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Trade Liberalization Strategy for Latecomer Developing Countries: The Case of Viet Nam in AFTA

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This paper considers two issues: (i) Viet Nam's strategy for simultaneously achieving industrialization and trade liberalization in the long run within the framework of the ASEAN Free Trade Area (AFTA); and (ii) data analyses of East Asian exports for the purpose of identifying promising future export industries of Viet Nam.

I. Simultaneous Pursuit of Industrialization and Trade Liberalization

1. Industrialization and Trade Policy

For a latecomer developing country, sustained economic growth and improved living standards of the population are paramount national goals. The East Asian experience shows that industrialization is the key to achieving these goals, particularly in countries with abundant labor endowment relative to land and other natural resources. Viet Nam's path of economic development is also expected to broadly follow this East Asian pattern featuring industrialization.

The progress of industrialization can be measured in different ways. First, most directly, industrialization means quantitative expansion of manufacturing industries in the national economy, as measured in the share in employment, GDP, or exports. An important milestone is reached when industry overtakes agriculture as the largest sector of the economy. Second, qualitatively, industrialization also implies a constant shift of principal manufacturing industries from low- to high-tech, as the level of technology as well as the wage rate continue to rise. Third, in parallel to the shifting product-mix, diversification of the industrial base is observed—a movement away from a few limited industries operated by foreign firms and joint ventures (JVs) to more diverse products and processes in the hands of both domestic and foreign producers. As demonstrated below, industrialization of the Vietnamese economy remains highly primitive by all these criteria.

Private entrepreneurship is the driving force of the market economy, but rapid industrialization in latecomer LDCs cannot normally be achieved by private initiatives alone. More often than not, it requires a wise state which intervenes where state intervention is needed, and refrains from meddling in private-sector activities where intervention is unwarranted. Successful industrialization requires a more active state than the IMF and the World Bank would permit, but far less state involvement, especially in actual production, than in socialist planned economies. It should be emphasized that ad hoc and

narrowly focused interventions to cope with short-term problems do not achieve consistent results. A blueprint—a comprehensive and concrete long-term development strategy—for industrialization is a prerequisite for effective design and consistent implementation of all policies.

The main focus of this paper is Viet Nam's trade policy. However, it must be emphasized at the outset that the discussion of trade policy alone, independently from other aspects of reform, is neither possible nor desirable. Trade policy must be embedded in a comprehensive and concrete long-term industrialization strategy mentioned above. It must be consistent with industrial policy, state-owned enterprise (SOE) reform, policy toward foreign direct investment (FDI), and fiscal and monetary policy and systemic reform (Figure 1). For instance, a list of infant industries to be protected temporarily cannot be determined unless an overall industrialization strategy is agreed, SOEs in chosen industries are restructured, proper criteria for selectively accepting FDI is implemented, and the banking sector is revamped for national saving mobilization.

At this moment, Viet Nam does have a future vision of "industrialization and modernization" and an ongoing five-year plan. But these remain too broad as an operations manual for a comprehensive industrialization drive. Nor are various areas of reform well integrated into a coherent whole. We strongly urge the Vietnamese government to draw up a blueprint which is crucial for effective implementation of all policies, including trade policy. Once approved, the blueprint should continue to be revised as circumstances change.

2. Viet Nam's Position as the Latest-comer in East Asia's Growth Chain

The East Asia region is made up of two groups: high-performing countries of the core group (Japan, four NIEs, ASEAN4, China, and Viet Nam) on the one hand, and other countries which are less dynamic today but may join the core group in the future (Myanmar, Cambodia, Laos, Mongolia, Far Eastern Russia, Central Asian republics, and North Korea) on the other. The core group is generally characterized by high growth, rapid industrialization, vigorous exports, high saving and investment (with a few exceptions), strong interdependence through trade and FDI, and rapid social change as income levels rise. Viet Nam long suffered from wars and inward-looking policies, but finally began to move from peripheral stagnation to dynamic growth with Doi Moi policy of 1986. Economic growth accelerated in the 1990s, and many features of East Asian high performers, such as high growth and FDI linkage, began to emerge in Viet Nam. Even so, Viet Nam is the latest-comer in the East Asian growth chain. Its economy remains primitive compared to other "flying geese" which started industrialization ahead of Viet Nam. This gap in productivity and economic structure must clearly be recognized in designing Viet Nam's industrialization strategy.

Viet Nam's position as the latest-comer is clear in a number of statistics. Figure 2 shows per capita GDP of the eleven countries in East Asia's core group. According to the World Bank, Japan's average income ($34,630) was 178 times that of Viet Nam ($200) in 1994. Gaps with other East Asian countries are also large. However, income comparison based on actual exchange rates overstates income differentials since Vietnamese prices are generally much lower than Japanese. In Figure 2, per capita GDP based on purchasing power parity (PPP) exchange rates, adjusted for price levels, are also presented (all countries are assumed to have the same price level as the United States.) After the adjustment, Viet Nam's per capita income is $1,010 and the Japan-Viet Nam real income gap narrows to 21:1. Figure 3 shows per capita exports (Singapore and Hong Kong which have significant re-exports are excluded). The value of exports is affected by country size and resource endowments as well, not just by the level of development. But Viet Nam, which exports only $76 per person annually (compared with $3,745 each Malaysian exports), ranks at the bottom of East Asia's export-oriented economies.

Figures 4 and 5 compare employment and GDP structure (again, excluding the city economies of Singapore and Hong Kong). It is commonly observed that the weight of economic activity shifts from agriculture to manufacturing and ultimately to services, as income grows (Petty-Clark's Law). This tendency is clearly visible in East Asia. Employment structure shows more drastic changes than GDP (i.e., value-added) structure. In Viet Nam, 69 percent of labor force engaged in agriculture (highest in the core group) is producing (only) 28 percent of GDP. This is because productivity is much lower in agriculture than in industry. By shifting labor from agriculture to industry, the economy as a whole can produce more value.

Differences in trade structure are also remarkable, especially on the export side (Figures 6 and 7). As is well known, Viet Nam's current exports are dominated by primary commodities. China, the second latest-comer in East Asia after Viet Nam, has a much more "advanced" export structure. On the other hand, oil-rich Indonesia exports more primary commodities than its income alone would predict.

Export structure is more closely examined in Figure 8. United Nations trade data[1] for 1995, based on SITC 3-digit level classification (252 commodities), are re-arranged into 45 industries—see Table 1. (Office machines and parts, M6, are sometimes subdivided into computers, M6a, and other office machines and parts, M6b, depending on data availability.) Each of the 45 industries belongs to one of the four major groups: primary commodities, light industry goods, intermediate inputs, and machinery. Figure 8 graphically shows the industrial distribution and diversity of export base for each country. The main exports of more advanced countries, such as Japan and Korea, are machinery followed by intermediate inputs. Among less developed countries, exports cover many products ranging from primary commodities to machinery. In contrast, Viet Nam's exports are concentrated in primary commodities and a few light industries. Machinery exports from Viet Nam are virtually non-existent. Moreover, the Vietnamese export base is not diverse, measured by the number of exported products. This lack of diversity is particularly remarkable in comparison with China and Thailand whose exports are far more diverse.

The monotony of Viet Nam's export base is further confirmed by the Lorenz curve and Gini coefficients presented in Figure 9. These statistics are normally used to measure the inequality of income distribution, but here they are used to measure the concentration of export products. For each country, export products are renumbered in the ascending order of value. The Lorenz curve is constructed by plotting the cumulative contribution of each quintile (20 percent) to total export value. The Gini coefficient ranges from zero to one, and is proportional to the area between the Lorenz curve and the 45-degree line. The lower (higher) is the Gini coefficient, the more diverse (monotonous) is the export base. Diversity of export base of China and Thailand is reconfirmed. Again, Viet Nam is an outlier among East Asian economies, with the Gini coefficient of 0.752. Viet Nam's top 20-percent industries account for over 90 percent of its total exports.[2]

Together, these data clearly show underdevelopment of Vietnam's industrial structure. Delayed start in industrialization has two consequences. First, due to lack of capital, technology, and marketing skills, a number of Vietnamese industries may not be able to compete with foreign rivals in the short run—

[1] The COMTRADE database, the United Nations Statistics Division, obtained at http://www.unicc.org/itc/infobase. Constructed export data cover more than 97.5 percent of total exports in each country except the Philippines. Coverage of the Filipino data is only 61.1 percent because of a large amount of exports labeled as "unclassified." I would like to thank Ms. Donna Vandenbrink for assistance in obtaining and processing the data.

[2] From the viewpoint of comparative advantage, each country should specialize in goods that can be produced relatively cheaply due to particular factor endowment or technology. Therefore, uniformly distributed export base is not necessarily desirable. Even so, some diversity within each broad group, such as light industry or machinery, should be expected in well-developed economies. Viet Nam's extremely high Gini coefficient seems to indicate unexploited comparative advantage rather than efficient specialization based on comparative advantage.

notwithstanding long-term potentials. As Viet Nam tries to expand its industrial export base, other ASEAN countries and China, which are ahead but produce similar products to Viet Nam's future exports, may prove to be formidable competitors. Second, recent regional and global free trade movements may severely constrain Viet Nam's strategy for industrial promotion. By contrast, industrialization of other East Asian countries—such as Japan and Korea in the early postwar years—was achieved during the period when import protection by latecomers was generally tolerated.

3. AFTA: Merits and Demerits

Viet Nam has accepted the obligations of the ASEAN Free Trade Area (AFTA) and its trade liberalization scheme (Common Effective Preferential Tariffs, or CEPT) in January 1996. Regional tariff rates of products in the CEPT's Inclusion List (IL) must be reduced in steps to 5 percent or less during 1993-2003. Viet Nam, which participated in AFTA three years after its inception, is permitted an additional three years to complete the whole process. Thus, Vietnamese IL tariffs vis-à-vis the rest of ASEAN need to be reduced to 5 percent or less by 2006. Outside IL, there are products in the Temporary Exclusion List (TEL) and General Exception (GE) list. Tariff reduction of TEL items starts three years after that of IL items, but they must be merged with IL gradually and in equal installments by 2003 (for Viet Nam, 2006). Thus, protection allowed by TEL is relatively short-term. GE items are products that can be permanently protected for moral, social, or national security reasons. In addition, non-tariff barriers are also to be eliminated in the medium term.

In reality, however, Viet Nam's CEPT schedule is very peculiar (Table 2). First, a large number of products (1,189 items or 54.2 percent) are placed in TEL compared with IL (857 items or 39.1 percent). Other countries have relatively much fewer items in TEL. Second, all items in IL currently have tariffs equal to or less than 5 percent, so there is no further need for reduction—the goal for 2006 is already achieved at the beginning, in 1996. In other words, IL is not binding for Viet Nam. Third, actual trade liberalization comes from moving items in TEL to IL during 1999-2003. What is really constraining for Viet Nam is not the distinction between IL and TEL, but the fact that all tariffs (except for GE items) must be lowered to 5 percent or less by 2006. If strictly adhered to, this timetable may prove quite onerous for the Vietnamese economy. As the various data above showed, the economic gap between Viet Nam and the rest of East Asia is much larger than three years, which is the postponement allowed under the CEPT scheme.

What are the merits of Viet Nam's early commitment to free trade under AFTA—"early" from the viewpoint of the stage of economic development? Clearly, there are enormous political and diplomatic advantages in fully participating in ASEAN—of which AFTA and CEPT are key economic ingredients. But economically, the greatest benefit to the Vietnamese economy comes from free-trade discipline. Exposure to international competition is a harsh but very effective way to make individual firms competitive and restructure the entire national economy. It forces enterprises—both private and state-owned—to become efficient in order to survive. Those which cannot compete with foreign firms will be eliminated. By weeding out inefficient firms and encouraging the remaining ones to do better, overall productivity will improve. Under internationally committed free trade, the government is also protected from policy mistakes and political pressures to overprotect too many industries for too long. Discipline of international competition makes it more difficult to hang on to white-elephant projects or succumb to the demand of vested interests for protecting self-appointed "strategic" industries. AFTA can effectively bind the Vietnamese government not to commit these errors.

What are the demerits? Lowering all tariff protection to less than 5 percent in less than ten years may wipe out a large part of existing (weak) Vietnamese industrial base. We can distinguish three cases. (i) For industries which are not suitable for Viet Nam, industrial collapse will be very painful but

unavoidable. For these industries, the key question is smooth transition, including absorption of unemployed workers. (ii) On the other hand, some existing industries—certain segments of food processing and apparels, for example—which are already sufficiently competitive today will survive—and may thrive—without government protection. (iii) However, free trade will also suppress a number of industries which are now either non-existent or very weak but are likely to become competitive in the next stage of Viet Nam's economic development. These "infant" industries have so far not been clearly identified by the Vietnamese government. Strict adherence to the CEPT scheme will likely be a severe constraint on the emergence and development of these true infant industries.

Viet Nam faces the "2006 problem," in which many existing state-owned enterprises (SOEs) which lack international competitiveness are likely to collapse before 2006, unless rapid improvements in technology, management, marketing, etc. are made. Given the shortage of investment funds and competent managers and experts, such improvements are a very demanding task. Under AFTA, most SOEs producing industrial inputs (chemicals, paper, steel, etc.) and machinery have little hope of survival; while SOEs producing products consistent with Viet Nam's comparative advantage (light industries, for example) may have a better chance. But these assessments must be made more carefully, industry by industry. At any rate, the SOE sector will have to be radically restructured and downsized during the next several years, due to the external constraints imposed by AFTA. As mentioned above, whether the product is currently included in IL or TEL does not really matter. Everything must be exposed to regional free trade by 2006. The SOE reform program must include a policy to cope with this problem, in addition to equitization and general corporations (GCs) policies. It is clear that not all SOEs can survive. It is thus crucial to classify SOEs into those which are doomed and those which can survive with major restructuring effort. For each category of SOEs, appropriate transitional measures must be implemented.

However, there is an even more important challenge for long-term development—the "post-2006 problem." While some existing SOEs may be restructured and survive, Viet Nam's main economic strength for the twenty-first century should come from new industries. New industries may emerge from the private sector, with or without help from the government. They may also be established first by the government and later be transferred to private management and ownership. In either case, proper guidance and assistance by the government is highly useful. Currently, the private sector is very weak, and only SOEs and JVs can significantly contribute to the national economy. But this situation must change sooner or later. The fact that Viet Nam can put so many manufactured goods in IL reflects the crudeness of its economic structure, not its competitiveness. Industries included in IL do not yet exist, so opening the market does not hurt now. But in order to achieve productivity growth and structural shifts, Viet Nam needs a next generation of industries in the early twenty-first century. If the maximum tariff allowed on manufactured goods after 2006 is a mere 5 percent, some—if not all—of these currently non-existent industries are unlikely to emerge and develop. In Japan and Korea, leading industries were temporarily protected with much higher tariffs. Rapid and indiscriminate trade liberalization will close the door to legitimate protection of a limited number of adequately chosen infant industries.

It must also be added that a large part of FDI inflow to Viet Nam to date has been stimulated by the promise of protected domestic markets and/or high tariff rates on finished products relative to imported inputs. If Vietnamese markets are opened at the rate stipulated by the CEPT scheme, foreign investors which are mainly interested in "import substitution"—i.e., producing in Viet Nam rather than importing in order to avoid tariffs and enjoy investment benefits—may lose incentives to invest in Viet Nam and turn to other locations in ASEAN. This issue should also be addressed in the context of FDI policy.

4. Strategies for Viet Nam

For Viet Nam, the crucial question is how to enjoy the merits of trade liberalization while minimizing its demerits. There are two risks that Viet Nam should avoid.

First, radical and excessively fast trade liberalization which would damage the growth potential of the Vietnamese economy should be averted. Free trade is the ultimate goal; it cannot be achieved overnight. Over-zealous pursuit of free trade in disregard of the stage of development would aggravate financial difficulties at all types of domestic establishments (SOEs, JVs and emerging private-sector enterprises) and lead to declining output, collapse in investment, surging unemployment, and social discontent.

On the other hand, a backsliding on free trade should equally be undesirable. When free trade starts to bite, there will be internal pressures, especially from concerned ministries and SOEs, to protect their industries—because they are "strategically" or "socially" important. If too many exceptions to trade liberalization are made, free-trade discipline will not work, and Vietnamese industries will forever remain outdated and uncompetitive. Without firm resolve and objective criteria to judge "infants," the argument for infant industry promotion will become an excuse for permanent protection of dying industries.

These are conflicting requirements, and the government must navigate through a narrow path between all-out free trade and all-out protectionism. To achieve this difficult task, there are at least three possible policy stances while remaining within AFTA.

First, Viet Nam may strictly comply with AFTA trade liberalization and use its free-trade discipline to the fullest extent to restructure the Vietnamese economy as quickly as possible. Under this option, free trade will be embraced not only formally but in spirit as well. There will likely be social costs to this strategy in terms of enterprise bankruptcies and increased unemployment. In particular, production at a large number of SOEs may come to a standstill. But government policies should be directed exclusively to minimizing and shortening the transitional pain, but not to its postponement or avoidance. International donors' assistance can also be sought for the same purpose. No exception to free trade is made, and the government should harden its resolve to resist internal political pressure to protect any particular industry. This strategy is close to what the IMF and the World Bank regularly advise.

Second, Viet Nam may accept AFTA obligations but continue to shield domestic industries from sudden exposure to international competition as much as possible without violating AFTA. In this way, international commitment will be kept formally, but its blow can be somewhat softened. In theory, there is not much room for maneuver once tariffs are lowered and non-tariff barriers are also banned. However, since non-tariff barriers are difficult to quantify, various trade impediments may survive without explicitly violating AFTA obligations.[3] Removal of institutional encumbrances, such as ambiguous laws and changeable procedures, is very hard to monitor and enforce internationally. The largest drawback of this strategy is that it goes against the national drive to improve governance and the legal framework. It is also ad hoc and passive. Moreover, it will certainly undermine the spirit—if not the letter—of AFTA. But this strategy requires the least effort on the part of the government.

Third, the Vietnamese government may propose a new latecomer formula to AFTA which takes into account the different stages of development among its members. This is the case for two-tiered (or

[3] As tariffs are reduced under the CEPT scheme, AFTA's attention is shifting toward the elimination of non-tariff barriers. However, AFTA has so far identified only two concrete measures—customs surcharges and technical measures concerning safety, quality, dimensions, etc.—as non-tariff barriers. Future prospects on the removal of non-tariff barriers within ASEAN remain uncertain.

multi-tiered) ASEAN. From Singapore to Viet Nam, Myanmar, and Laos, ASEAN members vary significantly in income, productivity, and economic structure. With the new membership of Cambodia in the near future, the problem of income diversity will become even more acute. If properly constructed and executed, the new formula for enabling latecomers to pursue industrialization and trade liberalization simultaneously can provide a model for future regional and global free trade areas. While immediate renegotiation for easier terms with AFTA may be diplomatically embarrassing for Viet Nam, a well-constructed proposal after ASEAN becomes a ten-country body should be politically feasible. However, this strategy is most demanding among the three strategies, requiring significant theoretical and diplomatic preparations on the part of the Vietnamese government. Without such preparations, it runs the risk of backsliding on free trade and undermining AFTA, as in the second strategy.[4]

5. Further Tasks under Non-renegotiation

The Vietnamese government has decided not to renegotiate the terms of AFTA, at least for now, thus eliminating the possibility of the third strategy above. This is an important and respectable policy choice, but under this approach of non-renegotiation much remains to be worked out. In addition to deciding whether the first or second strategy above is to be adopted, Viet Nam should determine the following.

First, the government should classify industries into (i) those to be promoted with official assistance, (ii) those to be left alone to develop by themselves, and (iii) those to be scaled down or liquidated. While the ultimate results of individual industries must and will be determined by market forces, relying solely on the market will likely result in higher transitional costs. For faster and more smooth transition, the government should design and implement different supporting policies for each type of industries. Furthermore, without such industrial classification, effective SOE and FDI policies cannot be formulated. The list of industries should remain flexible and be revised continuously as unexpected circumstances develop.

Second, for each industry to be promoted actively, realistic and concrete industrial policy must be designed. The scope, duration, and policy instruments for such promotion should be consistent with the other aspects of the economic reform, obligations of AFTA, APEC, and WTO, prospects for future FDI, and the government's budgetary situation.

Third, for industries which are likely to wane under free trade, an appropriate legal framework and economic measures should be in place to absorb released workers and other unemployed resources.

Without proper preparations to anticipate and ameliorate the shocks arising from the promotion of free trade, the decision to stick to the prescribed CEPT schedule may well lead to uncertainty, higher economic costs than necessary, and political backlash as the pain of opening up the economy is perceived to be excessive. Under the current policy of AFTA liberalization, a comprehensive and concrete blueprint for industrialization discussed in section 1 above becomes even more essential.

[4] For more details on this strategy, including the necessary preparation and documentation and political feasibility, see my paper presented at the June 1997 Hanoi Workshop.

II. Viet Nam's Missing Industries: Learning from the East Asian Experience

1. Purpose

The remainder of the paper presents some statistical results that may help Viet Nam identify currently non-existent but promising industries. Revealed comparative advantage (RCA) analysis in Phase 1 studied the current pattern of exports and imports. This paper supplements the RCA analysis in search for Viet Nam's "infant" industries which should be protected temporarily for attaining the next level of development. Works reported below are preliminary, and must be reinforced by other, more substantive studies in the Joint Japan-Viet Nam Research Project. In particular, feasibility studies at a finer level of industrial classification must be continued.

We assume that the development of the Vietnamese economy will generally follow the patterns of other East Asian economies. This does not mean that their pattern will match that of Viet Nam in every respect; but we expect the basic characteristics of East Asian dynamism—export orientation, increasing industrialization, FDI linkage, shift from low-tech to high-tech, rising wages, rural-urban migration, resulting social change, etc.—will also be inherited by Viet Nam, after known special factors are taken into account. Given this assumption, export patterns of other East Asian economies are highly suggestive in predicting Viet Nam's infant industries for the early twenty-first century.

In the next subsection, export compositions of eight countries—Japan, Korea, Malaysia, Thailand, Indonesia, Philippines, China, and Viet Nam—are studied, industry by industry. (As in Section I, Singapore and Hong Kong are excluded from the analysis because of their special status as city economies with significant re-exports.) The following subsection looks at the supply and demand balances of industries for which data are available. The last subsection lists considerations other than export patterns that must be taken into account in selecting infant industry candidates.

2. Export Growth and Income: Five Patterns

In Figure 10, correlation between income and export composition among the eight countries is plotted, industry by industry. Industries are classified according to Table 1. In each diagram, the horizontal axis measures the logarithm of per capita income evaluated at the PPP exchange rate. This enables us to compare real income adjusted for population growth, inflation, and exchange-rate variation.[5] Viet Nam's 1994 per capita income at the PPP exchange rate (measured in American prices) was $1,010—lowest among the eight. Thus, Viet Nam is always located on the left edge of each diagram. Other countries are also easy to identify from left to right since the income ranking is known (see Figure 2).

If product-cycle theory is applicable to East Asia, there should be a definite correlation between income and export composition of each product. We have already examined the overall shifts of export base in Figures 6 and 8. Here, we would like see individual industries more closely. Figure 10 strongly suggests five patterns (see the first introductory page in Figure 10):

1. Latecomer type (Viet Nam also exports)—some exports are negatively correlated with income, with low-income countries exporting relatively more, and Viet Nam also exports a

[5] However, this does not correct for the Balassa-Samuelson effect, namely, systematic change in internal relative prices as income (wage) rises. As an economy develops, prices of capital-intensive goods (e.g., machinery) tend to fall relative to those of labor-intensive goods and services. Growth of machinery exports (which become relatively cheaper as income rises) is understated to the extent that this effect is important.

significant amount of it. For example, fuels, industrial raw materials, fish, vegetables and fruits, rice, clothing, footwear, and other light industry goods.

II. Latecomer type (Viet Nam does not export)--similar to type I, but in this case, Viet Nam does not export much of it. For example, plumbing and light fixtures, furniture, plastic articles, and toys, games and sports goods.

III. Normal growth type—exports of this type of goods expand gradually as income rises, and rich countries tend to export proportionately more of it compared with poor countries. Viet Nam currently exports little of it. For example, polymers and plastics (petrochemicals), other chemicals, rubber and tires, metal products, other industrial machines, nonelectrical parts, computers, other office machines, telecommunications equipment, audio-visual consumer electronics, electric power machinery and parts, motor bikes and bicycles, other transportation machinery, and cameras.

IV. Advanced economy type—export growth of this type of goods is nonlinear. Low and middle income countries do not export much, and only high income countries—Japan and sometimes Korea—are internationally competitive. As a result, the graph becomes a flipped "L" shape. For example, engines and power equipment, specific industry machines, metalworking machines, automobiles, and auto parts.

V. Uncorrelated with income—exports are not clearly correlated with income, either positively or negatively. Those are goods whose production and exports are highly dependent on resource endowment and/or government policies. For example, other food, art and jewelry, fertilizers, leather and furs, paper, textile yarns and fabrics, cement, glass and pottery, iron and steel, and nonferrous metals.

Although the above classification is based on visual impression, patterns are very clear. Many primary commodities and light industry goods belong to type I or II, while industries requiring advanced technology are classified as type IV. Low- and medium-tech industries tend to be type III. Type V exports, which depend on endowment or policies, also accord with our common sense.

For Viet Nam, products of type II and III are natural candidates for infant industries. In the case of type II industries, exports may grow even without import protection. Feasibility studies of type V industries may also be worthwhile. On the other hand, type IV products (advanced machinery) should be approached with caution; they should not be targeted immediately unless there is a compelling reason for doing so. For type I industries, the possibility of expanding the current export capacity should be explored.

However, these are rough guides and should not be taken too rigidly. Special factors relevant to Viet Nam or each industry should also be considered. One way to explore this is to run regressions on these export patterns with additional explanatory variables relevant to each industry (other than per-capita income).

Furthermore, our industrial classification is still too broad, and feasibility studies must be conducted for individual products in each industry. (Similar income-export correlation analysis can be conducted at the finer, 3-digit level of industrial classification using the data in the appendix to the earlier draft of this paper presented at the June 1997 Hanoi Workshop.) Moreover, export patterns do not tell us the feasibility of import-substitution strategy, i.e., establishing new industries for domestic markets rather than for exporting. That should be a topic of a separate study.

3. Supply and Demand Balance

As a supplement to the above analysis, let us look at the supply and demand balance of each industry in Viet Nam, to the extent that data are available. We will use SITC-based export and import data and ISIC-based industrial production data compiled by the General Statistical Office. There are serious data problems. First, perfect concordance between SITC and ISIC classification is impossible. Second, primary commodities and many light industry goods are not included in the industrial production data. Third, even for industries included in the production data, coverage may be incomplete; small private establishments are likely to be omitted. Fourth, trade data may also suffer from incomplete coverage, under-reporting, and smuggling. Thus, the results below should be interpreted with caution.

For any industry i, let Y_i : domestic output; X_i : exports; M_i : imports; and A_i : "absorption" or domestic use. All variables are expressed in U.S. dollars. Then we have an identity:

$$\underset{\text{(supply)}}{Y_i + M_i} = \underset{\text{(demand)}}{A_i + X_i}$$

The concept of output here is gross, not value-added—unlike in the national income identity. Since we have data for Y_i, X_i, and M_i, the fourth variable, A_i, is calculated as a residual.

Table 3 presents these variables for each industry. It also reports three related indices. (They are calculated only when reasonably reliable data exist.) The trade specialization index, $(X_i - M_i) / (X_i + M_i)$, taking a value between -1 and 1, shows whether the product is mostly exported or imported. The domestic supply ratio, $Y_i / (Y_i + M_i)$, whose value ranges from 0 to 1, indicates the state of import-substitution for goods which are mostly imported. Finally, the export to total sales ratio, $X_i / (X_i + A_i)$, also between 0 and 1, shows the size of exports relative to domestic use for goods that are more often exported than imported. This last index can be a rough measure of international competitiveness, at least quantitatively (apart from quality and price).

For all primary commodities and most light industry goods, data are insufficient or unreliable to make any evaluation. Among light industries, domestically produced furniture and plastic articles are sold almost exclusively in Viet Nam, with very little exports and imports—i.e., Viet Nam is self-sufficient in them. The earlier analysis classified them as type II (low-income countries tend to export, but Viet Nam doesn't). This seems to suggest that Vietnamese producers of furniture and plastic articles suffer from low quality or lack of marketing skills. More investigation on this matter is warranted.

As for intermediate industrial inputs, leather and wood products are highly self-sufficient and also exported; they seem to be internationally competitive, and the possibility of further exports should be explored. Trade roughly balances in textile yarns and fabrics; here, a closer look at finer product categories may be useful. More importantly, all other intermediate inputs are mostly imported because domestic use exceeds production—and, judging from tiny exports, they are not internationally competitive.

Finally, machinery industries are even less competitive. Virtually all (new) automobiles are domestically assembled by JVs due to import protection on the finished product. (There may be data problems with automobiles and auto parts; their exports appear too large). Some exports occur in electrical power machinery and parts. However, all other machinery industries export very little. There is no indication of international competitiveness in Viet Nam's machinery industries.

4. Other Considerations

In selecting "infant" industries for the twenty-first century, many factors not covered by this paper must also be considered. We will just list them without further substantiation.

- Who will be the operators of infant industries—new domestic private enterprises, equitized SOEs, other SOEs, JVs, or 100 percent foreign-owned companies? This will affect the design of SOE reform and FDI policy.
- Industrial linkage is also important. In food processing, textiles, chemicals, and electronics, which segment (upstream, middle stream, or downstream) should be promoted first? Is the idea of "industrial clusters" useful for these industries? Should supporting industries be created, or should Viet Nam continue to import parts from abroad?
- Infant industries cannot be selected from supply-side (productivity) consideration alone. Demand-side factors—size of domestic markets, conditions of international markets and prices, etc.—are equally important determinants of industrial policy.
- In the regional context, Viet Nam's industrial promotion should be consistent with the division of labor within ASEAN. Over-investment in the same industries should be avoided. Viet Nam should also be aware of major industrial projects in the pipeline in China, NIEs, and other ASEAN countries.
- Promotion and diversification of export base should also contribute to the macroeconomic need to secure sufficient foreign exchange resources to undertake the national industrialization drive.
- Foreign investors and traders, including Japanese, should be consulted regarding the prospects of individual industries as well as overall investment climate of Viet Nam. They may not be always right, but their opinions are valuable in identifying problems which are not visible from inside.

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4. Ohno, Kenichi, "Viet Nam's Participation in AFTA, APEC, and WTO: Commitment to Free Trade vs. the Need to Promote Industries," Phase 1 Final Report, Volume 4, Industrial Policy, August 1996.

Table 1 Industry classification used in this paper

No.	Type	Description	SITC
		Primary Commodities	
1	P1	Fuels	3
2	P2	Industrial raw materials	2
3	P3	Meat and dairy products	00-02
4	P4	Fish and other seafood	03
5	P5	Rice and other cereals	04
6	P6	Vegetables and fruits	05
7	P7	Coffee, tea and sugar	06-07
8	P8	Other food	08,09,11,12,4
		Light Industry Goods	
9	L1	Clothing and accessories	84
10	L2	Footwear	85
11	L3	Plumbing and lighting fixtures	812,813
12	L4	Furniture	821
13	L5	Plastic articles	893
14	L6	Toys, games and sports goods	894
15	L7	Art and jewelry	896,897
16	L8	Other light industry goods	811,831,892,895,898,899
		Intermediate Inputs	
17	I1	Polymers and plastics	57,58
18	I2	Fertilizers	56
19	I3	Other chemicals	51-55, 59
20	I4	Leather and furs	61
21	I5	Rubber and tires	62
22	I6	Wood products	63
23	I7	Paper	64
24	I8	Textile yarns and fabrics	65
25	I9	Cement, glass and pottery	66
26	I10	Iron and steel	67
27	I11	Nonferrous metals	68
28	I12	Metal products	69
		Machinery	
29	M1	Engines and power equipment	71
30	M2	Specific industry machines	72
31	M3	Metalworking machines	73
32	M4	Other industrial machines	741-745
33	M5	Nonelectrical parts	746-749
34a	M6a	Computers	752
34b	M6b	Office machines and parts (excl. computers)	751,759
35	M7	Telecommunications equipment	764
36	M8	Audio-visual consumer electronics	761-763
37	M9	Electric power machinery and parts	77
38	M10	Automobiles	781-783,786
39	M11	Auto parts	784
40	M12	Motorbikes and bicycles	785
41	M13	Other transportation machinery	79
42	M14	Cameras	881
43	M15	Watches and clocks	885
44	M16	Other precision equipment	871-874,882-884

Table 2 Viet Nam's CEPT Tariff Reduction Schedule

	Number of tariff lines	Average tariff rate (percent)				
		1996	1997	1998	...	2003
INCLUSION LIST	857	0.88	0.88	0.88	...	0.88
Mineral products	71	1.20	1.20	1.20	...	1.20
Live animals	7	4.29	4.29	4.29	...	4.29
Prepared foodstuffs	1	5.00	5.00	5.00	...	5.00
Fats and oils	16	4.00	4.00	4.00	...	4.00
Vegetable products	23	2.87	2.87	2.87	...	2.87
Textiles and apparel	43	1.37	1.37	1.37	...	1.37
Footwear	1	1.00	1.00	1.00	...	1.00
Chemicals	25	1.12	1.12	1.12	...	1.12
Plastics	18	3.06	3.06	3.06	...	3.06
Hides and leathers	24	3.67	3.67	3.67	...	3.67
Wood and wood articles	8	4.50	4.50	4.50	...	4.50
Pulp and paper	31	1.71	1.71	1.71	...	1.71
Stone/cement/ceramics	25	1.88	1.88	1.88	...	1.88
Base metals and metal articles	147	0.45	0.45	0.45	...	0.45
Machinery and electrical appl.	338	0.09	0.09	0.09	...	0.09
Vehicles	35	0.31	0.31	0.31	...	0.31
Optical and musical instruments	42	0.71	0.71	0.71	...	0.71
Misc. manufactured articles	2	0.00	0.00	0.00	...	0.00
TEMPORARY EXCLUSION LIST	1189					
GENERAL EXCEPTION	146					

Source ASEAN Secretariat, AFTA Reader Volume IV: The Fifth ASEAN Summit, September 1996.

Table 3 Viet Nam: Supply and Demand Balance in 1995
(In millions of US dollars, converted at US$1=11,000 dong)

Type	Description	Xi Exports	Mi Imports	Yi Domestic output	Ai Domestic use	(X-M)/(X+M) Specialization index	Y/(Y+M) Domestic supply ratio	X/(X+A) Export to total sales ratio
P1	Fuels	1214.0	942.4			0.126		
P2	Industrial raw materials	374.5	374.8			-0.000		
P3	Meat and dairy products	21.5	63.6	252.1		-0.495		
P4	Fish and other seafood	609.2	1.1	772.4		0.996		
P5	Rice and other cereals	541.0	152.9	247.6		0.559		
P6	Vegetables and fruits	162.2	10.2	9.6		0.881		
P7	Coffee, tea and sugar	677.9	73.1	246.9		0.805		
P8	Other food	20.8	279.5	1458.9		-0.862		
	Primary Commodities Total	**3621.0**	**1897.7**			**0.312**		
L1	Clothing and accessories	741.6	305.3	458.2		0.417		
L2	Footwear	296.4	185.6	105.7		0.230		
L3	Plumbing and lighting fixtures	0.0	5.8			-0.996		
L4	Furniture	3.9	1.4	202.7	200.3	0.466	0.993	0.019
L5	Plastic articles	0.0	2.1	25.1	27.2	-1.000	0.922	0.000
L6	Toys, games and sports goods	5.7	3.0	2.8		0.307		
L7	Art and jewelry	0.3	0.0	2.6		1.000		
L8	Other light industry goods	288.7	1453.1	153.0		-0.669		
	Light Industry Goods Total	**1336.5**	**1956.3**			**-0.188**		
I1	Polymers and plastics	0.4	229.8	245.4	474.8	-0.997	0.516	0.000
I2	Fertilizers	0.2	545.4	139.3	684.5	-0.999	0.203	0.000
I3	Other chemicals	36.8	283.8	119.7	366.7	-0.771	0.297	0.091
I4	Leather and furs	49.6	0.0	204.9	155.3	1.000	1.000	0.242
I5	Rubber and tires	9.2	40.1	273.6	304.5	-0.627	0.872	0.029
I6	Wood products	91.7	3.6	299.9	211.9	0.924	0.988	0.302

I7	Paper	19.2	84.7	198.0	263.5	-0.630	0.700	0.068
I8	Textile yarns and fabrics	138.1	121.3	647.8	631.1	0.065	0.842	0.179
I9	Cement, glass and pottery	30.2	163.7	898.8	1032.3	-0.688	0.846	0.028
I10	Iron and steel	16.8	369.6	189.1	541.9	-0.913	0.338	0.030
I11	Nonferrous metals	21.2	76.3	102.3	157.4	-0.565	0.573	0.119
I12	Metal products	0.4	33.7	233.4	266.6	-0.978	0.874	0.001
	Intermediate Inputs Total	**413.7**	**1952.0**	**3552.2**	**5090.5**	**-0.650**	**0.645**	**0.075**
M1	Engines and power equipment	0.2	18.9	27.7	46.5	-0.980	0.594	0.004
M2	Specific industry machines	21.3	1117.8	125.2	1221.7	-0.963	0.101	0.017
M3	Metalworking machines	0.2	31.2	0.0	31.0	-0.986	0.000	0.007
M4	Other industrial machines	0.3	61.3	124.5	185.5	-0.990	0.670	0.002
M5	Nonelectrical parts	0.0	0.0	11.7	11.7		1.000	0.000
M6	Computers and other office machines	0.5	88.1	3.6	91.2	-0.990	0.040	0.005
M7	Telecommunications equipment	0.3	65.4	0.0	65.1	-0.992	0.000	0.004
M8	Audio-visual consumer electronics	2.3	81.5	0.0	79.2	-0.944	0.000	0.029
M9	Electric power machinery and parts	32.1	147.8	234.4	350.0	-0.643	0.613	0.084
M10	Automobiles	12.7	0.3	112.4	100.0	0.958	0.998	0.112
M11	Auto parts	2.2	11.5	0.0	9.2	-0.672	0.000	0.196
M12	Motorbikes and bicycles	0.2	404.5	16.4	420.7	-0.999	0.039	0.000
M13	Other transportation machinery	4.4	29.1	241.5	266.3	-0.740	0.892	0.016
M14	Cameras	0.2	5.4	7.4	12.6	-0.934	0.575	0.014
M15	Watches and clocks	0.3	9.5	0.5	9.6	-0.940	0.046	0.030
M16	Other precision equipment	0.6	55.2	9.0	63.6	-0.980	0.140	0.009
	Machinery Total	**77.7**	**2127.4**	**914.2**	**2963.9**	**-0.930**	**0.301**	**0.026**

Note Domestic output is a gross concept, not value-added. Since SITC and ISIC do not correspond exactly, some judgment is used in matching them. Coverage of domestic production of primary commodities and most of the light industry goods is inadequate. For these industries, domestic supply ratio and export to total sales ratio are not calculated.

Source Compiled from General Statistical Office Data.

Figure 1 A Comprehensive and Concrete Blueprint for Industrialization: Interdependence of policies and reform measures

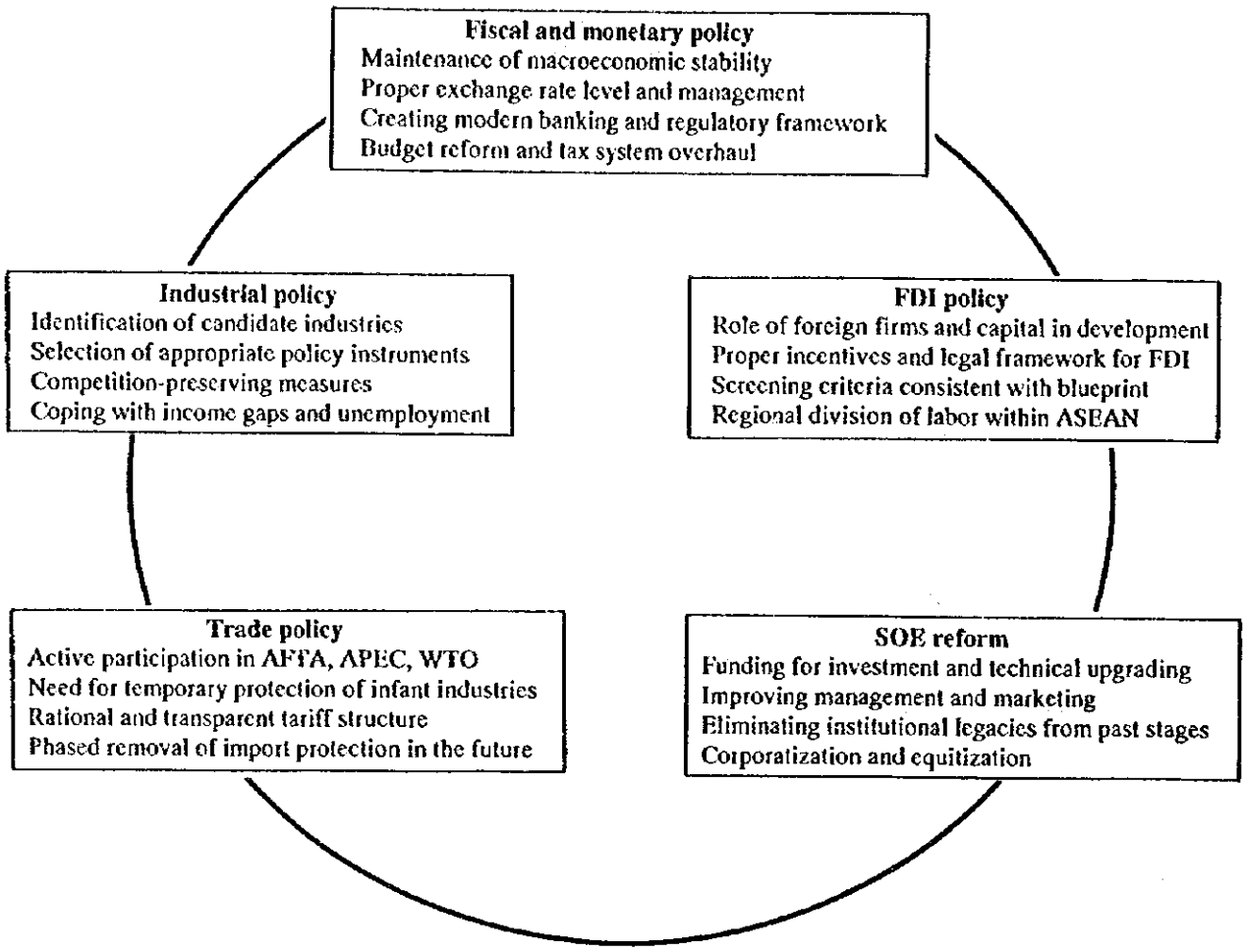
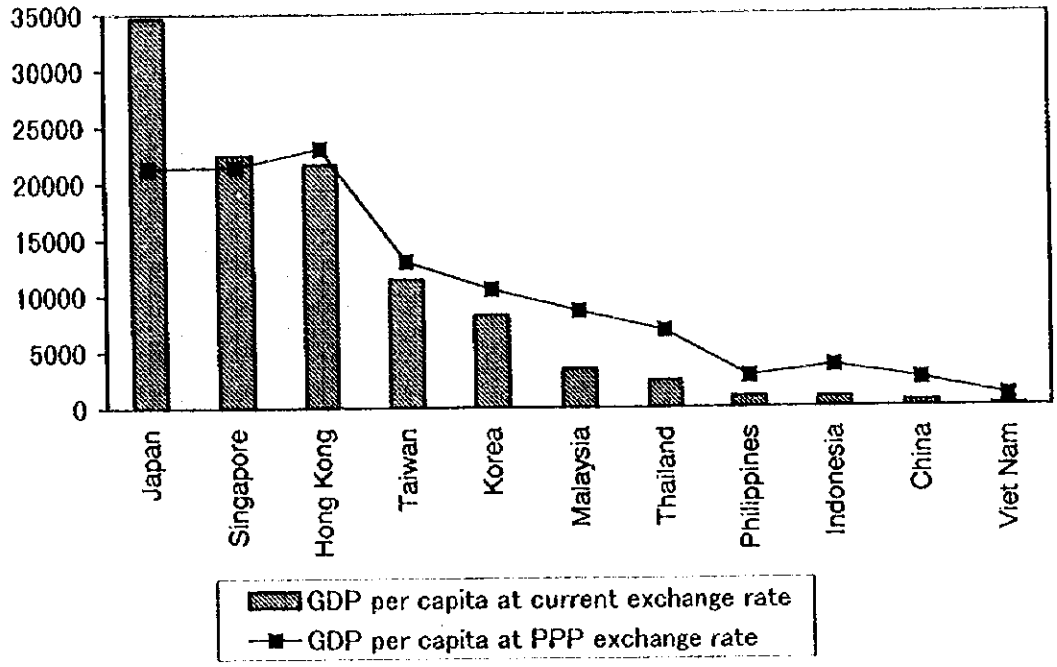
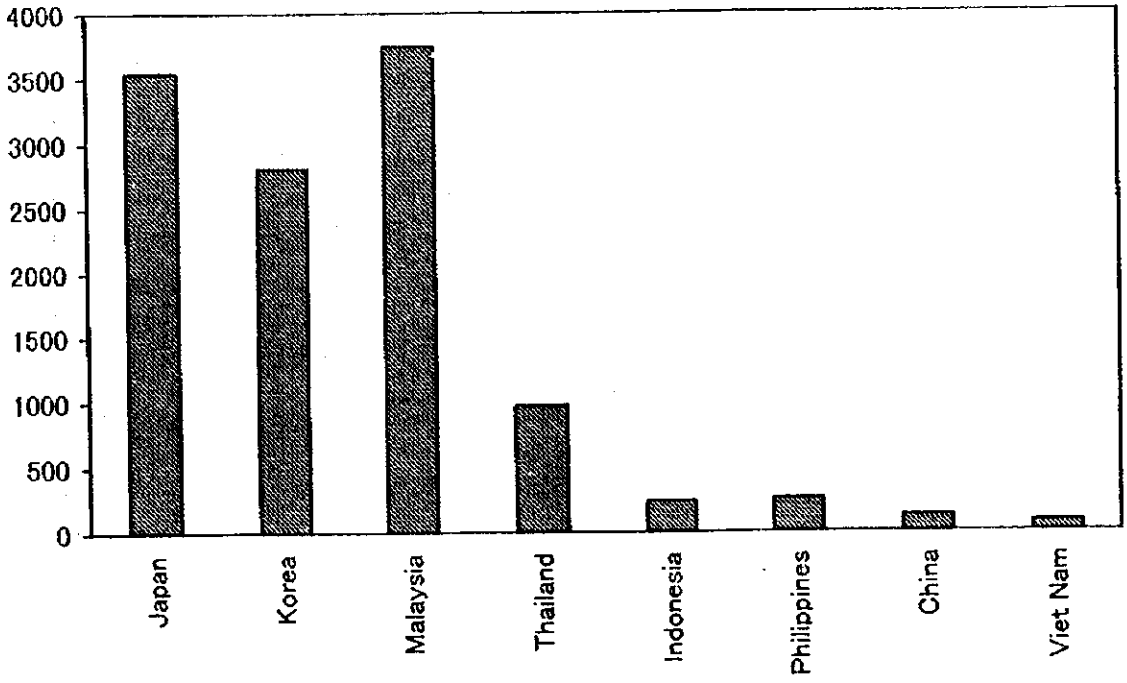


Figure 2 East Asia: per capita GDP in 1994 (US dollars)



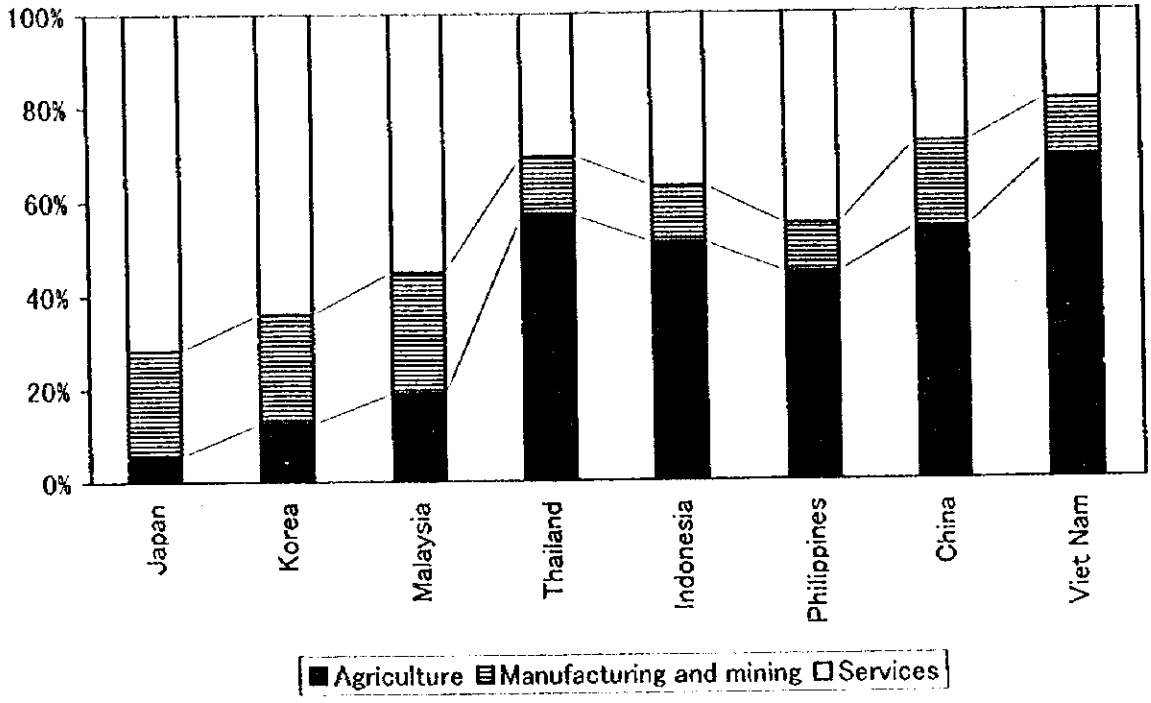
Source World Bank, World Development Report 1996.

Figure 3 Per capita exports in 1995 (US dollars)



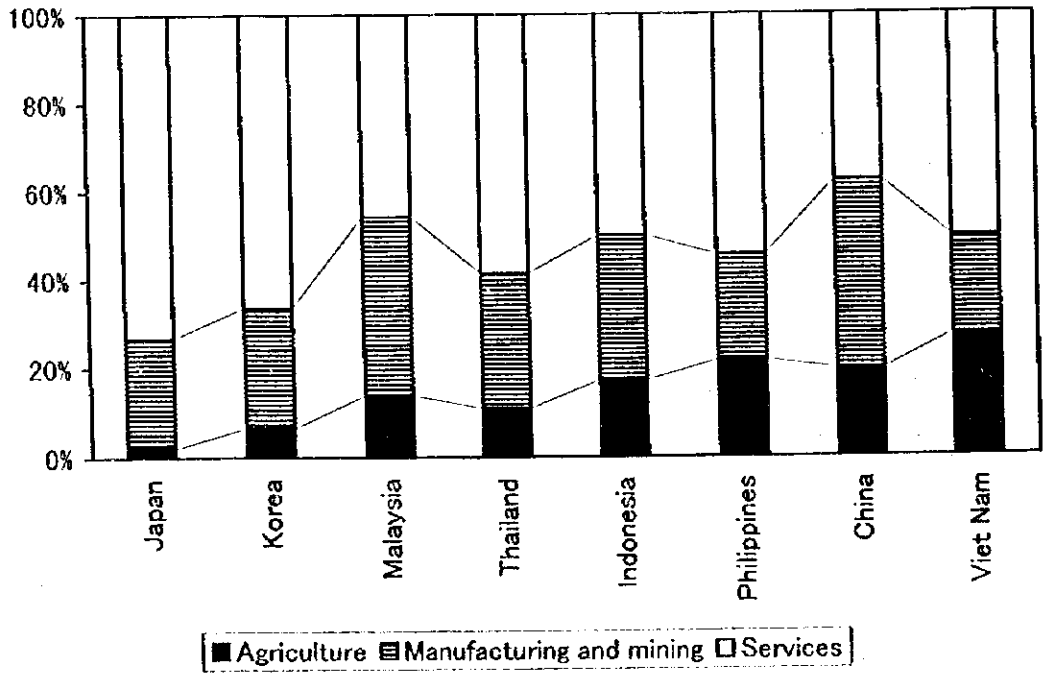
Sources World Bank, World Development Report 1996, and United Nations Statistical Division.

Figure 4 Employment structure:1995



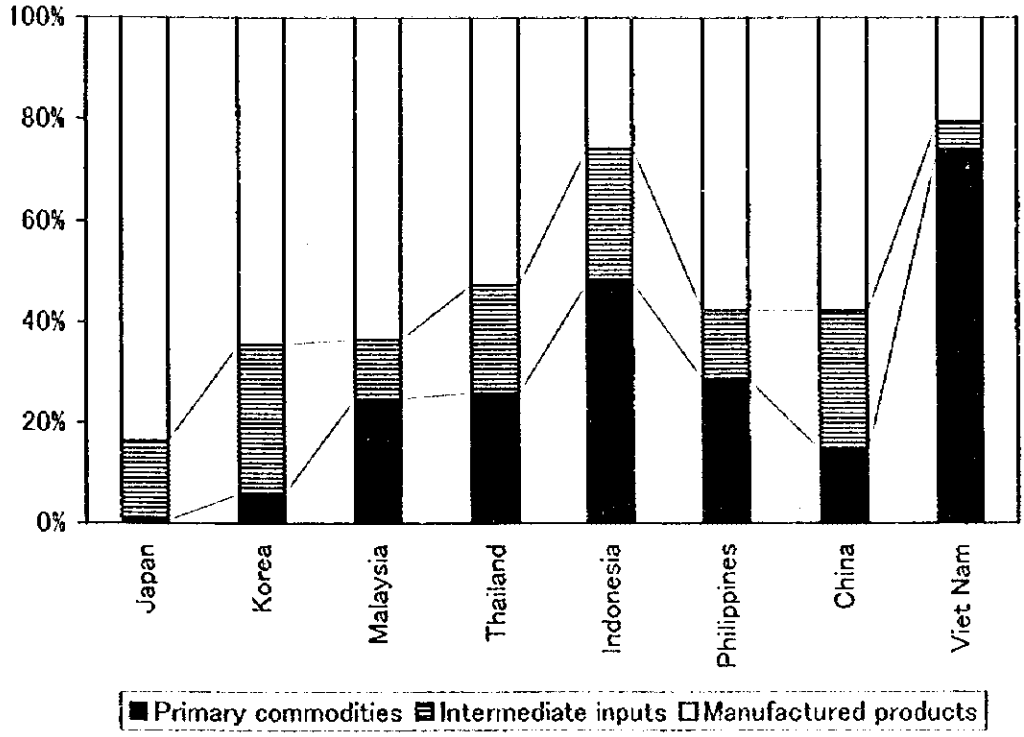
Sources ADB Key Indicators of Developing Asian and Pacific Countries 1996 and the Management and Coordination Agency, Japan. Data for Indonesia and China are for 1994; Thai data are for 1993.

Figure 5 GDP composition: 1995



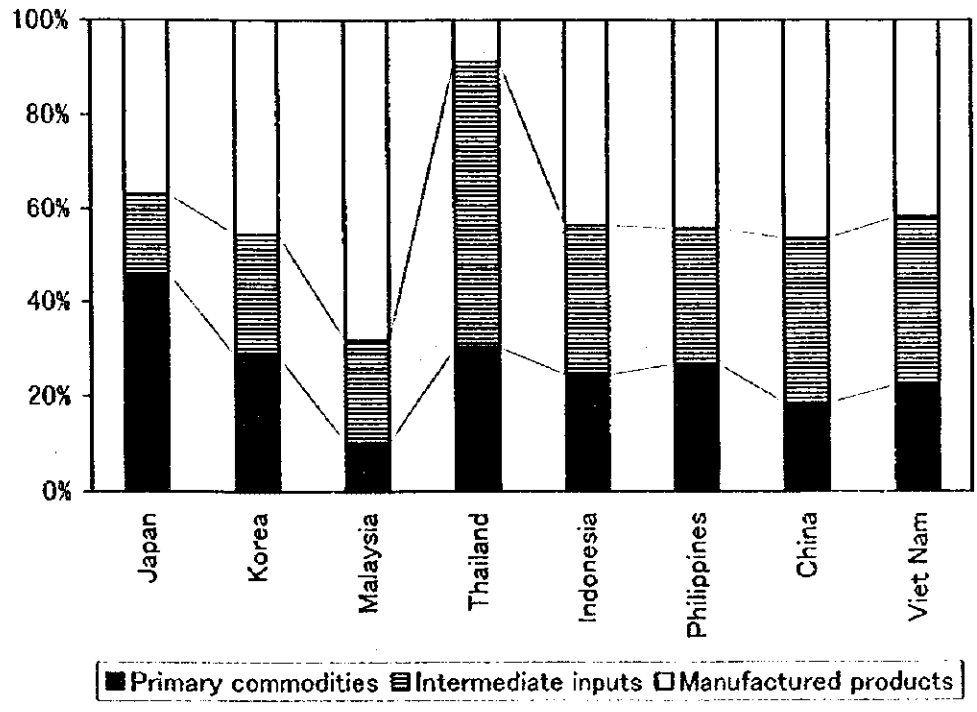
Sources See Figure 4.

Figure 6 Export Structure: 1995



Sources See Figure 4.

Figure 7 Import structure: 1995



Sources See Figure 4.

Figure 8 Export composition of East Asian countries

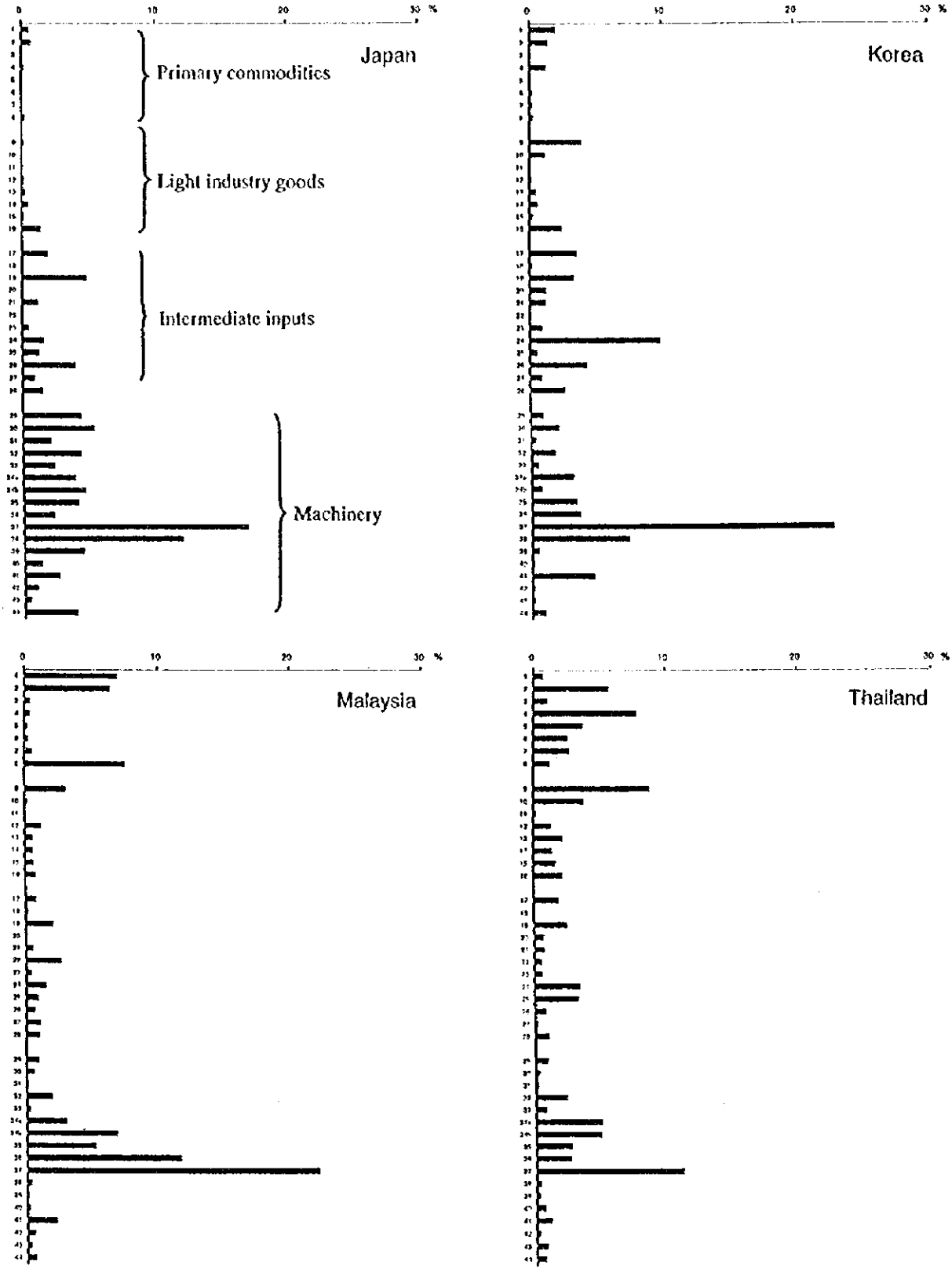
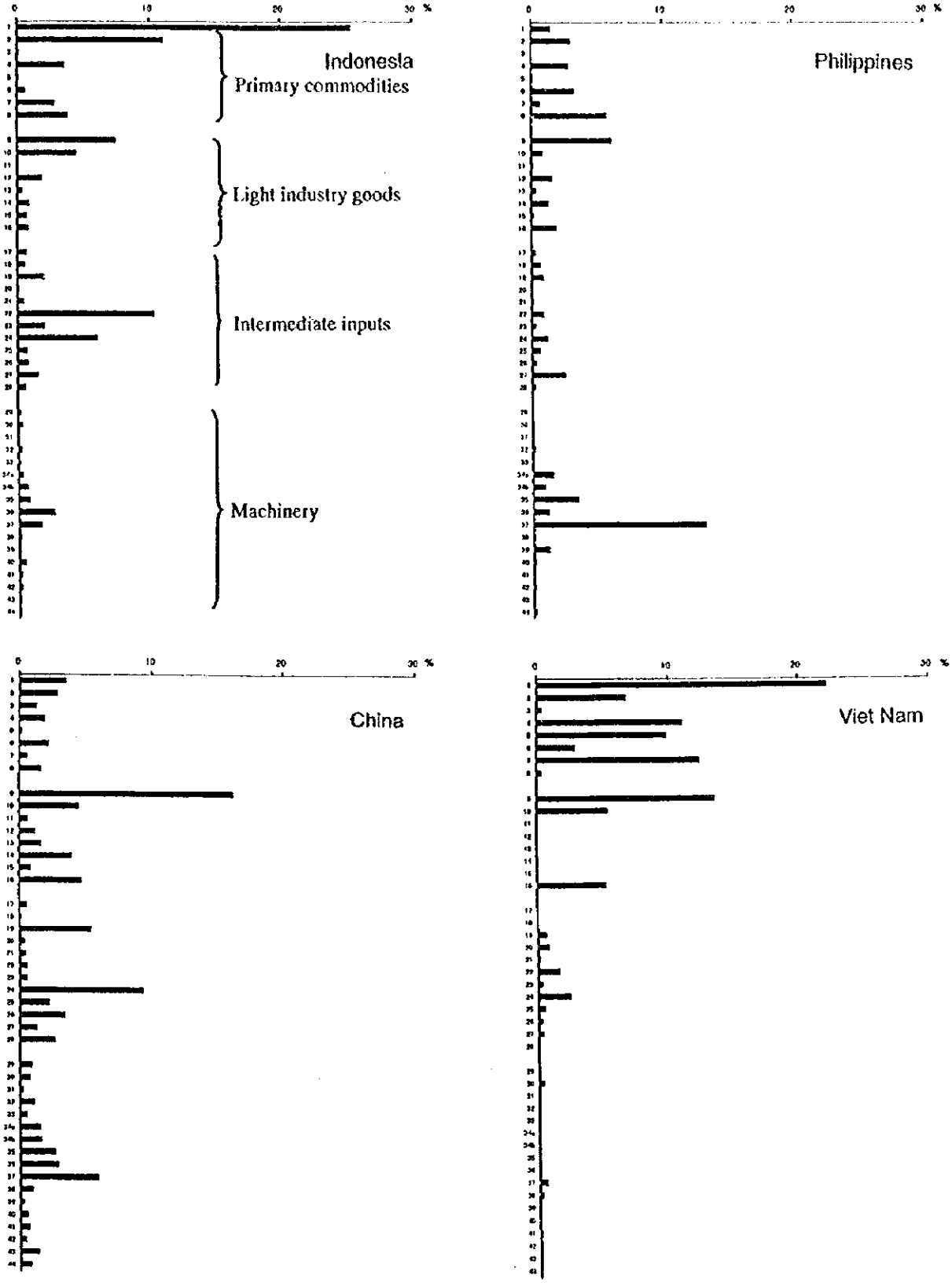
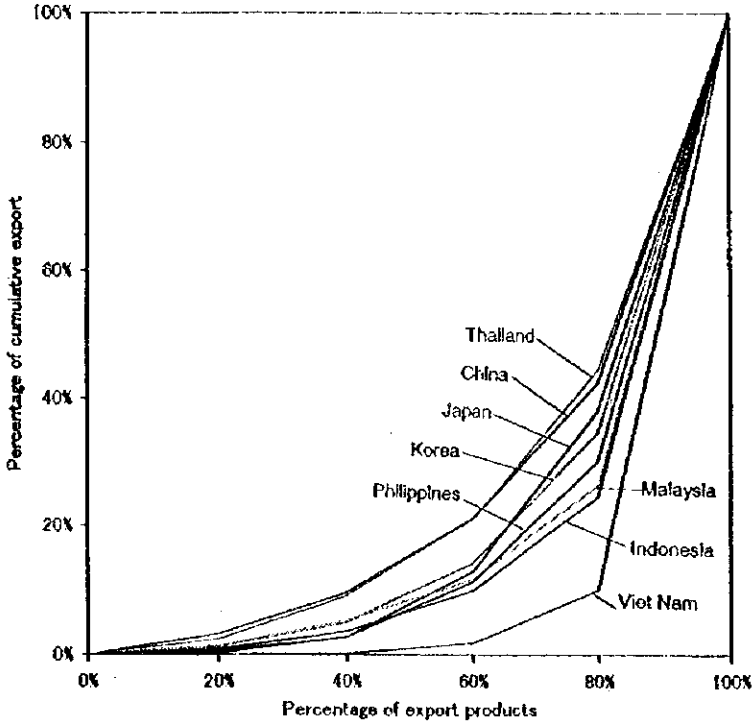


Figure 8 (continued)



Note Numbers on the vertical axis indicate industry classification (see Table 1).

Figure 9 Lorenz curve: export product concentration (1995)



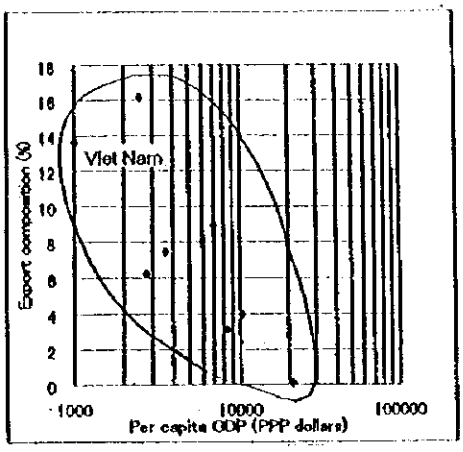
Gini Coefficient	
Japan	0.585
Korea	0.580
Malaysia	0.622
Thailand	0.493
Indonesia	0.645
Philippines	0.622
China	0.495
Viet Nam	0.752

Figure 10 Industrial Types (with an example)
Explanation of export composition diagrams

The following diagrams show the correlation between the income level and the export composition of individual industries among East Asian economies. (Singapore and Hong Kong are excluded because of their characteristics as entrepot city states with no agricultural hinterland. Taiwan is not included due to the lack of data in the U.N. database.)

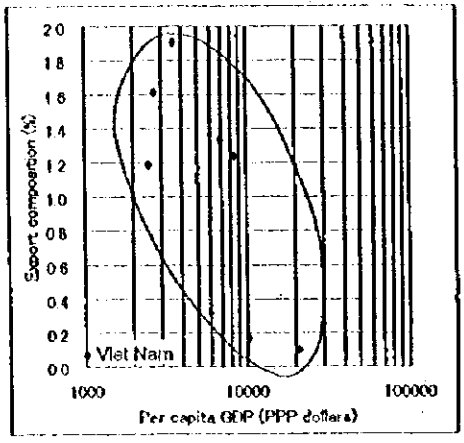
Horizontal axis: Per capita GDP at PPP exchange rate in US dollars, 1994 (log scale)
Vertical axis: Percent share of each product in total export value of the country, 1995

I. Latecomer type (Viet Nam also exports)



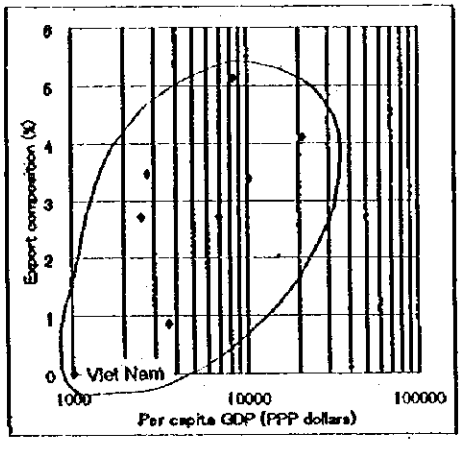
L1 Clothing and accessories

II. Latecomer type (Viet Nam doesn't export)



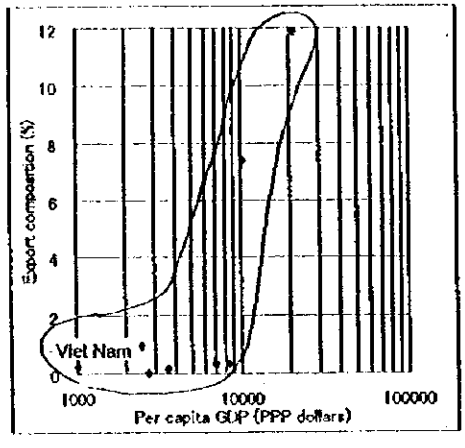
L4 Furniture

III. Normal growth type



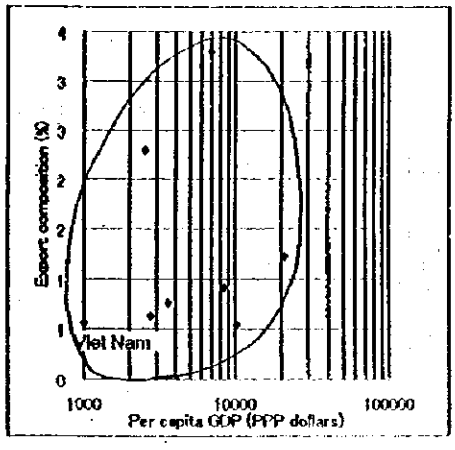
M7 Telecommunications equipment

IV. Advanced economy type



M10 Automobiles

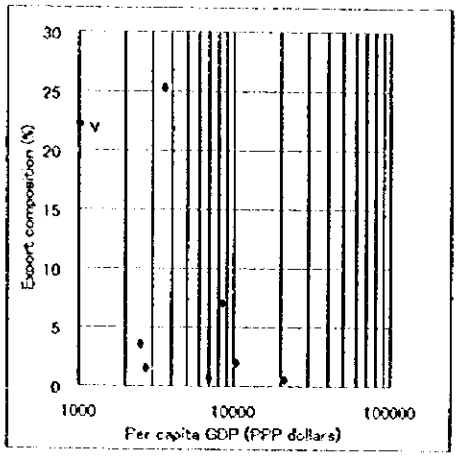
V. Uncorrelated with income



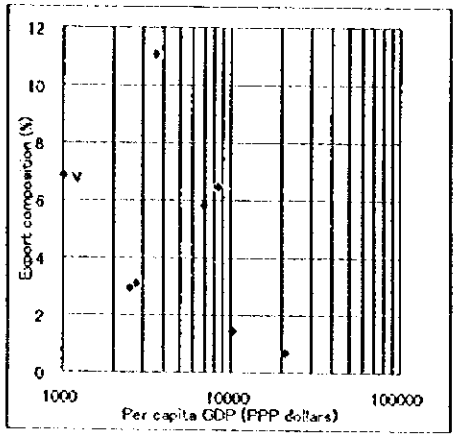
I9 Cement, glass and pottery

Figure 10 (continued)

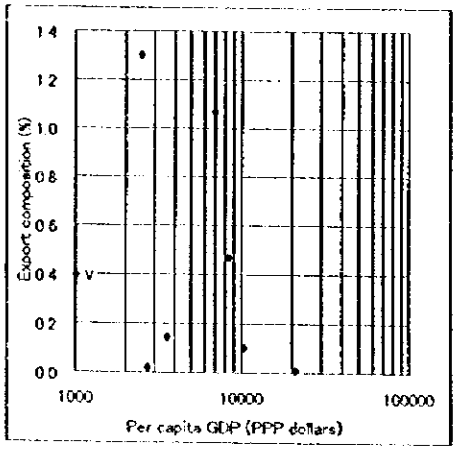
Primary commodity group



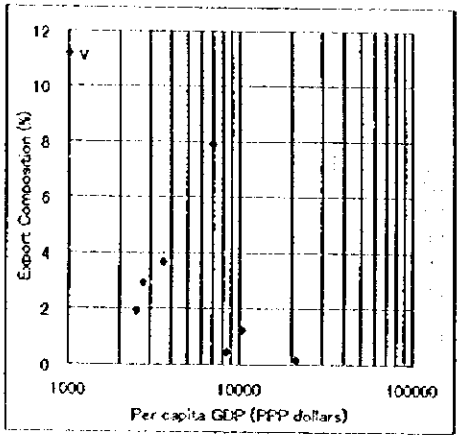
P1 Fuels



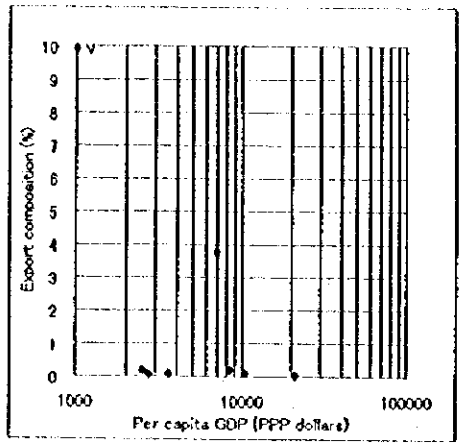
P2 Industrial raw materials



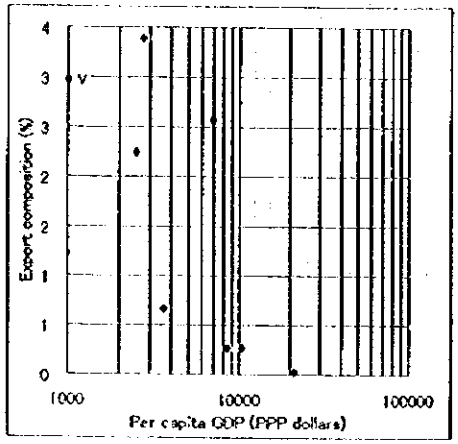
P3 Meat and dairy products



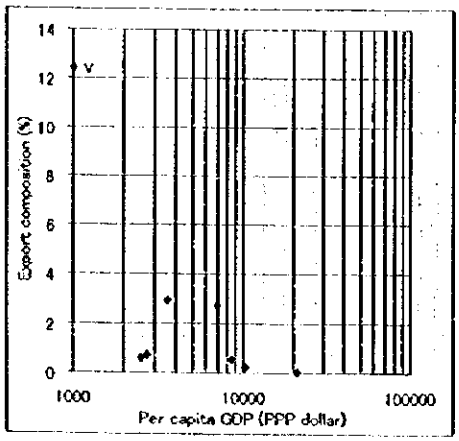
P4 Fish and other seafood



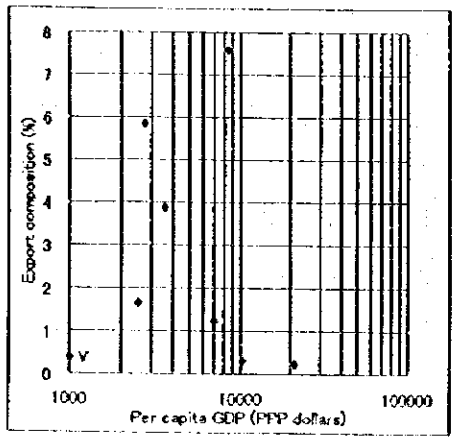
P5 Rice and other cereals



P6 Vegetables and fruits



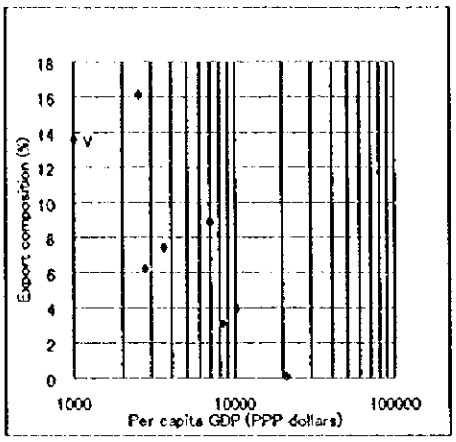
P7 Coffee, tea and sugar



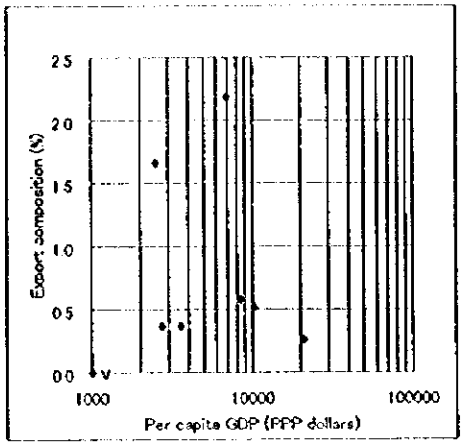
P8 Other food

Figure 10 (continued)

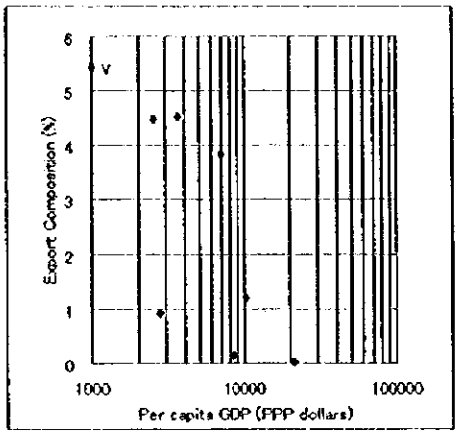
Light industry goods group



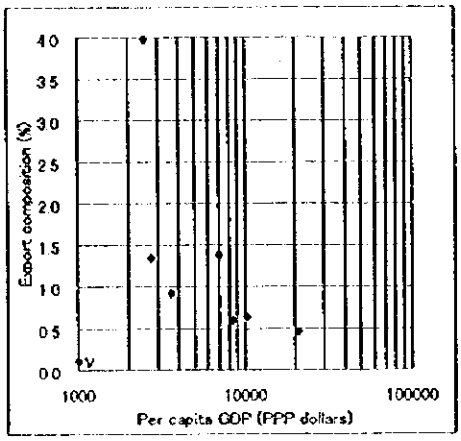
L1 Clothing and accessories



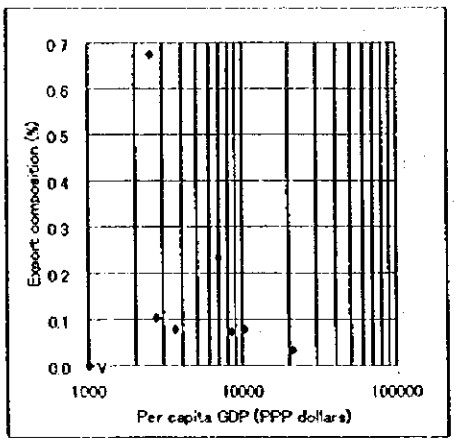
L5 Plastic articles



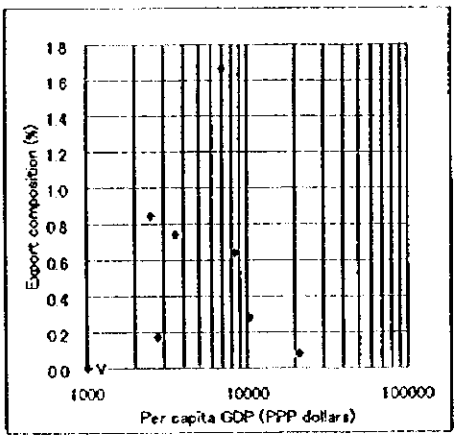
L2 Footwear



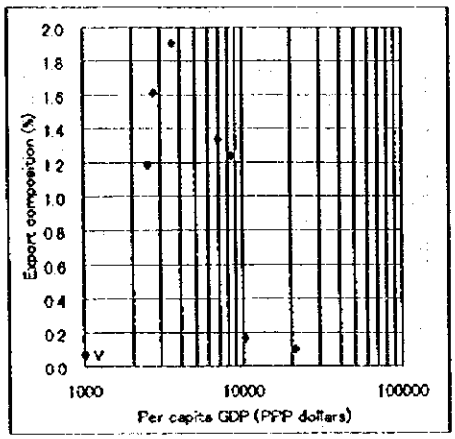
L6 Toys, games and sports goods



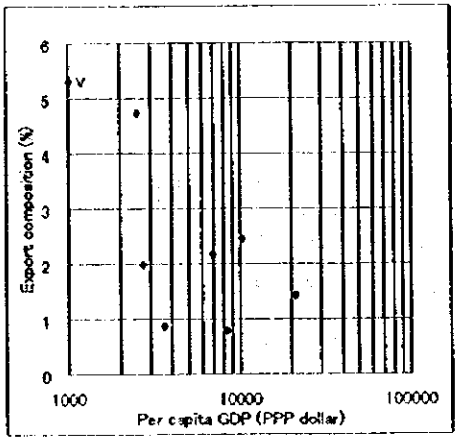
L3 Plumbing and lighting fixtures



L7 Art and jewelry



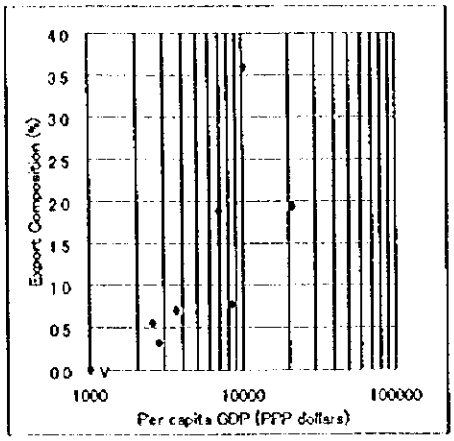
L4 Furniture



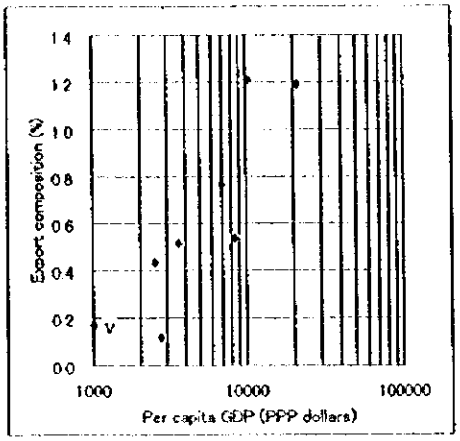
L8 Other light industry goods

Figure 10 (continued)

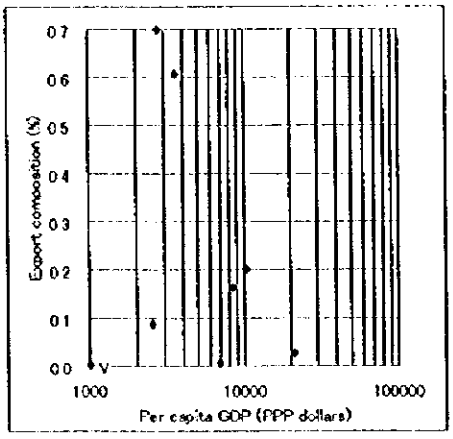
Intermediate inputs group



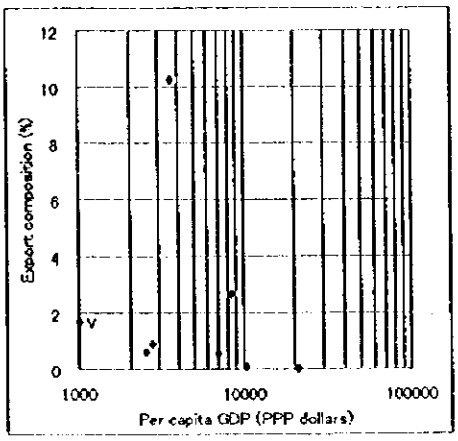
11 Polymers and plastics



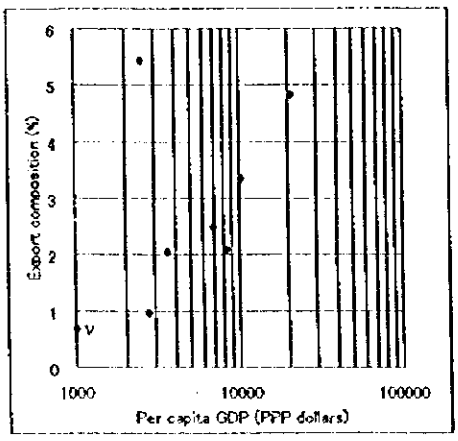
15 Rubber and tires



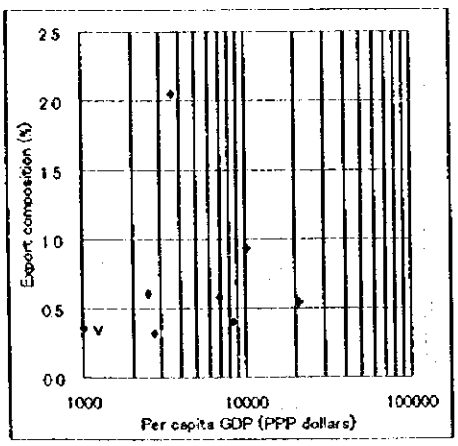
12 Fertilizers



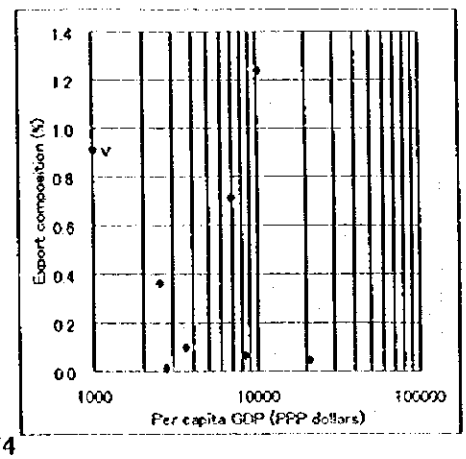
16 Wood products



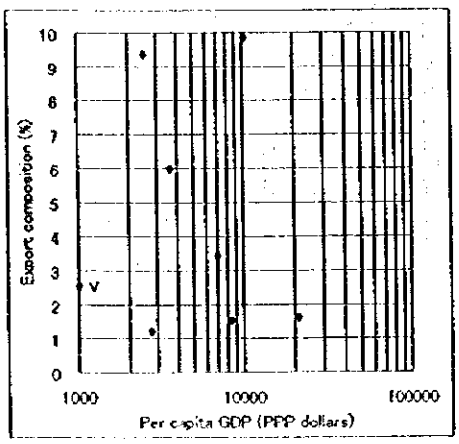
13 Other chemicals



17 Paper

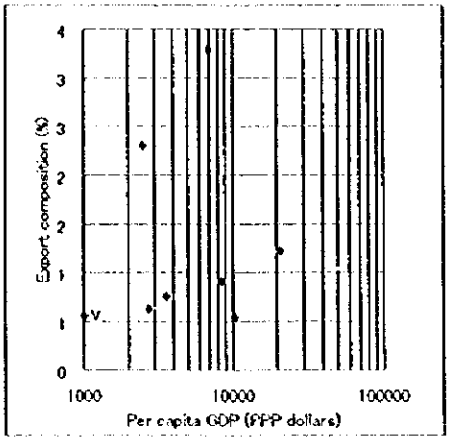


14 Leather and furs

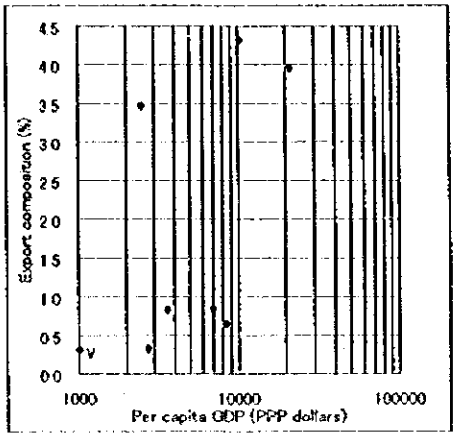


18 Textile yarns and fabrics

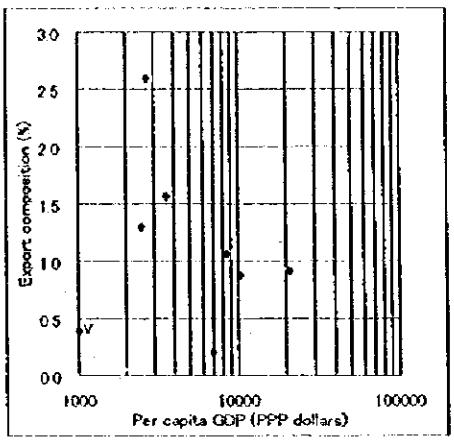
Figure 10 (continued)



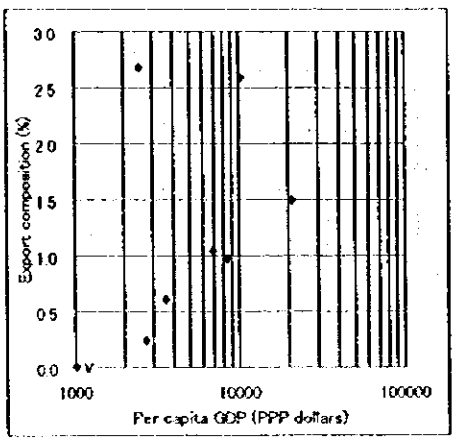
I9 Cement, glass and pottery



I10 Iron and steel



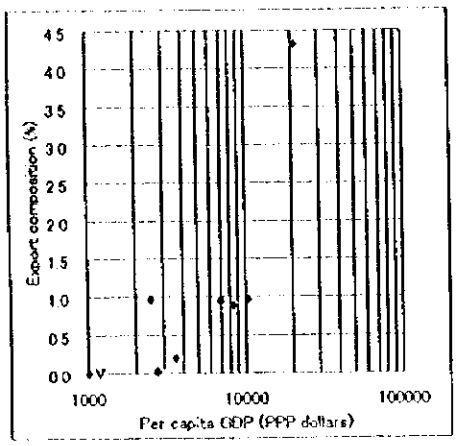
I11 Nonferrous metals



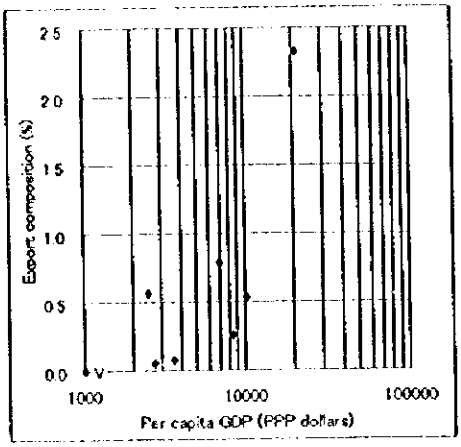
I12 Metal products

Figure 10 (continued)

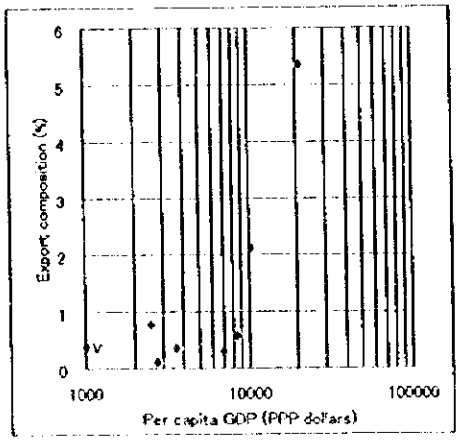
Machinery group



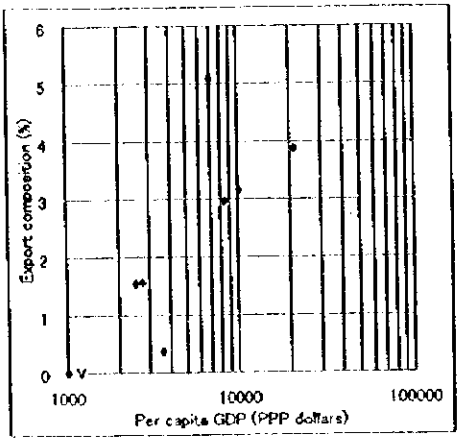
M1 Engines and power equipment



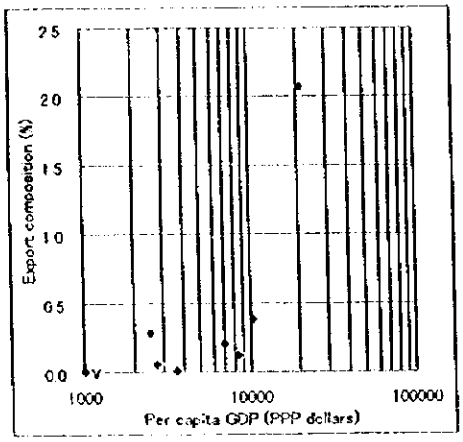
M5 Nonelectrical parts



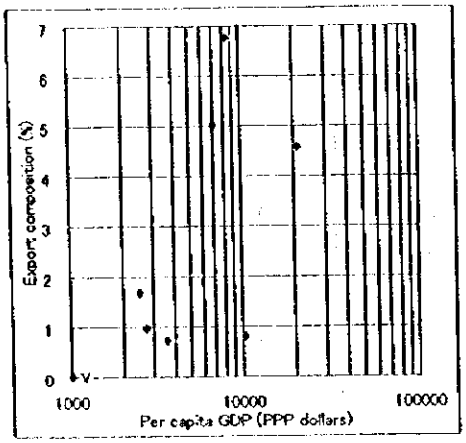
M2 Specific industry machines



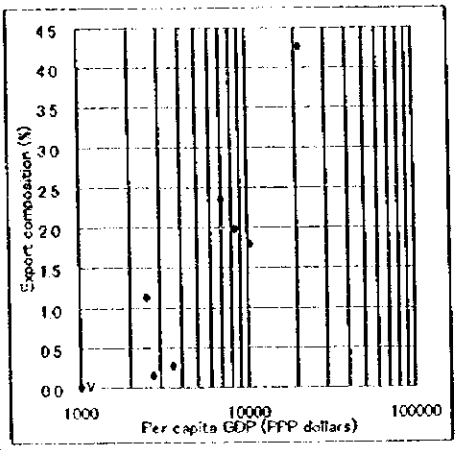
M6a Computers



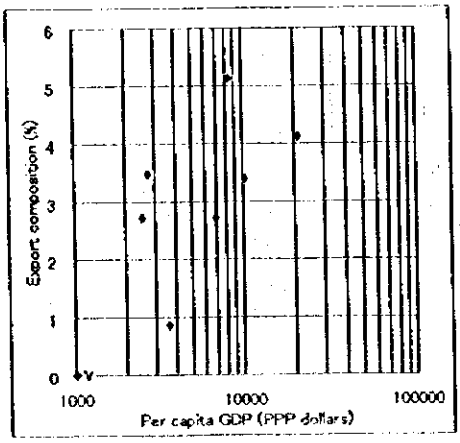
M3 Metalworking machines



M6b Office machines and parts (excluding computers)

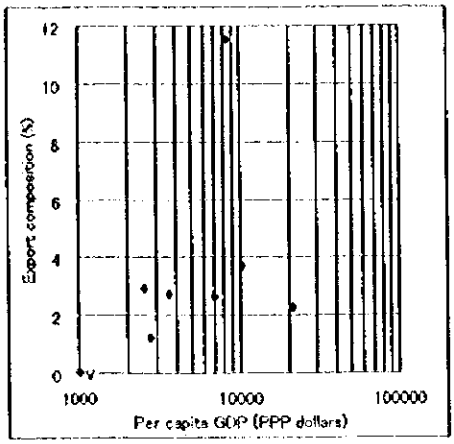


M4 Other industrial machines

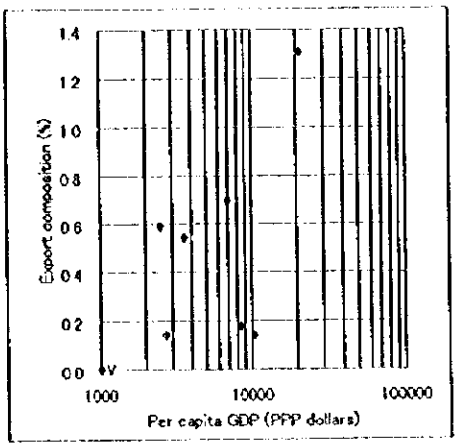


M7 Telecommunications equipment

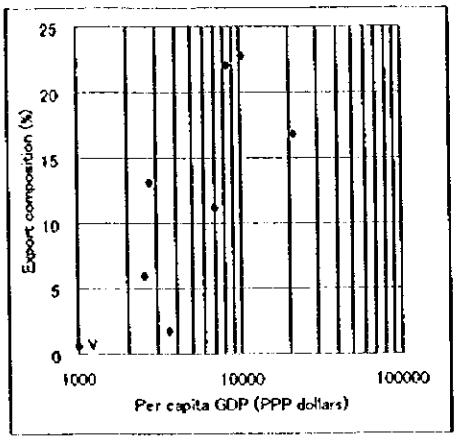
Figure 10 (continued)



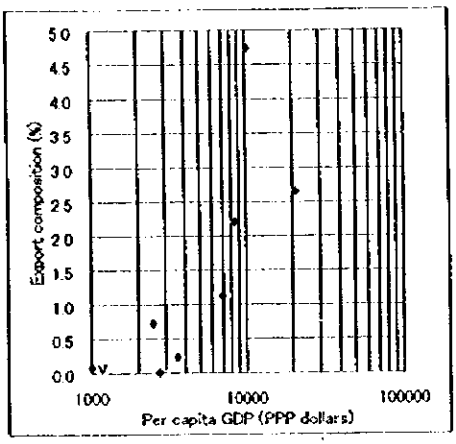
M8 Audio-visual consumer electronics



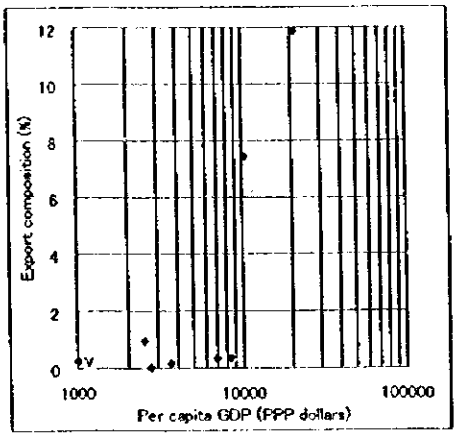
M12 Motorbikes and bicycles



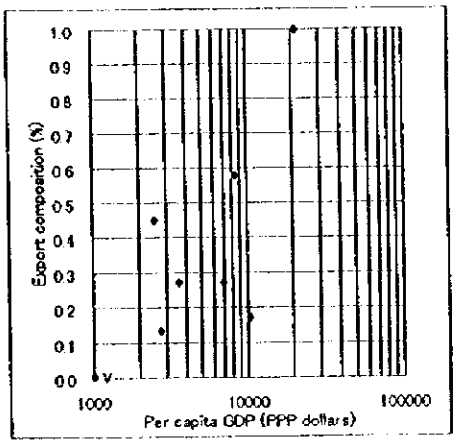
M9 Electric power machinery and parts



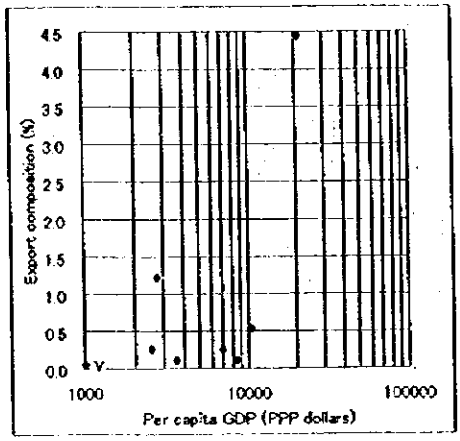
M13 Other transportation machinery



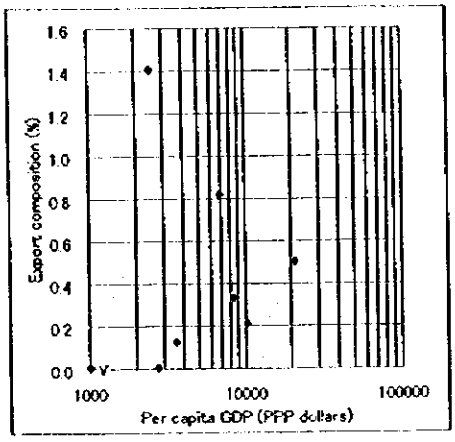
M10 Automobiles



M14 Cameras

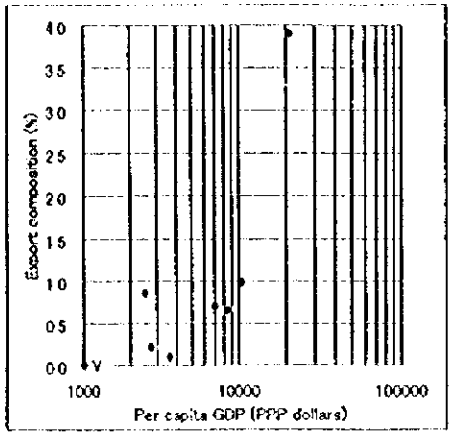


M11 Auto parts



M15 Watches and clocks

Figure 10 (continued)



M16 Other precision equipment

Agricultural and Rural Development

1

Introduction

1-A: Agricultural and Rural Development*

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The University of Tokyo
Seiji Shindo
IC Net Limited

I. General Remarks

Agriculture in Viet Nam has achieved impressively high growth performance since the start of Doi Moi policy. The systematic reform of managing agricultural production and marketing has been centered on relaxing the government's command on the farming and marketing activities and giving the freedom of decision-making to the farmers and the merchants. The high performance of agricultural growth was systemic reform to market economy in Viet Nam.

It should not be forgotten, however, that this systemic reform was necessary for agricultural growth, but is not sufficient as emphasized, in the Phase I report, for the further growth to develop the exportable sector and also to reduce the poverty in the rural areas. It has been clearly demonstrated in the process of Doi Moi that Vietnamese farmers have the capabilities of responding to the market incentives. But, it is not sufficient for promoting further growth only to provide the market incentives to the farmers through the systemic reform. The farmers are facing the underdeveloped market-institutions and suffering from the "market-failures" caused by the imperfect markets especially of products and credits. Vietnamese farmers are lacking the capability to gather the information regarding the international as wall as the domestic markets of the agricultural products. They also face the small-sized markets mainly resulted from the shortage of physical infrastructure such as roads and telecommunications. Needless to emphasize, such underdevelopment of the market-institutions is the major reason of the poverty in rural Viet Nam.

Judged from the above-mentioned findings, it should be emphasized that establishing the institutions and organizations of intermediating efficiently the scattered farmers and the national and international markets is urgently needed for further advancing agricultural production and reducing rural poverty in Viet Nam. The active participation of the government is highly recommended in the appropriate fields referred in the following analyses.

* The draft version of this chapter: Agriculture and Rural Development of the Executive Summary was initially written by the Japanese study team. The Vietnamese study team gave comments to the draft version which were incorporated into the final version. Thus, both sides are broadly in agreement to the final version of the Summary as presented in this report.

II . Diversification of Agriculture and Marketing Strategies of Agricultural Products of Viet Nam

1. Agricultural Diversification

Food crops, including paddy, maize, sweet potato, cassava and potato, are of predominant importance in the Vietnamese agriculture. Among food crops, paddy is overwhelming. Highly intensive and small scale family farms mainly growing paddy are the dominant features of the Vietnamese agriculture. Around 60% of the agricultural land are devoted to paddy farming, with two to three paddy crops per year being very common Rice is grown by nearly 80% of farmers, and provides food for their own as well as a source of the income. Paddy production has increased from 19.23 million tons in 1990 to 24.96 million tons in 1995 with the annual growth rate of 5.4%. After achieving the national self-sufficiency in around 1990, rice has been exported. In 1996 it exceeded 3 million tons which brought over US$ 800 million to the foreign exchange earnings to the country.

The growth of agriculture in the period of the early 90's has been largely achieved by introduction of new high yielding varieties and increased application of fertilizers and other inputs for paddy, and expansion of markets and small-sized irrigation in winter season for non-paddy products. Due to extremely small farm size of individual households, less than one-third of farm households is assumed to actually sell rice. As the per hectare income of paddy stands much less than those of other activities, farmers pursue to add new lines of agricultural activities to their existing ones thus to earn more incomes. In many areas where paddy production dominates farm activities, this means to diversify from paddy production. In the Red River Delta and elsewhere in which farmers are in subsistence conditions engaging largely in their own consumption while non-agricultural employment opportunities are limited, diversification of agricultural production is considered the only means to earn stable cash incomes.

The Red River Delta region can be divided into three zones according to the potential of diversification. The first zone is close to Hanoi and Hai Phong which has a good access to markets and slightly elevated lands suitable to grow vegetables and fruits. Diversification has relatively advanced in this area. The second zone is the vast flooding area of the delta where other crops than rice are difficult to grow, while the market access is inferior. Diversification in this zone is limited to a few food crops in winter season, and residuals after home consumption of vegetables, pigs and fish. Hilly uplands in the north and swamps in the south of the region constitute the third zone where diversification is currently limited. Yet with its good natural conditions, the zone has a great potential of diversification if transport infrastructure and local markets are developed.

Degree of diversification in individual zones and regions is affected by the respective agro-ecological and economic conditions. When changes in degree of diversification are illustrated by "diversification index" (see Box 1), the national index has advanced from 1985 to 1995, noticeably after 1990. Among seven agricultural regions, the Northeast South region shows most progressed in diversification, followed by the Mekong River Delta region. In these two regions, main diversified activities include sugarcane, vegetables, fruits, pigs and aquaculture. On the other hand, in other regions the diversification indices have shown no significant rise, or even a slight decline. Diversification index by region or zone should be carefully interpreted however as a different picture may appear at individual farm level.

Diversification of agriculture is a response to the growing demand for domestic as well as export markets. While the domestic market of agricultural products has expanded in the early 90's with the increased income, often it has not been enough to absorb all of the increased production, thus a resort

to exports has been sought. Main market features of Japan, Taiwan, Hong Kong, Singapore, other ASEAN countries and China are shortly reviewed in the following paragraphs, focusing on three agricultural products, i.e., vegetables, fruits and meats, including their processed or prepared products.

Box 1
Agricultural Diversification Index

In order to illustrate degrees, extents and changes of agricultural diversification, the Viet Nam Agricultural Science Institute (VASI) invented "diversification index." This index is a modification of the index of diversity used in ecology proposed by Simpson.

The Index of a region is the sum of values of production (or output) per capita of products in the region divided by the average production per capita of respective products of the whole country. Values of production are taken in constant prices, and agricultural population as the basis of calculation of per capita figures. Thus the more the number of products and production value in a particular region are, the greater the index of diversification of the region is. The index is calculated according to the following formula;

$D_i = \Sigma_j(X_{ij}/X_j)$

Where D_i: diversification index of the region i.

X_{ij}: value of production (output) per capita of the product j of the region i.

X_j: average production value per capita of the product j in the whole country.

It is evident that index numbers differ depending on the extent of area taken for calculation. For instance, if production diversifies at individual farm level but not in a region as a whole by offsetting each other, the index figure of the region hardly increases or changes. Trends of indices over time are generally more meaningful than absolute values. Thus index figures and their trends should be carefully interpreted to perceive extent and level of agricultural diversification.

Evolution of diversification in seven agricultural regions of the country is shown below in terms of the average annual growth rates from 1985 to 1995 of diversification indices.

North Mountain & Midland: −1.91
Red River Delta: −1.00
North Central Coast: −0.37
South Central Coast: −1.81
Central Highlands: −0.08
Northeast of South: 2.09
Mekong River Delta: 1.68

2. Market Features of Main East Asian Economies

(1) Japan

Japan is the leading food importer in Asia. As the annual per capita consumption for vegetables and fruits has remained unchanged for many years and somewhat declined, their imports have increased until 1994 and 1995 respectively. Several factors such as import liberalization coupled with reduction in tariff rates, an appreciation of yen against US dollar and several Asian currencies, and increasing dependence of food service and processing industries as well as retailers on imported products have contributed to the growth.

Currently, China is the largest supplier of vegetables, accounting for 45% of total imports in 1996. Chinese exports to Japan have risen sharply due mainly to its geographical proximity and inexpensive labor. In recent years a dramatic increase in exports of fresh vegetables has taken place. The United States is the second largest supplier with a 24% market share, followed by Thailand with a 4.9% share.

Imports from Taiwan peaked in 1991 and then gradually decreased. The US has steadily raised its exports to Japan with sophisticated management techniques for large-scale farming and an appreciation of yen against the dollar. In spite of these factors, as the Chinese export to Japan has rapidly expanded, the US market position has eroded.

Regarding fruit imports, US ranked top, comprising 38% of the market share, while it dropped by 7% last year. The Philippines is the second supplier of fruits with the dominant market share of banana. China is the third supplier having an edge for canned fruits. Regarding meats, imported beef is dominated by US and New Zealand, and Taiwan has the largest share in pork, followed by US and Denmark. Due to a drastic rise of chicken imports from China, Thailand was replaced by China as the largest supplier in 1994.

In 1995, food imports of Japan from Viet Nam ranked at the nineteenth among countries. Vietnamese exports to Japan are highly concentrated in marine products such as shrimp, prawn and cuttlefish. Although salted cucumber and ginger are imported as a raw material for pickles, their market shares are small compared with those of China or Thailand.

(2) Hong Kong and Singapore

Hong Kong and Singapore share many aspects in common. Both economies do not have a substantial agricultural sector, mainly relying on their hinterland for basic food. Both markets are open and functioning as a showcase to the neighboring countries together with the re-export base.

Hong Kong traditionally relies on China for foods, however US was very successful in penetrating into its food market last decade, enjoying approximate 20% of the market share, at the similar level with China in 1995. Due to steady income rise together with a growing number of tourists, the annual per capita food consumption has become closer to that of the western countries. This trend has pushed the demand for high value-added food which includes poultry meat, fresh and processed fruits, vegetables and beef imported from US, while Australia and New Zealand have a competitive edge in beef and dairy products. Not only western countries but also Asian and South American countries are aggressive in promoting agricultural exports to Hong Kong.

Singapore has a similar food market structure. With tariff levied only on tobacco and alcohol, there is virtually no trade barrier to foreign exporters, which actually benefits high value-added products from developed countries. However, unlike in Hong Kong, the US position in food imports is comparatively low, while fresh vegetables, tropical fruits and live animals are also imported from Malaysia, Australia and China. In spite of geographic proximity, Viet Nam's exports to these two countries are limited to a small amount of vegetables.

(3) Taiwan

Taiwan was one of the leading agricultural exporters in Asia before China emerged. Its export development was unique in having a strong linkage with the Japanese market and investment. With the rapid structural change, vegetable and fruit production for the Japanese market began to shift to Thailand in the 80's and later to China. However, such items as carrot, frozen green soybean and onion are still exported to Japan in considerable quantities. Pork is the most profitable agricultural export item. Nearly one third of Taiwan's hogs are slaughtered for export, practically all to Japan. However, due to the outbreak of foot-and-mouth disease in March 1997, the import of pork from Taiwan has been suspended.

Although trade barriers continue to hinder access for many agricultural products, food imports of Taiwan are on the rise with the steady economic growth. Competition is intensifying among the major exporters for gaining a share of Taiwan's growing food import market. The US position is

overwhelming with nearly 50% of the market share in both fruits and vegetables including their preparations in 1995. Viet Nam ranks at the fourth as a vegetable supplier with 5% of the market share. In particular, fresh or chilled vegetable imports from Viet Nam jumped in past several years, as a result Viet Nam is the second supplier of fresh or chilled vegetables with a 11% market share.

Viet Nam remains the ninth largest supplier of fruits to Taiwan, while Thailand has established a position of many kinds of tropical fruits such as durian, mangosteen and rambutan. Over 90% of Taiwan's beef consumption is supplied by Australia and US. Although imports of chicken meat is practically banned, if WTO-related trade liberalization is carried out, US and Thailand are in the favorable position to penetrate into the market.

(4) Other ASEAN countries and China

Recent dynamic economic upswing contributed expansion of upper and middle classes in these countries. Coupled with trade liberalization and the growing number of supermarkets, food imports have rapidly increased in the 90's. These countries import agricultural products not produced in own countries, e.g., beef and dairy products, while export tropical fruits to China and temperate fruits to other ASEAN countries.

The ASEAN countries with an exception of Malaysia are densely populated, their per capita incomes are still relatively low and a considerable part of their labor force is engaged in agriculture. They have high production potentials of the three commodities in question. Taking these factors into consideration, it seems that most of the increased demand would be met by increased domestic production in respective countries.

3. Potential for Future Exports

Viet Nam has a great potential in exports of salted and dehydrated vegetables, possibly frozen as well, with low labor cost and good skill. As food processors search for cheaper materials, trades of processed vegetables have increased. Japanese importers have initiated so called "development import" from Taiwan, Thailand, then China, Viet Nam and other developing countries in Asia. Imported vegetables are used by food catering and processing industries as low-cost materials. Nearly 80% of imported vegetables by Japan in 1994 were for processing.

In exporting fresh vegetables, whether of temporary nature at the time of crop failures in importing countries or of continuing nature, freshness is an important factor. Exports of fresh vegetables to Japan would confront strong competition with those from China which has already established itself in a firm position. Hong Kong, Singapore and Taiwan can be potentially promising markets. If Viet Nam can consistently export good quality produces in reasonable prices, a penetration into these markets is possible and promising.

While overall demand for fruits in Japan has remained steady in volume over long run, consumption of tropical fruits is increasing with a diversifying diet. As a result, their import markets would be comprised of relatively new products such as papaya and mango, while demands for banana and pineapple would not noticeably increase. In other Asian markets, the supply of tropical fruits are dominated by Thailand and the Philippines. These countries have long experience in exporting tropical fruits and established the brand names. Viet Nam has to increase the competitiveness if it intends to penetrate into the markets as a newcomer. On the other hand, there would be a good chance to export fresh fruits such as litchi and longan at attractive prices. Concerning meat, chicken has potentiality if Viet Nam succeeds in broiler production and processing for export markets utilizing inexpensive labor as Thailand did in the past.

Box 2
JETRO: Background of its Establishment and Development

When the external trade was open to the private sector in 1950, Japan suffered from a wide trade gap as imports far exceeded exports. Export promotion was badly needed as exporters were in a highly unfavorable situation in obtaining the information of customers abroad. They were in the situation of so-called "blind trade". In order to meet the need, an organization of information collection and distribution of overseas markets, JETRO (Japan Export Trade Research Organization) was established in 1951. Its initial fund was contributed by members and local governments, with a subsidy from the state. Later in 1954, in order to strengthen the financial and operating position in creating a fund, it became a foundation.

In 1958 as the Japan Trade Promotion Agency Law was enacted, the Organization changed the legal status to a special semi-governmental entity and the title to the Japan Export Trade Promotion Agency, afterwards in 1961 to the Japan External Trade Organization, while ever keeping the acronym as JETRO.

Following the establishment, JETRO has worked in market surveys of exporting commodities through its overseas resident offices and correspondents, and assistance to members and other people in external trade, and distribution of collected information. In addition to these tasks, JETRO engaged in collection and exhibition of overseas merchandise samples, participation in overseas exhibitions, and publishing services. The operations has ever expanded from surveys of overseas markets, and provision of market information initially carried out, to exhibitions and advertisements of Japanese products including the exhibition ships, improvement of designs of exporting commodities, and assistance for traders, producers and manufacturers.

Regarding agricultural products, in view of the significant share of agricultural commodities such as tea, canned tuna, canned mandarin oranges, mushroom and veneer boards in the Japanese exports at that time, the Japan Agricultural Commodities Export Promotion Council was established in 1955. Its mandate was wider than that of the then JETRO, covering adjustment of production with prospective market, improvement of market channels and provision of export credit in addition to market surveys and information provision. In 1958, with the establishment of the present JETRO as the integrated export promotion body, it was merged in it.

In several East Asian countries, export promotion of agricultural products is carried out by government agencies or semi-governmental organizations. In case of the Philippines, Bureau of Export Trade Promotion in Department (equivalent to Ministry) of Trade and Industry is the major agency responsible for. It promotes exports of specified commodities in setting target market for each commodity. The activities center to sales promotion in overseas markets. It also engages in the "matching" of exporters and importers and collection and provision of market information.

4. Government Roles in Export Promotion of Agricultural Products

Since exports of agricultural products are in principle carried out by the private sector including farmers' organizations, and state owned specialized companies, roles of the central government are basically limited to provide the basis for facilitating exports. Two areas, infrastructure improvement and assistance in increasing the access to foreign markets are emphasized in this connection.

Relatively high prices of fresh vegetables and fruits from Viet Nam are often attributed to the poor transport infrastructure from production sites to the product depots and further to shipping ports. Besides, lack of facilities such as freezers and refrigeration equipment at depots and ports makes it difficult to maintain the freshness and price competitiveness. A priority for promoting agricultural export, therefore, should be placed on the improvement of related infrastructure. This will in turn contributes to reduce the production cost and to strengthen the bargaining position of producers.

In the past, farm products were emphasized on the quantity rather than the quality. Under a market oriented economy, farmers must response to market requirements. Foreign markets are highly unique according to countries and commodities. In fact, producers largely rely on foreign buyers who control the market to obtain information. In order to negotiate with them and gain greater benefits, producers

and their organizations should acquire and be knowledgeable to foreign market situations. An institution would be established which provides information of market trends, quality control and requirements, trade related regulations, plant quarantines and so forth. Such an institution can also facilitate to exchange the information between producers' organizations and overseas buyers so as to avoid oversupplies and upgrade product quality. In this connection a reference is made to the Japanese experience regarding the Japan External Trade Organization (formally called the Japan Export Trade Promotion Agency). A few other countries in East Asia have similar promotion bodies. Box 2 "JETRO: Background of its Establishment and Development" presents a background information in this regard. Common to these bodies, export promotion is also carried out by means of exhibitions and trade fairs and assistance to traders and producers in exploring markets.

III. Building New Agricultural Cooperatives

1. Present Situation and Problems of Agricultural Cooperatives

Agricultural development in the past decade in Viet Nam has been led by intensification of production as typically demonstrated in paddy, and diversification from main crops, in most cases paddy, to other crops and activities. In the Red River Delta specifically, these developments to a large extent have been initiated and carried out by farmers' cooperatives having remained active in the 90's. These cooperatives have served irrigation, electricity, seed proliferation, and sometimes as intermediaries in collecting and marketing agricultural products. Many cooperatives also engage in small industrial production of bricks, textiles and organic fertilizers.

Agricultural cooperatives have been non-governmental organizations. They are deeply rooted on the traditional rural structure, thus represents village communities. In the North at present, People's Committee of many communes are consigning tax collection, construction and maintenance of schools and medical centers to cooperatives. This can be regarded to take place because of the capacity of cooperatives rather than that they subordinate to People's Committees.

Cooperatives face many problems and constraints. Firstly, for lack of stable financial resources, they cannot hire and keep full-time professional staff. In fact many cooperatives are operated by the managing staff working on a volunteer basis. Secondly, many cooperatives suffer from non-active capital such as undisposable real assets and arrears of loans to members, as a result have little operative capital. Borrowings from financial institutions are not workable due to the high interest rates for long-term loans or service provision operations. Thirdly, many of them have been established based on administrative village unit ("xa") or a few to several natural hamlets ("xom"), thus are too scattered and small to exchange information among each other, to conclude production agreements with outside agencies and to accumulate the capital.

Needless to say, cooperatives should serve their members. This is fundamental to any cooperatives which is reflected in the New Cooperative Law and its model statutes. Activities of cooperatives should be initiated, participated and implemented by members. In small family farms, production and living are integrated into the household economy which seeks a cooperative serving all aspects of the interests of farmer members such as purchase of inputs, marketing of products, financing required funds both for production and households, and savings. Under these circumstances, as seen in the experience in Japan and a few other countries in Asia, multi-purpose agricultural cooperatives may be regarded as the suitable type of cooperatives.

2. Establishment of "Cooperative Unions" and "Agricultural Cooperatives Information Center"

In view of the constraints currently faced by cooperatives in the North which are organized in one hamlet or a few combined, it is proposed to establish "cooperative unions or federations" (Lien Minh Hop Tac Xa) in selective areas as models. At first a model area is selected where active cooperatives exist, and imminent effect by constructing local industries and infrastructure is expected. A group of farmers in cooperation with cooperative leaders, government officials and industry managers makes an inventory of past experiences regarding cooperative activities of the area, and identifies and prioritizes activities of the cooperative union. Their functions include: to coordinate production and marketing in the area; to engage in, on behalf of member cooperatives, negotiations with buyers, traders and marketing/processing agencies; to give guidance to members of production and processing techniques; to provide transportation services; and to establish processing factories likely as joint ventures.

These unions may be organized in the geographical coverage of a district ("huyen"). They should not be established uniformly in every district, but upon initiatives and needs of concerned cooperatives. Establishment and performance of such unions are expected to encourage other inactive cooperatives to join. While these unions are independent of government agencies, the government would encourage and facilitate their establishment, for example, in drawing guidelines, guaranteeing loans, and transferring public assets like lands and ponds, pumping and electric stations.

It is reiterated that exploitation of overseas market of agricultural and rural products, along with that of domestic market, is crucial for promoting diversification. In order that markets are successfully exploited and producers receive a proper share of benefits, timely and appropriate provision of market information, promotion of products, negotiations with purchasing companies, processors and traders of products are required.

While cooperatives and their unions are responsible for group activities in their constituencies, information provision and marketing activities of a wider nature would be most effectively handled by establishing an "agricultural cooperatives information center." Its functions include: overseas market information collection and distribution; research on operations of major trading corporations engaged in agricultural trade; resources and technology inventory of individual cooperatives; and intermediation in negotiating production and sales contracts among cooperatives, cooperative unions and buyers. Again the center should be established according to needs, perhaps at regional "lien tinh" level but not necessarily in every region. In the future if a national federation of cooperatives is established, it would take over the center's functions. Meanwhile the government supports are required, thus the center would take a form of non-profit semi-governmental organization.

IV. Increasing Off-Farm Employment Opportunities in Rural Areas

1. Employment Situation in Rural Areas

Together with agricultural diversification, an important strategy for improving rural economy is to generate non-farm employment opportunities especially in rural areas where rural people could work and earn on a sustainable basis. In fact, around 80% of total population of Viet Nam are living in rural areas and 72% of the total labor force engage in agriculture and forestry. The agriculture sector has absorbed more than 70% of the annual increment of labor force in the past few years. As a result, the ratios of rural population and agricultural labor force to the total population and total labor force

respectively remained unchanged in spite of the rapid economic growth. On the other hand, the growth rate of labor force is expected to be higher than the overall population growth, reflecting the current demographic structure of the country. Therefore, employment generation in rural areas is of particular importance for the socio-economic development of the country.

Although information regarding the employment situation in rural areas is very limited, according to the Viet Nam Living Standards Survey 1992-93, unemployment ratio of economically active population in rural areas was reported as 6.87% while that of the urban areas was 9.40%. Of these unemployed, those who responded as "no job" or "do not know how to find job" as the reasons of unemployed accounted for 11.09% in rural areas and 13.75% in urban areas. By the nature of the survey, the figures may not duly reflect the actual situation, but the unemployment ratio seems not so high as it is generally perceived. Nevertheless increasing population in rural areas and labor force in the agriculture sector exerts additional pressure on farm land which is already very small.

In the same survey, employment in agriculture and non-agriculture were observed. In rural areas, those "farm self employed" accounted for 55.1%, and those "farm self employed plus wage earner" and "farm employed plus non farm self employed" accounted for substantive shares, which clearly showed the high dependence on off-farm employment in rural areas. Regarding main income of rural households, dependence on the non-farm sector in rural areas was as high as 52%. Comparison of working hours per year between the urban and the rural showed that the working hours per capita in rural was as 1,597.4 hours, or approximately three-fourths of that of the urban.

Though comprehensive information and statistical data on rural to urban migration are not available at the moment, a UNFPA project and an ESCAP study provide some insight. As these surveys excluded many individuals, especially short term or seasonal migrants who are not accommodated in the registered households, the real picture seems hard to capture. Though freedom of residence is guaranteed, there exist rules and regulations to effectively limit the excessive inflow of the population to major cities like Ho Chi Minh City and Hanoi. Without obtaining residential permits from authorities, one is not eligible to receive social benefit, including health and education.

Reflecting the situation, migration from rural to urban areas seems not so much in a high pace at present as generally observed in other developing countries. Because of the lack of the comprehensive study, especially regarding non-registered and seasonal migrants, it seems difficult to make any solid comment on migration at the moment, but the general observation might be interpreted that, in addition to the rules and regulations mentioned above, pushing forces in rural areas due to poverty and pulling forces in urban areas are both not so strong as generally assumed in the present Viet Nam.

In Red River Delta and elsewhere in Viet Nam, there exists a variety of rural industries such as spinning, weaving, pottery, metal works, wood and bamboo works, lacquer wares, brick making and food processing. In addition to these so-called traditional local industries, there also exist SOEs such as sugar refineries, pulp and paper mills and coffee/rubber/tea plantations, a number of them being established as core industries in New Economic Zones. Further, in the course of transition to a market economy, small scale enterprises, notably garment factories, are emerging. Personal commercial activities (peddlers) mostly by rural housewives are often seen in rural and urban centers.

2. Current Efforts for Increasing Job Opportunities in Rural Areas

The government has been taking various policy measures for increasing job opportunities in both rural and urban areas, especially since 1992. Notable one is the National Program on Job Creation, having been implemented since April 1992. The Program includes the National Fund for Job Creation with the performance of total disbursement of 1,129.6 billion VND until June 1996, international cooperation programs and the establishment of Vocational Training Centers nationwide. Through

these and other programs, 4.94 million people were reportedly provided jobs, of which 1.83 million were in the agriculture sector.

To obtain actual information on the non-farm job opportunities in rural areas, a number of enterprises including SOEs at central, provincial and district levels, cooperative enterprises, stock companies and family business in four provinces of northern Viet Nam were visited. At varying degrees, all of these enterprises face many challenges but also have potentials yet to be exploited. It was found that job opportunities in the off-farm sector in rural areas are highly diversified both in scale and contents. No prototype of rural industry can be drawn and the creation of employment should be considered and developed taking into full account of the specific conditions at commune and district levels.

The visited SOEs are all involved in processing of agricultural products with positive impacts on job creation in rural areas In these cases, infrastructure development such as transportation and communications, electricity and water supply is the prerequisite. Further, due attention is to be paid to avoid possible adverse effect on environment. Local industries varying from spinning and weaving to embroidery, silverware and lacquer ware have long history and traditions but many are facing difficulty in identifying and expanding market, together with difficulty in renovating facilities due mainly to lack of funds. Coupled with these problems are stagnant technological innovation and shortage of the successors.

3. Directions and Policy Options for Increasing Rural Non-Agricultural Employment

Employment issues in rural areas should be tackled from the aspect of socio-economic development of respective areas. Accordingly it should be duly incorporated into the socio-economic development program of the particular areas, and job creation effort should be compatible and conducive to development of the target area as a whole. As no prototype of rural industries common to different areas can be derived, initiatives and efforts of rural inhabitants should be encouraged and mobilized for the successful program development. In this connection, the cases of township and village enterprises in China provide successful examples of development of this kind which seem to be worthwhile to be studied for the successful implementation of regional development in Viet Nam.

The government, both central and local, should play an essential role in employment generation in rural areas, especially in infrastructure and loan facilities. On the other hand, in marketing and others areas, the government might better be an advisory body, giving support and advice upon requests. Coordination among existing programs related to employment and other measures should be pursued for the benefit of long-term development of respective areas.

Followings are suggested policy options for increasing rural non-agricultural employment:

(a) Infrastructure improvement. In promoting any industry in rural areas, infrastructure such as transportation, communications, electricity and water supply are essential;

(b) Improved access to funds is required. Many enterprises are facing difficulties in obtaining funds necessary for initiating, renovating and expanding their activities. To meet these requirements, expanded loan facilities should be considered;

(c) Strengthening marketing should be given a high priority. In many cases of local industry, due to small scale and many producers with a variety of products, they have a limited bargaining power in their sales of products. New product development and expansion of markets, both domestic and abroad, are also difficult to be carried out by individual enterprises. To overcome these difficulties, efforts should be taken by creating "trade associations." Organizationally they are similar to cooperative unions, and initiated and supported by member traders. Some activities of these associations would be conducted in cooperation with other organizations;

(d) Central and local wholesale markets. To connect urban and rural areas in commodity transaction, establishment of wholesale market in major cities and provincial centers would better be considered. This will encourage smooth and effective flow of commodities between urban and rural areas, increasing employment in the service sector; and

(e) Tourism industry in rural areas has potential though demand is rather limited at the moment. In promoting tourism in rural areas, infrastructure improvement is the prerequisite, but at the same time full attention should be paid on environmental aspect.

V. Development of Rural Infrastructure in the Red River Delta Region

1. Current Situation of Rural Infrastructure

For past two decades, Viet Nam has continuously invested in irrigation, drainage and flood control. Indeed, it has contributed to increase paddy production, and at a lesser extent, diversification to non-paddy crops and other farming activities. Investment in other rural infrastructure has also been active. This chapter intends to look into the situation and development of rural infrastructure taking the Red River Delta region as a case where the development has been actively pursued and related issues are typically demonstrated.

The Red River Delta region accounts for only 4% of the total area, and 9.4% of the entire agricultural land of the country. With the population of nearly 18 million, the region constitutes one-fourth of the country's total population. The region however provides some 20% of paddy produced of the country thanks to steady increase in the productivity in the late 80's and early 90's. The Delta has abundant water resources which have been developed over centuries. Rural road networks are denser than other regions and electrification equally covers rural households at the highest ratio. Yet it has not completely eliminated yearly fluctuation of outputs even a possibility of recurrence of poor harvests. Further increase in productivity of paddy at the similar growth rate as before is a great challenge in view of its high level already achieved. Due to its economic, social and political importance, a steady improvement of rural economy of the region is considered to be crucial to sustainable socio-economic development of the country.

The Delta is divided by some thirty irrigation and drainage systems protected by dikes and banks. Since the 60's, these systems have been equipped with large pumps serving both for irrigation and drainage which have contributed to ensure irrigation water and to mitigate water logging which is inherent to gravity irrigation/drainage. At present there are approximately 1,700 pumping stations with some 6,800 pumps. The area served by pumping irrigation is estimated to be nearly two-thirds of the total irrigated acreage. Nevertheless, on average, about 20% of the sown areas of both winter/spring and summer/autumn paddy were short of irrigated water, and some 100,000 hectares of the area suffer from and some 200,000 hectares are at risk of flooding or water logging every year. Most irrigation and drainage facilities have been repaired and partially replaced for years, but main structures have remained unchanged. Dredging of canals and overhauling of structures have rarely been carried out. Efficiency of irrigation and drainage thus declines, and operation and maintenance (O & M) costs increase.

In irrigation/drainage systems, tertiary canals play an important role to effectively provide water to and drain it from fields. Prevailing arrangements of tertiary canals, usually used for dual purposes of irrigation and drainage, do not allow to directly distribute water to individual plots of fields, thus

often needs the manual lifts of water to plots with a slightly higher elevation. Since O & M of tertiary canals are the responsibility of individual farmers or their associations/cooperatives, sometimes shortage of funds and difficulty to mobilize labor contributions make it difficult to properly maintain them and their related facilities.

Tiny and scattered parcels of farm land are the popular phenomenon in the Red River Delta. Farmers must cross over parcels and bunds of other farmers before reaching his own land for lack of farm roads. Although consolidation of these small parcels is considered difficult due to their scattered distribution and delay in issuing of land tenure certificates, initiatives in this regard have reportedly been taken in a few communes and districts of the region.

Rural roads in the region is at least in figures more dense than other regions. However most of inter-commune roads are not paved and do not allow vehicles and in rainy season even bicycles to pass. These roads are particularly relevant and essential to promote agricultural diversification and rural industrialization in increasing the access of farm products to markets and rural people to employed locations. Together with virtual lack of in-commune and in-field roads, the inferior conditions hinder marketing and working outside communes.

2. Capital Investment and O & M in Rural Infrastructure

Capital investment in rural infrastructure such as irrigation/drainage/flood protection, rural roads and rural electrification are estimated to have yearly increased in the order of 2 to 3 trillion VND for 1989-1995 at constant 1989 prices. This increase represents an average annual increasing rate of 8.7%. Compared with the rates of increase in fertilizer inputs and other assets, however, the increase in capital stock of rural infrastructure has been slower. Future investment in rural infrastructure, as shown in the Public Investment Program for 1996-2000, indicates that expenditure from state budget for rural infrastructure comprises 20.9% of the total expenditure. An estimated amount of 20 trillion VND is planned to be allocated to rural infrastructure including 14.5 trillion VND for water resources development for the five year period. According to the incremental capital output ratio (ICOR) of 2.33 calculated from the figures of 1992-95, a 10% annual increase in capital investment is required for securing an annual increase in output of 4.5%. Meanwhile a considerable part of the investment in rural infrastructure in the region has been funded by international organizations in which water resources development most important. The overview and general approach through these projects are presented in Box 3.

Box 3
Approach of International Organizations in Rural Infrastructure Development in Red River Delta

A major part of financial and technical supports for developing rural infrastructure in Red River Delta has been borne by international organizations such as United Nations Development Programme (UNDP), the World Bank and the Asian Development Bank (ADB). The most important project currently under implementation is the Red River Delta Water Resources Sector Project of ADB. Objectives of the project are to rehabilitate and develop water resources facilities, including repairing and replacement of pumping stations for irrigation/drainage, rehabilitation of intake and drainage sluices, and dredging of canals. As a sector project covering the whole area of the delta, the project comprises 35 sub-projects with a total cost of US$ 75 million to be implemented for a five year period.

In addition, the World Bank has started a project for improving some 5,000km of rural roads with a cost of US$ 55 million. This is also a sector project in which roads in the delta will be included. The World Food Programme (WFP) has long been implementing a series of projects strengthening coastal dikes protecting the delta from intrusion of sea water and flooding from rivers.

Beside of the above projects, the Red River Delta Master Plan was carried out by UNDP in cooperation with the World Bank in 1995. It aimed at indicating the guidelines of development of the delta region as a whole and at specifying priority projects. Another attempt was Viet Nam: Water Resources Sector Review carried out by the World Bank jointly with ADB, UNDP, Food and Agriculture Organization of the United Nations (FAO) and Ministry of Agriculture and Rural Development (MARD) of the Government of Viet Nam. This study, covering all over the country, reviewed the situation, identified constraints to development and indicated issues. It recommended to set up water resources development plans according to main river basins, to place an emphasis on short-term and quick-matured projects while calling for a re-evaluation of long term projects like the Son La dam.

Scopes and means pursued by these projects and studies vary according to the respective organizations and projects. They however appear to share the view that with limited available resources and implementation capacity, in order to maintain and increase agricultural production as well as to promote agricultural diversification, rehabilitation, capacity enhancement and partial replacements of existing irrigation/drainage facilities are most effective. While urgent action is required in this respect, in medium and long term, minor and on-farm irrigation and drainage need to be further developed without which water cannot reach farmers and farm plots. Agricultural diversification is constrained unless water can be controlled down to small plots and transportation of products is secured. Moreover if an integrated approach combining development of main and tertiary canals together with farm plot consolidation and organizing farmers would be pursued, effect of infrastructure development should be more significant and sustainable.

3. Policy Options for Development

For resolving and overcoming the above constraints, the following policy options are suggested:

(a) To review existing development plans of rural infrastructure from the aspects of agro-ecological situation and availability of water resources according to regions and areas, and roles of concerned institutions such as central and local governments, water management companies, cooperatives and individual farmers are specified;

(b) In developing irrigation/drainage infrastructure, an integrated approach encompassing main and tertiary facilities, together with consolidation of scattered farmland plots and construction of in-field roads, would be adopted and pursued;

(c) The state budget would be allocated with a priority to rural infrastructure investment. Regarding water fees, the present chronic deficient situation would be rectified by reviewing the level of water fees and by justifying to allocate other public funds for this purpose;

(d) In order to enhance the access of agricultural products to markets and rural people to employment opportunities, "market spheres" are specified, and related infrastructure such as rural

roads, particularly at commune level, and local market facilities would be improved; and

(e) Since natural and socio-economic conditions related to agricultural and the consequent infrastructure development are largely specific to individual regions and areas, similar studies to this one undertaken for the Red River Delta region would be carried out for other regions.

Costs of planning, construction, repairs and replacements of main structures and related facilities of large-sized irrigation, drainage and reservoir works with the command area of 150 hectares and above are in principle financed from the state budget, while cost of works with the command area of less than 150 hectares are carried out by local governments and beneficiaries with their funds and contributions. Smaller sized projects within one commune are totally constructed and maintained by the local people. O & M of facilities are transferred to provincial governments after completion, in case of irrigation/drainage facilities to provincial irrigation managing companies. These public companies are delegated to collect water fees from beneficiaries which are expected to cover the cost of administration, electricity and regular repairs. In practice, farmers' organizations often cooperatives take charge of the collection. In many cases, collected fees are below the required costs of O & M which results in the failure of proper O & M of canals and related structures and declines in the operation efficiency. Regarding rural roads, O & M and funding channels are similar to those for irrigation/drainage systems except irrigation management companies.

VI. Factors for the Successful Development of Rural Finance

1. Current State of Rural Finance in Viet Nam

Crucial to improvement of rural economy is provision of funds and credit to farm households together with public capital investment. Commercialization and diversification of agriculture has increased the need for funds and rural finance. Rural finance system in Viet Nam was restructured at the beginning of the 90's and the performance since then can be regarded as a success in view of achievements in increasing the amount of loans, mobilizing savings, expanding outreach, and recovering satisfactorily loans. In operational terms as well, a reasonable profitability has been maintained by financing institutions while reducing the dependency on the central bank.

Rural financing institutions in Viet Nam include the Viet Nam Bank for Agriculture (VBA), People's Credit Funds (PCFs), Rural Shareholding Banks (RSBs) and special finance programs as represented by the Viet Nam Bank for the Poor (VBP). Besides, the informal finance from such as money lenders, merchants, "ho," relatives and friends plays a significant role. Among the formal finance, VBA has been the dominant institution in the area of rural finance. It is important to note that rural finance of Viet Nam has evolved with VBA, which has been a financing institution with an aim to implement government policies. It is a similar financing institution with the Bank of Agriculture and Agricultural Cooperatives (BAAC) of Thailand, which has operated and developed on the basis of the nation-wide network while enhancing staff capability and introducing new financing techniques. VBA is however different from BAAC in several aspects. While BAAC lends at an interest rate lower than the market rate, and in turn is entitled to receive public funds, VBA has not lent money at a lower than market rate and government budgetary subsidies have been decreasing, and the ratio of savings and deposits in raised funds is higher. On the other hand, political and administrative organs like People's Committees and rural mass organizations like Women's Unions and Farmers' Unions are deeply involved in the VBA's operations.

Funds for lending of VBA particularly for medium and long term loans are not enough, and its

costs of financial intermediation are high. Shortage of funds should be overcome by mobilizing funds from savings. Expanded mobilization of medium and long term savings, promoting issuance of land use certificates, and establishing mortgage schemes should contribute to increase funds available to long and medium term loans. In order to enhance its efficiency, streamlining of the staff together with their training should be pursued. Expansion of branch offices combined with mobile banking should be carried out.

The development of rural finance in the recent years in Viet Nam can be categorized as a "from the top" or "policy oriented" finance. This perception may be underlined by the fact that the government subsidized part of the initial capital of VBA, the borrowing from the State Bank of Viet Nam (SBV) constitutes a considerable part of funds, and VBA itself has been a financing institution for implementing government policies. Yet VBA has not provided low interest loans to farmers and its interest rates have been at the same level as of other commercial banks. This may be important from the viewpoint of development strategy stressing financial sustainability. On the other hand, the performance of VBP, which supplies cheap loans for the targeted people, should be carefully scrutinized especially from aspects of sustainability of subsidized credits, checking the levels of loan recovery. Nevertheless achievements of VBA are considered commendable particularly since they have been accomplished in a short period of six years.

2. Rural Finance by the Cooperative System

Rural finance by the cooperative system remains an important issue in search for the future pattern of rural finance. The traditional and deep-rooted practice of mutual support in the rural Viet Nam, particularly in the North, underscores the potential as well as the feasibility of cooperative finance. It also brings many benefits for farmers, while mitigates the negative effects caused by the dominant even "monopolistic" position that VBA occupies in the entire rural finance. As shown in the experience in other Asian countries where roles of commercial banks in rural finance are limited for one reason or another, finance by private against public institutions would be best carried out by a cooperative credit system.

When a cooperative credit system is envisaged in the rural Viet Nam, a multi-purpose agricultural cooperative popular in East Asia comes to mind. Multi-purpose agricultural cooperatives are based on ties among people living closely in an area or community who organize themselves into a cooperative which have many functions serving the members, taking an advantage of the "economy of scope." Thus in the circumstances in which many small farm households prevail and mutual support practices persist, these cooperatives would be the ideal feature of cooperatives in which financing services are included.

Yet it may not be realistic to plainly assume such a type of cooperatives as the ideal in the present Viet Nam. Situation of the country has been affected and constrained by its own historical background and the consequent stages of development. Specifically constraints to be considered in drawing a future rural financing system include: farmers have a negative perception against old cooperatives; debts of cooperatives remain unsolved or even serious in some areas; PCFs, cooperative type financial institutions, already exist in rural areas; but PCFs cannot be considered to fully carry out cooperative functions in spite of their some positive records; and in the medium and long run, demand for loans from rural areas will decline while the demand from urban areas will increase significantly.

3. Future Directions of Rural Finance in Viet Nam

It is neither feasible nor pertinent to define the future role of cooperatives in rural finance at this juncture. Instead three scenarios of possible directions of the future rural finance system are hereby indicated.

The first scenario is to basically maintain the present system. Two financing institutions, VBA and VBP, would continue to play the major role in rural finance which would be complemented by PCFs as cooperative financing institutions. PCFs would solely perform financing activities while other cooperative activities would be carried out by newly established agricultural cooperatives. There may be some changes in the respective shares of these three institutions in rural finance, but PCFs are unlikely to ever grow into a dominant position. Since they provide only financial services, PCFs will be unable to meet other needs of rural communities. Should other rural organizations spring up on their own and provide cooperative functions, they will still be limited because those functions will be separate from financial services. This will not secure satisfactory levels of economic benefits for rural communities. Government institutions will continue to lead rural finance and produce the distortions that are peculiar to the artificial flow of funds the government finance involves. The stronger the demand for funds in the non-agricultural sector is, the greater these distortions will be.

The second scenario is to promote and strengthen multi-purpose cooperatives on the strong initiatives of the government. This needs an intervention of the government to the debt problem of former cooperatives and its policy supports like subsidized credits for cooperatives. Since these cooperatives based on area and community linkage are required to organize concerned farmers with their "heavy" participation, a government leadership, sometimes accompanied by forced measures, would become necessary. These would result in a higher political cost with a psychological resistance of farmers. This alternative therefore appears not to be practical under the present conditions, but may emerge in future especially if the rural sector faces serious economic and social problems in rough waters of the market economy and then a strong farmers' organization is looked for.

The third scenario can be considered between the first and second ones, in which PCFs and cooperatives would stand each other. PCFs may continue the current functions as a credit cooperative, or alternatively may perform financing as well as other economic functions. In addition, newly established agricultural cooperatives may develop any functions as they wish in an integrated manner as far as these functions are initiated on a voluntary and economically viable basis. No government subsidies are given, nor regulations are imposed, while the government restrains its activities within indirect or "prudential" areas such as register, encouragement and awarding. Under the new Cooperative Law, agricultural cooperatives could extend the financing activity provided they have the management capacity and competent staff. In fact, for foreseeable future such cooperatives may take place in occasional cases which is meant that the farmers' interests would not be fully realized.

VII. Improvement of Rural Economy Towards Poverty Alleviation

Improvement of rural economy should be achieved through efforts at many fronts such as agricultural diversification together with promotion of marketing of agricultural products, non-agricultural employment generation in rural areas, and improvement of rural infrastructure. It should be also tackled with in considering specific features of respective areas and carried out with the participation of farmers and their organizations, particularly newly built agricultural cooperatives. Rural finance should be further strengthened on the basis of the rural financing system set up recent years.

Meanwhile, poverty reduction has been an important issue to be addressed in the course of economic growth. Poverty in Viet Nam is predominantly a rural phenomenon. Ninety percent of the poor people live in rural areas. Seventy-six percent of the poor engage in agriculture. Therefore it is clear that we have to focus on the agricultural sector to alleviate poverty. For example, in the North access to passable roads determines the income opportunity of rural people as villages with limited access to passable roads tend to be poor. Irrigation is another example. This is true especially for the Red River Delta where poor households have less irrigated land than the non-poor. Though we emphasize the importance of rural infrastructure, it is not a sufficient condition for poverty alleviation. We also emphasize those factors with which poor people can make full use of rural infrastructure, for example, education, knowledge, skill, information network which will be established by frequent movement of rural people between rural and urban areas, financial resources such as the Viet Nam Bank for the Poor (VBP), etc. To provide these factors will be the role of the recommended voluntary cooperatives.

Recent experience of the East Asian countries is considered as a success in attaining both economic growth and income equality. An important factor of the success is that economic growth has been led by labor intensive and small scale industries. In case of Thailand, though the urban sector geographically concentrates in Bangkok and its surrounding areas, there are many channels between the rural and urban sectors. Rural areas provide cheap labor to the urban sector as migrants who send their earnings to their villages. This transfer creates a market for the non-agricultural sector. These migrants also go back to their villages and play a pioneering role to introduce small scale industries in rural areas with their acquired knowledge, skills and sometimes funds.

Lessons from the experiences of other Asian countries show the effectiveness of promoting labor intensive and small scale industries and mobilizing labor from the agriculture to non-agricultural sectors for alleviating poverty. As a labor abundant country, Viet Nam is required to absorb labor to the non-agricultural sector to reduce the poverty. The non-agricultural sector comprises not only the urban sector but also rural industries. In a country where transportation is not developed, migration to big cities may aggravate urban problems as migrants tend to stay in these cities. In order to avoid an aggravation of urban problems, therefore, rural industrialization would be an appropriate solution. Agglomerations in rural areas or in provincial towns are effective to provide markets for rural industries. The role of government would be focused on infrastructure development of transportation, communications, information and education.

Improvement of rural economy would thus lead to expansion of market for the rural as well as urban sectors, specifically urban manufacturing industries. Poverty would be reduced in the process of rural development starting from increased rural income in agriculture and through an expansion of employment opportunities which then brings out increased income for the urban sector and the economy as a whole. Rural development is thus considered the key of poverty alleviation.

VII. Highlights of Policy Options for Improvement of Rural Economy

The foregoing paragraphs suggest that improvement of rural economy must provide the basis of sustainable development of the socio-economy of Viet Nam. For improving rural economy, actions should be taken at all levels of farm households, cooperatives, central and local governments. In this study, however, those taken by governments and agricultural cooperatives are focused. Major policy options are grouped into three broad areas, i.e., physical infrastructure development; building market related institutions including rural finance system; and organizing people and communities for participating in development.

(1) Improve and develop physical infrastructure for promoting agricultural diversification and rural employment generation

In order to promote agricultural diversification and to expand markets for newly introduced and increased agricultural products, market related infrastructure should be constructed, improved and enhanced. Expansion of rural employment opportunities is realized through inducing a variety of industries ranging from traditional handicraft to labor intensive processing and manufacturing industries in rural areas and make rural people be able to access to them. To this end:

(a) Improve transportation facilities, especially rural roads at community level;

(b) Build local and urban wholesale markets; and

(c) Develop irrigation and drainage infrastructure on the basis of respective local conditions and market potential. These works encompass main and tertiary facilities, together with consolidation scattered land plots and construction of in-farm roads.

(2) Develop market related institutions for both domestic and overseas markets

Producers' organizations specifically agricultural cooperatives are expected to play important roles in marketing, engaging in negotiations with buyers, traders, processors and exporters/importers of agricultural and rural products. The role of government on the other hand is to facilitate producer and their organizations to obtain market information and to give better access to markets. To this end:

(a) Assist in establishing "cooperative unions (or federations)" and "trade associations" by organizing active agricultural cooperatives and rural small enterprises respectively;

(b) Establish an export promotion agency of agricultural and rural products. This may take the form of a semi-governmental organization which would assume the functions of "agricultural information center" for cooperatives; and

(c) Consider future directions for further strengthening rural finance in response to changing needs and socio-economic conditions. Major issues include the role of cooperative credit in relation to People's Credit Funds, the VBA's dominant position in the whole system, and the significance of policy oriented finance.

(3) Consider specific conditions and background of respective regions and areas and ensure full participation of concerned rural people and their groups

Infrastructure development, institutional arrangement and in general any action relating to rural development need to be pursued taking the conditions and people's willingness of respective areas into account. No uniform blueprint, plan and action are effective, neither sustainable. Therefore:

(a) Plan, build and carry out the above policy options according to specific conditions of individual areas;

(b) Ensure full participation of local people and their organizations. To this effect encourage farmers to build agricultural cooperatives and give guidance in this regard.

1-B: Situation of the Vietnamese Agriculture and Rural Development and Directions to Solutions

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I . Situation of the Vietnamese Agriculture and Rural Development

1. Achievements

Viet Nam has undergone the renovation for many years with appropriate policies such as Directive No. 100 of the Central Committee of the Party in 1981, Resolution No. 10 by Politoburo in 1988, the amended Land Law in 1993 and policies on the liberation of production input and product circulation. Moreover, farm households have been granted with permanent land use rights while they are recognized as an autonomous economic unit. As a result, the Vietnamese agriculture and rural economy have undergone a big change and accomplished the following achievements.

Food production has developed steadily and remarkably. As a result the food shortage has been overcome as food production has continuously expanded at an annual rate of 4%. Although natural calamities and floods struck almost all regions of the country in 1996, food production reached at 29.1 million tons, up by 1.6 million tons (or 5.8%) from the level of 1995. Per capita food production has increased from 324.9 kg in 1991 to 372 kg in 1995 and further to 378 kg in 1996. Its five year average for the period of 1991 – 95 was 350 kg compared with 310kg for 1986 – 90. Consequently Viet Nam has changed from a food shortage and importing country to an exporting country of rice with an average annual export of 1.5 – 2 million tons. The export was especially high in 1996 amounting to 3.004 million tons.

Specialized areas of combining animal husbandry and crop production with processing industry have been formed. They include areas of: rice in the Mekong River Delta, rubber and coffee in the Central Highland, tea in Northern Mountain and Midland and in Lam Dong Province, wine production in Thuan Hai Province, milch cow breeding in Moc Chau Province and urban suburbs.

The annual export of agriculture, forestry and fishery products in value terms accounts for more than 40% of the total export of the country. Particularly it achieved US$ 3,267 million, accounting for 45% of the total export value of the country in 1996.

Structure of the economy has already begun to change as well. The proportion of the country's agriculture to GDP tends to decrease. It reduced from 38.75% in 1990 to 28.37% in 1995 and is estimated to be 27.2% in 1996.

Owing to Program 327, an increasing area has been reforested and forests have been better protected from environmental degradation.

"Trade villages" have been rehabilitated and developed.

More capital has been invested in such rural infrastructure as irrigation, drainage, transportation and electricity.

Living standard of rural inhabitants has improved. The improvement of their consumption level has created favorable conditions for promoting rural markets. Their purchasing power has improved towards increasing purchase of industrial goods.

2. Present Shortcomings in Rural and Agricultural Economy of Viet Nam

Agriculture in Viet Nam is basically an exclusive and self-sufficient economy having the cultivation sector as the leading sector. Animal husbandry is still small. In both 1995 and 1996, cultivation and animal husbandry respectively accounted for 77% and 23% of the total value of agricultural production. Rice is the main crop in the cultivation sector accounting for 65% of its total value. Industrial crops account for only 17% and other crops about 18%.

Earning capacity of agricultural production is still low, especially in rice production. In spite of the bumper crop of rice in 1996, farmers' income did not rise owing to a lower price. While productivity of crop and animal husbandry has increased, it yet remains low. It stands at about a half of the productivity in advanced countries.

Quality of agricultural products is also low. They have not yet met the increasing requirements of domestic and export markets. Some products are even been exposed to the competition with foreign agricultural products in the domestic market.

Agricultural land per person is small and has been declining. It is caused by population growth, encroachment to agricultural land by industrial uses and urbanization, while the expansion is limited especially in the North. In the South, land for agricultural production could be increased by 0.5 million hectares by the land reclamation in Dong Thap Muoi Province and in some other areas of the Central Highland and Southeastern region.

Rural labor is in large surplus. As a result, there is a migration from rural to urban areas. However, the number of migrated people has not yet been very large due to the fact that underemployment has been predominant in urban areas. Almost all the migrated people are unskilled workers like construction workers and porters. Their education level is low, thus they have little career. Owing to the underemployment, income and living standard in rural communities is low, even extremely low in many areas, and the proportion of poor households in rural areas is still high.

Infrastructure is still underdeveloped, especially in inter-village and inter-commune roads, roads from communes to national highways, and roads from communes to district and provincial towns. At present electricity is not available to about 40% of communes and households. Although a priority is given to the investment in irrigation and drainage systems, due to limitation of capital resources, demand for irrigation and drainage for agricultural production is not fully met. Many irrigation works have been seriously degraded. Since paving of inter-field irrigation canals with concrete and bricks is considered to be effective, it should be widely carried out. Nevertheless the State has not enough capital to support this work and rural people is so poor that they cannot afford to do it by themselves. Other rural infrastructure such as market facilities, water supply, and district and commune towns is yet to be developed. Investment capital has been in shortage.

Cooperatives and other farmers' organizations are in the course of renovation. Therefore their operations are not yet stable and in consequence cannot become a positive driving force to support productive development of farmers. New types of organizational models have just begun to emerge in some areas.

Since the renovation, agriculture has generally taken a remarkable step forward. However a higher rate of production is yet to be achieved, especially towards industrialization and modernization. This is caused, among others, by tiny and scattered cultivation land of farm households.

II. Policy Directions for Improving Rural and Agricultural Economy in Forthcoming Years

The objective of rural and agricultural development in forthcoming years is to raise income and living standard of rural communities. To this end, problems should be resolved in the following directions.

1. To Raise Income from Agriculture

First of all, it is necessary to exploit the existing 10 million hectares of bare land, bold hills, waste land along seashores, rivers, lakes and ponds. It is beneficial to agricultural, forestry and fishery development, job creation and production increase. Program 327 for greening bare land and barren hills, and Program 773 for exploiting waste land along seashores, rivers, lakes and ponds have been implemented fully satisfactorily.

Secondly, it needs to apply technical and scientific progress in biological field, and advanced cultivation methods. This aims at creating good animal and crop varieties, increasing productivity and quality, satisfying domestic as well as export demands, diversifying planted crops and livestock, increasing land use intensity, and increasing productive value per unit of agricultural land.

Thirdly, it should promote construction of processing plants of agricultural products and intensive investment to improve quality and value of agricultural products.

Lastly, profitability of food producers is emphasized. The State has already issued policies on the investment in irrigation, agricultural extension, transportation and electricity distribution. The study on further reduction of agricultural taxes is being conducted so that its direct benefit could reach at farmers.

In coming years, some elements relating to food production and foodstuff will be affected since consumption of bread and instant noodles would lead to an increasing importation of wheat flour. The effect to rice production should be carefully considered to ensure not only the food security but also its effective and sustainable development as well as the environmental protection. To this effect, in March 1997, Prime Minister made decisions on specific measures to improve profitability of food producers. They include:

1) The Ministry of Agriculture and Rural Development is assigned to conduct research on and to widely disseminate high yielding and quality rice varieties, and to expand the application of rice and maize drying techniques, e.g., small, medium and large sized drying ovens aiming at reducing post-harvest loss and ensuring high quality, especially in the Mekong River Delta.

2) Chairpersons of provincial People's Committees are instructed to purchase the entire amount of rice in their respective administrative areas at the minimum price announced at the beginning of each harvest season. The purchased rice would then be used for domestic consumption and export. They should not allow any individuals, organizations and sectors to purchase rice from farmers at a lower than specified price. Concerned entities are requested to remove impediments so that the entire amount of rice sold by farmers is to be purchased.

3) Every individual and organization which has appropriate capacity for and license of food trading is permitted to purchase, mill, process, transport and trade cereals for domestic consumption in addition to the balanced food export.

4) Eliminating licenses for granting and control of domestic food transportation, canceling tax on large amount of food trading among regions and ensuring the full circulation of food in domestic market.

5) Prime Minister signed a decision on the allocation of rice export and fertilizer import quota to

localities and central companies. Furthermore, he assigned chairpersons of People's Committees to select rice export and fertilizer import units in line with the assigned quotas.

6) Deferred payment contracts of fertilizer import at reasonable prices should be made with large fertilizer production groups in the world. They serve for stable and permanent contracts endorsed by the government.

2. Creation of Non-Agricultural Jobs

This issue is very important for transferring a large part of agricultural labor force to the non-agricultural sector. To this effect, it is needed to set up policies on vocational training with preferential credit and conditions for rural youths so that they could have more chance to look for or create jobs by themselves. It is also conducive to recruit labor to industrial centers and rural areas.

Policies regarding "trade villages" should be established so as to attract local workers.

Labor export to other countries is to be promoted. The number of workers overseas is estimated to be 36,000 over the past five years.

Establishment of industrial centers in localities and large special industrial zones is to be promoted. Special industrial zones include: Ba Ria - Vung Tau, Dong Nai, Binh Duong, Binh Phuoc, Dung Quat (Quang Ngai Province), Chan May Port (Thua Thien - Hue Province), in the peripheral areas of Ha Noi, Hai Phong and Quang Ninh. Thus new industrial cities would be formed to attract laborers and create jobs.

3. Provision of Credit to Rural Areas

To this effect, Programs 327 and 773, Job Creation Program, Hunger Eradication and Poverty Reduction Program are continuously implemented.

It is also important to create favorable conditions for operations of rural financing institutions such as the Viet Nam Bank for Agriculture, the Viet Nam Bank for the Poor, and the People's Credit Funds.

4. Infrastructure Development

District and commune towns in rural areas are to be developed which facilitates development of the service sector and product procurement, and transfers the industrial civilization to farmers.

The government already made a decision in allowing localities to retain 50% of their agricultural tax revenue which can be used for construction of local infrastructure. In mountainous areas, it is allowed to retain 100% of the tax revenue for the purpose.

The government has focused the infrastructure development on the Northern Mountain provinces in the five years plan of 1996 – 2000, in which the utmost effort is devoted to mobilize resources for road construction. Besides it will be carried out in the following directions:

1) Five hundred centers and clusters of communes including roads, schools, village dispensaries and markets will be constructed in the period of 1997 – 2000.

2) Central and local budgets will be used with priorities for upgrading road lines from provincial centers to centers of district towns and economic zones.

3) The investment in road construction by enterprises will be encouraged in the whole country. After completion, these enterprises will be allowed to collect toll fees for their capital recovery.

4) An appropriate portion of fund for the Hunger Eradication and Poverty Reduction Fund should be allocated for transportation development. This fund will be used for remuneration of work participants, especially those in underemployment and the target households. This could achieve

transportation improvement along with hanger eradication and poverty alleviation.

5) With regard to rural electrification, 80% of communes will receive electricity from the national power networks by 2000 compared with the present ratio of 63.2%, and farm households will consume 60% of total electricity compared with the present ratio of 50.76%. The investment capital required for this program is very large. The government intends to mobilize capital from various sources in the following means:

- The power line from original electricity sources to step-down transformer stations will be developed by the electricity sector. Required capital would come from such sources as its own capital, ODA, preferential credit and others.
- The State will provide disadvantaged areas with subsidies depending on their difficulties. It also improves electricity management to ensure reasonable prices to farmers. The subsidy levels would be 20, 30, 50 and 80% of the total power investment capital.
- A priority will continuously be given to irrigation.

5. Measures Regarding Capital and Labor Mobilization

In supplementing policies relating to domestic investment encouragement in which emphasis is placed on export related and priority areas.

1) To remove impediments to accelerate the equitization of selected state owned enterprises.

2) To compensate part of interest to banks to increase investment loans.

3) To eliminate irregular income tax imposed on remittances by overseas Vietnamese to their families in the country.

4) To promulgate a new Foreign Investment Law to further promote foreign investment into Viet Nam in which more concrete and detailed articles are specified. In addition, granting investment licenses in certain cases will be decentralized to People's Committees of provinces and cities, and the management of industrial centers and export processing zones. Regarding decision making in executive boards of joint venture enterprises, consensus of all members are not required, instead two-thirds of members are acceptable in many cases.

5) To promulgate regulations regarding BOT (Build-Operate-Transfer) and similar investment formulas. A mechanism on investment in infrastructure in cash from land rent will be set up by reformulating land plans and by simplifying administrative procedures regarding granting licenses of land use and rent.

6) With regard to labor mobilization, the government is going to confirm a law regarding labor mobilization in making a proposal for its amendments. The proposal would be then submitted to the Standing Committee of National Assembly for its approval. It will be ensured with the law that all people in labor age must participate in construction and repairing of infrastructures for certain days per year. A regulation on replacing the military service to be served by young men by the equivalent conscription labor would be promulgated. The labor thus mobilized is mainly used for building large infrastructure works. If a person does not directly fulfill the obligation, they must pay an amount of money equivalent to the locally market remuneration for labor.

6. Measures for Stimulating Development of Cooperatives and Farmers' Organizations

Subsequent to the promulgation of the Cooperative Law in March 1996, the government issued the following decrees:

1) Decree No. 15/CP dated 21 February 1997 regarding stimulation of development of

cooperatives. The decree emphasizes a reduction of tax rate imposed on land use and rent. It also encourages cooperatives to engage in direct export and import activities with foreign partners. The measure allows cooperatives to obtain loans from national programs and international organizations.

2) Decree No. 16/CP dated 21 February 1997 regarding cooperative business change and registration, and regarding operations and organization of Union of Cooperatives. In the decree, an emphasis is put on the content and procedure of cooperative business change and registration. Moreover, attention is also paid to establishment, business registration, operations and organization of Union of Cooperatives.

3) Decree No. 02/CP dated 2 January 1997 specifying the State functions at various levels and sectors, rights and obligations in managing cooperatives. This aims at implementing the Cooperative Law and its policies concerning supports for development of cooperatives.

1-C: Economic Structural Adjustment, Industrialization and Modernization of Agriculture and Rural Economy

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I . Introduction

Agriculture and rural economy have undergone fundamental changes since the start of the renovation policy nearly ten years ago. Yet they still remain in a less developed stage from such aspects that food production stays in the dominant place, rural population accounts for 80% of the total population and agricultural labor force 75% of the entire labor force, and unemployment in rural and agricultural sector is relatively high. Productivity of crop and livestock production is low, and production cost high. As a result, farm income is low and incidence of rural poverty high compared with in other sectors. Meanwhile the gap in income and living standard between rural and urban areas has been expanding. In remote and mountainous areas, these gaps are particularly significant causing disparities among regions.

The government intends to further develop agriculture and rural economy, thus improve the living standard of rural people and communities. In order to achieve these objectives, it is necessary to carry out structural adjustment in agriculture and rural economy, and their industrialization and modernization.

II . Structural Adjustment of Agriculture and Rural Economy

The notion of structural adjustment of agriculture and rural economy was at first indicated in a resolution adopted at the Fifth Congress of Central Committee of the Party in 1993. Regarding the agricultural sub-sector, main thrust of the resolution is to transform the agriculture from one with predominantly mono-cropping and low efficiency to one with multi-cropping, multi-activities and high efficiency in appropriately exploiting land, other natural resources and labor. Such a change should be demonstrated in an increase in industrial and fruit crops, livestock raising and processing of agricultural products.

Regarding the forestry sub-sector, it needs to shift from simple logging mainly in the state-owned forestry to an ecologically sustainable forestry while emphasizing reforestation and environmental protection especially in watershed and specialized forests, and allocation and renting of forests to people.

Regarding fisheries, emphasis is placed on offshore fishing, development of aquaculture fisheries, promotion of processing chain, and reasonable and sustainable exploitation of marine resources.

Regarding rural economy, according to the resolution, major changes should take place in an increase in industrial and handicraft production, increase in the commerce and service sectors in rural areas, and development of rural infrastructure. Attention should be paid to the development of remote

and disadvantaged areas to reduce the gap among regions.

III. Industrialization and Modernization of Agriculture and Rural Economy

Industrialization and modernization of agriculture and rural economy were initially addressed in the Political Report of the Central Committee of the Communist Party of Vietnam at its Eighth National Congress in July 1996. In its chapter of development orientations in key fields, the report indicates that "the substance of industrialization and modernization in the remaining years of the 90's is to pay high attention to industrialization and modernization of agriculture and rural economy and to comprehensively develop agriculture, forestry and fishery and combine them with farm, forest and aquatic produce processing industries".

Major points relating to agriculture, forestry and fisheries are summarized as follows:

1) Agriculture in general: To develop all sub-sectors of agriculture towards large scale commodity production in close connection with the processing of their products with advance technologies; to attach special importance to development of food production for ensuring the national food security; to accelerate water conservation works; to effect gradually rural mechanization and electrification; and to widely apply bio-technology.

2) Forestry: To put more investment in the production and development of forests; to re-green fallow land and denuded hills; and to appropriately exploit forest resources.

3) Fisheries: To expand the culture and netting of aquatic and marine products; to exploit rationally coastal resource; and to resolutely reach out to the open sea.

4) Important areas for industrialization and modernization: To develop processing industry, handicrafts and small industries in rural areas, townships and towns; and to develop traditional craft villages. Other points include: To readjust capital allocation and mobilize more funds to considerably increase the State's investment capital and credit for the development of agriculture, forestry, fishery and rural economy; and to adopt policies to encourage and assist farmers in terms of tax, prices of farm products and agricultural inputs, technology transfer, and use of land.

The concept of rural industry has been used in practice as well as in theoretical studies for nearly 20 years. Moreover the need for developing manufacturing and handicraft industries in rural areas has been felt for a much longer period. While various aspects are involved in relation to development of rural industry, its important roles in agriculture and rural economy are considered to be as follows:

- Jobs are created for raising income and living standard of rural population;
- Use of local material resources can be realized;
- Funds and capital from rural population and communities are mobilized; and
- It serves to develop and expand rural markets related to agriculture.

These roles played by rural industry are related to and carried out through all stages of agricultural production from up-stream to downstream. In the up-stream, rural industry serves for land reclamation, irrigation and drainage and other related works. In the direct linkage with production, it provides machines and tools, seed, livestock feed, fertilizers and pesticides for crop and livestock production, and in the down-stream, it serves for harvesting, storage, drying, processing, transportation and distribution of agricultural products.

Rural industrialization is the concept of a process of building agricultural and rural production, including rural industry, in the direction of "modern mechanical engineering" which leads to a rapid

development of technical level and productivity of labor in rural areas. The process of industrialization always links with modernization process.

Rural industrialization encompasses the following areas and elements:

- To develop rural industries including manufacturing and handicraft industries, and service industry with industrial linkages;
- To provide and extend advanced techniques to agricultural production including forestry and fishery production. Specifically to introduce new crop varieties and animal breeds having high yield and quality, and advanced cultivation methods; and
- To develop rural infrastructure.

IV. Situation of Economic Structural Adjustment and Industrialization and Modernization of Agriculture and Rural Economy

Since the Fifth Congress of the Central Committee, the reform of agriculture and rural economy has permeated in the thinking and action of all sub-sectors at all levels. It has become practical activities of millions of farmers since the structural adjustment is the key to prevent agriculture and rural economy from poverty and backwardness. Diversification of agriculture and rural economy has been initiated in this direction. A number of models in this regard has appeared. Specialization in industrial and fruit crops, livestock breeding and aquaculture has developed. The movement regarding reforestation and protection forests has been promoted. These actions have achieved high value production per unit of land.

Since then, rural industry and handicraft industries have rapidly developed. A number of traditional "professional villages" have been rehabilitated and new ones created. Establishment of agricultural-handicraft households, handicraft production groups and limited companies has generated jobs and improved living standards and incomes of people and communities in rural areas.

According to a survey held by General Office of Statistics in 1994, out of 11,974,515 rural households, only 160,370 were industrial and handicraft households, accounting for 1.34% of the total rural households. The highest ratios of these households were recorded in the Northeast South region (2.78%), followed by the Red River Delta region (2.58%), while the lowest ratio was in the North Mountain and Midland region with 0.38%.

In order to elaborate adequate directions and solutions to develop rural non-agricultural professions and trades, another survey was carried out in late 1996 by Ministry of Agriculture and Rural Development in cooperation with Ministry of Planning and Investment and General Office of Statistics under the direction of the Prime Minister. The survey was conducted for a sample of 3,439 households and production units altogether, in 9 provinces covering 27 districts and 81 communes. Of the total samples, 160 were specialized production units, 784 households entirely specialized in non-farm activities, and the remaining 2,495 households mixed ones of agriculture and non-farm activities. Within these mixed activity households, 1,538 were more oriented to non-farm activities and the remaining 957 oriented to farming activities.

Out of 944 households/production units specialized in non-farm activities, 60.62% were newly established since 1989. Moreover the pace of establishment of these specialized households/production units has been notably accelerating past four years, particularly in the coastal and midland regions. This is regarded to reflect positive impacts brought about by various policies and different programs taken by the government in the direction of rural industrialization. Among 160 production units, the group of "small industry and handicraft" hires workers the most, followed by construction. As for female labor, the group of "textile, garment and embroidering" has the most

followed by the processing of agricultural products, and small industry and handicraft.

Households engaging in non-farm activities are divided into those based on agriculture and those on non-farm activities. The former households also engage in non-farm activities because they intends to increase their income while farming cannot give them enough employment. The latter households continue to engage in non-farm activities because their off-farm employment is not stable so that they cannot afford to leave land and become entirely specialized households.

Rehabilitation of traditional "professional villages" and establishment of new ones have attracted a great deal of labor in rural areas. For instance, the number of rehabilitated trade villages accounted for 123 in Nam Ha Province, 73 in Ha Tay Province and 64 in Ha Bac Province respectively. These villages have also contributed to development of service activities such as distribution of raw and wasted materials, input supply, marketing of products and credit provision. By these means, they created many jobs in rural areas.

Significant differences in terms of income and capital for productive purposes exist among different categories of rural households/production units. Monthly average income per worker is VND 430,000 for specialized production units, VND 236,000 for specialized households, and VND 186,000 for mixed agriculture-profession households. These levels of income are 1.6 to 3.9 times of the monthly average income of a worker exclusively engaging in agriculture. The average capital available to productive purposes is VND 370.2 million for specialized production units, VND 35.8 million for households specialized in non-farm activities, and VND 19.1 million for households based on agriculture with greater engagement in non-farm activities. The last figure stands at nearly a half of specialized households and 2.3 times of households based on agriculture with off-farm employment.

Together with the restoration and establishment of "professional villages," a greater involvement of farm households in non-farm activities has exerted various impacts on agriculture and rural economy. Above all they have created employment opportunities, and increased income and purchasing power of rural population. They have facilitated to transform rural production structure from a small-scale and mono-culture agriculture to a market-based, multi-culture production where agriculture is undertaken in combination with expanding rural industries and services, and promoted to formulate markets for commodity, capital and labor in rural areas.

V. Measures for Accelerating the Process of Economic Structural Adjustment, and Industrialization and Modernization of Agriculture and Rural Economy

Economic structural adjustment, and industrialization and modernization are closely linked each other. They are at the same time complex process with plenty of difficulties and challenges. The extent and speed of changes depend on policies of the State. Policies and measures are highly important for accelerating the process in agriculture and rural economy which in turn affect and determine industrialization process of the national economy.

Various problems have however emerged in the process. For instance, surplus takes place recently in several kinds of fruits. Lack of the processing industry and insufficient supporting policies for consumption promotion are blamed to cause the glut. Other problems include insufficient investment capital and high risks encountered by bank loans. In some "professional villages," support for production is lacking and environmental pollution appears. In order to accelerate the process of economic structural adjustment, and industrialization and modernization of agriculture and rural economy, it is necessary to address a series of issues in which the following polices and measures are emphasized:

1. Capital Investment

- To create adequate capital for production purposes;
- To charge reasonable interest rates on loans; and
- To avert risks in the process especially those of new products, poor areas, disaster-prone fields (e.g. sea fishing).

2. Scientific Research

- To establish scientific research systems on agriculture and rural economy; and
- To strengthen agricultural extension and introduce new technologies.

3. Policies Supporting Small and Medium Scale Enterprises

- To train cadres and workers; and
- To search for consumption markets of products.

4. Infrastructure

- To construct and upgrade transportation networks including roads, waterways and airlines;
- To build market facilities; and
- To construct towns, district towns and establish population centers, service centers and commercial centers.

5. Marketing of Products

- To explore markets;
- To improve export and import mechanisms; and
- To formulate a policy on production insurance.