Renovating Industrial Policy*

November 2004

Kenichi Ohno

Vietnam Development Forum (VDF)
National Graduate Institute for Policy Studies (GRIPS)

This paper was prepared for the Workshop on Strengthening the Competitiveness of Vietnamese Industries organized jointly by the Embassy of Japan in Vietnam and the Ministry of Planning and Investment (MPI) on November 22, 2004. The workshop aimed to offer useful analysis and proposals on industrial policy for the preparation of the next *Five Year Plan for Socio-Economic Development from 2006 to 2010*.

I. Positioning Vietnam in the Global and Regional Context

Toward a new policy framework

Vietnam's industrial policy is becoming increasingly obsolete as international integration proceeds. A significant gap has emerged between the planning method inherited from the past and the reality of global competition under WTO, FTAs, and the challenges of China and other ASEAN countries. Unless this mismatch is quickly eliminated, Vietnam's industrial policy will remain inconsistent and impractical. A drastic improvement is called for in order to achieve the national goal of becoming an industrial country by 2020 as well as to effectively execute the intervening Five Year Plans and Ten Year Strategy.

The old method specifies quantitative targets for individual industries and even products in detail. These targets typically cover output, export value, new investment, the domestic supply ratio, and the localization ratio. These targets are based more on the aspirations of national leaders than scientific evaluation, but implementing bodies are required to achieve them at any cost. Progress toward these targets are frequently monitored, reported, and discussed. If targets are missed—for whatever reason—it will generate a political problem for responsible authorities.

* The author would like to thank Japanese experts and officials who participated in a series of preparatory meetings for this workshop, especially Mr. Mitsuru Kitano and Mr. Hideo Fukushima (Embassy of Japan); Mr. Kyoshiro Ichikawa (JETRO); Mr. Masayuki Karasawa (JBIC); Mr. Shingo Naganawa (JICA); Prof. Norio Gomi (Rikkyo University); and Prof. Tran Van Tho (Waseda University) for the useful exchange of information and ideas. However, the author alone remains responsible for the content of this paper.

This method may have been acceptable when Vietnam was an internationally isolated planned economy, but not now. The following reasons can be cited as to why it is no longer appropriate:

(1) Industrial strategy must be based on the analysis of the international situation and Vietnam's current and future position in it. Trends in East Asia are especially vital. Policy can no longer be designed purely by domestic needs or desires.
(2) In the market economy, the final outcome of who and which products will win is determined by the market demand and the effort of individual enterprises, not by the performance targets specified by the government.
(3) Industrial policy must be indirect and guiding rather than direct and compulsory. The Vietnamese government must invent new policy tools and channels to work effectively with private and foreign enterprises which are becoming increasingly important in Vietnam.

It is evident that the quantitative method is outdated and must be replaced by a new policy framework. The general need for policy improvement is widely felt among policy makers, but concrete steps to achieve it remain to be identified. As a result, the old method continues to permeate in Vietnam's industrial policy formulation including the current Five Year Plan and a large number of master plans for individual industries.

Industrialization under international integration is not a new problem in the world economy. In the past, many countries faced this challenge and produced various results from brilliant success to dismal failure. As usual, the mindless copying of other countries' policies will not work in Vietnam since the situations are different. But if foreign lessons are carefully assessed and adjusted with the requirements of new reality, the way to overcome this challenge should become reasonably clear. Below, we propose to separate the lesson that is still applicable to Vietnam and the policy components that must be newly installed.

<u>The framework still valid for Vietnam</u>

While situations change over time and across countries, the *general framework* within which industrial policy is formulated should remain the same. What must be adapted to local peculiarities are the concrete components of this framework, not the framework itself. Industrial policy formulation must follow the logical sequence indicated below. All master plans should also have the same structure.

First, the external conditions must be analyzed carefully. In the case of Vietnam, situations in East Asia—China and ASEAN4 in particular—are crucial. Japan, US and EU are important as markets and the providers of FDI and technology. International commitments such as FTAs and WTO entry must also be reviewed.

Second, domestic capability must be evaluated equally carefully in light of these external circumstances. In the case of Vietnam, the status of FDI agglomeration, supporting industries, business costs, supply of skilled human resources, source of

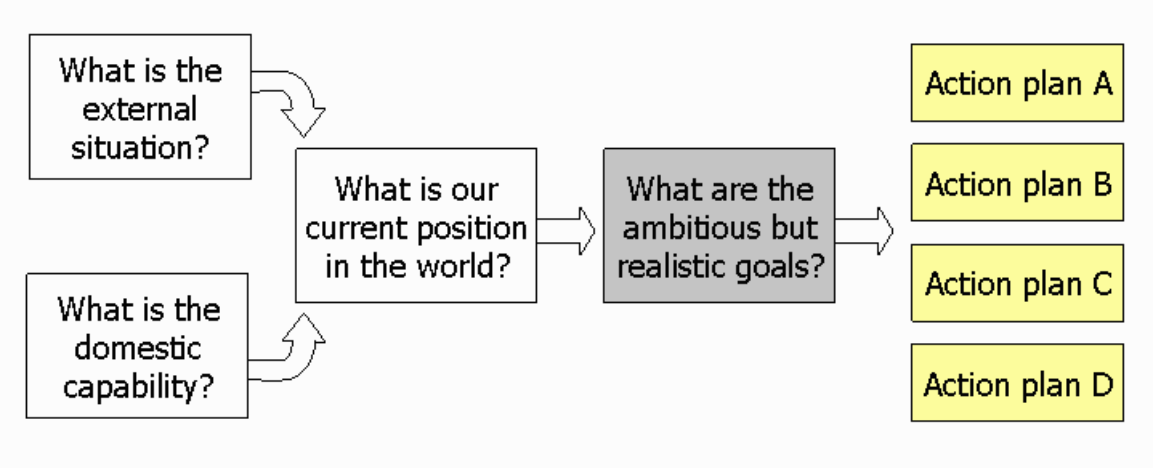
growth, and the current degree of participation in regional production networks should be studied.

Third, based on these external and internal assessments, ambitious but realistic industrial goals must be formulated. They must be ambitious in the sense that they will strongly and proudly propel Vietnam into the position of a significant industrial economy. They must be realistic in the sense that the combination of good policy and serious enterprise efforts should be able to attain them.

Fourth, in order to achieve these goals, necessary action plans must be designed and implemented. These action plans should be as concrete as possible with a reasonable timetable and interim targets. Necessary laws need to be drafted and competent teams must be assigned to execute the action plans.

Virtually all industrial strategies in modern Japan, from the mid 19th century to present, have been formulated this way. When the modern textile industry was introduced in Japan in 1883, the goal was to produce cotton yarn that could compete with British imports. Eiichi Shibusawa, the super business coordinator, and his associates organized necessary capital, technology and production management to establish the Osaka Spinning Company. By the early 20th century, Japan became the largest exporter of textile products in the world. Similarly, when the Ministry of International Trade and Industry (MITI) promoted the machinery and electronics industries in the 1960s, the goal was to survive and compete effectively against formidable foreign competition (especially American) in the process of overall tariff reduction required by OECD entry and the GATT Kennedy Round. The machinery and electronics industries subsequently became the strong pillars of the Japanese economy with highest production technology in the world[1].

Figure 1. How to Formulate an Industrial Strategy



[1] In a similar vein, the MoFA report on the *Postwar Reconstruction of the Japanese Economy* (September 1946, English translation published by the University of Tokyo Press in 1992) is structured in the same way. External and internal situations are analyzed in Part I, and required actions including strategies for individual industries are discussed in Part II.

Is this policy formulation featuring an aggressive positioning of domestic industries in global competition outdated in the 21st century? The answer is NO. Vietnam should follow basically the same strategic sequence with necessary modifications to reflect the new reality inside and outside Vietnam.

New constraints and adjustments

However, the world that Vietnam faces today is different from the one that Japan faced in the 19th century or in the 1960s. The largest difference is that developing countries are now forced to integrate more rapidly and completely with the global economy.

Early "latecomers" like Japan, Taiwan and Korea were given a large amount of time to build industrial capability before they liberalized the trade regime significantly. For this reason, the strategy of *infant industry promotion* under a tariff barrier was adopted. While technology was imported vigorously, FDI firms did not dominate modern manufacturing or exports. In the end, industrialization was achieved with local enterprises becoming the main engine of growth. But this strategy cannot be repeated in Vietnam.

The middle-income ASEAN countries like Malaysia and Thailand did rely heavily on FDI for their industrialization. However, they too were permitted to absorb FDI and build an industrial base for a few decades while tariff rates were reduced only gradually. By contrast, Vietnam must liberalize trade only a decade after serious integration with the Western economies began. As a result, FDI agglomeration, supporting industries and technology absorption of Vietnam remain seriously deficient.

Vietnam's industrialization must proceed under these constraints. We still believe that robust industry-driven growth is possible, but certain adjustments must be made to the content of industrial policy. More specifically, greater openness and weaker preparation necessitate the following modifications.

(1) Becoming a vital link in the regional production network

When Japan, Taiwan and Korea grew rapidly, they were strongly influenced by the American and European economies while the division of labor with the neighboring East Asian countries was limited. However, Vietnam should not aim to become an industrial economy independently from the neighboring countries. Vietnam must achieve industrialization through intense participation in the regional production network and becoming a crucial link in it.

China is no doubt the largest and most powerful competitor in East Asia. Among ASEAN4, Thailand competes directly with Vietnam in FDI attraction. But neighboring countries should not be viewed only as competitors. East Asia is an area where the international division of labor in manufacturing is actively promoted by MNCs. Vietnam should not aim at self-contained and vertically-integrated industrial structure since no country can complete the production process by itself. Instead,

Vietnam should build a production base which takes advantage of this networking. The quality and extent of production networks which Vietnam builds will determine its competitiveness. In this sense, neighboring countries are production partners as well as competitors (Ohno 2004b).

Under globalization, competitiveness should be achieved by (i) strengthening a small number of domestic manufacturing processes which have *dynamic comparative advantage* (see below); and (ii) linking these processes closely with similarly competitive processes in other countries. First-class products are created when the best are combined from home and abroad.

The optimal localization ratio is not 100% (Mori and Ohno 2004). Even in the case of the Thai automobile industry which boasts the largest agglomeration in ASEAN, 30% of parts are still imported and 70% are domestically produced. Within domestic procurement, 45% are supplied by FDI firms and 25% are produced by local firms[2].

(2) The indirect approach to global competition

For local manufacturing firms in Vietnam, direct competition against giant MNCs in the global market is infeasible at present. It will take a long time before they can achieve the competitiveness level of these rivals. While some local companies already export with their brand names (Vinamilk, Biti's, Trung Nguyen Coffee, etc), the number and quantity are too small to be regarded as an engine of industrial growth at the moment.

For this reason, it is essential that Vietnam work closely with FDI firms and foreign traders located in Vietnam to compete effectively in the global market for the next five to ten years. It is inevitable that, initially, the capability of foreign firms in design, production and marketing be used to accelerate Vietnamese exports. Over time, however, Vietnam must absorb, internalize and replace foreign expertise. Specifically, the following steps are advised.

First, FDI absorption should be dramatically augmented beyond a critical level to achieve sufficient agglomeration in both assembly and parts production.

Second, local enterprises should link aggressively with FDI firms by learning production management, quality control and on-time delivery, and should become their suppliers. The government should actively support their effort.

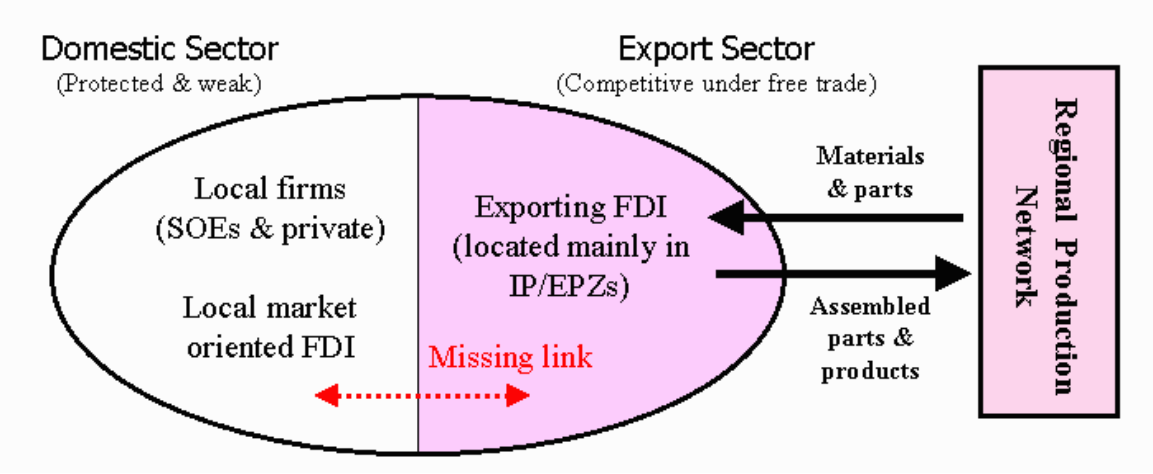
Third, maximize the spillover effect of urban industrialization to all nation, including rural and remote areas which receive little FDI. This can be accomplished through several channels such as labor migration, fiscal transfer, public investment, and other preferential policies (see section III below).

[2] Information provided by the Nomura Research Institute in August 2004.

This is the *indirect* approach to global competition. Some argue that industrialization dominated by FDI is not true development for Vietnam, so local firms must take the lead. The sentiment is understandable but such a strategy is impractical in light of fierce global competition.

Figure 2. Dual Structure of the Vietnamese Economy

--The need to link local firms with FDI firms--



(3) Promotion measures

In the past, developing countries used high tariffs, import bans and quotas, differential tax treatment, localization requirement, and other discriminatory measures to promote domestic production. But under WTO and FTAs, they are no longer permitted. Vietnam must use measures that are consistent with (or at least acceptable under) international commitments[3].

In a market-oriented and globally integrated economy, the state sector should not engage in industrial production or investment. Existing SOEs should gradually be privatized, consolidated or closed down depending on their future potential. Public investment should be confined to indirectly supporting industries through building human resources and physical infrastructure. Private enterprises, both domestic and foreign, should be the central force of production in the future.

But even in a highly open developing economy, there are many tasks that the government must perform. Indeed, when the domestic market economy is severely underdeveloped, industrialization will not advance smoothly without them. Here, we

[3] One of the questions frequently raised by Vietnamese officials is: *how can Vietnam promote supporting industries (upstream investment) without resorting to tariffs and import restrictions?* However, foreign part producers are more concerned with demand size and policy stability than financial incentives when they consider investment. We believe that a combination of good policy and the prospect of rising part demand can attract FDI part makers even under a free trade environment.

would like to draw the attention of the Vietnamese government to the following roles which are currently insufficiently fulfilled.

a) Showing a clear strategic direction through master plans to remove uncertainty and increase confidence for domestic and foreign investors.

b) Creating a new business-government relationship suitable for the market-oriented economy. The relationship must be based on mutual trust and benefit rather than bureaucratic reporting[4]. It should not degenerate into collusion, however.

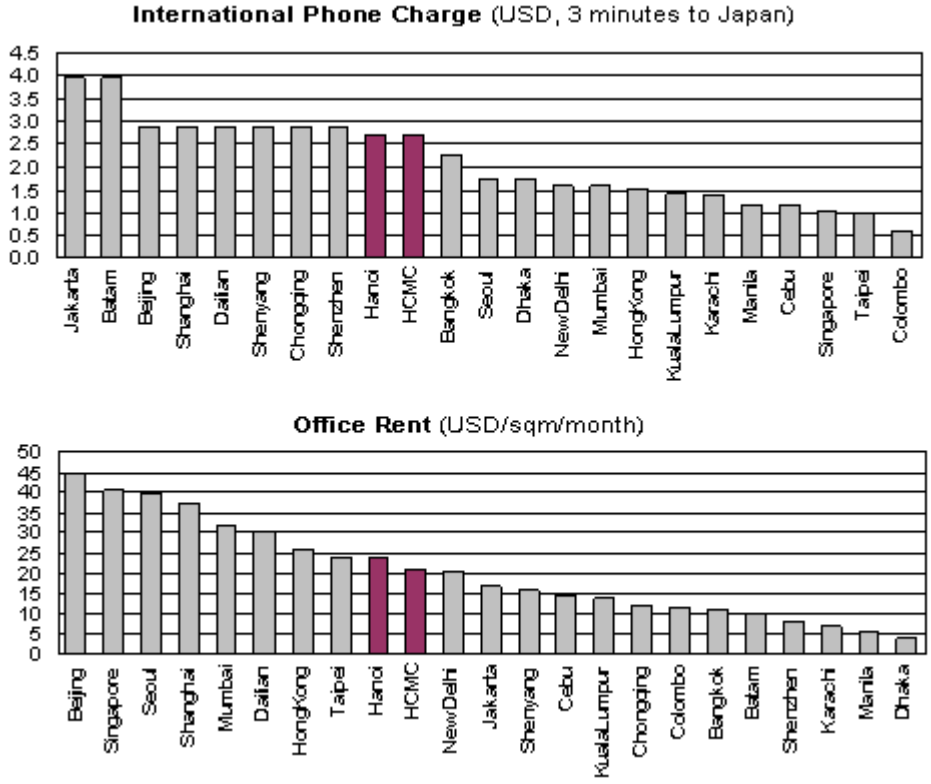
c) Staging an effective campaign in country and land marketing to attract a critical mass of FDI. This must be accompanied by a serious effort to reduce the cost of doing business in Vietnam (see Figure 3 below).

d) Indirect and general assistance to industries through creating market-supporting institutions currently lacking in Vietnam. This should cover areas like information, technology, production management, marketing, enterprise database, etc.

e) Reform of the policy mechanism to concentrate the capability and authority of industrial policy formulation in one place. Many East Asian countries have had a small elite team directly supporting the top leader in economic policy execution. Vietnam's economic policy making is too decentralized at present.

[4] In the past, many high-performing East Asian economies—especially Japan and Korea—established a large number of official and unofficial channels between business and government to carry out industrial policies. For example, Japan in the 1960s had deliberation councils, business associations, administrative guidance, and frequent exchange of personnel to share vital information. A large literature exists on how MITI cooperated with the private sector to achieve rapid industrialization.

Figure 3. Business Cost Comparison in Asia (Nov. 2003)
--Vietnam ranks in the middle to upper range—



Source: JETRO Overseas Research Department (March 2004).

II. The Selection of Leading Industries

Dynamic comparative advantage

Section IV-2 ("Orientation for developing industry") of the current *Five Year Plan for Socio-economic Development from 2001 to 2005* discusses orientations for eleven industries. Among these, the following seven belong to manufacturing in the narrow sense: (i) agro-processing, (ii) paper, (iii) textile, garment and footwear, (iv) electronics, informatics and telecommunication, (v) mechanical engineering, (vi) chemical fertilizer; and (vii) steel[5]. However, it remains unclear why these industries are selected. The classification also seems somewhat irregular as some industries are much broader than others. If "mechanical engineering" includes general machinery, electrical machinery, transportation machinery and precision machinery, virtually all modern assembly industries are covered by this categorization.

[5] The other industries mentioned include oil and gas, electricity, coal, and mineral mining.

For industrial policy to be effective, the list of *leading industries* (or whatever term is used to for industries which are important and must be supported strongly) should not be too long. Supporting all industries is equivalent to supporting none. Furthermore, the criteria by which they are selected should be clearly presented. In light of the discussion in Section 1, the leading industries of Vietnam should be first and foremost those that have *dynamic comparative advantage*[6] vis-à-vis neighboring countries, especially China and ASEAN4. In addition, industries that support and supplement the leading industries should also be included as the target of promotion.

Dynamic comparative advantage must be built on something that Vietnam has in abundance but other countries can hardly duplicate. It should also be something that lasts for a long time. For this reason, natural resources or low wage cannot be the basis of Vietnam's long-term growth. Vietnam's dynamic comparative advantage should be built on its diligent and skillful workers in factories and offices whose quality is second to none in the developing world (Ohno 2003, 2004a). However, the potential of Vietnamese workers has not yet been fully realized due to deficiency in enterprise management and industrial policy. Vietnam should make utmost effort to improve them.

Leading industries

Vietnam should promote industries with dynamic comparative advantage. We propose five industries as highly promising *leading industries* which can push up the national economy in the next five to ten years. The rationale for choosing the first four (electronics, garment and footwear, food processing, and software) should be clear from the foregoing discussion. They are export-oriented and skilled labor-intensive industries which have already attained a certain degree of international competitiveness. However, their production management, marketing or product mix still falls short of potential. They should be developed further and more fully to achieve top quality and reliable supply in the global market.

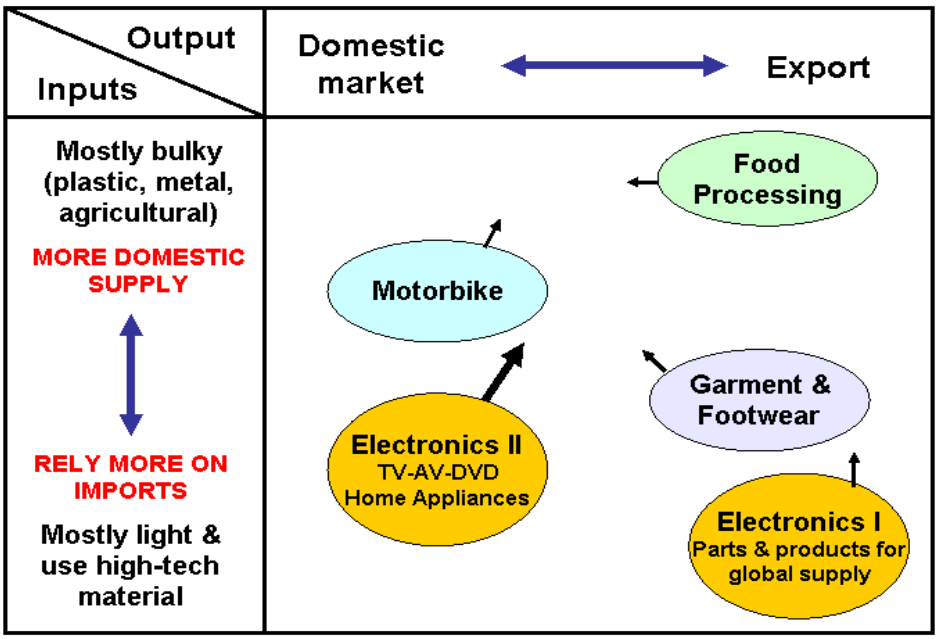
Even within each leading industry, processes and products in which Vietnam can truly excel are limited in number. Each selected industry should not be targeted broadly or generally. It is crucial for Vietnam to correctly and narrowly define policy objectives for each. This paper has no space to adequately discuss each industry. Good master plans must be drafted to fulfill that purpose. The rationale for the fifth leading industry (motorbike) is different and will be explained below.

The leading industries can be classified by the characteristics of their output and inputs (Figure 4). For this purpose, we must clearly distinguish two types of electronics, I and II (see below for their definitions).

[6] *Comparative advantage* is a term in classical economics (Ricardo 1817) that refers to the cost advantage in certain products that a country has over other countries because they can be produced *relatively* more cheaply than other products within that country on account of technology or factor endowment. The term *dynamic* indicates that such an advantage will (can) be realized in the future by enterprise efforts supported by appropriate policy. Today, the definition of advantage should include not only cost but also quality, quick response, and reliable supply.

Regarding output, some firms invest in Vietnam to pursue lowest cost and highest quality in order to supply to the global market. Others come to or stay in Vietnam to supply to the domestic market. Currently, food processing, garment and footwear, and electronics I are highly export-oriented while motorbike and electronics II are mainly domestic market-oriented[7]. As to inputs, their nature varies from bulky to light, from raw to high-tech material. These input-and-output characteristics are key determinants of required support measures. The arrows in Figure 4 indicate the aspiration of each industry. The general trend is to try to supply both domestic and foreign markets, seek higher input localization, or both. But there are also significant variations in orientation among industries.

Figure 4. Characteristics of Leading Industries



Note: software is difficult to locate in this diagram since it does not require physical inputs. If software design and program instructions are considered "inputs," they are mostly supplied by foreigners (like electronics I).

(1) Electronics (hardware)

Electronics assembly in Vietnam is dominated by FDI firms (mainly Japanese and Korean) and consists of two types. These must be clearly distinguished since situations differ significantly between them.

[7] Food, garment and footwear supply to both domestic and foreign markets, but significant segmentation in quality, price and taste exists between the two markets. In Figure 4, we focus on their export capacity.

Electronics I: This is large-scale production using mostly imported parts and exporting often 100% of its output. In this case, MNCs have chosen Vietnam as their global supply base for certain key products. They operate in IZ/EPZs or as EPEs and enjoy virtually free trade thanks to import duty refunds. Fujitsu, Canon, Mabuchi, Tosok and Fujikura belong to this group (whether they export parts or final products does not matter here). Quantitatively, electronics I has a great impact on FDI agglomeration as well as Vietnam's overall output and export structure. However, input localization is more difficult than other industries since it mainly uses precision parts or high-tech materials (IC chips, LCD, plasma display, etc) which are not available locally. To attract electronics I, a combination of global marketing and a further reduction of business costs is needed.

Electronics II: This is smaller-scale production to mainly supply the domestic market. From the viewpoint of MNCs' global strategy, factories of this type play the role of final assemblers of consumer electronics in each local market. Being close to the consumers allows them to know and respond to their needs effectively. Additionally, they may also export certain models not produced in other countries. Sanyo, Matsushita, Sony, Toshiba, and JVC belong to this group. Compared with electronics I, they are affected more severely by (i) local policy environment such as tariff structure, restriction on parts import, and tax changes, (ii) relatively small domestic demand and an excessive number of producers, and (iii) impending trade liberalization under FTAs and WTO. They are challenged by competition from neighboring Asian countries (sometimes from the factories of the same company group). To survive, they must quickly localize parts and lower production costs. For these firms, Vietnam must first remove superfluous impediments regarding laws, procedures, tariffs, taxes and so on, and ensure a free and stable business environment comparable to those in rival countries. After that, good marketing and business cost reduction should further encourage them as in the case of electronics I.

(2) Software

Since the software industry uses only Vietnamese brain and no physical inputs, contribution to value-added should be immediate. It also elevates national pride since software is considered to be an intelligent industry. At the same time, however, the local software industry remains embryonic and severely lacks skilled programmers, instructors, teaching methods and materials, and English proficiency (JICA-NEU 2003).

More than any other industry, the targeting of software must be done extremely carefully. Software ranges from the design of microchips, standardized software package, computer games, customized business software, industrial software for factory operation, and so on. Given the limited capacity, Vietnam should choose the areas in which it can perform well and not others. This specifically means starting as a subcontractor of customized application software. In fact, this is already happening in Vietnam. In its essence, it is *itaku kako* (contract manufacturing). Other software countries like India, China, Israel and Russia are

also doing this to export software. Vietnam should basically follow their path and broaden the capability into other software areas only gradually and if possible.

Since software companies in Vietnam are small, young and private and operate in a free environment, the government need (should) not directly intervene in their activities. The market principle is the main force to develop this industry. However, policy can indirectly support the software industry to overcome the weaknesses mentioned above. The combination of an increased number of skilled programmers and proper targeting and indirect support should be able to propel Vietnam to a significant position in ASEAN.

(3) Garment and footwear (and other sundry goods)

These are skilled labor-intensive and export-oriented industries whose inputs are mainly imported[8]. One of the complaints often raised by Vietnamese policy makers is that their contribution to value-added and technical transfer is low. This is true at present, but whether Vietnam's garment and footwear remain at this primitive stage or progress to encompass design, global procurement, production management, quality control and marketing, which create far greater value, depends on the efforts of local enterprises and the government. Unlike electronics, there is a large scope of expanding local production both upstream (design, accessories, dyeing, etc) and downstream (marketing) as well as improving the productivity of cutting and sewing. Vietnam should move from common products to high-priced and differentiated items—men's shirts and cheap jackets should be replaced by ladies' fashion and designer clothes over time. For this purpose, Vietnam's skillful workers are a great asset. Foreign garment and shoe buyers note that Vietnam ranks with Italy and Japan in workmanship, if properly trained and directed. No other developing countries can compete with Vietnam in this—whether China, Thailand, Indonesia or Bangladesh.

Some worry that the garment and footwear industries will decline relatively soon when Vietnamese wages rise and other low-income countries start to catch up. But if new values are constantly created as argued above, these industries may continue to expand strongly for a long time rather than decline. It all depends on the enterprise managers and policy makers of Vietnam. Official support for these industries should accelerate the sophistication and deepening of downstream production.

Another issue often debated in Vietnam is the desirability and feasibility of investing in the upstream sector (cloth and leather production). This should be viewed as the import substitution problem discussed below, and the solution should also be the same. In general, upstream expansion should be undertaken under strict market conditions and should not be promoted at all cost. Material production is a large-scale

[8] In Japanese, labor-intensive work (assembly, programming, sewing, embroidering, etc) performed by the order a foreign buyer who provides design and imported materials is called *itaku kako* (contract manufacturing). In the garment industry, the term CMT (cut-make-trim) is used to describe this activity. If the local garment producer is asked to purchase specified materials or find suitable suppliers, the operation is called FOB (*free on board*, a term used in Vietnam only which is unrelated to foreign trade terminology).

process subject to excess supply and slim profit margin. Many countries in the region have already invested in textile and Hong Kong performs as an international procurement center of clothing materials. Vietnam's dynamic comparative advantage lies in downstream production and not in capital-intensive material production. Vietnam should go upstream only if it can compete effectively with the existing regional production network. Otherwise, the best materials should be procured freely around the world to realize the highest quality.

Many sundry goods such as furniture, kitchen ware, bags, handicrafts, and small household items (called *zakka* in Japanese) belong to the same category as garment and footwear. With initial foreign linkage, Vietnam can and should expand the scope of value over time, from cheap and common to expensive and sophisticated. These industries should also be encouraged. However, the drafting of master plans for these industries is more difficult and even unnecessary because they are large in number and undertaken primarily by private hands.

(4) Food processing

This is a labor-intensive and export-oriented industry whose inputs are locally procured. Commodities produced by the agricultural, forestry and fishery industries are processed and added value for exports. In general, food processing does not require large investment in expensive machinery or high-tech parts. In this sense, the industry contributes significantly to the national economy by activating rural areas, reducing hunger and poverty, and earning foreign exchange.

The largest problem with this industry is poor quality in processing, distribution and marketing despite the relatively high quality of raw materials. As a consequence, Vietnamese products often sell at lower prices than those of competitor countries. The poor handling, in turn, results from the lack of policy initiative, information, and capital. While raw materials are produced by families, other processes are undertaken by SOEs, private traders or foreign buyers in various proportions depending on the product. When foreigners are directly involved in production and marketing, quality and sanitary control are extremely strict—otherwise export to high-income markets is impossible. Some local private producers, many of whom have foreign connections, can also produce at international standards. On the other hand, products (partly) marketed through official channels, including large export items like rice, coffee and tea, still suffer from low quality and price and the absence of market recognition. Efforts must be made to improve them. As with garment and footwear, the most effective strategy is linking with foreigners, learning from them, and eventually replacing them[9]. This option should be seriously considered.

(5) Motorbike

[9] Foreign firms bring new technology, safety standards and marketing sklll which are lacking locally. For example, Nestle has linked up with Ha Tay farmers to produce high-quality dairy products and METRO also procures and markets locally made food using a modern merchandising network.

The motorbike industry is unique in the sense that, though it is domestically oriented, it has already achieved high degrees of scale merit, product quality and competitiveness. The unusually large size of Vietnam's motorbike market relative to its income partly explains this situation. Another important factor is producers' effort to survive the China shock a few years ago and the resulting transformation of the industrial structure. Motorbike is the only leading industry in Vietnam that can grow robustly without heavy reliance on exports.

Thanks to efforts in local parts procurement, motorbike assemblers have built significant links with domestic suppliers, both Vietnamese and FDI, and can become the hub of further development of supporting industries in Vietnam. Nevertheless, compared with Thailand, the agglomeration of domestic suppliers is still small. This is due to the shorter history of FDI and the lack of other industries (automobiles and electronics in particular) that can share the same supporting industries in Vietnam. The master plan of the motorbike industry should be closely linked to the strategy of promoting supporting industries. Other issues that must be considered include traffic safety and congestion, air pollution, and overall urban planning. In the short run, the import quotas of motorbike parts based on the initial investment approval (F/S) must be abolished as soon as possible.

One interesting issue concerning motorbike is the battle of business architecture fought in Vietnam (Pham and Shusa 2004, Mishima 2004). This is closely related to the question of how fast the domestic motorbike market expands to rural and mountainous areas. Previously, the Japanese business architecture dominated in which the high-quality and high-price products were assembled from order-made components (*integral architecture*). Meanwhile, the Chinese began to copy-produce Honda models by combining ready-made components (*modular architecture*). After the China shock of 1999-2001, both models co-exist in Vietnam. Expensive models are produced by foreign assemblers with integral architecture while cheap models continue to be produced by local assemblers with modular architecture. How long this market segmentation will last is an open question debated among experts.

Table 1. Features of Leading Industries

	Contribution to:			Key Policy Issues
	Exports	Labor use	Supporting industries	
Electronics I	High	High	Middle	Country and land marketing; business cost reduction for critical FDI mass
Electronics II	Low?	High	Middle to high	Removal of current barriers; country and land marketing; business cost reduction
Software	High	High (skilled)	--	Proper targeting; boosting programmers' skill
Garment & Footwear	High	High	--	Improve and expand downstream capability for world's highest quality
Food processing	High	High	--	]Improve processing by linking to FDI and foreign buyers
Motorbike	Low?	Middle	High	Basis for supporting industries; parallel business architecture

Note: Software has no physical supporting industries. The upstream production of garment and footwear and food processing are specific to them and cannot share supporting industries with other industries.

Supporting industries (parts and components)

There is a broad consensus that the development of supporting industries is important for the industrialization of Vietnam. However, the precise way to analyze and promote supporting industries remains vague. Under global integration, 100% localization should not be the goal. No country can produce purely domestically in a vertically integrated fashion as if the economy were closed. To survive and win global competition, the best inputs from all over the world, including Vietnam, must be combined. The crucial questions are *what should be localized and what should be imported in each case*, and *what determines the optimal procurement pattern*. The promotion of supporting industries must be based on a full understanding of these factors. Correct identification of inputs to be localized will significantly accelerate industrialization while the wrong identification will lead to wasted time and resources (Mori and Ohno, 2004).

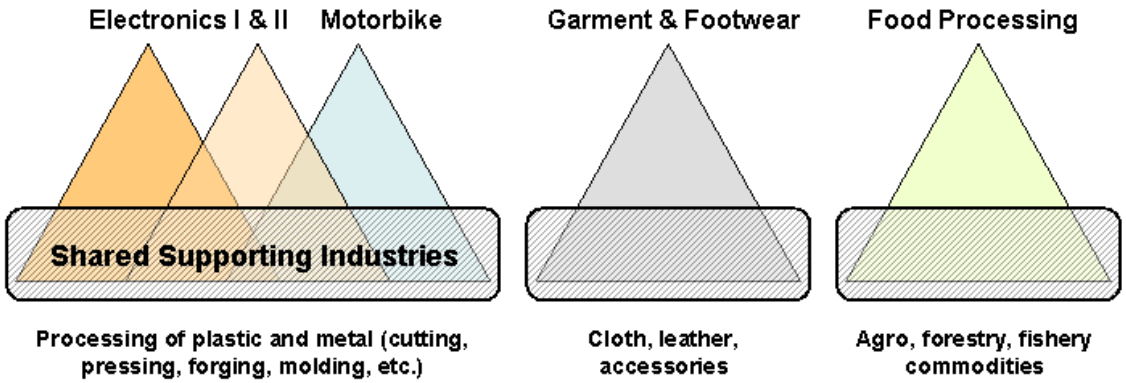
What must be urgently localized are revealed clearly from the behavior of FDI firms. They all want to locally procure those parts and materials that are bulky relative to their value. In addition, naturally, unique or frequently revised parts must be locally procured rather than imported. More specifically, those that must be urgently localized are plastic and metal parts, molding and pressing tools, and packing materials. This also includes the reliable and quick processing of plastic and metal parts such as cutting and slitting, stamping, forging, molding, heat treatment, and so on. In contrast, FDI firms do not expect precision parts or high-tech materials to be produced in Vietnam. This is partly because the level of local technology is insufficient and partly because each MNC has already built a global factory, which is capital intensive and large-scale, in another country to supply such parts. In other words, reliable plastic injection and heat treatment

plants are more strongly wanted by FDI firms than plants that try to supply difficult components at less than global quality.

As shown in Figure 4, the intensity and content of localization requirements differ from one industry to another, and perhaps from one firm to another in reflection of their global strategy. Moreover, required inputs differ greatly across industries. The term *supporting industries* is more relevant to assembly-type manufacturing while garment, footwear, and food processing each require materials specific to them. Promotion policy should mainly be directed to the parts and materials for assembly-type manufacturing.

Among assembly-type manufacturing, supporting industries often overlap with each other so that promotion policies must also be integrated. While the size and required precision of parts may differ somewhat across industries, motorbike and electronics I and II should be able to share supporting industries to a large extent. Promotion should be targeted primarily at this kind of *shared* supporting industries. To link local suppliers with FDI firms and improve their capability, various measures should be employed such as trade fairs, enterprise database, and technical support centers.

Figure 5. Sharing Patterns of Supporting Industries



Meanwhile, as discussed earlier, upstream investment in garment and footwear (i.e., textile and leather) should be undertaken cautiously. Processing, distribution and marketing should be enhanced for food processing.

Material-producing industries

Among industrial inputs, basic materials like steel, petrochemicals (PVC and fertilizer included), textile, cement, paper and the like should be analyzed separately from the parts and processes used in assembly-type manufacturing. They are capital-intensive material industries of the import substitution type whose promotion requires special caution. Their promotion should not be denied outright. Moreover, the concern that heavy industries are needed to deepen the industrial structure and ease the balance-of-payments pressure as

income continues to rise rapidly is a reasonable one. However, they should be developed selectively and conditionally, rather than broadly at any cost, since potentially huge risks to the national economy are involved.

As noted above, a capital-short country like Vietnam does not generally have dynamic comparative advantage in these industries. Besides that, other countries have already established enough global supply capacity. Their markets are often characterized by excess competition, thin profit margin and price volatility. If Vietnam is to invest in them, it must be assured that new projects will remain competitive in this rough environment. For this, a very high level of analytical skill and management capability is required. The success or failure of a capital-intensive project depends critically on the appropriate choice of technology, product mix, and timing of investment. Investment without sufficient knowledge is too risky, and protecting heavy industries with high tariffs is no longer acceptable. In short, public support for these industries is warranted *if and only if* sufficient market competition is introduced *and* policy capability is significantly enhanced.

In drafting the master plans of heavy industries, the fact that private firms have started to invest actively in them deserves special attention. The steel market, previously dominated by the state-owned VSC, is now briskly invested by local and foreign private firms. This is true not only with "easy" products like steel bars, wirerods, galvanized sheets and pipes but also with billet making and flat sheets which were previously regarded as too difficult for them. Similarly, in cement, there are active and profitable private producers backed by strong demand and proper technology. These trends indicate rather clearly that public investment and production will not be so crucial—or even unnecessary—in developing these industries in the future. Private firms are generally more efficient and the risks they bear will not add to the national debt burden. The new role of government in the development of private sector-driven material industries must be studied carefully and reflected in their master plans.

<u>On the automobile industry</u>

Among civil manufacturing industries, automobile has the broadest input-output linkage and the highest integration of technology. For this reason, it has great impact on the industrialization of the national economy. But for the same reason, the successful promotion of the automobile industry is very difficult. To be more precise, final assembly and part exports which are detached from the rest of the economy are relatively easy, but the establishment of a pyramid of primary and secondary suppliers serving the final assembler at the top, as in Toyota City, is extremely challenging. Only the US, EU and Japan have such capability. All other car-producing countries like Korea, Thailand, China, Brazil and South Africa copied technology and received significant assistance from them.

Within the Vietnamese government, there is a call for designating automobile as one of the leading industries as well as a call for caution[10]. The pros and cons of promoting the automobile industry in Vietnam are also hotly debated among Japanese industrial experts. Those who emphasize the benefits strongly support promotion, but those who highlight the costs and risks are more skeptical.

The author of this paper does not recommend the inclusion of automobile in the leading industry list. Given the difficulty of fostering this industry, current policy capability as well as domestic market size are too limited. There are additional unfavorable conditions in ASEAN, such as the recent tendency of MNCs to further concentrate automobile production in Thailand and the dismal failure of Malaysia's attempt to create a national car. Vietnam has to meet many other industrial challenges before tackling the most difficult task of automobile production. At least in the next Five Year Plan, the vigorous promotion of the automobile industry is premature.

However, as mentioned above, the final assembly of certain models and part exports may be feasible. While Thailand may continue to produce the largest number of automobiles in ASEAN, it is quite possible for MNCs to assign Vietnam to produce certain models or parts. The master plan of automobile should be based on such a realistic and more modest vision. After that is achieved, Vietnam can pursue more ambitious targets in the following stages.

III. Some Issues in Implementation

The final section discusses three issues that must be resolved as soon as possible.

Renovating the contents of master plans

The main purpose of this paper has been to stress the need to significantly upgrade the method of industrial policy formulation and to suggest the concrete direction of its modification. Both existing and forthcoming master plans should conform to the external orientation explained above.

To further concretize the idea, the suggested contents of a hypothetical overall industrial strategy are shown below[11]. For the rationale of this structure, see Section 1, especially Figure 1. Compared with Japanese industrial strategies in the past, greater attention is given to the aspects of globalization that Vietnam now faces. The master plans for individual industries should follow the same basic format, except that details must be adjusted to suit the reality of each industry.

[10] The three-page strategy (*chien luoc*) for automobile was approved by the Prime Minister in December 2002 (175/2002/QD-TTg) and the longer master plan (*qui hoach*) was approved in October 2004 (177/2004/QD-TTg).
[11] Condensed and slightly modified from Ohno (2004b).

Table 2. The Suggested Contents of an Overall Industrial Strategy

Chapter	Content
Part One: Analysis of the Current Situation	
1. Global review	Trends in industrial countries, trade, investment, ODA, business cycles, etc.
2. Regional review	China, ASEAN4, regional trade, FDI, FTAs, status of competition, etc.
3. Vietnam's current position	Degree of participation in regional production network, FDI agglomeration, trade commitments, cost comparison, strength and weaknesses of Vietnam vis-à-vis China and Thailand, etc.
Part Two: Industrial Strategy up to 2010 with a view to 2020	
4. Fundamental Strategy for industrialization	Statement of basic industrial strategy such as the role of state, FDI, private sector, market principle, global integration, etc.
5. Industrial goals for 2020	Based on the analysis of Part I, the goal of becoming an industrial country must be defined clearly.
6. Leading industries and supporting industries	A small number of leading industries are selected and the selection criteria are stated. Industries to support the growth of leading industries are identified.
7. Reform of industrial policy formulation	Necessary changes in industrial policy design in light of new global and regional environment, including a shift from quantity to competitiveness orientation.
8. Linking industrial policy with trade policy	How to strengthen linkage among MOT's trade policy, MOF's tariff policy, and MOI's industrial master plans.
9. FDI attraction and promoting parts suppliers	Actions needed to attract a critical mass of FDI and build supporting industries.
10. Optimal regional linkage	Determination of what should be procured domestically and what should be imported to enhance competitiveness.
11. Technical transfer and improving domestic capability	Measures to maximize technical absorption including the supply of managers and engineers, improving higher education and training, and the use of external assistance.
12. Interim roadmap	Targets for 2010, 2015 and 2020 are to be stated.

Further drastic improvement in FDI policy

The Vietnamese government in general and MPI in particular have made much progress in improving the investment climate. The Vietnam-Japan Joint Initiative to Improve Business Environment (December 2003) and its follow-up process is making additional effort to remove obstacles toward the same goal. While the situation has greatly improved over time, it must be admitted that, in international comparison, Vietnam still ranks low

in business friendliness. The critical mass of FDI to transform the industrial structure significantly has not been reached. The road ahead is still far.

Vietnam should move from simply removing past obstacles to creating a dynamically attractive environment for international business. Responding to the complaints of existing FDI firms is not enough. FDI policy should become more strategic and forward-looking. For this purpose, we raise the following three points.

First, the idea of *country marketing* (for Vietnam) and *land marketing* (for provinces and industrial estates) must be activated. Vietnam's international marketing as an FDI destination remains very poor. It is necessary to first link with and learn from foreign professional land marketers. Subsequently, marketing skills should be internalized within Vietnam. Superior marketing can compensate for the currently poor quality of Vietnam's industrial infrastructure. The marketing for Vietnamese products and tourism should basically follow the same line.

Second, the cost of doing business should be reduced as much as possible. This includes all aspects of production cost: parts and materials, labor, land, transportation, electricity, telephone, internet, water, housing and, last but not least, the time and financial cost of coping with cumbersome procedures. Each of the cost components should be scrutinized for possible reduction. Unnecessary regulations must be revised or removed. Cost reduction effort must be made with an international perspective. The ultimate goal should be to position and advertise Vietnam as one of the lowest cost locations in East Asia.

Third, the regular review and assured implementation of the existing measures must be enhanced. While a large number of initiatives and promises are made, many are delayed or remain unimplemented. Foreign investors are skeptical of "commitments" and want to see real action. To be effective in FDI attraction, it is necessary to simplify the policy content and concentrate on achieving them 100% in time as promised. The first step should be to fully implement the Vietnam-Japan Joint Initiative. After all, investors are more concerned with the attitude of the Vietnamese government, which determines the future direction, than the currently poor status of physical infrastructure. The psychology of foreign investors can be changed drastically with positive policy announcements even if roads, ports and bridges cannot be built overnight.

Reinforcing spillovers from growth centers to all nation

The reduction of hunger and poverty is a very important national goal. The fruits of industrialization must be distributed fairly across all people and areas without exacerbating the income gap. To achieve this, two approaches should be simultaneously adopted. The first approach is to use public spending and investment (including ODA) to directly help the poor, such as the provision and improvement of education, health care, clean water, rural road, and electrification in poverty-stricken areas. The second approach is to speed up industrialization on the one hand and to build strong channels to spread the effects of industrialization to rural or remote areas on the other. The two approaches are complementary and must be promoted in parallel since the only one will cause problems.

Direct help alone without increasing the national income will perpetuate budget pressure and aid dependency. Growth maximization with strong spillover is a powerful tool for poverty reduction, but it also tends to create new problems like materialism, environmental pollution, income gaps, and the pockets of poverty where the spillover does not reach.

The overall socio-economic strategy must contain both approaches. We recommend that social policy concentrate on the first approach while industrial policy focus on the second approach. The second indirect approach is suitable for industrial policy because Vietnam must achieve competitiveness under the global market rule. That requires building the best conditions for domestic and foreign businesses. If that fails, the effort to enhance spillover channels will become meaningless.

This implies that FDI agglomeration and modern manufacturing industries should be located where the private sector goes in order to maximize competitiveness[12]. In Vietnam, the most attractive industrial sites are in the suburbs of Ho Chi Minh City and Hanoi (the outskirts of these cities and the neighboring provinces)[13]. The government should accept the fact that industrial concentration will occur mainly in these growth centers and design industrial policy accordingly. Additionally, Da Nang and Thua Thien-Hue, as well as the Mekong Delta with Can Tho as the regional hub, may be designated as two auxiliary growth centers.

Once these growth centers attain rapid industrialization, the positive effects should be transmitted to the poor and remote provinces through the following channels[14]: (i) fiscal transfer through taxes, subsidies and public investment, (ii) preferential policy for the poor and the minorities, (iii) labor migration and workers' remittances, (iv) rural income generation through access to growing urban markets, and (v) new private investment. The first two are public channels whereas the remaining three are private. To accelerate these spillovers, the government must improve the fiscal mechanism, monitor labor flows, construct necessary infrastructure for transportation, housing and education, and ensure that rural activation does not create new problems like congestion, materialism, street children, environmental pollution, crime, and the like.

Industrial policy formulation should not mix the two approaches of poverty reduction. In particular, investment attraction should not be evenly spread across all provinces. Even if industrial parks are designated in remote areas, few manufacturing firms will come and

[12] According to Mr. Hajime Yamaguchi (Sumitomo Corporation) who created two successful industrial parks in Jakarta and Hanoi (Thang Long Industrial Park), three key ingredients for attracting Japanese investors are as follows: (i) location near a large urban center and an international port (or airport), (ii) good infrastructure service, and (iii) good management of the industrial estate.

[13] The appropriate industrial areas should be defined as those provinces that have sufficient locational and policy conditions to attract a large amount of domestic and foreign investment. For instance, the Greater Ho Chi Minh City Area may include HCMC, Dong Nai, Binh Duong, Ba Ria-Vung Tau and Long An. The Greater Hanoi Area may include Hanoi, Vinh Phuc, Hung Yen, Hai Duong and Hai Phong.

[14] See GRIPS Development Forum (2003) for the analysis on spillover channels of large infrastructure projects.

industrial agglomeration will not occur. Remote areas should be assisted in other, more effective ways than the inflation of industrial parks.

References

GRIPS Development Forum, Linking Economic Growth and Poverty Reduction: Large-Scale Infrastructure in the Context of Vietnam's CPRGS, GRIPS and JBIC, November 2003.

Japan International Cooepration Agency (JICA), and National Economics University (NEU), *Chinh sach cong nghiep va thuong mai cua Viet Nam trong boi canh hoi nhap*, tap 2, NXB Thong ke, 2003.

Mishima, Kohei, "The Supplier System's Potential for Expansion in Vietnam: Lessons from Japanese Makers' Procurement Pattern in Thailand and Indonesia," unpublished, VDF, September 2004.

Mori, Junichi, and Kenichi Ohno, "Optimum Procurement Strategy: Determinants of Parts Localization under Regional Linkage and Competition," VDF manuscript, October 2004.

Ohno, Kenichi, "Vietnam at the Crossroads: Policy Advice from the Japanese Perspective," VDF Policy Note no.1, December 2003.

Ohno, Kenichi, "In Good Hands/The Lucky Country," *Vietnam Economic Times*, January 2004, pp.12-15.

Ohno, Kenichi, "Designing a Comprehensive and Realistic Industrial Strategy," VDF Discussion Paper no.1, June 2004.

Pham Truong Hoang, and Yoshikazu Shusa, "Competition and Evolution of Business Architecture: The Case of the Vietnamese Motorcycle Industry, unpublished, Yokohama National University, September 2004.

Ricardo, David, *On the Principles of Political Economy and Taxation*, 1817