

VDF Report

Supporting Industries in Vietnam  
from the Perspective of Japanese  
Manufacturing Firms

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VDF Report:  
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Vietnam Development Forum

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# **VDF Report:**

## **Supporting Industries in Vietnam**

### **from the Perspective of Japanese Manufacturing Firms**

In early 2006, the Vietnam Development Forum (VDF) organized a series of hearings between the Ministry of Industry (MOI) and Japanese manufacturing firms operating in Vietnam<sup>1</sup>. Through these hearings, the MOI team, which was drafting the supporting industry master plan, directly exchanged information and views with the concerned Japanese firms.

The targeted sectors were Japanese assemblers and parts suppliers belonging to electricals and electronics, motorbikes, and automobiles<sup>2</sup>. These were important sectors for the development of supporting industries, as well as the sectors specifically mentioned in the Japan-Vietnam Joint Initiative. We sent letters to all Japanese FDI firms operating in Vietnam in these sectors, which numbered 55. Among them, we were able to hear from 32 firms, which included 15 electrical and electronics firms, 14 motorbike firms, and 9 automobile firms<sup>3</sup>. By region, 19 firms were located in the North and 13 firms were located in the South. In addition, we visited one Vietnamese assembler, two Vietnamese parts suppliers, and one Taiwanese parts supplier, all of which had business relations with Japanese assemblers. We also heard opinions of Japanese industrial experts.

Hearings were conducted from late February to early April 2006. Intensive hearings were organized in the week of March 6 in the North, and in the week of March 13 in the South. Different hearing styles were used, from formal meetings to factory visits, informal exchange and email correspondence, to adapt to the preferences and time constraints of the companies. In semi-structured interviews, we generally inquired about the current situation of parts localization and desired policy measures for supporting industry promotion. We also received comments on the draft supporting industry master plan, if any. All information was treated as confidential and no company name was to be released.

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- <sup>1</sup> Participants from VDF were Kenichi Ohno (project co-leader), Mai The Cuong, Ngo Duc Anh, Junichi Mori, Pham Truong Hoang, and Kohei Mishima. Participants from MOI were Nguyen Anh Nam (team leader), Mai Tuan Anh, Pham Gia Thuc, Pham Tung Lam, and Duong Hong Quan.
  - <sup>2</sup> Hearings with Vietnamese firms and firms of other nationalities, including China, Taiwan, Korea and EU, were conducted separately by MOI without our help.
  - <sup>3</sup> These add up to 38 firms due to overlapping. Six firms supplied parts to both automobile assemblers and motorbike assemblers.

This report is compiled by VDF using the inputs from the interviewed firms. VDF takes full responsibility for its content. No statement or analysis in this report should be construed as a consensus view among Japanese FDI firms. In fact, opinions often differed among the three sectors, and even among firms belonging to the same sector. Arguments presented below are majority views, or common denominators, among Japanese FDI firms operating in Vietnam, as selected by VDF.

## 1. Current Situation of Local Procurement

Vietnam's supporting industries are relatively undeveloped. For Japanese FDI firms in manufacturing, Vietnam's local procurement ratio was 22.6% in 2003, while those of Malaysia and Thailand were 45% or higher<sup>4</sup>. However, the progress of local procurement differs significantly across the three sectors studied.

The motorbike sector is most advanced in localization, with the average local procurement ratio of 75%<sup>5</sup>. This figure includes internal parts production by assemblers, sourcing from local suppliers, and sourcing from FDI suppliers in Vietnam. Although motorbike assemblers continue to stress the importance of developing supporting industries further, the degree of their localization is much higher than the other two sectors.

In the electrical and electronics sector, local procurement is rising at some FDI firms. In 2002, most consumer electronics assemblers were unable to domestically source even relatively simple plastic and metal parts. But now, one TV assembler reports that it is able to buy virtually all plastic parts from (mainly FDI) suppliers in Vietnam. At present, local procurement for TV seems to range from 20% to 40%, depending on the producer<sup>6</sup>. Similarly, a computer device producer said that it had increased the number of domestic suppliers from 7 in 2002 to 45 in 2006. As a result, local procurement of this firm rose from 5% in 2004 to 30-40% in 2006. However, there are other producers who continue to have low local procurement. One TV assembler still maintains complete knock-down (CKD) production because imported parts are cheaper than domestic parts.

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<sup>4</sup> According to JETRO, local procurement of the manufacturing sector in 2003 was 47.9% in Thailand, 45.0% in Malaysia, 38.3% in Indonesia, and 28.3% in the Philippines. See Japan External Trade Organization, *Japanese-Affiliated Manufacturers in Asia (ASEAN and India): Survey 2004*.

<sup>5</sup> This figure was provided by a motorbike assembler during the intensive hearing week.

<sup>6</sup> Junichi Mori, "Development of Supporting Industries for Vietnam's Industrialization: Increasing Positive Vertical Externalities through Collaborative Training," Master Thesis, Fletcher School, Tufts University, 2005 ([http://fletcher.tufts.edu/research/2006/Mori\\_MALDThesis\\_010406.pdf](http://fletcher.tufts.edu/research/2006/Mori_MALDThesis_010406.pdf)).

Overall, the current localization level is still far below what Japanese firms desire for attaining competitiveness. Even for manufacturers who have raised local procurement of plastic parts significantly in recent years, finding electronics parts, molds, and metal processes such as pressing, forging, and plating, remains very difficult. An assembler of home appliances said that it could not find any high-valued components in the domestic market. Although this firm has achieved a local procurement ratio of 70% in terms of number of parts, its localization is only 30% in value. This implies that localization has been concentrated in low-value parts only.

As for the automobile sector, progress is slowest among the three sectors, with local procurement ratios of 5-10%<sup>7</sup>. While some bulky or labor-intensive parts, such as seats and wire harnesses, have been localized, most other parts continue to be imported. Furthermore, automobile manufacturers in Vietnam are currently beset with serious short-term problems such as second-hand car imports, the special consumption tax, and related uncertainty in the domestic market<sup>8</sup>. These prevent auto-makers from making long-term strategic plans. Compared with motorbikes, automobiles in Vietnam are at much lower level of demand size and development, which severely limits strategic options to overcome these problems. Within the automobile sector, trucks and buses have higher local procurement ratios than passenger cars, because upper-structure of buses (passenger areas) and trucks (cargo storage) can be built locally by Vietnamese companies.

## 2. Key Factors and Relations for Competitiveness

By the standards of Japanese manufacturing, competitiveness depends on *quality*, *cost* and *delivery* (QCD). For Japanese parts producers in Vietnam, the crucial aspects that need to be improved are *cost* and *delivery*, while quality guarantee is taken for granted. To reduce cost and quicken delivery, a healthy development of supporting industries is essential.

In mechanical assembly-type manufacturing, which is considered in this report, parts cost looms large in the total production cost of final assemblers. For instance, one consumer electronics assembler said that parts accounted for 80% of the production cost while labor accounted for only 2%. More generally, the

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<sup>7</sup> Japan Finance Corporation for Small and Medium Enterprises (JASME), *Management Information* Vol. 323, 2004, in Japanese (<http://www.jasme.go.jp/>).

<sup>8</sup> The special consumption tax on passenger vehicles rose from 40% to 50% in January 2006, and the import ban on second-hand passenger cars will be lifted on May 1, 2006. Domestic new car sales in the first quarter of 2006 fell 32% compared with the same period last year due to the wait-and-see attitude of consumers.

parts cost usually occupies 70-90% compared with the labor cost of less than 10%. Thus, cost competitiveness cannot be attained unless the cost related to parts procurement is reduced. By importing Malaysian or Thai parts, producers in Vietnam incur additional costs in transportation, storage and handling. Unless most parts are made in Vietnam, they cannot compete effectively against Malaysian or Thai assemblers who can use these parts without additional costs.

Furthermore, Japanese assemblers require high-frequency, on-time delivery of parts in order to minimize inventory and production lead-time. Normally, daily or even hourly deliveries are required. Unlike some Vietnamese firms which hold large inventories as a safety buffer, Japanese firms always consider inventory as a cost to be avoided as much as possible. To achieve *zero* inventory, Toyota developed the Just-In-Time system (also known as the *kanban* system) in the 1950s, which has spread widely to other Japanese firms. Quick and frequent delivery is impossible if parts are imported every few months, or if it takes days to bring parts to the factory. For this reason, final assemblers want suppliers to be located near them. One Japanese consumer electronics company recently visited Vietnam to consider the possibility of building a factory there, but gave up the idea after observing the weaknesses of supporting industries in Vietnam.

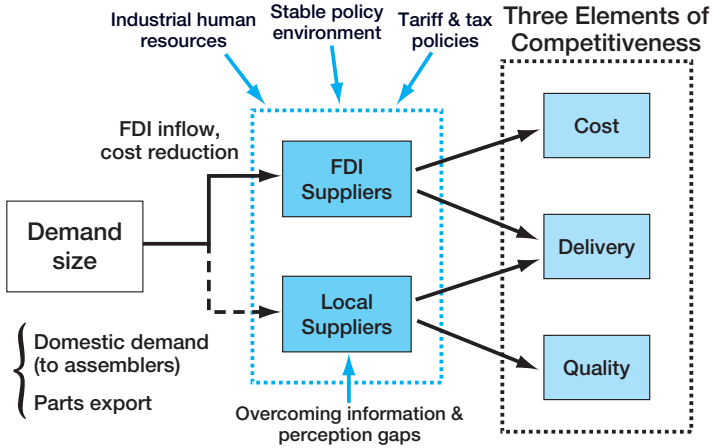
For Vietnamese parts suppliers, on the other hand, the most crucial aspects that must be improved are *quality* and *delivery*. Even if their parts are cheap, Japanese assemblers will never buy them unless these two factors are guaranteed. At present, there is a significant gap between Japanese assemblers and Vietnamese suppliers regarding the acceptable standards in quality and delivery, which will be discussed later.

Supporting industries consist of both FDI firms and Vietnamese firms. Realistically, parts localization must begin with first attracting a large number of FDI suppliers to Vietnam, followed by a gradual strengthening of Vietnamese suppliers. FDI firms must inevitably be a large part of supporting industries in the early stage of Vietnam's industrialization.

Demand size is the pre-condition for attracting FDI suppliers to Vietnam. Large demand is absolutely needed for cost reduction and FDI attraction, which are mutually related. Without sufficient demand, parts makers cannot lower production cost (see below for the reason) and become competitive. Therefore they will not invest in Vietnam. Overcoming the demand size problem must be the top priority in the development of supporting industries.

Once this problem is solved, our survey has shown that there are four additional

Figure 1. How to Achieve Agglomeration and Competitiveness in Parts Industries



areas that must be enhanced in order to accelerate the growth of supporting industries: (i) high-quality industrial human resources, (ii) attractive tax and tariff policies, (iii) stable policy environment, and (iv) overcoming the information and perception gaps between FDI assemblers and Vietnamese suppliers.

Basic relationship among demand size, the development of domestic suppliers (both FDI and Vietnamese), and the three elements of competitiveness is illustrated in Figure 1. Four areas that must be improved are also shown in the figure. The remainder of this report will explain these components in detail.

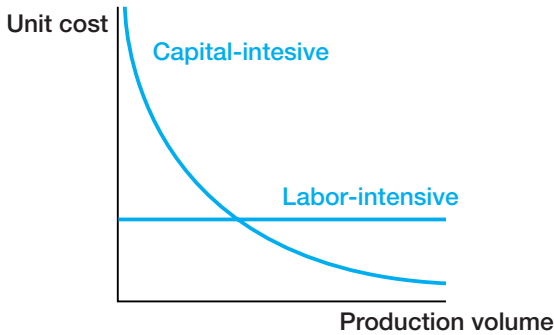
### 3. Why Demand Size is Important

Large demand size is crucial for supporting industries because they require relatively large minimum orders to enter the market. This reflects the fact that, generally speaking, supporting industries are more capital-intensive than final assembly, which tends to be highly labor-intensive. One auto parts supplier stated that supporting industries would develop naturally even without any promotion policy, if there was a sufficient demand.

Supporting industries such as molding, metal processing and plastic injection require expensive machines and a relatively few workers compared with assembly. Moreover, these machines are *indivisible* (one cannot purchase one-tenth of a machine). Once machines are installed, the capital cost for the factory is the same whether they are operated 24 hours a day and 365 days a year, or only part



Figure 2. Declining Unit Cost in Supporting Industries



of the time. Thus, the unit capital cost (total capital cost divided by the number of products produced) declines inversely with the volume of production. For example, a factory making 600,000 plastic parts per year is likely to enjoy efficiency while a factory producing only 2,000 parts per year can hardly survive. That is why FDI parts makers need assurance that there is a large demand (or there will be a large demand in the near future) before investing in Vietnam.

This is in sharp contrast to final assembly which relies on a large amount of unskilled labor without any sophisticated machines. For such operation, the unit cost is almost constant since there is no sunk capital cost. To double the production volume, all that is needed is to use twice as many workers, tables, tools, and expand the factory space accordingly.

In the motorbike sector, domestic demand in Vietnam reached 2.02 million units in 2004, ranking third within ASEAN after Indonesia and Thailand<sup>9</sup>. It is normally said that many motorbike parts suppliers begin to enter the market if the minimum order exceeds 200,000 to 300,000 units<sup>10</sup>. A domestic demand of 2 million units per year is sufficient to entice a number of FDI parts makers to come to Vietnam and compete with each other. Indeed, motorbike assemblers are now able to source many metal and plastic parts from both FDI and local suppliers. However, they still import engine parts or produce them in-house.

<sup>9</sup> The Vietnamese figure comes from the Ministry of Police and the Ministry of Industry (unpublished data). Within ASEAN, the largest motorbike market is Indonesia (3.08 million in 2003) followed by Thailand (2.11million in 2005). See Kohei Mishima, "The Supplier System of Motorcycle Industry in Vietnam, Thailand, and Indonesia: Localization, Procurement and Cost Reduction Processes," in Kenichi Ohno and Nguyen Van Thuong, eds, *Improving Industrial Policy Formulation*, Vietnam Development Forum, 2005, p.215.

<sup>10</sup> Mishima, 2005, p.218.

The domestic market of consumer electrical and electronics is growing rapidly, but its absolute size still remains small compared with other ASEAN countries. For example, the annual sale of TV is around 1.4 to 1.5 million sets in Vietnam, while Thai consumers buy 2.2 to 2.4 million sets per year<sup>11</sup>. If exports are also included in calculating the market size, Vietnam looks even smaller. Vietnam produced 2.2 million TV sets in 2003<sup>12</sup>, whereas Malaysia produced 9.9 million sets and Thailand produced 6.5 million sets in 2004<sup>13</sup>. Because of the small market in Vietnam, Japanese parts makers prefer to export parts from their existing factories in Malaysia or Thailand to Vietnam, rather than taking the risk to invest in Vietnam. While some plastic suppliers have already entered the Vietnamese market, there are few electronic parts suppliers because the latter require larger minimum orders. One TV assembler said that its sister factory in Malaysia could purchase almost 100% of the parts domestically, including electronic components, but that remained impossible in Vietnam.

Small demand size is far more serious an issue for the automobile industry. In 2005, domestic demand for new passenger cars was about 35,000 units while Thailand produced over 1 million cars. According to one car manufacturer, a minimum order of 400,000 units is necessary to enjoy scale merit, which is roughly the market size of Indonesia or Malaysia. Despite the small market, Japanese car makers have maintained their production facilities in Vietnam because they expected growing demand in the future in a country with a population of over 80 million. However, many Japanese car assemblers are disappointed that demand for new cars has been shrinking in recent years due to policy reasons, such as the rising special consumption tax and the liberalization of second-hand car imports. In addition, they are concerned that worsening traffic congestion and accidents may impede the healthy growth of the car market. Moreover, without proper policy, increased traffic would cause environmental damage, especially air pollution, as severe as in Bangkok or Jakarta.

#### 4. The Possibility of Export

One way to overcome the problem of small domestic demand is to find export markets. For parts suppliers, this can be done indirectly by supplying to domes-

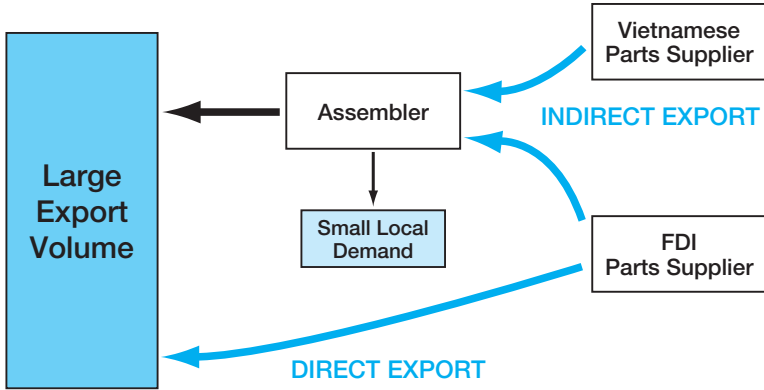
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<sup>11</sup> Figures provided by a consumer electronics assembler during the intensive hearing weeks. Since the number of TV manufacturers is almost the same in Vietnam (7 companies) and Thailand (6 companies), the average market size for each assembler is smaller in Vietnam than in Thailand.

<sup>12</sup> General Statistics Office, *Statistical Yearbook 2004*, Statistical Publishing House, 2005, p.339. However, production of 2.2 million looks too large in comparison with the domestic market of 1.4-1.5 million sets (note that Vietnam exports very few TV sets).

<sup>13</sup> News Net Asia, *Beat China: The Manufacturing Sector in ASEAN*, 2005, p.75, in Japanese.

Figure 3. Possibility of Export



tic assemblers who may export finished products in large quantity, or directly through parts export.

In electrical and electronics, bulky finished products such as washing machines and refrigerators may not be suitable for export, unless domestic products are sufficiently low-cost to offset high logistics cost associated with exportation. On the other hand, compact products such as computer peripherals and hi-fi stereos are normally produced in one location and distributed to the global market. For instance, one computer device assembler in Vietnam exports 1.2 million printers per month under the privileges of being an export processing enterprise (EPE). Another consumer electronics manufacturer, which currently focuses on the domestic market, has a plan to convert its factory into an export base, provided that policy environment improves to make cost reduction possible.

The most desired policy for cost competitiveness in electrical and electronics is the reduction of parts tariffs to zero, or at least to a level lower than the Common Effective Preferential Tariffs (CEPT) on finished products (5% or less). Several consumer electronics manufacturers stated that further tariff reduction on parts and materials was necessary for survival and preparing brighter future plans. However, a number of the manufacturers added that, even with zero parts tariffs, domestically assembled finished products would still be slightly more expensive than those produced in Malaysia or Thailand. This was due to high logistics cost of having to import a large number of parts. One consumer electronics assembler hoped to reduce such logistics cost by rearranging the flow of imports for minimum inventory and quick delivery. This might be effective in the short run, but increasing local procurement was more preferable in the long run. If final

assemblers expand production strongly, existing suppliers will receive larger orders, and it will be also easier to invite more FDI parts makers to invest in Vietnam.

Another way to increase export is through direct parts export. For this, again, it is essential that parts in question be internationally competitive. Only those parts that satisfy the following conditions can be considered for export. First, they must achieve cost competitiveness by using Vietnam's comparative advantage — diligent and cheap labor — to a full extent. Second, parts and materials used in parts production must be low-cost, and their tariffs must also be zero or very low. Third, the product must be relatively compact and high-value. Fourth, there should be an efficient logistics system to minimize the financial and time cost of export. In sum, exportable parts must be labor-intensive, compact, and high-value. Moreover, they must be parts that do not require strict Just-In-Time delivery. In Vietnam, wire harnesses for cars, which fit this description, are now directly exported in large volume. But such parts are still very few.

One important thing to remember is that decision to export is not in the hands of the Japanese general director in Vietnam. Output, imports and exports of each overseas subsidiary is part of the global strategy of Japanese multi-national corporations (MNCs). They are decided by the headquarters in a way that contributes to the positioning of the entire business group in the global value chain and production network. Cost competitiveness is absolutely necessary to be selected by the headquarters to be an export base. Many Japanese firms in Vietnam, especially those without an EPE license, do not think that they currently have production cost low enough to be an export base. That is why they urgently request a further reduction of import duties on parts and materials. While CEPT tariffs on finished products became 5% or less in January 2006, many imported parts from non-ASEAN countries are still subject to Most Favored Nation (MFN) tariffs higher than 5%. Recently, import tariffs on electronic parts were lowered in response to the request of Japanese and Korean assemblers in Vietnam, but the average parts tariff still remains at 6.6%<sup>14</sup>.

Similarly, when a Japanese subsidiary in Vietnam proposes to export parts directly, such a plan must be consistent with the overall global strategy of the headquarters. Japanese wire harness companies initially came to Vietnam to supply to assemblers in Vietnam. They subsequently turned to export markets, because the domestic market was too small for profitability — and this re-orientation was approved by the headquarters.

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<sup>14</sup> *News Net Asia*, February 14, 2006, in Japanese.

## 5. High-quality Industrial Human Resources

Once the demand size problem is somehow overcome, the most crucial factor for the long-term development of Vietnam's manufacturing industries is the fostering of *Meisters*, a German term for highly skilled masters of manufacturing. In Vietnam, industrial weaknesses are often attributed to the lack of financial resources to buy modern equipment. However, the majority view among Japanese firms is that high-quality industrial human resources are much more important than high-tech machines. One Vietnamese firm supplying plastic parts to Japanese and American firms remarked that highly-skilled workers, not new machines, were essential, and second-hand machines operated by good workers were superior to brand-new machines operated by poor workers. Similarly, a Japanese expert stated that simple assembly or routine machine operation could not generate international competitiveness, because anyone in any country could do it. Another Japanese expert stressed the importance of professional spirit to pursue 100% product quality at all times, without stopping at 99%. According to him, this one-percent gap was the source of difference between competitive FDI suppliers and uncompetitive local suppliers.

There are different types of *Meisters* contributing to various types of manufacturing processes. They include:

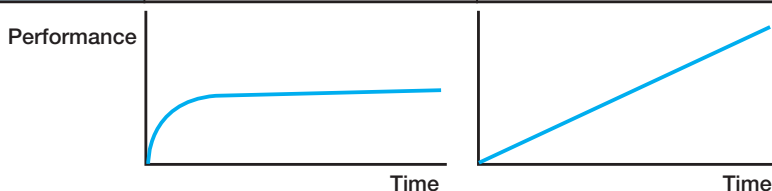
- Line leaders who can manage and improve the entire production process in a factory, rather than just one skill. In Japanese, such workers are called *tanoko* (multiple-skilled workers).
- Very experienced molding engineers who can design, produce and adjust moldings for perfection, and who can feel even minute differences of several microns with their hands.
- Super assemblers in cell production who can assemble a whole product by himself or herself, and therefore can suggest the way to improve the designs of individual parts for efficient assembly.

While the importance of human resource development is widely talked about, the precise reason why this is so important is not well recognized or shared. High-quality industrial human resources are essential in advancing manufacturing beyond the levels reached by Thailand and Malaysia ("breaking the glass ceiling"), as well as in coping effectively with the China challenge.

From the perspective of business architecture theory, Prof. Takahiro Fujimoto of Tokyo University argues that ASEAN countries, especially Thailand and Vietnam, should master *integral manufacturing*, rather than imitating China's *modu-*

**Figure 4. Modular Manufacturing vs. Integral Manufacturing**

	<b>Modular manufacturing</b>	<b>Integral manufacturing</b>
<b>Parts interface</b>	Parts are common and can be used for any model	Each product has unique parts, specifically designed
<b>Merits</b>	Quick results and flexibility	Endless pursuit of quality
<b>Demerits</b>	No differentiation, excess entry, low profit, lack of R&D	It takes much energy and time to achieve results
<b>Institutional requirement</b>	Openness, quick decision making, flexible outsourcing	Long-term relations, building internal skills & knowledge



*lar manufacturing.* Integral manufacturing requires parts to be designed uniquely for each product, which are mutually adjusted continuously for high performance. In contrast, modular manufacturing uses common parts which are put together in flexible combinations to create new products quickly. For developing countries, modular manufacturing is easier to implement but has associated drawbacks such as oversupply, depressed prices, low profitability, and the lack of incentive for technological improvement<sup>15</sup>.

Japan is a country of integral manufacturing, but faces high wages and an aging population. In 2007, many experienced workers will begin to retire (the so-called “year 2007 problem”). Japan is desperately seeking a young, developing country partner in integral manufacturing but has found none so far. On the other hand, ASEAN countries need high skill building beyond simple assembly, in order to sustain growth and compete with China. If Vietnam learns to become such a partner, with long-term vision and strong aspiration for high quality, Japan and

<sup>15</sup> Integral manufacturing in developing countries is an issue drawing much attention in Japanese academic circles. It is also one of the hottest research topics at VDF in both Hanoi and Tokyo. See K. Ohno, *The Economic Development of Japan: The Path Traveled by Japan as a Developing Country*, GRIPS, 2006, pp.213-216, and K. Ohno, “Integral Manufacturing: The Way Forward for Vietnam,” in VDF, *Industrial Policy Formulation in Thailand, Malaysia and Japan: Lessons for Vietnamese Policy Makers*, forthcoming in July 2006. In addition, VDF is organizing a symposium with Prof. Fujimoto’s research team in July 2006 in Tokyo.

Vietnam can form a strategic alliance in integral manufacturing. In such a case, the Japanese government and business community will surely assist Vietnam through ODA and technical assistance. Other ASEAN countries are already asking for such help<sup>16</sup>.

To supply a large number of high-quality engineers, existing programs should be enhanced and new programs should be added through both public and private effort. The following measures were suggested by Japanese firms and experts.

First, existing training programs should be fully utilized. For example, one molding supplier has sent five Vietnamese workers to Japan for training with the support of the Association for Overseas Technical Scholarship (AOTS), a Japanese official agency. One automobile parts supplier has sent most of its middle-class engineers and managers to its group factories in ASEAN under its own training program. In addition, many Japanese firms organize internal competition such as the QC Circle Olympics and the Skill Olympics, in which workers belonging to the same business group in different countries meet in one place to compete for high performance.

Second, the Vietnamese government should support training programs offered by firms. The draft of the supporting industry master plan proposes to subsidize 50% of the cost incurred by the training activities of individual firms. Many Japanese firms welcomed this proposal. One company asked for the precise definition of “training and education.” It wanted to know whether all types of training, both external and internal, would be supported.

Third, a system to promote and certify industrial Meisters should be established. Japan has Meister systems at national, prefectural (provincial), and firm levels, which together encourage good engineers to do better and be socially recognized. For example, one of the top companies in Japan (an electronic device manufacturer) has an internal Meister system for lens polishing, painting, and electrical wiring. Meister candidates are nominated by each department, who are classified into three ranks A, B, and C. The company then sends A-ranked engineers to the Meister license offices of the central or local government. If they successfully receive Meister certificates from the government, the firm will additionally award them with internal Meister titles and a bonus of

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<sup>16</sup> Thailand is linking up with Ota Ward of Tokyo, an area with many high-tech SMEs, to transfer manufacturing skills. In Indonesia, Japanese FDI firms set up a new association in Jakarta to strengthen the molding industry in February 2006.

500,000 yen (about US\$4,200). Meisters in this company are required to train two successors for two years.

Fourth, collaborative training programs between FDI firms and local suppliers should be encouraged. Such programs promote technical transfer to local firms, and provide opportunities for both sides to know each other and work together. One of the most successful programs in collaborative training is the Penang Skills Development Centre (PSDC) in Malaysia<sup>17</sup>. During our survey in Vietnam, many Japanese firms expressed interest in participating in such programs. They hoped that practical vocational training, if properly conducted, would increase the supply of skilled workers and slow down wage inflation. A number of Japanese firms said that they would send their experienced engineers as instructors or make their equipment available for such training, if the government made serious effort to initiate such programs.

Fifth, practical engineering education must be strengthened in high schools, industrial colleges, and universities. A motorbike parts supplier complained that the results of sending their workers to Japan for training were less than expected, because Vietnamese workers lacked basic skill and knowledge for absorbing advanced technology. One computer device assembler proposed that the government should pay more attention to basic but highly demanded skills such as production engineering and efficient factory management, rather than pursuing flashy words like IT, high-tech, biotech, etc. An electronics component producer also suggested bolstering practical skills and knowledge in molding and pressing with precision.

## 6. Job Hopping as an Impediment to Skill Development

One important issue related to human resource development is job hopping. For integral manufacturing, engineers with high skills and deep knowledge of the production process must stay in one firm. However, Vietnamese workers who are trained by the company or have acquired some skills often move to another company in search of higher salaries or better working conditions. This prevents accumulation of highly specific skills and reduces incentives for companies to train their workers. Even in labor-intensive garment production and food processing, job hopping causes problems for personnel management. But for supporting industries which rely on experienced engineers and expensive machines, job hopping is fatal. Admittedly, this phenomenon is not unique to Vietnam; many developing countries report high job turnovers.

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<sup>17</sup> Mori, 2005, Chapter 4.



In Vietnam, several Japanese molding companies aim to establish an integrated manufacturing system within a factory from design to marketing. They train their workers to become full-fledged engineers who know A to Z in making molds. However, their plans are often frustrated by middle-class engineers quitting without mastering high-level technique. One Japanese expert criticized this trend since workers were losing the opportunity to become excellent engineers for short-term gains.

In Vietnam at present, there seem to be two macro reasons for increased job hopping. First, an increased inflow of FDI is creating labor shortages, especially in localities where FDI is concentrated. An automobile parts supplier in the North said that, as the industrial zone in which the company was located was getting fully occupied, rising labor demand began to cause a high job turnover and wage increase. The second reason is a shift in economic structure. In and around Ho Chi Minh City, service industries are expanding rapidly and absorbing a large amount of workforce. An electronic parts maker in Ho Chi Minh City said that the average turnover of first-year employees had increased dramatically in recent years, from less than 1% to 40-50 % at present.

However, not all firms report high job hopping. Among the firms we visited, some said they had kept their workers successfully with very low turnovers, even less than 1% per year. One reason seems to be location. An automobile parts supplier in the suburbs of Hanoi explained that it was located in an area where labor demand had not risen very much and where most of the workers were local, not migrant, with no intention of moving far. Another reason seems to be employee policy. A plastic parts supplier described its worker incentive programs, such as generous benefits, transportation allowance, and delicious lunch. Workers tend to be loyal to companies which treat them well. The salary level is often not the decisive factor. It is necessary to study the conditions under which workers stay longer with one company, to minimize unnecessary job hopping.

## 7. Tariff Reduction and Tax Incentives

The general director of a consumer electronics manufacturer stated that tariff reduction and tax incentives were standard policy instruments for promoting supporting industries. Many firms we interviewed agreed. These measures are also widely practiced in other East Asian countries for encouraging SMEs and supporting industries.

Many electrical and electronics firms requested that import duties on parts and

components be quickly lowered preferably to zero, or at least to less than 5%, which was the CEPT tariff rate for finished ASEAN products. This was needed to avoid the situation of reverse tariff structure in which tariffs on components were higher than tariffs on finished products. Otherwise, assemblers in Vietnam would lose cost competitiveness against ASEAN imports. ASEAN imports that threaten production in Vietnam are often the products of local subsidiaries belonging to the same Japanese business group. From the viewpoint of the Tokyo headquarters, there is no reason to assemble TVs and audio-visuals in Vietnam if such assembly incurs high parts tariffs in addition to high logistics cost. It will be more efficient to export them from the existing factories in Malaysia or Thailand, where local parts are available and production scale is large, to serve the Vietnamese market.

Tariff reduction will have two favorable effects. First, it enhances cost competitiveness of assemblers and may turn Vietnam into an export base of certain finished products. Second, liberalization of parts import increases intra-industry parts trade and encourages Vietnam to specialize in the production of certain parts to be exported globally. Advanced ASEAN countries have already actively participated in East Asia's production network and found certain core components to specialize in. For example, Malaysia specializes in cathode-ray tubes (CRT) and Thailand specializes in compressors used in air-conditioners and refrigerators.

In addition, a number of firms wanted import duties on raw materials be reduced. More than one parts supplier urged import tariff reduction on high-quality industrial materials which were not produced in Vietnam. Several metal parts suppliers complained about the recent tariff increase on cold rolled steel from 0% to 7%, to protect the new Phu My cold rolling mill in the South. This is forcing domestic metal users to raise their prices. The problem is that the quality of Phu My's cold rolled steel is still below standard and Japanese firms must continue to use imported cold rolled steel at a higher tariff. If the Phu My mill improves quality and delivery speed to a level acceptable to Japanese firms, the problem may be ameliorated.

Capacity building of customs officers is also called for. Several firms complained that common products available in Vietnam (steel pipe for construction, for example) and high-tech materials unavailable in Vietnam (rare metal precision tube for molding, for example) are charged the same tariff rate to protect the former. Japanese firms wanted popular products and high-quality industrial materials be distinguished in the tariff schedule. In some cases, different tariffs were levied on the same product depending on the whims of the customs official in

charge. In general, customs officers do not have sufficient knowledge to distinguish and classify fundamentally different products.

Another important promotion measure is tax incentives. Preferential tax treatment should be provided to encourage supporting industries, to both FDI and local suppliers without regard to nationality<sup>18</sup>. Corporate tax exemption and reduction, tax deduction for machinery purchases, subsidies for R&D, and the like, will accelerate investment in supporting industries. Neighboring ASEAN countries already provide such tax incentives under well-focused national campaigns for promoting SMEs and supporting industries.

For example, Thailand introduced preferential treatment for supporting industries in 1993-94. Targeted products and processes included molding, jigs, forging, casting, industrial tools, cutting, grinding, sintering, heat treatment, surface treatment, machining centers, electronic connectors, Ni-Cd and rechargeable batteries, and plastic engineering. Firms engaged in any of these 14 activities were given the following privileges: (i) 8-year corporate tax exemption regardless of location; (ii) 50% import tariff reduction for machinery import for projects located in Zones 1 and 2 (inside and near Bangkok), (iii) 100% import tariff exemption for machinery import for projects located in Zone 3 (rural areas); and (iv) exclusion from foreign capital restriction by 1996<sup>19</sup>.

Some Vietnamese policy makers are worried that further reduction of parts tariffs and provision of tax incentives, proposed by FDI firms, may bring negative results. Main concerns include: (i) a decrease in fiscal revenue; (ii) how to promote domestic parts industries under zero tariffs; (iii) how to avoid the situation where producers in other sectors demand similar special treatment; and (iv) the risk of Vietnamese producers being wiped out under the dominance of FDI parts makers.

With regards to these issues, Japanese experts and firms replied as follows. For the fiscal revenue effect, a detailed study on the long-term, indirect impacts of tax and tariff reduction was needed. If such policies activate FDI and growth, the overall revenue effect might well be positive through increased income, more traffic and port charges, income multiplier effects on other sectors, and so on. On the second issue, it was noted that financial incentives were only one of the

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<sup>18</sup> Equal treatment of domestic and foreign firms is one of the key requirements of WTO. More generally, none of the policy measures considered in this report violates WTO rules.

<sup>19</sup> Japan International Cooperation Agency (JICA), *Investigation Report for Industrial Development: Supporting Industry Sector*, 1995, p. 2-2-4, in Japanese.

factors determining parts investment. As argued above, the availability of large demand and highly skilled engineers is more important. Supporting industries can grow strongly even without protective tariffs if these other conditions are met. Since parts industries also use parts, high parts tariffs may not promote parts industries, depending on the precise structure of such tariffs.

As to the third and fourth issues, the concerns were understandable but prioritization and natural selection were inevitable. One consumer electronics assembler felt that mobilization of resources to targeted sectors was necessary and desirable, and supporting industries, which were the base for all machinery industries, should be recognized as a key sector that warranted special support. In addition, elimination of a large number of Vietnamese firms, hitherto weak and protected, is inevitable under globalization. It is part of the natural selection process for Vietnam to become more competitive. Japanese firms expect at least some local firms to survive and grow. Almost all Japanese assemblers hope to increase transactions with local firms to reduce cost and diversify suppliers. For instance, one Japanese molding firm expressed interest in increasing subcontracts with Vietnamese suppliers. Japanese firms hope to build a new system of cooperation and division of labor with Vietnamese firms under an increasingly open and competitive environment. The necessary condition for this is that Vietnamese firms make serious effort in QCD.

At present, FDI firms often criticize policies, and the government in turn complains about the lack of promised performance by FDI firms. This acrimonious relationship is harmful to the healthy development of Vietnamese industries. To improve the situation, one Japanese expert proposed a “give-and-take” deal between the government and Japanese FDI firms, in which the former seriously improves policies in accordance with business demands while the latter set targets for production, export, cost reduction, localization, and so on, *conditional on the implementation of good policies*. The government must understand that business performance depends on not only enterprise effort but also many external factors, including policies, and that business targets should not be interpreted as commitments that can lead to penalties when they are not achieved. One Japanese firm did not like this idea since the proposal sounded like “socialist planning,” and some were similarly concerned that numerical targets might bind their businesses. However, others were open to such an idea.

## 8. Unstable Policy Environment

Complaints about unpredictable policies are nothing new in Vietnam. Everyone agrees that this is perhaps the most serious impediment to FDI in Vietnam. But

we must emphasize this well-known weakness since it is also negatively affecting the growth of supporting industries. Policy instability has three main features: (i) the lack of communication with businesses; (ii) ambiguity of the policy purpose; and (iii) sudden implementation. The Vietnamese government was sharply criticized when it suddenly enforced import quotas on motorbike parts in 2002, which caused serious damage to motorbike assemblers and suppliers. The special consumption tax on automobiles also continues to cause much confusion and chagrin. Japanese firms feel that the Vietnamese government has not learned much from these experiences. They are afraid that similar problems will occur in the future.

Even when we were conducting the survey, some Japanese firms were unable to meet us since they were engulfed in new policy-related problems which had the same features described above. Specifically, the increase in minimum wages in February 2006 caught most Japanese firms unprepared since the government did not give them sufficient prior information<sup>20</sup>. Some Japanese firms in the South suffered wildcat strikes in the wake of confusion caused by the minimum wage hike. Some firms also criticized the requirement that wages be raised 7% after initial training. For some workers, short-term training is hardly enough. For example, at least a few years of training is needed to produce good engineers. Uniform, compulsory requirement for wage increase ignores differences among labor types.

Japanese automobile manufacturers and their suppliers were severely hit by the recent announcement on the liberalization of second-hand car imports which would start on May 1, 2006. The purpose of this policy was unclear. Some producers wondered if the government wanted them to leave Vietnam, or just putting pressure to reduce car prices. The explanation that used-car imports were required for WTO accession was not persuasive to some observers. Automobile assemblers tried to assess the long-term impact of this policy but implementation details were not yet revealed. Meanwhile, new car sales dropped sharply in the first quarter of 2006 as consumers waited for price decreases in May. Some production lines stopped.

There are two reasons why policy instability curbs the inflow of foreign parts producers. First, unlike big-name assemblers, most Japanese suppliers are SMEs with relatively small capital and little international experience. They have little know-how in coping with policy uncertainty and working with a foreign gov-

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<sup>20</sup> The minimum wages were raised from US\$45 to US\$55 in Hanoi and Ho Chi Minh City, from about US\$35 to US\$50 in smaller cities, and from US\$31 to US\$45 in the rest of the country.

ernment. They are extremely afraid of any failure in the factory abroad, which may lead to the bankruptcy of the parent company. Observing this situation, one Japanese material supplier advised the Vietnamese government to assure Japanese SMEs with full support. Drafting a good supporting industry master plan is the best way to do this.

Furthermore, unstable policy lowers the evaluation of Vietnam in the eyes of the MNC headquarters. In any Japanese corporation, global strategy is made at the headquarters, while a factory in Vietnam plays an assigned role in it. Oftentimes, Japanese general directors stationed in Vietnam are very eager to expand their factories and contribute to Vietnam's industrialization. But the headquarters usually does not care much about Vietnam, which is only a very small piece in the global business game. This gap in enthusiasm toward Vietnam is called *ondosa* (temperature gap), implying that the factory in Vietnam is hot but the headquarters remains cool. General directors must get an approval from the headquarters for expanding the factory, introducing new models, exporting to the global market, and so on. But persuading Tokyo becomes very difficult when Japanese media are full of news about continuing policy inconsistencies in Vietnam. The general director of an electrical and electronics assembler said that he was doing everything to invite group companies to Vietnam, but he could not convince the headquarters under present circumstances.

## 9. Information and Perception Gaps

For strengthening local capability, Vietnamese suppliers must work together with FDI assemblers. However, two problems impede fruitful business cooperation between Vietnamese and FDI firms.

The first problem is the information gap. Although most FDI assemblers are desperately looking for local suppliers, they do not know where good Vietnamese parts makers are located. Many Japanese firms use telephone directories and workers' personal connections to look for potential suppliers. One company said that it had to visit 100 firms to find one good supplier. All this is too costly and time-consuming for private firms. A number of Japanese firms noted that local suppliers did not actively approach them. Local suppliers generally do not seem to know how to build business relations, and lack confidence to do business, with Japanese firms.

One way to bridge the information gap is to create a supporting industry database. Many Japanese firms said they would welcome such a database. In fact, several organizations, including the Vietnam Chamber of Commerce and Indus-

try (VCCI) and Vietbig, have already produced yellow-page-type databases, providing information on company names, contact addresses, and main products<sup>21</sup>. However, a mechanical listing of hundreds and thousands of companies is not enough. FDI firms want to reduce time and cost in narrowing down potential suppliers. This requires either explicit ranking or implicit recommendations by the database provider. Moreover, information must be accurate and updated frequently. In most databases, listed firms are asked to update information by themselves, but it is doubtful if this can guarantee speed and objectivity. A good database needs careful design and much commitment on the part of the database provider.

The second problem is the perception gap. Even if the two sides find each other, there is a wide gap between what Japanese firms require as minimum standards in quality, cost and delivery (QCD), and what local firms consider acceptable. The Vietnamese side complains that Japanese firms are too fussy about little things while the Japanese side rejects local parts which they say are below the required levels. One reason for this is that local firms have had little exposure to global market competition while Japanese firms are already fiercely competing with American, European, Korean and Chinese firms. Another important reason is that *integral manufacturing* of Japanese firms, which requires long-term cooperation and endless pursuit of perfection, is at odds with modular manufacturing of copied products practiced by most Vietnamese firms.

Vietnamese suppliers lack the knowledge of the Japanese production system. For example, they send catalogs and product samples to JETRO or Japanese assemblers, and expect to receive orders. But Japanese firms never accept such casual contacts. In the case of automobiles, designing of a new model starts at the R&D center in Japan three years prior to mass production. Parts suppliers are required to continuously participate in this *design-in*, working closely with assemblers and other parts makers. To join this system, Vietnamese firms must send Japanese-speaking engineers to Japan for three consecutive years. In the case of electronics and motorbikes, the situation is not as rigorous as automobiles, but assemblers still must perform quality tests and get an approval from the headquarters before trying new part suppliers.

One Vietnamese firm supplying key metal parts to Japanese firms said that it

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<sup>21</sup> VCCI's *Vietnam Business Directory* is available in book form and CD-ROM. Vietbig, a joint-stock company, publishes its database in a book as well as in a website ([www.yellowpages.com.vn/index.asp](http://www.yellowpages.com.vn/index.asp)). In Thailand, the Board of Investment's Unit of Industrial Linkage Development (BUILD) is responsible for maintaining a supplier database.

took three years to become a business partner of a Japanese motorbike assembler, a process that contained different interaction phases. Other Vietnamese firms which supply to Japanese firms echoed that it took them about two to three years before receiving the first order. Until then, they had to send a large number of samples, which were rejected repeatedly, forcing them to improve quality step by step. This was a very costly and frustrating process. But once trust is built, Japanese firms teach them well and assure stable business relations and large orders.

Two Vietnamese firms, which have successfully built business relations with Japanese assemblers, offered three lessons for newcomers. First, top priority is sincere attitude toward business. Even if initial ability is low, Japanese firms will help them as long as general directors make serious effort to learn from Japanese and meet high requirements (similarly, a large Japanese computer device assembler stated that it would first look at the attitude of the general director when choosing local suppliers). Second, each firm should accurately assess and honestly admit its weaknesses. If local suppliers cheat or overstate production capacity or technology, the Japanese side will immediately find out and never trust them again. Finally, commitment to quality is crucial. The quality problem is what FDI firms are most afraid of, because it would destroy their reputation in the global market.

## 10. Industrial and Safety Standards

Finally, we would like to touch upon two additional issues not introduced earlier: quality and industrial standards and unavailability of raw materials.

Vietnam needs to create safety and industrial standards at least to the levels of neighboring ASEAN countries<sup>22</sup>. The current absence of industrial and safety standards impedes the development of supporting industries in three ways. First, importation of low-quality finished products hinders the business expansion of domestic assemblers. A consumer electronics manufacturer stated that low-quality imported products had eroded the market of high-quality products that it produced. Indirectly, this also reduces local parts procurement. Second, importation of low-quality parts and components may crowd out domestic suppliers. A tire supplier said that low-quality tires had flooded the domestic market because Vietnam did not have a consistent standard to grade the strength of tires. Third, domestic suppliers face difficulty in establishing their own quality standards. A Japanese motorbike parts supplier said that they followed Japan

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<sup>22</sup> For example, Malaysia has JBE SIRIM and Thailand has TISI as national safety standards.



Industrial Standard (JIS), but Vietnamese suppliers would not adopt any quality control system since they were not familiar with any system either at home or abroad.

Furthermore, the government should provide timely information on environmental laws in developed countries, to which Vietnamese products may be exported. For instance, EU introduced the law on the Restriction on Hazardous Substances (ROHS) in January 2006, which prohibited importation of products containing any of the six substances<sup>23</sup>. Although Vietnam has not adopted a similar environmental restriction, most FDI firms have chosen to abide by ROHS for domestically sold products as well as exports. As a result, they now require Vietnamese parts and material producers to also follow ROHS. However, the latter still lack the knowledge and technology to comply. One Taiwanese motorbike parts supplier noted that it was unable to find any local supplier of trivalent chrome, which was to replace the banned hexavalent chrome in metal plating, and therefore could not switch to the ROHS standard.

## 11. Unavailability of Raw Materials

Some assemblers and suppliers emphasized the importance of raw material industries. As long as Vietnam relied on the imports of flat steel, plastic materials, industrial chemicals, paint, refined oil products, and so on, competitiveness in terms of cost and lead-time could not be realized against those countries that had these materials.

However, raw material industries are extremely capital-intensive, far more so than supporting industries which we have been considering. Before investing in expensive equipment, there should be a sufficiently large industrial demand to ensure efficient operation and low cost. According to one manufacturer of printed circuit boards (PCBs), China could invest a huge amount in the material industries of PCBs because it had hundreds of PCB assemblers that used them. In Vietnam, there are only three PCB assemblers. Thus, it would take a few decades before domestic demand for PCBs rose sufficiently to justify producing the raw materials. Until then, tariff reduction, or even tariff exemption, on the raw materials of PCBs is the appropriate policy.

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<sup>23</sup> Cadmium, lead, hexavalent chrome, mercury, PBB, and PBDE.



**GRIPS**

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