consistency and transparency of policies concerning foreign direct investment, and provision of adequate incentives for siting in Viet Nam

Stage 2 (from 2000 to 2005)

Adaptation to AFTA/CEPT

- Stage of attracting siting of strategic export bases of MNCs to take advantage of the wave of relocation of ASEAN production sites by Japanese and other MNCs in response to rising wages in other ASEAN countries and increasing trade liberalization through AFTA
- Constructing AV assembly bases in ASEAN production networks of MNCs and attracting FDI in relatively labor-intensive assembly of IT products such as monitors, CD-ROM, DVD and cordless phones
- Exemption of import duties on intermediate products necessary for the production of export products

- Flexible offering of incentives in accordance with the degrees of export contribution and local content attainment
- Development of parts industries by attracting FDI of Japanese and other foreign MNCs (promotion of export of assembly-type general-purpose components, and import substitution of customized components) and by encouraging the participation of domestic capital
- Development of export processing zones and industrial parks for FDI of small and medium sized firms

Stage 3 (from 2005 to 2010)

Building International Competitiveness

- Stage of attaining international competitiveness in consumer electronic assembly based on competitiveness in local supply of components including electronic devices such as ICs, mainly of the front-processing
- Offering of strong incentives to investment in supporting industries
- Expansion of assembly of IT products such as HDD, printers, facsimiles and copiers by attracting FDI
- Improvement of the infrastructure for supporting industries (to attract FDI and to promote domestic suppliers)
- Promotion of investment in high tech parks by firms in the information and communication field
- Nurturing of domestic capital by developing the infrastructure of the environment, communication and technology transfer; e.g. high-tech parks, trade fairs and databases of domestic manufactures and traders of export products

Stage 4 (from 2010 to 2020)

- Stage of attaining international competitiveness in ASEAN in the broadly based electronics industry including foreign as well as domestic capital
- Attainment of engineering capability in original design and development and factory operation
- Acquisition of foothold for catching up in high value added products and advanced technologies such as information technologies, including software, and electronic devices mainly supported by foreign capital with some participation of domestic capital
- Upgrading of the supporting industry by acquiring precision processing technologies for molded components and developing front-end processing of IC products

II . Metal Mold Manufacturing Industry

1. Opportunity to Develop the Metal Mold Manufacturing Industry in Viet Nam

Metal mold manufacturing, one of the supporting industries for electric and electronics production, constitutes an important element of a full fledged manufacturing industry in Viet Nam. It is a key component of machining technology, which is distinguished from assembling technology. Its absence has been a serious constraint to the upgrading of industrial structure in ASEAN countries, which depend primarily on assembling. Viet Nam is potentially in a position to fill this gap and pursue a

more broadly based development path than other ASEAN countries.

Currently, Japan, Korea, Taiwan, Hong Kong, and Singapore are the only economies in East Asia exporting metal molds in significant volumes. All of them are troubled with problems in maintaining the industry. Japan has problems of high labor costs and the aging of its engineers and skilled workers with a resulting difficulty in finding successors. Taiwan, Hong Kong, Korea and Singapore have problems of rising wages and a shortage of labor. The export capacity of these countries will probably decline sooner or later.

The metal mold manufacturing industry is underdeveloped in other countries. Malaysia may be the only one which has started to promote FDI in the industry. In addition to the insufficient local demand due to the low accumulation of local manufacturing industries, the lack of human resources has been the reason for the relative underdevelopment of the industry in ASEAN.

At this point, the metal mold manufacturing industry is virtually non-existent in Viet Nam as the user industries have not developed yet. However, the change in the environment surrounding the industry in Japan, Taiwan, Hong Kong and Singapore offers a rare opportunity for Viet Nam to develop the industry, which plays a crucial role in increasing the value added of export industries and upgrading the country's industrial structure.

Viet Nam is in a favorable position to develop the industry for the following reasons:

- 1) The intention of the user industries such as the final assemblers of electronics products to invest in Viet Nam is strong because of the abundant labor and the size of its latent market.
- 2) The quality of Viet Nam's labor force with high mathematical skills, manual dexterity, and diligence is thought to fit a metal mold manufacturing industry.

2. To Learn from the Experience in Taiwan and Thailand

Viet Nam should learn from the experience in neighboring countries in order to set a basic policy framework for developing the industry. Specifically, it should learn from the success of Taiwan and the failure of Thailand.

The Taiwan government promoted foreign investment in the parts industry to supply the already existing foreign firms in the final assembly industries. These parts industries formed the user industries for the metal mold manufacturing industry. The government promoted the industry, which mainly consisted of private small and medium sized firms, with the following specific measures:

- 1) Provision of low interest loans to support the capital expenditures of the industry;
- 2) Research and development in metal mold manufacturing technology by the Industrial Technology Research Institute (ITRI), the results of which were offered to firms in the industry;
- 3) Encouragement of spinning out of the entrepreneurial employees of the metal mold manufacturing firms.

Since there was a heavy concentration of Japanese consumer electronics manufactures and American electronics parts manufacturers, which invested in Taiwan as an export base, the industry developed centered on metal molds for plastic injection used in the electronics industry. Taiwan exported 33 billion yen of metal molds, or about a quarter of its production, in 1995, with 40% each destined to China and ASEAN and 10% to Japan.

Thailand, on the other hand, was not as successful in developing the industry. The country attracted export-oriented investments in the final assembly area and sufficient attention was not given to the importance of supporting industries. As a result, the country missed an opportunity to develop the metal mold manufacturing industry.

3. A Sample of Policy Scenario to Develop the Metal Mold Manufacturing Industry

In view of the experience in Taiwan and Thailand, the basic policy framework for the development of the industry in Viet Nam may be as follows:

- 1) Foreign investment in parts industries should be promoted along with final assemblers.
- 2) Since sales of metal molds to parts manufactures constitute indirect exports, the metal mold manufacturing industry should receive the same preferential treatment as export industries.
- 3) Since firms in the metal mold manufacturing industry are mostly small and medium sized and their risk tolerance is limited, FDI policies should be applied to possible investors with particular care.
- 4) There should be a scheme to support the entrepreneurs opening businesses in this sector.
- 5) R&D activities in public institutions in metal mold manufacturing technology and their dissemination should be supported.

Although metal mold manufacturing has been more automated recently, there remain many functions, which are not automated and depend on the accumulated experience of engineers and skilled workers, such as final adjustments and testing. Taking the characteristics of the industry into consideration, the following sequence may be a way for Viet Nam to develop the industry, for example:

Stage 1: Development of human resources (up to 2005)

- 1) Establishment of schools to train engineers and an industrial technology institute dedicated to the metal mold manufacturing technology
- 2) Promotion of FDI in the industry to transfer the technology
- 3) Provision of the same preferential treatment offered to export industries by treating the sales of industry as indirect exports

Stage 2: Accumulation of experience in manufacturing metal molds and establishment of domestic enterprises in the industry (2006-2010)

- 1) Establishment and operation of a "Metal Mold Industrial Park" to heighten the concentration of metal mold manufactures and facilitate their specialization and networking
- 2) Support for entrepreneurs who want to start the metal mold manufacturing business by providing low interest loans and introducing clients

Stage 3: Development of Vietnamese capitals in the industry (2011 to 2020)

- 1) Provision of risk capital through venture capitals

III. Garment and Textile Industry

1. Enhancement of Industrial Inter-linkage is Desirable

Viet Nam's garment and textile industry, which consists of the upstream fiber sector, mid-stream fabric sector, and the down-stream garment sector, produced 94,000 tons of fiber, 345 million square meter of fabrics, 45 million pieces of knit wears and 400 million pieces of garments in 1995, and its export in the same year amounted to US\$800 million. Exports of the industry, however, are very much biased to the garment sector. Viet Nam's textile exports mainly consist of garments. Garments

accounted for 83.1 percent of total textile and garment import from Viet Nam to Japan during the first half of 1996 according to Japanese statistics, and the comparable figure for fibers and fabrics was only 2.1 percent

This is because Viet Nam has comparative advantage in the very labor intensive garment sector with her industrious and skillful but still low-wage workers. Moreover, foreign enterprises have provided necessary materials and design and overseas marketing capabilities, which Viet Nam lacks, mostly by way of subcontracting arrangements. Viet Nam still lacks qualified line managers who can perform quality management, production management and technology guidance. Moreover, managers equipped with the knowhow of market economy are lacking.

Due to the participation of foreign enterprises and the private sector and trade liberalization, Viet Nam's garment export has increased very rapidly in the 1990s by successfully shifting markets from traditional CMEA countries to western markets including EU and Japan, although export to the potentially huge American market is insignificant because of the lack of most favored nation (MFN) status.

Viet Nam is not yet competitive in the up-stream fiber and mid-stream fabric sectors, which are more capital intensive. Viet Nam does not hold comparative advantage in these sectors and state owned enterprises dominating these sectors lack managerial, technological, marketing and financial capabilities necessary for attaining international competitiveness. Part of the weakness of Vietnamese fiber and fabric sectors stems from the obsolete equipment. Since most machines used in the fiber and fabric plants are more than 20 years old and not automated, they are too inefficient to produce quality products.

However, many enterprises have started to equip their plants with new machines since 1992 and fiber quality has improved. Moreover, a limited number of state enterprises seem to be developing a capability of integrated production mainly to serve domestic markets and also some low-end export markets. Further consolidation and modernization of state enterprises are necessary to turn these exceptional state enterprises to internationally competitive enterprises.

Although Viet Nam's bias to the garment sector is very much in line with the development pattern of the garment and textile industry throughout East Asia, the lack of industrial inter-linkages poses a problem for the establishment of a full-fledged garment and textile industry in Viet Nam to compete with countries such as Thailand and Indonesia. Compared with competing neighboring countries, Viet Nam has a limited variety in its supply of fabrics. In Viet Nam, only cotton and cotton/polyester mixed fabrics are available domestically but polyester fabric and filament are mostly imported from Taiwan, Korea, Malaysia and Indonesia. Local production of polyester mixed fabric, synthetic fiber and manmade knit fabric is desirable to enhance industrial inter-linkages in Viet Nam's garment and textile industry.

2. To Take Advantage of the Relocation Trend of East Asian Garment and Textile Industry

As Viet Nam is starting from a very weak competitive position in the up-stream and mid-stream sectors of the garment and textile industry, increasing inter-linkage in the industry is generally believed to be achievable only by active utilization of FDI in the sectors. In view of the increasingly internationalized industrialization of East Asia, this strategy needs to be pursued in accordance with the development in the neighboring countries.

Foreign investments in the textile (fabric and fiber) sector are mostly from Korea, Taiwan, Hong Kong and Singapore, and Japanese investments have focused on the garment sector.

The FDI of the Japanese textile industry started in the 1950s, followed by another wave of

investments in the 1970s to meet import substitution policy requirements. Japanese investments in Indonesia and Thailand started in the latter period. In the 1990s, the bulk of Japanese investments have been made in the garment sector in China, and additional investments have been made to expand existing facilities in Indonesia and Thailand. The number of existing Japanese investments worldwide is 806, with the garment sector accounting for 507, or 63 percent, followed by the textile sector at 126, or 16 percent, the dyeing sector at 49, or 6 percent, and the fiber sector at 33, or 4 percent. Investments in China numbered 543, accounting for 67 percent, followed by 74 projects, or 9%, in Thailand and 60 projects, or 7 percent in Indonesia according to the statistics compiled by the Japan Chemical Fiber Association.

Since the collapse of the Berlin Wall, the garment and textile industry has entered a major relocation phase globally as a vast pool of low-wage labor in the former planned economies including China and Viet Nam, has joined the market economy. Moreover, a strong tide of trade and investment liberalization, including the phasing out of the Multilateral Fiber Agreement (MFA) to be integrated into the WTO system and liberalization under the AFTA/CEPT, is expected to accelerate the relocation process.

Rising wage levels in the more advanced countries in ASEAN such as Malaysia and Thailand have shifted comparative advantage in labor-intensive sectors of the garment and textile industry in East Asia to latecomer countries such as Viet Nam. Following investments in the garment sector, relatively labor-intensive production of fabric and dyeing process are likely to move from countries such as Thailand to countries such as Viet Nam. On the other hand, capital-intensive production of fiber is likely to concentrate on existing production bases in Taiwan and Korea in East Asia and in Indonesia and Thailand in ASEAN under the liberalized trade regime. Liberalization under the AFTA/CEPT will accelerate the process of concentration in ASEAN.

The single most important phenomenon in the East Asian textile scene at the start of the next century is the emergence of China as the major producer and consumer of garment and textile products. The Chinese market is expected to be a huge one and China will probably become a net importer of garment and textile products. The potential of an East Asian garment and textile producer country will be determined by how it positions itself as an exporter to the Chinese market.

Thus, the priorities of Viet Nam's garment and textile industry are to strengthen linkages with other ASEAN countries in the medium term and to position itself to supply the Chinese market in the long term. In fact, some Japanese investments in ASEAN in the 1990s have been made to increase the globalization of operations by expanding their production facilities and networks and to establish a bridgehead to cultivate the Chinese markets by seeking coordination with their garment operations in China.

3. Policy Options for the Development of the Garment and Textile Industry

There are essentially three tentative scenarios for the ultimate structure of the Vietnamese garment and textile industry around the year 2020: a Hong Kong type specialization in the down-stream (garment) sector; a Taiwan and Korea type volume production of fiber and fabric products; a Japan, Indonesia and Thailand type quality orientation through enhanced integration from the up-stream to down-stream sectors.

In the increasingly liberal trade environment of the region, particularly under AFTA/CEPT, which might incapacitate infant industry protection, it will probably be impossible to pursue a Taiwan and Korean-style volume production of synthetic fibers and fabrics. Because of the more liberal trading environment, Viet Nam will not be able to impose protective measures to the same degree as countries such as Japan, Thailand and Indonesia have practiced. On the other hand, a purely down-

stream oriented strategy as has been pursued by Hong Kong does not seem to be practical since it requires a much more open and efficient trading infrastructure comparable to that existing in entrepot economies. This means that Viet Nam will have to combine the Japan, Thailand and Indonesia type approach and the Hong Kong type approach.

We think that the garment sector should be the basis on which Viet Nam's textile sector will develop by enhancing backward integration. It would be wise to encourage rather than discourage subcontracting activities, on which the sector has been thriving. At the same time, it is necessary to take measures to develop the transportation infrastructure and to speed up customs clearance, to support overseas marketing, to establish and support design sectors, to liberalize and modernize the domestic distribution system, and to reform state enterprises and liberalize the private sector, in order to upgrade Viet Nam's garment sector for enhancing its long-term viability. Design information centers should be established to disseminate the information of overseas markets to the small and medium sized enterprises in Viet Nam.

In order to serve international markets, particularly Japanese markets, which are characterized by low unit volumes and a requirement for quick responses, tightly knit flexible industrial networks have to be developed with the participation of foreign enterprises.

It may be advisable, at least in the initial stage before local supply of synthetic fibers and fabrics becomes available, to encourage the Japanese MNCs to enhance their intra-ASEAN industrial linkages between garment production in Viet Nam and fiber production in Thailand and Indonesia, in order to complement the lack of local supplies.

Based on the strength of its garment sector, backward integration of the Vietnamese garment and textile industry needs to be accelerated. It is possible to enhance the integration of the Vietnamese garment and textile industry by developing the relatively labor-intensive fabric sector based on the increasing demand from the garment sector and then finally to the capital-intensive fiber sector mainly by inviting FDI.

Although backward integration based on the demand from more downstream sectors should be a guiding principle in the development strategy of the Vietnamese garment and textile industry, it may become necessary for Viet Nam to raise protective barriers if it decides to develop the capital intensive fiber industry even in the case of inviting FDI. Viet Nam's international obligations under AFTA/CEPT may contradict such a policy option in the future.

As state enterprises in the mid-stream and up-stream sectors lack international competitiveness, they should be consolidated into a limited number of promising enterprises, which should be modernized. Their obsolete machinery should be replaced, but more importantly, their marketing and management have to be strengthened with the help of foreign enterprises. In terms of cost efficiency, modernization of machinery may be done by purchasing used machinery with technology transfer rather than purchasing expensive new machines. Foreign aid may be used for sending factory management specialists at the time of equipment purchases and the sewage and other environment protection investment in association with industrial park development.

Human resource development along with enhancing integration from the up-stream to the down-stream sector is the key to upgrading Viet Nam's garment and textile industry. It is necessary to increase training in state institutions and opportunities should be pursued to utilize foreign aid for this purpose. However, the really meaningful training and technology transfer will have to come from MNCs on the job. Profit-oriented MNCs are obviously reluctant to provide training and technology transfer unless they receive sufficient economic incentives.

As we have mentioned before, we believe that MNCs are going to make strategic investments in the garment and textile industry in Viet Nam to build bases for supplying the Chinese market in the future

by forming international industrial networks centered in ASEAN. By offering enough incentives for such strategic investments, Viet Nam will be able to negotiate technology transfer from the MNCs.

IV. Ship Repair Industry

1. Advantages of Viet Nam in the Ship Repair Industry

Viet Nam is in a favorable position to develop the ship repair industry by taking over some of the work currently undertaken by Singapore. International competitiveness of the ship repair industry rests on four factors: location facing open sea, deep water port, vicinity to major shipping routes and abundant labor. Central Viet Nam can satisfy all these conditions.

Singapore satisfied these conditions in the early post-war period, and the industry has grown to a major one there, currently earning US\$1.1 billion of foreign currency and employing about twenty thousand persons, or 1.7% of its labor force. In the early period of '60s, the industry contributed significantly to Singapore's development, constituting 15% of GDP and 12% of employment. However, as wage costs have risen in Singapore, its advantage in labor cost has been lost.

(1) Location advantage

The central part of Viet Nam is in an advantageous geographical position to take over some of Singapore's ship repair businesses. It faces the open sea. There are bays 15 meters deep, which can accommodate crude oil tankers of 250,000 to 270,000 tonnage. It is located a close 300 km from the major shipping routes connecting Singapore, Hong Kong, Taiwan, Shanghai, Korea, and Japan. In contrast, Manila, for example, is about 1,200 km from these routes.

We understand that the Vietnamese government plans to expand existing docks in Hai Phong and Quang Ninh in the north and Saigon in the south. However, these docks have problems of being either in the shallow water or distant from major shipping routes. Development of new facilities in central Viet Nam would be a more feasible strategy.

(2) Cost competitiveness

The ship repair industry is highly labor intensive and depends much less on materials supply than the ship-building industry. The typical cost structure of the ship repair industry is 15% on steel products, 10% on loading equipment and outfits such as navigation equipment, 10% on paint and 65% on labor, while that of shipbuilding is 25% on steel products, 10% on engines, 30% on loading equipment and outfits, 5% on paint and 30% on designing and assembling, which is mostly labor cost. Since Viet Nam does not produce steel, engines, outfits and paints, which constitute nearly 70% of shipbuilding cost, it is in a cost disadvantage against Japan and Korea to depend on imports of these inputs for shipbuilding. For the same reason Singapore concentrated on the ship repair industry, rather than shipbuilding industry. Viet Nam is in a much better position than Singapore in the ship repair industry, as labor cost accounts for 65% of the total cost. In Viet Nam, the average monthly wage of onsite workers is about US\$100~130 in comparison with that of US\$1,000 in Singapore.

(3) Prospects for taking over some of Singapore's business

Singapore decided to consolidate its existing docks for ship repair in 1994 in line with its policy to upgrade its industrial structure. This suggests that some ships which had used Singapore for repair will have to use other countries for that purpose. Japanese shipbuilding firms invested in Singapore in

the 1960s and utilized their facilities in Singapore as repair centers for ships built in Japan. As a consequence of Singapore's consolidation of the ship repair industry, there is a risk that some ships built outside of Japan may not be able to get repair service in Singapore. The Korean shipbuilding industry, facing rising wage costs at home, needs to secure repair facilities to compensate for the loss of capacity in Singapore and to enhance its non-price competitiveness vis-a-vis the Japanese shipbuilding industry. This is the reason why Hyundai, a leading Korean shipbuilder, has invested in Da Nang in central Viet Nam.

(4) Economic effects of ship repair industry

Hyundai plans for its facility in Da Nang to repair 91 ships and build 3 ships in 2003 with the sales of US\$ 110 million by employing about 4,800 persons. Two more investments of the same size with full capacity operation starting from the year 2005 could mean that the industry could repair 300 to 350 ships per year with sales of US\$300 million and employ 15,000 persons.

2. Policy Options to Develop the Ship Repair Industry

The Vietnamese government should invite foreign investments mainly from Korea by designating central Viet Nam as a ship repair center. Moreover, the following measures may be necessary to generate a favorable operational environment.

- 1) Guarantee overseas remittance of profit
- 2) Prepare bonded warehouses for raw material imports and eliminate tariffs on imported raw materials
- 3) Simplify customs clearance procedures
- 4) Allow the operation of inspectors designated by ship-owners

One policy option for the long run is to move into the shipbuilding industry by establishing a linkage with the steel industry. Since steel products account for about a quarter of the total cost of shipbuilding, the existence of a competitive blast-furnace industry is necessary for such a move. Consumption of steel by the shipbuilding industry, for example accounted for 10% to 15% at the peak of the shipbuilding industry in Japan and Korea.

Policy Alternatives and Their Implications for Capital Intensive and Infant Industries

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In the phase I study of the industrial policy we have identified the best path of industrial growth for Viet Nam to be the pursuits of labor-intensive industries and a shifting from low-tech to high-tech orientation that would allow Viet Nam to exploit its competitive advantages in certain export industries. However, another factor deserving special attention is the importance attached to capital intensive, or infant industries in the current Five-year plan. Countries with populations as large as Viet Nam's will eventually need their own domestic chemical and heavy industries, or infant industries such as automobile.

Although capital-intensive industries can be expected to have a number of favorable spill over effects on other sectors of the economy, they typically demand enormous initial investments and steps must be taken to ensure that investments are not wasted. Automobile industry has also attracted special attention of policy makers considering industrialization because of its vast value-added size. The industry comprises a wide spectrum of supporting industries and basic materials, and usually requires a long time for the development. It is also an industry where economy of scale typically works. Automobile industry usually requires long-term industrial policy for proper development at the initial stage — well before economic development prepares the environment for international competitiveness.

In the phase II study we will analyze six industries which Viet Nam's government is highly concerned and proposed to add to the study object, namely automobile, iron and steel, oil refining, petrochemical, urea fertilizer, and cement; and we will examine possible alternatives and their policy implications for Viet Nam. On the assumption that Viet Nam's government hope to introduce such industries, we analyze mainly from the standpoint of how Viet Nam can develop those industries.

I . Policy Alternatives and Their Implications for Six Capital-intensive and Infant Industries in Viet Nam

1. Automobile and Parts Industry

The automobile and auto parts industry is an industry where economies of scale exist. In other words, it is a cost-declining industry, where the so-called Marshall's external economics works in the sense that an expansion of the scale of the industry as a whole leads to a reduction in the manufacturing costs for each producer.

The automobile and auto parts industry is also characterized by the vast value-added, substantial

job-creating effect, high backward linkage effect of demand, and considerable technological spill-over effect. Moreover, it is an integrated industry because one automobile is made up of 20,000 to 30,000 parts, and the industry has a pyramid-shaped structure consisting of networks among the enterprises with the car assemblers at the top. Also, because it is characterized by economies of scale, any developing country trying to set up its own automobile industry needs to protect it, at least for a certain period of time.

Because of these characteristics, particularly the vast value-added effect—(that is, the substantial foreign currency savings that made possible if import substitution is successfully carried out)—or because of the aspiration to become an advanced industrialized country, many countries are giving special importance to the automobile industry, and are taking measures to protect and nurture it in the fairly early stages of industrialization. In ASEAN, too, the governments of Thailand, Indonesia, Malaysia, and the Philippines have been working in earnest to nurture automobile industries of their own.

Protecting and nurturing a particular industry naturally burdens the other sectors of the national economy. In the case of the automobile industry, the economies of scale in the industry, including the parts sector, are so great that the domestic market has to grow quite large before the cost of local manufacturing can be low enough to contend with competitive imported products. Further, because of the character of the automobile industry as an integrated industry with wide spectrum of supporting industries, it is difficult to acquire export competitiveness until the country has a generally high level of industrial technology. Therefore, it may be difficult from the first to claim that it is valid to start protecting this industry in the early stages of a country's industrialization.

From the viewpoint of the scale of the domestic market, the market in Viet Nam, whose size in 1995 is estimated at around 30,000 units, is much too small, for both completed vehicles and parts, to achieve economies of scale. In this sense, it may be fair to say that even if Viet Nam's government may be willing to nurture a local automobile industry on a long-term basis, this is not the time to start doing it on a large scale.

Should Viet Nam then let things develop naturally in its automobile industry? The advantage of that would be that it would be possible to avoid the distortion of resource distribution and the increase in the burden on the consumer, both of which result from protection. A disadvantage would be that enormous demand for imports would develop once per capita income reaches a certain level and motorization begins, if there was no local production. Another disadvantage would be the loss of the opportunity for the country to generate substantial value-added benefit in such a case. If a country with such a large population as Viet Nam achieves sufficient economic growth for motorization to occur, it would not be realistic for the country to still continue to import automobiles in the form of completed vehicles.

On the other hand, the primary approach taken to protect and nurture an automobile industry is to restrict imports by means of tariffs. In this regard, Viet Nam is to reduce its tariff applied within the ASEAN area to 5% or below by the year 2006 in principle because it has already affiliated with AFTA/CEPT. (Viet Nam's government has registered passenger vehicles seating 16 or less as General Exemption items to the Secretariat of ASEAN. But this probably will not be easily admitted.) Also, when a country begins to nurture its own automobile industry when the domestic market is not yet sufficiently large, it usually takes the approach of imposing a local content requirement. However, it would be difficult for Viet Nam to take such an approach as a policy measure if it was to affiliate with the WTO in the near future. Thus, from the standpoint of Viet Nam's international economic environment, number of suitable policy measures will be decreasing as time passes if Viet Nam waits and sees.

In any event, it is up to Viet Nam's government itself to decide whether it should start developing an automobile industry now, or wait until the level of per-capita income rises and the domestic market expands, or whether it should not try to nurture the industry but let nature take its own course. Viet Nam's government will do this by weighing the cost of such nurturing for the national economy against the benefits possibly realizable in the future, taking into account the above-mentioned international environment resulting from its affiliation with AFTA and the WTO. Of course any policy measure it may take to nurture the industry would have to be tolerable in light of international rules such as those of the WTO. This report will discuss policy measures that Viet Nam can take to nurture an automobile industry, since Viet Nam's government has already made it fairly clear that it intends to do so.

If Viet Nam begins to work in earnest to nurture such an industry now, the following three basic approaches (not exclusive each other) can be considered. The first approach would be to promote expansion of the market for the domestic product. Expansion of the market for a domestic product usually leads to the reduction of manufacturing costs and a further growth in demand. The possible means to achieve this would include: restriction of imports of completed vehicles including used vehicles, setting a fairly high import tariff for completed vehicles without raising the tariff for knockdown (KD) parts too high (too high a tariff for KD parts would impair KD production), review (including possible abolition) of the minimum price system which establishes standard ratable value by item (in many cases the ratable value are higher than the actual import prices of KD parts), promotion of competition among domestic producers, introducing local content requirement with a high degree of freedom for producers (aside from whether this is possible given the relationship with the WTO), and permitting the producers to employ used machinery to reduce their manufacturing costs.

The second possible approach is promoting local production in order to retain the added value generated in the industry within the country and also structuring a network of parts manufacturers. However, this would need to be a long-range program because it is normally impractical to greatly increase the ratio of local production while the domestic market is still small even if the government takes measures to do so. The measures the government could take to that end would be – though these duplicate with the measures for promoting the expansion of the market for local producers – to shift imports of completed vehicles (including used vehicles) to local KD production, avoid making tariffs for KD parts too low (too low a tariff would impair parts production), introduce a local content requirement – if such a requirement is to be introduced – in a way effective for the promotion of a shift to local production, adopt a tariff system geared to the promotion of local production of parts that levies declining tariff rates going from completed vehicles to KD parts and to parts-of-parts (currently, the tariff rates for parts-of-parts are higher than the rates for KD parts depending on the type of vehicle, and this is impairing the production of parts), shift from the sales tax to a value-added tax (currently the sales tax is levied cumulatively, and this impairs production of parts through inter-company specialization), or develop local Vietnamese enterprises that will specialize in producing parts.

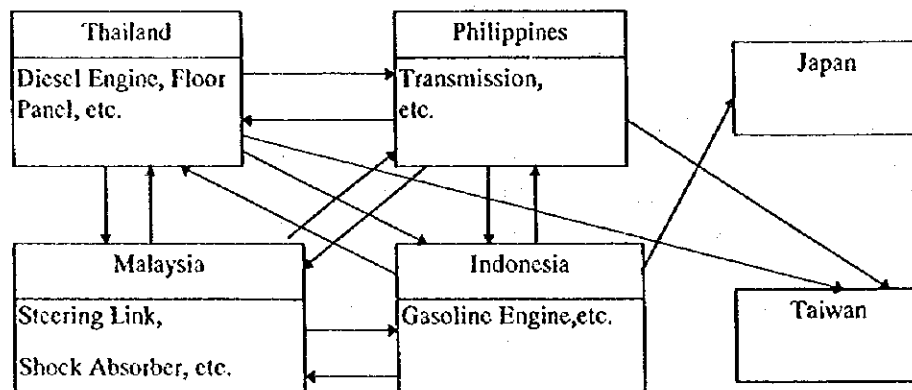
The third approach is to aim to participate in the international specialization within the ASEAN area in line with the MNC (Multi-National Corporation) strategy. Since export of completed vehicles is difficult for the time being, Viet Nam should work to foster export items in the parts sector by utilizing foreign direct investment. (see Box 1)

Box 1

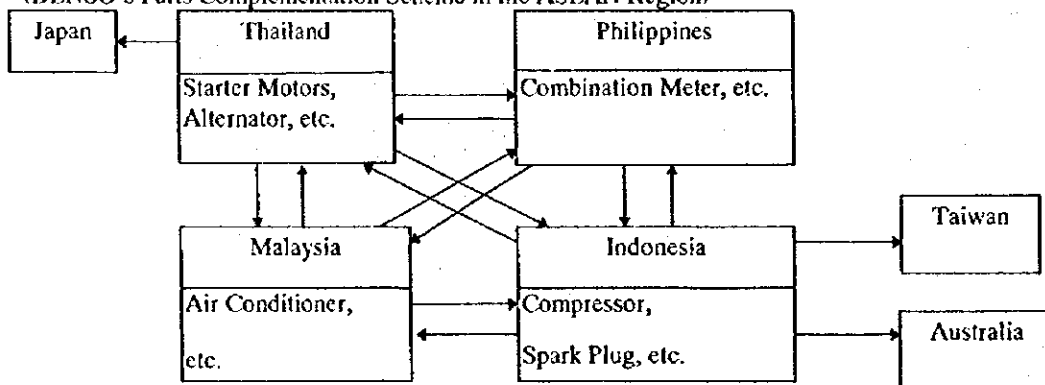
Examples of Parts Complementation Scheme by MNCs in the ASEAN Area

There are two general trends occurring simultaneously in the automobile industries of ASEAN countries. One is each nation's pursuit of a nationalistic objective by promoting local production or a national car project. The other is the structuring of an international specialization system for major auto parts (centralized production of certain parts in certain countries, mutual supply of these parts, and cost reduction through such arrangement) within the ASEAN area from the MNC side utilizing BBC and AICO (ASEAN Industrial Cooperation) schemes and anticipating the coming into effect of AFTA. In regard to the latter trend, arrangement examples of Toyota, a representative manufacturer of completed vehicles, and Denso, a major parts manufacturer, are illustrated below. Each TOYOTA and DENSO factory in ASEAN countries is producing automobiles (TOYOTA) and many kinds of auto parts (TOYOTA, DENSO). The parts written in each country's box are produced and supplied mainly to ASEAN countries (some parts are supplied to Japan and other countries). The arrows show the direction in which such parts are supplied.

(TOYOTA's Parts Complementation Scheme in the ASEAN Region)



(DENSO's Parts Complementation Scheme in the ASEAN Region)



It is desirable from the perspective of both export promotion and export-import balance for auto parts that Viet Nam occupies an appropriate place in these MNC strategies.

The first measure to be taken to achieve this is to grant a substantial investment incentive to factories making export parts. In the ASEAN area, a system of international specialization in such key components as engines and transmissions based on the BBC (Brand-to-Brand Complementation) Scheme and other agreements is already proceeding. At the same time, other ASEAN countries are also taking a positive stance towards the introduction of a new parts manufacturing base within the ASEAN area. It is therefore necessary to establish a system of incentives consistent with the investment climate in these other countries. Viet Nam has fallen far behind Thailand and other countries in the area of incentives, as well. Another measure is to attract and foster enterprises which supply parts to the export-parts manufacturer. This is obviously because the export-parts manufacturer will not by itself be able to produce export-competitive parts, and it is necessary for the parts-of-parts to be efficiently produced near the export-parts factory.

If Viet Nam's government is to start nurturing an automobile and auto parts industry now, the period of its industrial protection is likely to prove quite long. Thus, it must not make haste in producing results quickly, but try to achieve slow but steady progress. Especially the improvement of the ratio of local production is something it will need to work on long-term basis, closely monitoring the pace at which the market expands.

Concerning other ASEAN countries' stance toward the automobile and parts industry, each country has been protecting the industry as a special one. For example, in Malaysia and Indonesia completed cars are still protected by an import tariff of 200% in the highest case. Considering this situation, it may become difficult for all ASEAN countries to keep the CEPT schedule, so Viet Nam needs to watch other countries' stance carefully.

2. Iron and Steel Industry

Integrated blast furnace mill is said to be a symbol of the country's industrialization, and crude steel production is often used as an indicator of the industrial might of a nation. Therefore, developing countries aiming to become industrialized have been implementing measures to promote and develop an iron and steel industry, though there may have been differences among them in terms of the degree of intervention and policies used. The iron and steel industry is a typical capital-intensive industry. It starts from a small-investment operation and grows through phases, led by demand for steel which expands as the national economy grows. Japan and South Korea succeeded in developing integrated blast furnace mills of their own by taking promotional measures consistent with the size of domestic demand and the industry's development phases. There are also examples of failures because the governments took measures that ignored the development phases.

Experiences in such industrialized countries as the United Kingdom, the United States, Japan, and South Korea have led to stylization of how demand for steel in a country changes with the progress in that nation's industrialization and the shift in its industrial structure. This stylized product life cycle of steel, is divided into five time periods: a period of rapid growth of demand, a period of growth deceleration, a period of maturity, a period of decrease, and a period of stability. Demand for steel grows more quickly than the economic growth in the phase of economic development when the per capital GDP is \$10,000 or less.

This period of rapid growth of demand for steel stretches over the "initial stage of industrialization" and the "acceleration stage of industrialization" and is a period when major users of steel products change. During the initial stage of industrialization when the economic structure, once centered around agriculture, begins to be centered around the manufacturing sector, demand for long products such as bar steel to meet fast-growing needs in the construction of infrastructure, factories, hotels, and the like, increases sharply. In the industrialization acceleration phase when the linkage between

export-oriented industries and domestic industries that support them produces synergetic effect and double-tracked growth progresses; demand for flat products such as sheet steel for manufacturing industries like canning, home appliances, and automobiles adds to the demand for long products; and the growth of demand for all steel products is accelerated.

The phase-by-phase development has been observed in industrialized countries and ASEAN countries. Finding business opportunity in the fast-growing demand for steel, producers, first go into operations requiring limited investment and then into larger operations in the order of simple rolling, electric furnace mill, sheet rolling, and integrated blast furnace mill.

The first type of operation to develop with the rapid growth of demand for bar steel for construction use are "the simple rolling industry" which rolls imported billets, and "the electric furnace industry" which melts and rolls imported scrap iron. In the iron and steel industry, the optimum production scale which minimizes production cost and the amount of investment vary from one type of operation to another. The standard scales of equipment and investment are approximately \$20 million for 200,000 tons per year of production in the case of simple rolling, and approximately \$75 million for 500,000 t/y for the electric furnace operation.

The ASEAN countries entered the period of rapid growth of demand for steel in the late 1980s, and their imports of steel products have been increasing sharply because their steel producing capacities could not keep pace with the rising demand. Demand for steel in 1995 was 9 million tons in Thailand, less than 8 million tons in Malaysia, more than 6 million tons in Indonesia, and more than 3 million tons in the Philippines. Against the backdrop of domestic-capacity shortage and resulting price hike of steel products, the steel industries of the ASEAN nations have reached the phase where new producers enter into the simple rolling sector and electric furnace sector in rapid succession.

Viet Nam, too, entered the period of rapid growth of demand in the 1990s. Demand for steel in Viet Nam was more than 1.3 million tons in 1996, and most of it was for construction use. By contrast, the production was only 800,000 tons in bar steel, and imports of bar steel and billets increased rapidly. In the Vietnamese iron and steel industry, three companies have entered the simple rolling sector since the mid-1990s through joint ventures of foreign entities and VSC, the state-owned steel company. As a result, production capacity in 1996 was 430,000 tons in total for the two VSC electric furnace mills and 620,000 tons in total for the simple rolling mills of the three joint ventures.

The iron and steel industries of Thailand and Malaysia are about to enter the next phase now. In Thailand, demand for flat products exceeded 4 million tons in the mid-1990s due to the development of manufacturing industries such as home appliances and automobiles, and a joint venture of a local private industrialist and a Japanese steel company newly entered "the sheet rolling industry" which rolls imported slabs. Installing a hot strip mill requires an investment of more than \$1,000 million for the standard annual capacity of 2 million tons. In Malaysia, too, the construction of a 2 million tons-per-year hot strip mill is under way for startup in 1998.

In Indonesia, the government invested in a state-run iron works in the late 1970s, when the government was enjoying high revenue from exports of crude oil. The iron work has a sheet producing facility and direct reduction furnaces in its upstream process. This investment resulted in production capacity far exceeding the domestic demand in those days, causing domestic sheet prices to fall. What is more, the steel product of the facility had to be sold for construction use at lower prices because sheet made from crude steel produced in direct reduction furnaces in those days did not meet the quality standards set by manufacturing industries, such as the automobile industry. The government took various protective measures, including such measures as quantitative control on imports and high tariff rates and supplying the natural gas used in the direct reduction furnaces at a price less than half of the international price, but the profitability of the state-owned iron works

continued to be poor.

The phase that follows the sheet rolling operation is "integrated blast furnace steel making." Investment in an integrated blast furnace mill is exceedingly high. To build a 3 million tons-per-year mill requires \$3,000 - \$4,500 million in capital investment, plus organizing infrastructure around the facility.

A blast furnace produces crude steel of higher quality than the product of an electric furnace or direct reduction furnace now in commercial operation. However, because of its technological characteristics, a blast furnace, has to be maintained at a high rate of operation, and this makes it impossible to adjust crude steel production as demand increases or decreases. Therefore, steel manufacturers engaged in this type of operation have adopted the strategy of selling to order high-value, high-priced sheet to domestic manufacturing industries, such as automobile, and selling the remainder of their production as low-priced long products to construction use both at home and abroad, in order to keep their operating rates high.

Based on experience in Japan and South Korea, when the domestic demand for steel reaches around 10 million tons, an integrated blast furnace steel mill is expected to keep an appropriate operating rates. Especially a decision to build the first integrated blast furnace mill in a country not only involves the serious risk of bankruptcy if the project fails, but could also have a major impact on the nation's economy as a whole.

The steel industries of the ASEAN countries have not reached the phase of integrated blast furnace operation. An estimate based on experience in South Korea, Taiwan, and ASEAN countries shows that demand for steel in Viet Nam will reach 2.1 million tons by the year 2000, and 3.4 million tons by 2005. Demand up to that time period is expected to be mainly for bar steel for construction use. It will be after then that the canning and home appliance industries will develop so that demand for sheet will start growing.

The steel industry plays different roles in each stage of industrialization. In the initial stage of industrialization, it is important for the sustainable growth of the national economy as a whole that the steel industry meets the rising demand for bar steel for the construction of infrastructure. The path for Viet Nam to follow, which is still in the initial stage of industrialization, would be to first nurture operations requiring limited investment, and then proceed to foster the steel industry in a progressive way in line with the growth of domestic demand, using foreign capital where necessary, while at the same time ensuring reliable supplies of steel. This will minimize the distortion of the national economy and the risk of the investment project.

Operations that can be nurtured before AFTA goes into effect in 2006 and bring least distortion on the national economy and steel consuming industries would be simple rolling and electric furnace operation. In the simple rolling segment the JV between foreign capital and VSC have already started operations and are running a profitable business in the face of oversupply and falling prices resulting from the import of large quantities of low-priced bar steel from Russia in 1996. With respect to bar steel, it will be possible to develop local production through a joint venture with VSC by attracting foreign capital by maintaining the TE status until 2003 and levying a 30% protective tariff, the same level as now. However, it is necessary to realize that the ban on imports of billet and bar steel, in effect since July 1997, not only runs counter to the general world-wide trend to liberalize investment and trade, but also impairs the mainstay of the industrialization strategy of fostering export industries through introduction of foreign direct investment.

In the sectors of sheet rolling and integrated blast furnace mill, it will be difficult before 2006 to introduce direct investment from abroad or promote entry of domestic entrepreneurs even if protective measures are taken, because domestic demand is limited. Viet Nam will need to review and

implement industrial policies other than import tariffs, as Japan and South Korea did, when investment in integrated blast furnace operation begins to appear realistic.

Box 2
Experience in Japan and South Korea

In the early 1950s, when domestic demand for steel in Japan was around 5 million tons, a private steel producer, based on a bullish forecast that demand would double to 10 million tons by 1960, planned to build an integrated blast furnace mill. Some argued that Japan in those days was not strong enough in steel industry, and that such an investment would create excessive supply capacity. However, the Ministry of International Trade and Industry (MITI) concluded that excessive capacity could be avoided by adjusting the scale and timing of the investments by private companies, and decided to give financial support and favorable tax treatment to this investment after developing an investment coordination policy called "Rationalization Plan." Steel projects were financed with a long-term, low-interest loan from the Japan Development Bank, a government-affiliated financial institution, for the substantial portion, plus loans from private banks and the World Bank. Demand for steel in Japan expanded quickly afterward, reaching 10 million tons by 1959 and 20 million tons by 1964. Thus, the Japanese steel industry entered the phase of integrated blast furnace operation.

In South Korea, domestic demand for steel had not yet reached 3 million tons by the early 1970s. Based on the heavy and chemical industry plans established in those days, nationally owned POSCO constructed four blast furnaces by 1983, totaling a capacity of 9.4 million tons per year. This rapid capacity expansion was criticized as wasteful planning by many experts, but Korean policy at that time was to create steel demand by promoting steel-using industries such as shipbuilding. A temporary surplus capacity in the domestic market was used to increase exports and pay off its debts. The Korean steel industry entered the phase of large-scale integrated blast furnace operation in the 1980s. The availability of foreign funds, especially from Japan, and technological assistance from Japanese steel companies were the important factors behind the successful start-up of POSCO.

3. Oil Refining Industry

Viet Nam is now considering constructing local refineries. Introduction of an oil refining industry in Viet Nam, an crude-oil-producing country, is often discussed from the viewpoint of making the most of a local resource. It is true that the significance for the national economy of generating added value by refining oil and exporting the resultant products, rather than always using it as a crude natural resource, should not be overlooked. Doing that can also prove beneficial for the development of the regional economy. However, considering current conditions in Viet Nam, it will be more important for the national economy that such studies be made, first, from the viewpoint of analyzing the real benefit in substituting imported oil products.

The primary benefit of shifting to local production for oil products, for which the country now depends entirely on imports, is that it will ensure reliable supplies (both quantitatively and qualitatively) of oil products, basic materials for local industries. In the current supply/demand situation for crude oil in East Asia, which is increasingly dependent on the Middle East, a shift to local production for oil products will be meaningful—especially when China, a major variable in supply-demand balance, is taken into account. Also, from the experiences during the Gulf War, which resulted in faster escalation of oil-product prices than crude oil prices, and also in the difficulty in some cases of procuring such products to begin with, it is obvious that such a shift will also offer the benefit of ensuring energy security in cases of contingencies such as an international conflict.

A second benefit is a long-term improvement in trade balance resulting from a change in the trade structure. Using rough 1995 figures, we find that the slightly less than \$900 million (5.5 million tons) for oil-product imports would be eliminated, if Viet Nam shifted to local production, but then

approximately two-thirds (5.5/7.7) of the \$1,000 million or so (7.7 million tons) of crude oil exports would be lost or an equivalent amount of Middle East crude oil would have to be imported. The difference would represent an improvement in trade balance; however, a question arises as to which raw material crude oil should be chosen — this relates to the breakdown of equipment for the refinery, discussed later. At the same time, the import of equipment for the initial construction would be a major burden on the trade balance.

On the other hand, this process, industrialization = import substitution, would negatively affect the national economy, especially for the short term, because it would cause rises in oil product prices. Depending on equipment makeup, construction of a refinery requires \$1,000-1,500 million in initial equipment investment (for approximately 130,000 b/d in scale), and depreciation and interest costs occupy large portions of the initial product price after startup. In addition, the product would not be price-competitive with products from Singapore.

Moreover, if the refinery is to be constructed in Dung Quat, as Viet Nam now plans, the cost of building infrastructure, estimated at \$1,000 million in total, would make the project cost even more formidable. It would be necessary to protect local products by restricting imports or applying a high tariff initially. This would lead to higher retail prices; and to suppress such price hikes, it would be necessary to levy low taxes in the distribution stage and also take other measures such as granting a subsidy with respect to the supply price of crude oil.

Whether to use locally-produced crude oil when a refinery is constructed is a question requiring a study based strictly on economic rationality. It is said that Vietnamese crude oil (produced mainly in Bach Ho) is low in sulfur content and lightweight, so the refining facility can be fairly simple and still meet demand for up to middle distillates. (If compared to a certain yield, the facility can be at least 20% to 30% less expensive than when Middle-East crude oil is used.) Accordingly, the international price of Vietnamese crude oil is high and the cost of procuring crude oil for the refining entity would naturally become higher unless the supply price from state-run Petro Viet Nam is subsidized, as is done, for example, in Malaysia.

Another area requiring caution is the outlook for oil production in Viet Nam. Production at the existing oil wells is expected to peak sometime between 2000 and 2010, and the cost of changing facilities' specifications from those needed to refine Vietnamese crude oil to those needed to refine Middle East oil is estimated at several hundred million dollars, which would seriously affect the long-term profitability of the enterprise. Indonesia is being forced to improve its existing refineries as the long-term outlook is that its oil production will gradually decrease. In Malaysia, too, the refinery now under construction (Malacca-2) is being equipped with a hydrocracking facility, for treating Middle East crude oil.

The benefit of having foreign capital participate in the industrialization of oil refining is primarily that it provides a reliable source of funds, thus alleviating the burden on the government (compared with industrialization by a state-run enterprise). Additional benefits include the availability of operation technology, and the marketing power for sales abroad in case some of the by-products (such as heavy oil which is not much in demand locally) are exported. If the government tried to industrialize oil refining without using the option of introducing foreign capital, it would have to be prepared for a substantial financial burden and risk.

A refining enterprise cannot be profitable unless it sites its facility near a consuming area and also goes into distribution. Therefore, in order to get foreign participation when these two conditions are not satisfied, it would be necessary to provide various incentives such as alleviating the foreign entity's burden for infrastructure, and allocating it preferential oil exploration rights.

However, a participating foreign enterprise would be targeting retail markets in Viet Nam, whose

population will reach 100 million in the near future. It may be improbable to secure a foreign enterprise's participation in the oil-refining business without opening the distribution segment. This is because oil refining itself is a business with a very low profit margin. However, if the distribution segment is opened, it is quite likely that the existing monopolistic control of the market by a few state-run enterprises such as Petrolimex and Saigon Petro will be seriously disrupted.

When considering the introduction of an oil-refining business in Viet Nam, taking into account the additional factor of affiliation with AFTA and WTO, the alternative of deferring such an introduction and relying on imports for the time being appears to make better sense—if priority is given to maintaining the existing domestic distribution system. In this case, the high tariffs now imposed on oil products which are on the General Exemption list (e.g., 60% for gasoline), can be lowered by placing them on the Inclusion List (IL). This facilitates to meet with AFTA and WTO requirements. Instead, securing tax income and controlling demand can be achieved via taxation at the in-land distribution stage.

If Viet Nam accepted the idea of opening its domestic retail markets, it would stand a good chance of achieving industrialization at an early date by securing foreign capital participation. Although siting and other conditions (sharing the burden of infrastructure, taxation, etc.) would still be factors, there should be quite a few foreign enterprises, including major international oil companies, which would want to participate in the project. In this case, it would be advisable to make the policy decision as soon as possible. This is because it would then be possible to give the participating foreign enterprises the benefit of time, since mainly due to AFTA/CEPT a protective tariff can be applied until 2006.

4. Petrochemical Industry

Petrochemicals, along with steel, are the two symbolic industries in the heavy-and-chemical industrialization effort; and Japan and South Korea, for example, had been working actively to promote them. Among the ASEAN countries, Singapore was the first to start up a petrochemical complex (1984) and this has become the core of its industrialization program. In 1989, NPC1 was completed in Thailand. Since the early 1990s, petrochemical complexes have also been coming on stream in Malaysia and Indonesia.

Petrochemical products are fabricated into materials for: industries such as automobile, home appliance, electronics, and housing; daily necessities such as apparel, household goods, and other sundry items; and packages and containers. They are also used as basic raw materials for dyes, pigments, agricultural chemicals, and pharmaceuticals. The automotive market accounts for a greater percentage of their usage in Japan and South Korea than in ASEAN; while in Thailand, apparel-and-fiber has reached 42% of the total usage. Thus, the breakdown of the total market for petrochemical products reflects the degree of industrialization of each country.

From the viewpoint of export promotion, demand for petrochemical products are classified in three areas; pure domestic demand, indirect export and direct export. Indirect export means the demand for the materials of other products for export, and it develops in accordance with the growth of other export industries such as automobile and parts, electronics and electric appliances, and textiles. The growth of these export industries is an important element for the development of the petrochemical industry in Viet Nam. Above all, the fiber segment or part of the appliance segment will be particularly important as the first segment to be industrialized, as examples in other countries have shown.

The next step to be considered is substitution of imports in the midstream petrochemical operations that serve these consuming industries. It may be necessary to initially take protective measures when

foreign capital is introduced. Therefore, an appropriate approach may be to foster certain industries, where possible, on a selective basis leading up to the year 2006, the deadline for AFTA/CEPT. It will be necessary to keep the items which require protection within the AFTA area on the TE list until 2003, and to set WTO's preferential tariff rates high for outside the AFTA area.

The midstream and upstream industries usually take the following course of development, according to the speed of development of the consuming industries, the ease of industrialization, or the ease of import of materials. Polyvinyl chloride (PVC) for building materials is usually the first to be commercialized. In Viet Nam, a PVC plant that can produce 80,000 tons a year is now being constructed as the first full-scale resin plant. Polystyrene for home appliances and other sundry goods is also one of the first to be commercialized. Purified terephthalic acid (PTA), whose raw material can be imported, is among the first to be commercialized for polyester fibers. The next step is to commercialize vinyl chloride monomer and styrene monomer. Lastly, building an ethylene center is considered if sufficient demand for olefins develops.

Petrochemical complexes are in the upstream of the petrochemical industry. They are capital-intensive with economies of scale typically working. To lower production cost per unit, balanced sales of various co-products are necessary. If a complex is constructed before downstream demand reaches a sizable amount, the plant has to become export-oriented and will be exposed to fluctuations of the international market. Another alternative is to delay construction until the accumulation of downstream plastic processing plants reaches a certain level, depending on the domestic demand. Experiences in other ASEAN countries show that domestic demand of 400~500 thousand tons of ethylene equivalent is the minimum amount to justify the construction of a petrochemical complex. In the case of Viet Nam, however, it is highly likely that this will not happen until after 2006. Thus, one possibility is to consider industrial policy and measures for preferential treatment of the industry, other than import duty, if a real investment opportunity presents itself; and if further measures are necessary, they would have to be negotiated on a case-by-case basis.

With respect to upstream operations, Viet Nam has a plan to eventually develop a petrochemical complex adjacent to an oil refinery in Dung Quat. Another alternative is to develop a gas based petrochemical plant, using natural gas produced from the sea in the south. Location in the south provides the advantage of being near consuming areas. In this case, however, the availability and prices of natural gas become the important points of consideration. Incidentally, the propylene generated in oil refining can be a source for the raw material for propylene products.

If the government attempts to substitute imports (for protection and nurturing) going midstream and upstream while trying to promote exports at the same time, a conflict of interest may develop between the two attempts. If the government supplied a higher-priced intermediate material to protect the industry, the export industry would lose its competitiveness by that much. If, for example, it was possible to levy a tariff on imports of a midstream petrochemical product, thus protecting domestic producers, and allow the user a rebate equivalent to the protective tariff for the export portion of that product or if it was possible to supply the raw material (e.g., naphtha) for the intermediate material at an even lower price, then the result would be a protective policy measure that promotes exports at the same time. If this is done, the industrial measure would have to be acceptable to WTO.

Box 3

Protective and Nurturing Measures for Petrochemical Industries

The other ASEAN countries are also taking various protective and nurturing measures for their petrochemical industries. These include: supply of raw materials which account for a large part of the manufacturing cost at a lower price (Malaysia), organizing infrastructure at the government's expense (Singapore, for example), reduction of corporate taxes for several years after plant startup (many countries, including Malaysia), and imposition of high tariff rates on imports of petrochemical products (all countries except Singapore).

What is more, import restriction measures verging on violating GATT or WTO rules have also been taken. These serve to induce foreign capital at the same time; it may be the case that foreign concerns did not enter countries which were not employing these measures because the investment climate was unfavorable. Thus, the other ASEAN countries have been giving priority to developing their petrochemical industries, knowing that such measures put the consuming industries at a disadvantage.

5. Urea Fertilizer

Currently, Viet Nam relies on import for supply of fertilizer. More than 70% of fertilizer consumed by farmers in 1995 was imported and this cost \$545 million which accounted for 7% of total import value. Urea accounted for more than 60% of the fertilizer imported in 1995. Urea demand, which reached to 1.6 million tons in 1995, had to be virtually all imported. The demand in 2000 is estimated at 2.1 million tons. If all urea demand is to be filled by import at price of early 1997, it will cost \$500 million.

Two types of projects are under consideration to relieve this heavy dependence on import: "Mix and distribute" and "Gas based urea." Regarding the former, chemical products are imported and mixed to produce NPK fertilizer. NPK composition is prescribed to fulfill farmers' various requirements for different crop types. This project is planned to allocate investment in the distribution network which will optimize the NPK mix. Implementation is expected to alleviate hard currency constraints and reduce losses incurred in both transportation and consumption of fertilizer. Total investment for this project is as small as \$36 million and it is expected to start operation at the end of 1998.

A natural-gas based urea fertilizer plant of 0.6 million tons per year is now under consideration. This production level is expected to cover 30% of urea consumption in 2000. Required investment is estimated at as much as \$400 million. Assuming the currently booming international urea price level of more than 200\$/t, this new urea plant might have financial viability. However, international urea prices are highly volatile and in the 1980s it had dipped as low as 70\$/t, causing many urea project failures.

Urea demand in China and India, the two countries with the largest consumption, will continue to grow in the coming years and the international market is expected to be tight, thus leading to new plants being planned in neighboring countries. Indonesia, the biggest exporter of urea fertilizer in Asia, is now constructing three natural gas-based urea plants and is expected to expand its export capacity by as much as 1.7 million tons by 2000. The length of their pipelines, which affects the price of gas and is the crucial element in urea cost, is less than 50 km, much shorter than Viet Nam's 360 km. Careful examination is necessary concerning the viability of a new urea plant.

Fertilizer is an important material used in agricultural production. In ASEAN countries, where the governments regard agriculture as a priority industry, the tariff rates for chemical fertilizers, including both urea and NPK fertilizers, are 5% or less. Fertilizers are classified as FT items in CEPT schedule.

In Viet Nam, too, agriculture is now an important part of its economy, and normally it would be putting the cart before the horse to impose a high tariff on imported fertilizers to help promote a project to construct a new urea fertilizer plant. In other words, the fertilizer industry is being treated in a different way than the petrochemical industry in ASEAN countries.

Viet Nam's project to build a new urea fertilizer plant forms a part of an integrated natural gas utilization plan, along with a natural gas development project and a power generation project using natural gas. Each project is being planned as a joint venture between foreign partner and a state-owned enterprise, and the entire plan will not move forward unless there are prospects that all three projects will be commercially viable. However, there is a conflict of interest among the projects with respect to setting a price for the natural gas. The natural gas development project wants the price of the natural gas to be set high, while the power generation and urea fertilizer projects need the price to be set on the low side. There would be no problem if the cost of developing natural gas was sufficiently low to allow the three projects to proceed simultaneously, but the longer the submarine pipeline is, the higher the cost of natural gas becomes.

The break-even point in terms of the purchase price of natural gas is presumed to be different between the power project and the urea fertilizer project. Thus, it would help promote the plan and improve its economic effect if the projects were prioritized from the viewpoint of the national economy and implemented in the order of the priorities.

6. Cement Industry

The experience in NIEs and ASEAN countries shows that the cement business is lucrative in the early stages of industrialization. Domestic demand for cement rises more rapidly than the economy's growth until per capita GDP reaches \$4,000, due to the construction of infrastructure with public funds and a construction boom in the private sector. Cement cannot be stored for an extended period of time because it degrades quickly, and it is bulkier (price is lower for the same volume) than other building materials. Therefore, in the price at the site of use, transportation cost (especially land transportation cost including loading and unloading from the truck) occupies a large part of cement price. The relatively high transportation cost provides domestic cement producers with "natural protection" against imported cement.

Due to the rapidly expanding domestic demand and natural protection from imported products, domestic prices of cement rose sharply. Finding business opportunity in these conditions, private industrialists newly entered into the business—this is how the cement industries in developing countries have grown. In the 1990s, cement industries in the ASEAN countries experienced the "Cement Cycle" of "Fever" and "Price Falls." In the Fever phase, domestic demand for cement rose quickly at annual rates of more than 20% due to a construction boom caused by economic growth. The existing production capacity was operated at full capacity, but supply still could not meet demand, and cement prices rose sharply, and imports of cement increased rapidly. After about two years of such brisk market, new cement producing facilities started operations, which caused supplies to increase, prices to fall, and imports to decrease. If capacity far exceeds domestic demand in the Price Fall phase, domestic cement prices plummet, and the cement producers suffer poor profitability. It is difficult for cement producers who have invested in new facilities to cut down production because they need to maintain high operating rates in order to repay loans. They continue to supply product to the point of exceeding domestic demand and this cause plummet of cement price.

The Cement Cycle of changing supply-demand balance and violent price fluctuations, which occurs during the course of industrial development, is ascribable to "the economies of scale" of cement producing facilities and the characteristic of cement as a product. The cement industry is a capital-

intensive industry where the appropriate facility scale is 2 million tons in annual capacity, requiring \$3 million in capital investment. Therefore, in a developing country whose domestic market is around 10 million tons, adding one production facility would increase capacity by 20%, exerting a major impact on the supply-demand balance. Also, it is difficult, because of its characteristics, to control supplies of cement by means of export or import or inventory adjustment, and therefore, price fluctuates violently when the supply-demand balance changes.

Demand for cement in Viet Nam has been rising since the first half of the 1990s. Demand for cement, 2.6 millions in 1990, rose to 8.4 million tons by 1996, growing at a quick pace of more than 20% annually. On the supply side, the capacity of VNCC, the state-owned cement corporation, could not catch up with the demand, and imports of cement and clinker (a semi-finished cement product) increased rapidly. In 1995, the country experienced a Cement Fever because of the shortage of cement, and domestic prices of cement rose to a level similar to those being experienced in ASEAN countries.

As of the end of 1996, VNCC, monopolistic local producer of a high-grade cement until then, owned four factories having a total of 5.3 million tons in annual production capacity. Having found business opportunity in the active cement market in the early 1990s, three foreign enterprises formed joint ventures with VNCC, and are constructing cement factories with new facilities. These three joint venture companies will complete one factory each year starting in 1997. As a result, Viet Nam's cement producing capacity will double to 12.2 million tons by the year 2000, with four major corporations vying with one another in its domestic market.

The four corporations include VNCC, which will expand its annual capacity to 6.7 million tons, and the three foreign joint ventures which will eventually have 5.5 million tons of annual production capacity in total. The joint ventures are constructing cement producing facilities using hewest dry-type technology, and will invest in such cement distribution facilities as cement terminals and cement tankers. Meanwhile, some factories of VNCC has facilities that use wet-type technology and excess manpower in non-productive departments. Therefore, the manufacturing cost of the three new joint-venture producers is expected to be significantly lower than for VNCC.

The mechanism of the Cement Cycle experienced in the ASEAN countries offers many lessons when development of the Vietnamese cement industry is considered. The supply-demand balance in the cement market is determined by the speed at which demand for cement rises and the timing of the startup of the cement producing facilities. The price of cement fluctuates widely depending on the supply-demand balance. High cement price means high profit for the cement producer, but if the price is too high, the financial burden on the construction companies and the government, which builds the infrastructure, becomes excessive. If the price of cement is low, the user benefits from it. However, if it is too low, the cement producer does not invest to expand its capacity.

The ASEAN governments eased their quantitative restriction on imports of cement when they were in a Cement Fever phase, regarding cement as a basic material needed for the construction of infrastructure. In all of those countries the tariff for cement is 0%, because domestic cement producers are under "natural protection," and cement is designated for FT in CEPT schedule. Viet Nam is hurrying to build infrastructure in initial stages of its industrialization, and to ensure reliable supplies of cement is the highest priority.

Viet Nam eased price regulation in 1997 by changing its price control mechanism from the designated price system to a ceiling price system. In operating the new system, if the ceiling price is set at too low level, that will dampen the desire of foreign enterprises to invest in Viet Nam. It is also important to organize a structure to collect information on cement's distribution and retail prices for the sake of preventing formation of a price cartel when pricing is liberalized.

One possible alternative for enhancing VNCC's competitiveness is to separate it from the

government's organization as a profit-pursuing entity having the right to operate the business on its own. This would allow VNCC to invest in new facilities using internally retained funds. Another alternative for VNCC is to enter the cement distribution and retail business. In the cement business, it is more profitable to run it as an integrated operation, encompassing manufacturing and distribution, than to engage only in manufacturing activities. As is eloquently shown from the experience of Thailand and Indonesia, the cement industry is a suitable industry to nurture the domestic industrialists.

II . Participation In AFTA and WTO, and Their Influence on Viet Nam

Viet Nam has already participated in AFTA and is in the process of implementing the AFTA/CEPT schedule for the reduction of its import tariff rate. Viet Nam has also applied to participate in WTO and is currently preparing for the first working party in Geneva in the near future. The world trend is for more liberalization of trade and Viet Nam should also endeavor to enjoy this new international environment. However, Viet Nam's industrialization is in its initial stage and opening their market to ASEAN countries through the AFTA/CEPT scheme could have an agonizing impact on the development of domestic industries.

First, the existing state-owned industries, mostly equipped with obsolete and small-scale machinery, might be driven into bankruptcy by competition. Second, foreign investors might require protection at the initial stage as a pre-condition for new investment. This has been widely observed in other ASEAN countries. To deal with these problems, Viet Nam should carefully introduce a time schedule for tariff reduction toward the deadline of 2006, coupled with industrial policies other than import tariff. This would encourage the restructuring of ailing state-owned enterprises and at the same time prepare an attractive environment for foreign investors. In capital-intensive and infant industries such as steel, petrochemicals, and automobile, where full growth of demand is forecast to be after 2006, some arrangement might become necessary at a later point.

In these capital-intensive and infant industries, Viet Nam can also learn from the cases of other ASEAN countries. The automobile industry is considered to have problems in other countries, too. Malaysia and Indonesia have rigorously promoted the local production of automobiles. However, completed cars are still protected by an import tariff of 200% in the highest case and are currently included as an item of the temporary exclusion list in these countries. These countries must transfer the industry from the exclusion list to the inclusion list by the year 2000 and reduce the import tariff to below 5% by the year 2003. Considering the current tariff of some 200%, these countries might face difficulty in meeting the time schedule of CEPT.

In the case of the petrochemical industry, other countries are just beginning to obtain large-scale petrochemical complexes. Naturally, new facilities have faced difficulty in profitability and governments have in some cases introduced, or tried to introduce, temporary protection even against the rule of AFTA/CEPT. Large-scale integrated steel mills, which have not been constructed in ASEAN countries yet, might need protection at the initial stage as well, despite the will of governments. Viet Nam can learn from the cases of preceding countries, but the general trend is to keep AFTA in the right track.

Viet Nam should also promote industrial policies other than import tariff. Various measures such as policy-based finance and tax incentives can be considered. At the same time, Viet Nam should remove unnecessary impediments to the promotion of FDI, such as slow processing, contradicting policies, an irrational tax system, and trade rights for certain state enterprises. If further measures were still necessary after removing these impediments and streamlining industrial policies, they would have to

be negotiated in each case. This kind of case-by-case approach seems to be the only practical way.

WTO works under different principles, with more emphasis on the abolishment of quantitative restrictions and other non tariff barriers. After the review of the current trade policies in Viet Nam, other member countries might raise issues such as trade rights and non discriminatory measures. Integration into these two different schemes would influence the industrial development pattern, as compared with other preceding ASEAN countries. Development scenarios and available policy measures must be carefully examined in the era of AFTA and WTO.