

# Chapter 9

## The Challenges of Upgrading and Diversifying Viet Nam's Industrial Structure

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# **CHAPTER 9**

## **THE CHALLENGES OF UPGRADING AND DIVERSIFYING VIET NAM'S INDUSTRIAL STRUCTURE**

*Nguyễn Bình Giang*

### **Abstract**

This research attempts to look into how the weaknesses and shortcomings in soft and hard infrastructure have been the obstacles to the upgrading and diversification of industrial structure in Viet Nam. It is important to overview the status of key industries before examining what elements of soft and hard infrastructure pose problems to firms in these industries. A survey is then conducted to determine the impacts of those elements.

It is well documented that though achieving high performance in terms of export volumes, Viet Nam's textile and apparel industry as well as footwear industry mainly include original equipment manufacturers for foreign multinational firms. These industries do not even have control over the domestic market. Meanwhile infant industries such as electronics and automotive mainly import and assemble complete knock down kits. To become higher value-added industries, they should be upgraded to become semi-knocked down kit assemblers and then own design manufacturers (or even own brand manufacturers) and free-on-board exporters. Development of supporting

industries and human resource will be the key factor while hurdles created by soft and hard infrastructure should be immediately removed.

## **INTRODUCTION**

Viet Nam's industrial structure has considerably changed during the past 20 years. The outputs and export volumes by some manufacturing industries have grown fast. But where the value added in Viet Nam is concerned, the low growth rate of the manufacturing sector is cause for concern. Although the government has approved and implemented several development strategies, long-term development master plans for the textile, leather and footwear, wood processing, automobiles and motor, electronics and information industries, these industries are still only at the stage of simply assembling or outsourcing for global buyers. The textile and leather shoes industries have successfully penetrated the international markets but have yet to do so for the domestic market. As the foreign markets went into a slump during the global economic recession in 2008-2009, these industries suffered severely. While the prices of cars and motorcycles in Viet Nam are much higher than elsewhere in the world, the per capita income is lower.

This section seeks to determine the structural weaknesses involving soft and hard infrastructure that may be hindering the upgrading and diversification of specific industries in Viet Nam.

The questions we have to ask here are: i) why has not Viet Nam been able to diversify its existing industrial structure; and ii) which elements are needed to upgrade

Viet Nam's industrial structure alongside the development of infrastructure, improvements of investment climate and human resource.

The approach employed in this research begins with an analysis that entails a review of the industrial structure of Viet Nam, the history and current situation of key industries in the country, including textile and apparel, footwear, wood processing, electronics, and automotives.

The second part of this research explores the problems related to soft and hard infrastructure that key industries face in the course of their development. Secondary sources such as journals and newspapers were used for the study.

A survey was conducted to further the above problems. Respondents were asked to identify their needs and demands for improvements of soft and hard infrastructure in Viet Nam.

## **1. OVERVIEW OF VIET NAM'S INDUSTRIAL STRUCTURE**

After more than 20 years of reform, the structure of Viet Nam's economy has shifted from agriculture, industry and service to industry, service and agriculture. In 1991, industry and construction only accounted for 23.8 percent of the gross domestic product while agro-forestry and fisheries made up 40.5 percent and service 35.7 percent, respectively<sup>1</sup>. In 2009, the corresponding rates were 41.7 percent, 17 percent and 41.3 percent, respectively<sup>2</sup>. Although the manufacturing sector is growing steadily, it is still

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<sup>1</sup> Phan Kế Tuấn (2009), “Tái cơ cấu ngành công nghiệp theo yêu cầu phát triển bền vững”, Kinh tế và phát triển, 7/2009. (“Restructuring industry sector for sustainable development,” *Journal of Economics and Development, July.*)

<sup>2</sup> “Tình hình kinh tế- xã hội năm 2009 (Press release: 2009 Socio-Economic Statistical Data),” General Statistics Office, 31/12/2009. Retrieved 24/01/2010 from

mainly composed of original equipment manufacturers (OEM) for overseas companies such as garments and textiles, footwear, mechanical assembly and electronics or agro-processing with a low added value. For example, the textile and apparel industry in 2008 earned over 9.2 billion U.S. dollars from exports, but two-thirds of these earnings came from OEM for global buyers.<sup>3</sup>

The rate between the increase of the value-added and output growth (VA/GO) is always smaller than 1. This means Viet Nam's industry develops horizontally, with the processing and assembly playing an important role. VA/GO of the electronic and information industries in 2007 was 13.81 percent – a slight increase of 1.5 percent from 1995 and the lowest among other industries. This is because these industries consist simply of assembly firms. Viet Nam has around 2,000 textile and garment enterprises, but there are only 250 supporting enterprises. Similarly, manufacturing engineering and electronic appliances also focus solely on assembly. This resulted in the downward trend of VA/GO in industry over the recent past.<sup>4</sup>

## **1.1. Textile and Apparel Industry**

Textile and apparel industry is one of the biggest industries in Viet Nam, with more than 2,000 enterprises and 2 million workers. More than 60 percent of the products are

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[http://www.gso.gov.vn/Modules/Doc\\_Download.aspx?DocID=10840](http://www.gso.gov.vn/Modules/Doc_Download.aspx?DocID=10840). It is worth noting that the industry sector in Viet Nam, based on its own system, includes the mining, manufacturing, construction, electricity and water industries. If the mining industry is lumped together with agriculture, forestry and fisheries as the primary sector, and water and electricity services are combined with the trade and services sector, then the economic structure of Vietnam's industry by 2009 would be as follows: the manufacturing sector accounting for 24.9%, primary sector 21.4%, service and trade sector 53.7%.

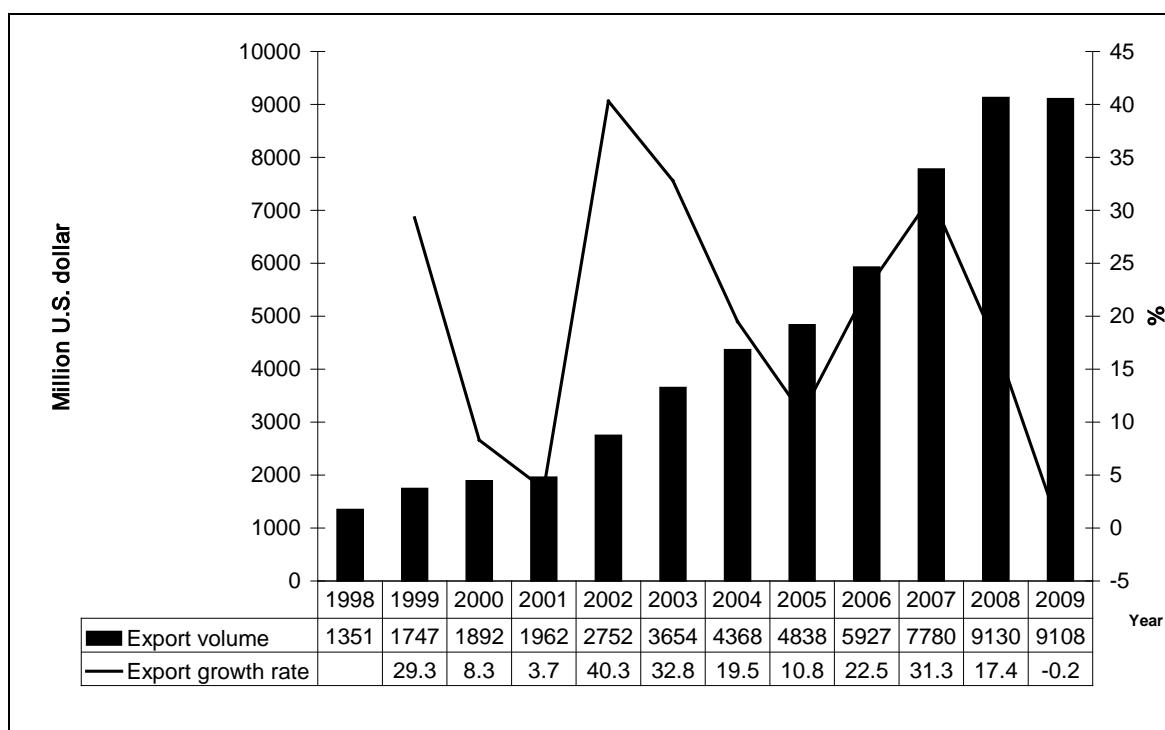
3 Phan Kế Tuấn (2009), Ibid.

4 “Cơ hội tái cơ cấu công nghiệp (Opportunity to restructure industry),” *VnEconomy*, 11/5/2009.

Retrieved 24/01/2010 from <http://vneconomy.vn/20090511091013767POC5/co-hoi-tai-co-cau-cong-nghiep.htm>

exported<sup>5</sup>. The export value in 2009 was more than 9 billion U.S. dollars (nearly 9.2 billion U.S. dollars in 2008), representing a 1.45-fold increase over the export of crude oil (Figure 1).<sup>6</sup> The current situations of textile and apparel industries are shown in Figure 2, Figure 3, Table 1 and Table 2.

**Figure 1: Export Volume and Growth Rate of the Textile and Apparel Industry during 1998 and 2009**



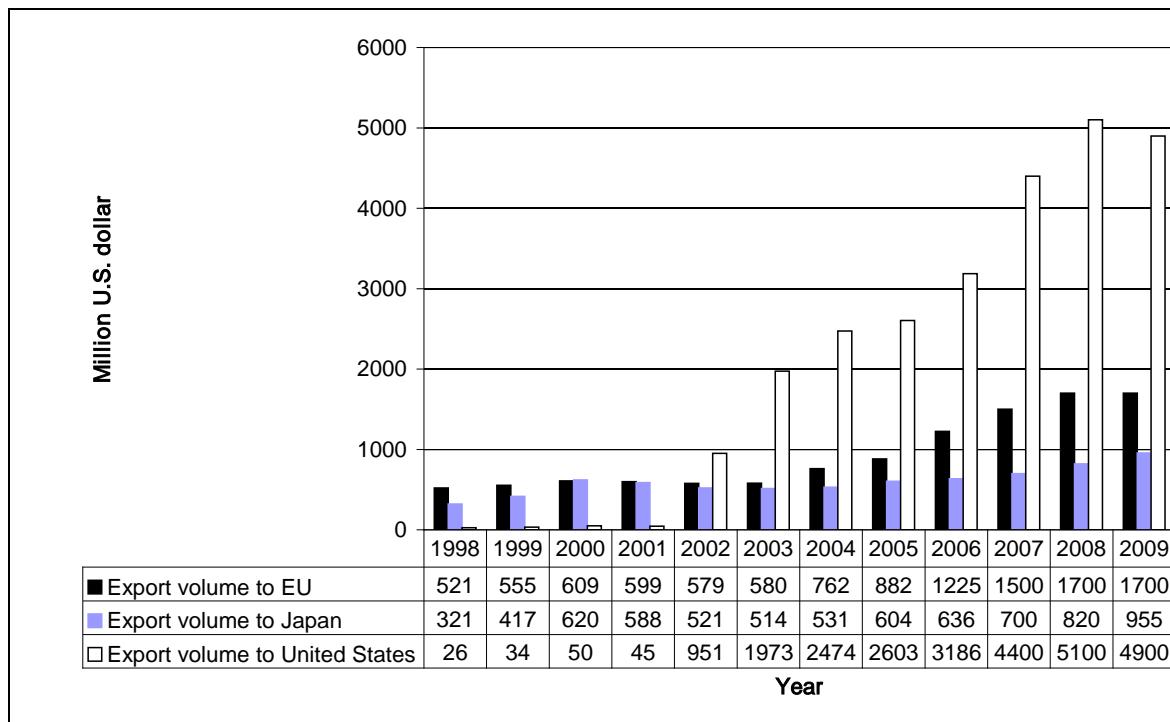
Source: Vitas, on-line available at

<http://www.vietnamtextile.org/en/ChiTietTinTuc.aspx?MaTinTuc=441&Matheloai=58>.

<sup>5</sup> “Phát triển ngành dệt may Việt Nam sau hai năm gia nhập WTO và những giải pháp để tăng tốc (Development of Viet Nam’s textile and apparel industry during two years since joining the World Trade Organization and measures adopted to accelerate it),” *WTO Việt Nam*, 27/12/2008. Retrieved 24/01/2010 from [http://wto.nciec.gov.vn/Lists/MarketAccess\\_vn/DispForm.aspx?ID=84](http://wto.nciec.gov.vn/Lists/MarketAccess_vn/DispForm.aspx?ID=84)

<sup>6</sup> “Tình hình kinh tế- xã hội năm 2009 (Press release: 2009 Socio-Economic Statistical Data),” General Statistics Office, 31/12/2009. Retrieved 24/01/2010 from [http://www.gso.gov.vn/Modules/Doc\\_Download.aspx?DocID=10855](http://www.gso.gov.vn/Modules/Doc_Download.aspx?DocID=10855).

**Figure 2: Export Volumes of Garment Products to Main Markets**



Source: Source: Vitas, on-line available at

<http://www.vietnamtextile.org/en/ChiTietTinTuc.aspx?MaTinTuc=441&Matheloi=58>.

Garment and textile factories are allocated mainly in Ho Chi Minh city (1,400 enterprises); Ha Noi and adjacent areas (300 enterprises altogether). In 2007, this industry produced about 10,000 tons of raw cotton, 50,000 tons of synthesized fabric, 260,000 tons of short fiber, 150,000 tons of knitted fabric and 680 million m<sup>2</sup> of shuttled fabric.<sup>7</sup>

<sup>7</sup> “Xuất khẩu dệt may VN: Vào tốp 10 thế giới (Viet Nam’s export of textile and apparel products: How it became one of world’s top ten exporters,” *Tiền Phong*, 04/10/2007. Retrieved 24/01/2010 from <http://www.tienphong.vn/Tianyon/Index.aspx?ArticleID=97746&ChannelID=3>

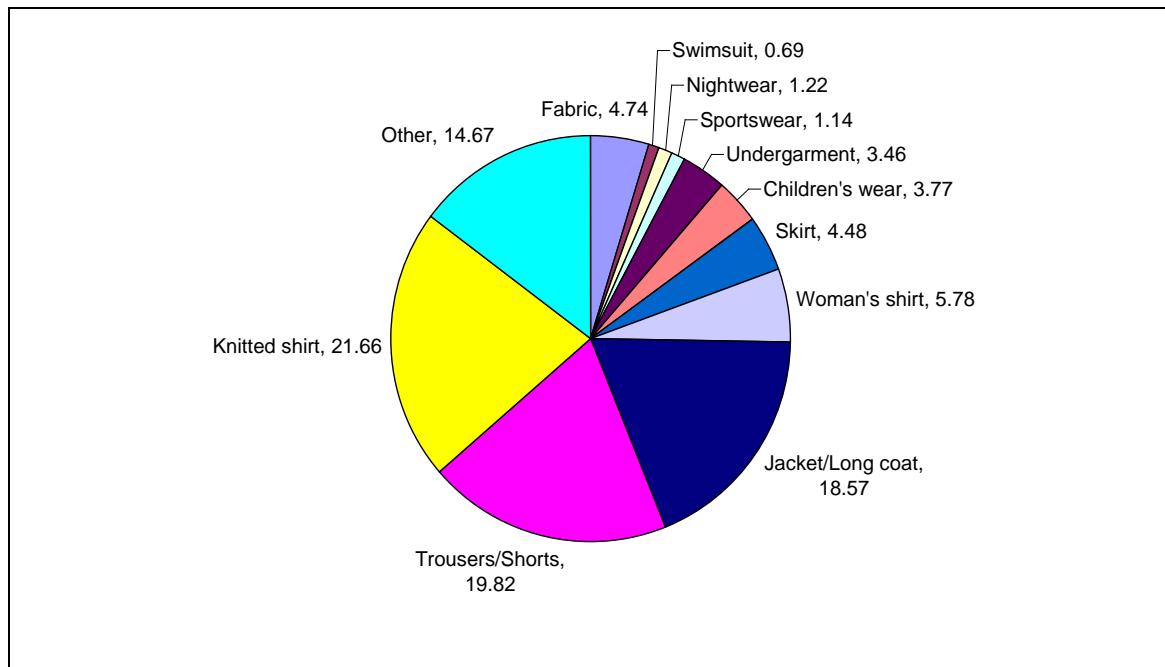
**Table 1: Firms in the Textile and Apparel Industry, 2009**

Categorize		Number	Share (%)
By ownership	State-owned firms	10	0.5
	Domestic private firms	1490	74.5
	FDI firms	500	25.0
By location	North Vietnam	300	15.0
	Central Vietnam	150	7.5
	South Vietnam	1550	77.5
By sector	Textile and apparel	600	30.0
	Apparel only	1360	68.0
	Fiber and yarn	40	2.0

Source: Vitas, on-line available at

<http://www.vietnamtextile.org/ChiTietTinTuc.aspx?MaTinTuc=138&Matheloi=57>.

**Figure 3: Textile and Apparel Export Structure by Products (percent) in 2009**



Source: Vitas, on-line available at

<http://www.vietnamtextile.org/en/ChiTietTinTuc.aspx?MaTinTuc=441&Matheloi=58>.

Within the fabric-garment-dye-textile chain, the textile and fabric sector have developed faster than the other two, resulting in the breaking up of the chain. Although the fabric industry has progressed, there remain limitations in terms of quality and diversity, that is, it does not meet the demands of garment and textile enterprises for a variety of fabrics. There are enterprises using cotton, while others use wool, polyester and mixed fabrics. Currently in the domestic market, Viet Nam's fabrics are facing fierce competition from cheaper Chinese products. As most enterprises process only export products, they have to accommodate customers' choice of materials, which usually prevent them from sourcing domestic materials. This causes many difficulties for the textile and dyeing industries as well as fabric producers.<sup>8</sup>

## **1.2. Footwear Industry**

After 20 years of development (by the end of 2008), Viet Nam's leather and footwear industry<sup>9</sup> had 500 enterprises, 400 of which are in the South, including Ho Chi Minh City, Binh Duong and Dong Nai provinces, 10 in the central region and 60 in the

**Table 2: Import Volume of Materials, Accessories in Million U.S. dollar**

Items	2002	2003	2004	2005	2006	2007	2008
Cotton	96.7	105.7	190.2	167	219	268	468
Fibre/yarn	313.7	298.3	339.0	340	544	744	788
Fabric	997.0	1,364.0	1,927.0	2,398	2,980	3,980	4,454
Accessories	1,711.0	2033	2,253.0	2,282	1,952	2,152	2,376

Source:<http://www.vietnamtextile.org/en/ChiTietTinTuc.aspx?MaTinTuc=330&Matheloi=58>.

8 “Ngành sợi tìm đường xuất khẩu (Yarn industry finds the way to export)”, *Thời báo kinh tế Sài Gòn*, 16/7/2009. Retrieved 11/1/2010 from

<http://www.thesaigontimes.vn/Home/kinhdoanh/xuatnhapkhanh/21101/>

9 Including sub-industries which manufacture footwears, bags, cases, other leather products...

North.<sup>10</sup> This industry employs more than 650,000 workers (excluding those in small City, Binh Duong and Dong Nai provinces, 10 in the central region and 60 in the North.<sup>11</sup> This industry employs more than 650,000 workers (excluding those in small and material supply factories, households and craft villages), accounting for 10.6 percent of the country's industrial labor force. This figure is expected to increase to 820,000 in 2010 and 1.3 million by 2020. The industry has recorded a high growth rate in five consecutive years (2005-2009), averaging 16 percent a year, with footwear and bags being the two main products. (By 2008, the industry's production capacity was 715 million pairs of different kinds of footwear and 88 million bags of different types.) Leather products alone increased by an average of 20 percent a year (130 million leather products had been made by the end of 2008).<sup>12</sup>

The leather and footwear industry has contributed greatly to Viet Nam's exports, with more than 5.6 billion U.S. dollars in 2008 and 4.191 billion U.S. dollars in 2009.<sup>13</sup> Viet Nam's leather and footwear industry accounted for 14 percent of the world's market share, making the country the world's second biggest exporter (next to China).<sup>14</sup> The country's export market has expanded and remained stable. Vietnamese

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<sup>10</sup> “Ngành Da - giày Việt Nam: Bỏ ngõ thị trường nội địa (Footwear industry forgets the domestic market)”, *Lao Động*, 31/8/2009. Retrieved 24/1/2010 from <http://www.laodong.com.vn/Utilities/PrintView.aspx?ID=153488>.

<sup>11</sup> “Ngành Da - giày Việt Nam: Bỏ ngõ thị trường nội địa (Footwear industry forgets the domestic market)”, *Lao Động*, 31/8/2009. Retrieved 24/1/2010 from <http://www.laodong.com.vn/Utilities/PrintView.aspx?ID=153488>.

<sup>12</sup> “Ngành da giày Việt Nam: Còn nhiều gian khó (Viet Nam's footwear industry: Battling numerous challenges)”, *Báo Công thương điện tử*, 21/8/2009. Retrieved 05/01/2010 from <http://www.baothuongmai.com.vn/Details/chuyen-dong-cong-thuong/nganh-da-giay-viet-nam-con-nhieu-gian-kho/32/0/20035.star>.

<sup>13</sup> “Tình hình kinh tế- xã hội năm 2009 (Press release: 2009 Socio-Economic Statistical Data),” General Statistics Office, 31/12/2009. Retrieved 24/01/2010 from [http://www.gso.gov.vn/Modules/Doc\\_Download.aspx?DocID=10855](http://www.gso.gov.vn/Modules/Doc_Download.aspx?DocID=10855).

<sup>14</sup> “Quy hoạch phát triển ngành da giày Việt Nam đến năm 2020 sẽ đạt kim ngạch xuất khẩu 16,5 tỉ USD (By the master plan for development, Viet Nam's footwear export will reach 16.5 billions U.S. dollar at

products are now available in North America (the US, Mexico and Canada), 27 European Union (EU) member countries, Russia and Eastern Europe. Over the last few years, Viet Nam's footwear exports to the EU have risen rapidly in terms of quantity and value. By the end of 2008, the EU was Viet Nam's biggest importer of footwear products with a turnover of 2.484 billion U.S. dollars, accounting for 52.32 percent of the country's revenue from exporting this item. The EU is followed by the US, in which Viet Nam has surpassed Italy to become the fourth biggest supplier after China, Brazil and Indonesia. In 2008, Viet Nam's exports to the US were valued at 1.075 billion U.S. dollars. Viet Nam's footwear products are also exported to many other countries around the world. Countries in East Asia, which share many similarities with Viet Nam in terms of tradition and customs, often import sneakers, leather shoes and slippers from Viet Nam. In 2008, exports to Japan brought in over 137 million U.S. dollars and to Hong Kong 50.2 million U.S. dollars.<sup>15</sup>

Local leather and footwear enterprises in Viet Nam account for 77 percent of the whole sector but they produce only 35 percent of the export value. Up to 70 percent of Viet Nam's footwear firms are simply OEMs for global buyers.<sup>16</sup> However, the export value is accounted for only by 50 major enterprises, with 10,000 workers or more, modern technology and many potential customers such as OEM firms for Nike, Adidas

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2020)," *Vinanet*, 26/01/2010. Retrieved 27/01/2010 from <http://www.vinanet.com.vn/tin-thi-truong-hang-hoa-viet-nam.gplist.288.gpopen.176346.gpside.1.gpnewtitle.quy-hoach-phat-trien-nganh-da-giay-viet-nam-den-nam-2020-se-dat-kim-ng.asmx>.

<sup>15</sup> "Ngành da giày Việt Nam: Còn nhiều gian khó (Viet Nam's footwear industry: A lot of hardship to face)," *Báo Công thương điện tử*, 21/8/2009. Retrieved 05/01/2010 from <http://www.baothuongmai.com.vn/Details/chuyen-dong-cong-thuong/nganh-da-giay-viet-nam-con-nhieu-gian-kho/32/0/20035.star>

<sup>16</sup> "Ngành Da - giày Việt Nam: Bỏ ngỏ thị trường nội địa (Footwear industry forgets the domestic market)," *Lao Động*, 31/8/2009. Retrieved 24/1/2010 from <http://www.laodong.com.vn/Utilities/PrintView.aspx?ID=153488>

and large distribution groups, including Wal-Mart, Decathlon and other distribution channels. These firms earn up to three-fourths of the total export turnover.<sup>17</sup>

### **1.3. Electronics Industry**

The Viet Nam Electronic Industries Association has reported that after producing electronic products for the domestic market (1994-2000), nearly 300 enterprises nationwide (including foreign direct investment or FDI enterprises) have shifted to assembling information technology (IT) and electronic products for export.<sup>18</sup> However, after 20 years of development, this industry is still in the final process of small-scale assembly.<sup>19</sup> Spare parts, accessories and materials depend too much on overseas suppliers.<sup>20</sup> The local content of electronic products is only about 20-30 percent, focusing mainly on packaging, plastic details and engineering.<sup>21</sup> Consequently, the added value of the electronic industry is low. This is because supporting industries for the electronics industry have not yet developed while the research and development

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<sup>17</sup> “Ngành da giày đặt mục tiêu xuất khẩu 5 tỷ USD năm 2010 (Footwear industry sets the goal of export volume of 5 billions U.S. dollar in 2010),” *Vinanet*, 21/1/2010. Retrieved 24/01/2010 from <http://www.vinanet.com.vn/tin-thi-truong-hang-hoa-viet-nam.gplist.331.gpopen.176182.gpside.1.gpnewtitle.nganh-da-giay-dat-muc-tieu-xuat-khau-5-ty-usd-nam-2010.asmx>

<sup>18</sup> “Công nghiệp điện tử: Mô hình phát triển tự gây khó (Electronic industry: a development model of self-hindering,” *Nhật báo Người đại biểu nhân dân*, 06/05/2009. Retrieved 11/1/2010 from <http://www.nguoidaibieu.com.vn/Trangchu/VN/tabid/66/CatID/3/ContentID/71900/Default.aspx>

<sup>19</sup> “Phát triển công nghiệp điện tử (Electronic industry development),” *PC World Vietnam*. Retrieved 11/1/2010 from [http://www.pcworld.com.vn/pcworld/printArticle.asp?atcl\\_id=5f5e5d5b5e5659](http://www.pcworld.com.vn/pcworld/printArticle.asp?atcl_id=5f5e5d5b5e5659)

<sup>20</sup> “Cơ cấu công nghiệp điện tử mất cân đối nghiêm trọng (The seriously unbalanced structure of electronic industry,” *Dân trí*, 26/12/2008. Retrieved 24/1/2010 from <http://dantri.com.vn/c76/s76-299647/co-cau-cong-nghiep-dien-tu-mat-can-doi-nghiem-trong.htm>

<sup>21</sup> “Công nghiệp điện tử Việt Nam giữa hai gọng kìm (Viet Nam’s electronic industry is caught in trap),” *The Saigon Times*, 29/12/2008. Retrieved 11/1/2010 from <http://www.thesaigontimes.vn/Home/kinhdoanh/dautu/13726/>

(R&D) groups of this industry are fledging and still being formed.<sup>22</sup>, <sup>23</sup> Besides technological weaknesses is the imbalance in the product structure. Household electronic appliances account for more than 80 percent while specialized electronic and IT products constitute the rest.<sup>24</sup>

#### **1.4. Automotive Industry**

Established in 1992, Viet Nam's automotive industry<sup>25</sup> has been developing for 18 years. Major landmarks in its development are the 1995-1996 period when Japanese manufacturers established their own factories in Viet Nam; 2000 when Viet Nam's automotive development strategy evolved and private enterprises were encouraged to take part in this industry. Currently, the sector has over 60 manufacturers, including 17 FDI ones, producing up to hundreds of thousands of cars every year. However, this industry in Viet Nam is still underdeveloped.<sup>26</sup> Most of them assemble their products in the form of CKD (complete knock down – assembled with 100 percent imported spare parts) and manually, leading to a low local content of (2-7 percent). The added value is achieved in a number of stages: welding, painting and attaching bulky items or low value-added parts that are fit for local sourcing, such as tires, batteries and wire harnesses. Nearly 90 percent of components and spare parts are imported from China

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<sup>22</sup> “Phát triển công nghiệp điện tử (Electronic industry development),” *PC World Vietnam*. Retrieved 11/1/2010 from [http://www.pcworld.com.vn/pcworld/printArticle.asp?atcl\\_id=5f5e5d5b5e5659](http://www.pcworld.com.vn/pcworld/printArticle.asp?atcl_id=5f5e5d5b5e5659)

<sup>23</sup> “Công nghiệp điện tử Việt Nam tụt hậu 10-20 năm (Viet Nam's electronic industry lags 10-20 years,” Sở Thông tin và Truyền thông thành phố Đà Nẵng (Da Nang's Department of Communication), 06/12/2006. Retrieved 11/1/2010 from

[http://www.ttt.danang.gov.vn/dpt.do?mod=3&id\\_cm=ttcn/cndt&id\\_bt=2006/12/290](http://www.ttt.danang.gov.vn/dpt.do?mod=3&id_cm=ttcn/cndt&id_bt=2006/12/290)

<sup>24</sup> Ibid.

<sup>25</sup> In Viet Nam, this industry consists of cars, motobicycles, and bicycles.

<sup>26</sup> “Ngành công nghiệp ô tô VN: Chập chững... tuổi 16 (Viet Nam's automotive industry: Still an infant at 16),” *Sài Gòn Giải Phóng*, 11/9/2008. Retrieved 11/1/2010 from <http://www.sggp.org.vn/kinhte/2008/9/164877/>

and the Republic of Korea. Buses and trucks have a higher local content, with 30 percent of engines, gear boxes and the transmission systems produced at home while electric and electronic components comprise around 70 percent. In particular, truck frames and trunks are entirely domestically produced. Four- to nine-seat vehicles are mainly manufactured by FDI businesses as no domestic firm has taken part in assembling them.<sup>27, 28, 29</sup> A trend to import cars instead of assembling them at home has evolved.<sup>30</sup>

After 10 years of development, the supporting industry for Viet Nam's automotive industry with 100 supporting service providers (about 30 are FDI enterprises) has made almost no progress. The Toyota Viet Nam joint venture, one of the largest auto assembly manufacturers in Viet Nam, has only 11 enterprises, supplying simple components such as batteries, electric wires, parasol covers, plastic and rubber spare parts.<sup>31</sup>

There are about 60 enterprises assembling and producing motorbikes in Viet Nam, including 50 manufacturers and seven FDI enterprises. Over 230 enterprises produce components and spare parts for motorbike assemblers, 80 percent of which are 80 FDI

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<sup>27</sup> “Phát triển công nghiệp hỗ trợ ôtô: Đường còn xa... (Automotive industry development: long way to go,” *Diễn đàn doanh nghiệp*, 30/06/2008. Retrieved 24/01/2010 from <http://dddn.com.vn/Print.aspx?NewsID=2008062602445578>

<sup>28</sup> “Công nghiệp lắp ráp” ô tô (Automobile ’assembling industry’),” *Thị trường Việt Nam*, 14/12/2009. Retrieved 24/01/2010 from <http://thitruongvietnam.com.vn/gpmaster.gp-media.thi-truong-viet-nam.gpprint.6818.gpside.1.asmx>.

<sup>29</sup> “Ngăn chặn hành vi “móc túi” (Prevent the stealing),” *Dát Việt*, 12/01/2010. Retrieved 24/01/2010 from <http://www.baodatviet.vn/Utilities/PrintView.aspx?ID=76339>.

<sup>30</sup> “Đi tìm dòng xe chủ lực của ngành ôtô Việt Nam (Find the main style of car to manufacture),” *VnExpress*, 30/6/2009. Retrieved 24/01/2010 from <http://vneconomy.vn/20090615110128172P0C23/di-tim-dong-xe-chu-luc-cua-nganh-oto-viet-nam.htm>

<sup>31</sup> “Công nghiệp phụ trợ: 10 năm vẫn chưa lớn (Supporting industry: Still underdeveloped at 10),” Phòng Thương mại và Công nghiệp Việt Nam (Viet Nam Chamber of Commer and Industry), 09/11/2009. Retrieved 24/01/2010 from <http://www.vcci.com.vn/kinh-te/cong-nghiep-phu-tro-10-nam-van-chua-lon>

enterprises. The local content of made-in-Viet Nam motorbikes is relatively high (from 40 to 70 percent) because there has been a sharp increase in demand in recent years, creating a bigger market for the supporting industry. However, locally made spare parts are produced mainly by motorbike joint ventures or bought from other FDI enterprises. The number of enterprises able to provide spare parts for motorbike assembly is very small. For example, in 2003, Honda had only identified 13 enterprises capable of supplying quality spare parts.<sup>32</sup>

## **2. HINDRANCES TO IMPROVING THE INDUSTRIAL STRUCTURE**

### **2.1. Overview**

Although administrative procedures such as tax and customs have been simplified, they are still cumbersome for enterprises.<sup>33</sup>

Viet Nam still has no real highways except for expressways designed for high-speed traffic with partial control of access. Only 20 percent of the highways have the width of a standard two-lane road. Urban roads account for less than 2 percent of the total length of roads nationwide. Land acreage for transport in Ha Noi and Ho Chi Minh City makes up only around 10 percent. Most roads are narrow and of poor quality.<sup>34</sup>

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<sup>32</sup> “Thực trạng phát triển công nghiệp phụ trợ tại Việt Nam (Situation of supporting industry development in Viet Nam),” Viện nghiên cứu Phát triển Thành phố Hồ Chí Minh (Ho Chi Minh City Institute for Development Studies). Retrieved 24/01/2010 from <http://www.hids.hochiminhhcity.gov.vn/xemtin.asp?idcha=3439&cap=4&id=4426>.

<sup>33</sup> “Khó khăn chồng chất, dệt may xuất khẩu lo nước rút (Facing lots of hinderances, textile and apparel export tries to accelerates),” *VietNamNet*, 17/7/2008. Retrieved 24/01/2010 from <http://vietnamnet.vn/kinhte/2008/07/793987/>

<sup>34</sup> “Vietnam’s Automotive Component Industry: Ready to go Global?” PricewaterhouseCoopers, 2007. Retrieved 24/01/2010 from [http://www.pwc.com/en\\_GX/gx/automotive/pdf/pwc\\_vietnam\\_auto.pdf](http://www.pwc.com/en_GX/gx/automotive/pdf/pwc_vietnam_auto.pdf)

Viet Nam has three international gateways-national ports, namely, Hai Phong Port, Vung Tau Port and Van Phong Port.<sup>35</sup> Hai Phong Port is in the inner city of Hai Phong and on a river, which makes it difficult to access while the other two are under construction. The Ho Chi Minh City port, which has the highest shipping traffic is also on a river and is faced with many limitations too such as being located in a big city and the road system is bad.

The *Global Competitiveness Report 2009-2010* published by the World Economic Forum puts Viet Nam in specific ranks out of 133 economies based on specific variables: 111th by the quality of overall infrastructure, 102nd by the quality of roads, 99th by the quality of port infrastructure, 84th by the quality of air transport infrastructure, and 103rd by the quality of electricity supply. Moreover, the Report ranks Viet Nam 85th based on the quality of education system, 111th by the quality of management schools, and 76th on brain drain.

## 2.2. Existing Industries

Recently, the three main difficulties for textile and apparel firms as well as for footwear firms have been lack of capital, electricity and workers.<sup>36, 37</sup>

Regular and unnoticed blackouts have caused serious losses to businesses. Productive sectors employing large numbers of workers such as leather and footwear, textile and garment, enterprises still have to pay full day salaries and other fixed

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<sup>35</sup> Decision 2190/QĐ-TTg dated 24 December 2009 by the Vietnamese Government on approval of master plan of seaport system in Viet Nam til 2020 with vision to 2030.

<sup>36</sup> ““Thử sức” doanh nghiệp dệt may (“Challenge” the textile and garment firms),” *VnMedia*. Retrieved 24/01/2010 from <http://www.vnmedia.vn/newsdetail.asp?NewsId=138916&CatId=26>

<sup>37</sup> “Doanh nghiệp bức xúc vì thiếu điện và khát vốn (Firms being hard pressed by lacking of electricity and finance),” *VnExpress*, 19/7/2008. Retrieved 24/01/2010 from <http://vnexpress.net/GL/Kinh-doanh/2008/07/3BA049C3/>

expenses even when there are unnoticed power cuts. This affects not only productivity but also product quality.<sup>38, 39</sup>

The textile and apparel industry employs many workers so that the quality of the workforce plays a vital role. In order to increase the added value and workers' income, it is essential to increase labor quality, especially the quality of middle-level managers. Additionally, improving labor quality helps the industry to cope with labor shortages and reduce dependence on cheap labor force.<sup>40</sup>

In fact, the labor force for the textile and apparel industry is not abundant, especially in major cities. Ten years ago, textiles and garments for export attracted unskilled workers in major cities. Now the emergence of new industries in urban areas with less difficult working conditions or higher income restructures the labor force. This has made many major enterprises to defrag their production to rural areas and industrial zones in the last five to seven years. However, as OEMs depending too much on contract and season, this industry cannot compete with other sectors in terms of revenues, prompting it to expand its operations to industrial zones. The president of the Viet Nam Textile and Apparel Association has stated that "labor dispute is becoming fiercer and the textile and apparel industry will have to resettle the labor force by defragging them in towns instead of focusing just on big industrial zones."<sup>41</sup>

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<sup>38</sup> "Điện thiêu, lâi suất cao "đè" doanh nghiệp (Black-outs and high interest "press" firms)," *VnMedia*. Retrieved 24/01/2010 from <http://www6.vnmedia.vn/newsdetail.asp?NewsId=138391&CatId=26#>.

<sup>39</sup> "Khó khăn chồng chất, dệt may xuất khẩu lo nức rứt (Facing lots of hinderances, textile and apparel export tries to accelerates)," *VietNamNet*, 17/7/2008. Retrieved 24/01/2010 from <http://vietnamnet.vn/kinhte/2008/07/793987/>.

<sup>40</sup> "Làm sao cải thiện môi trường kinh doanh? (How to improve the business climate?),," *VnEconomy*, 02/6/2007. Retrieved 24/01/2010 from <http://vneconomy.vn/PrintPage.aspx?NewsID=69419>.

<sup>41</sup> "Dệt may gặp khó về lao động (Textile and garment firms face obstacles of labors)," *Điễn đàn doanh nghiệp*, 11/9/2009. Retrieved 05/01/2009 from <http://dddn.com.vn/2009090805062405cat101/det-may-gap-kho-ve-lao-dong.htm>.

High production costs among firms are partly due to the training cost, which firms have to pay by themselves. Such costs reduce the firms' competitiveness.<sup>42</sup> Another factor that pushes up the production cost in textile and garment firms is the additional cost to hire small trucks to convey products between factories and suburb areas due to container trucks are prohibited to enter the inner city.<sup>43</sup>

Productivity in the footwear industry is low because of five main reasons: workers' low education level, poor training, poor coordination, disunified materials and small contracts and insufficient equipment.<sup>44</sup>

According to the Viet Nam Leather and Footwear Association, up to 80 percent of workers in the sector are untrained. This means that labor quality is hindering the sector's development. Moreover, managers in this industry are trained in other fields, so they have to learn on the job. Thus training and human resource development is becoming a big concern for the industry. However, just a few enterprises have made appropriate investment in training and most workers are trained only in theory over a short time before they begin to work.<sup>45</sup>

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<sup>42</sup> “Biện pháp chống đỡ cho dệt may và da giày 2009 (Measures to support textile-apparel and footwear industry in 2009),” *Dân Trí*, 25/01/2009. Retrieved 24/01/2010 from <http://dantri.com.vn/c76/s82-305191/bien-phap-chong-do-cho-det-may-va-da-giay-2009.htm>.

<sup>43</sup> “Ngành dệt may mất sức cạnh tranh vì đội phí (Textile and apparel industry loses competitiveness due to cost burden),” *Sài Gòn tiếp thị*. Retrieved 24/01/2010 from [http://www.sgtt.com.vn/oldweb/cacsobaotruoc/484\\_38/p02\\_03\\_nganhdetmay.htm](http://www.sgtt.com.vn/oldweb/cacsobaotruoc/484_38/p02_03_nganhdetmay.htm).

<sup>44</sup> “Ngành da giày VN có “tiếng” mà chưa có “miếng” (Viet Nam's footwear industry: high “revenue” but low “value-added”), *VnExpress*, 13/6/2003. Retrieved 24/01/2010 from <http://www.vnexpress.net/GL/Kinh-doanh/2003/06/3B9C8BF6/>.

<sup>45</sup> “Ngành da giày Việt Nam: Còn nhiều gian khó (Viet Nam's footwear industry: A lot of hardship to face),” *Báo Công thương điện tử*, 21/8/2009. Retrieved 05/01/2010 from <http://www.baothuongmai.com.vn/Details/chuyen-dong-cong-thuong/nganh-da-giay-viet-nam-con-nhieu-gian-kho/32/0/20035.star>.

### **2.3. New Industries**

An official from the Viet Nam Electronic Industries Association claims that cheap labor, an advantage for the assembly of electronic goods in Viet Nam, is no longer a competitive trend. In order to develop the electronic industry, Viet Nam should focus on building up a group of product R&D activities.<sup>46</sup> “Apart from inviting famous electronic companies, it is essential to welcome producers for contracts in assembly and spare parts manufacturing.”<sup>47</sup>

Viet Nam’s automative market is small<sup>48</sup> because of low income and poor infrastructure, as evidenced by the lack of highways and parking facilities<sup>49</sup>. As there are many manufacturers,<sup>50</sup> it is difficult for manufacturers to achieve the economy of scale and reducing the scale of their production. Another major factor hindering the development of the supporting industry for the motorbike and automotive industry is the lack of highly skilled workers. Only 20 percent of workers in supporting firms receive regular training.<sup>51,52</sup>

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<sup>46</sup> “Phát triển công nghiệp điện tử (Electronic industry development),” *PC World Vietnam*. Retrieved 11/1/2010 from [http://www.pcworld.com.vn/pcworld/printArticle.asp?atcl\\_id=5f5e5d5b5e5659](http://www.pcworld.com.vn/pcworld/printArticle.asp?atcl_id=5f5e5d5b5e5659).

<sup>47</sup> “Công nghiệp điện tử Việt Nam tụt hậu 10-20 năm (Viet Nam’s electronic industry lags 10-20 years),” Sở Thông tin và Truyền thông thành phố Đà Nẵng (Da Nang Department of Communication), 06/12/2006. Retrieved 11/1/2010 from

[http://www.ttt.danang.gov.vn/dpt.do?mod=3&id\\_cm=/ttcn/cndt&id\\_bt=2006/12/290](http://www.ttt.danang.gov.vn/dpt.do?mod=3&id_cm=/ttcn/cndt&id_bt=2006/12/290).

<sup>48</sup> “Công nghiệp ôtô VN: chưa thoát khỏi vòng luẩn quẩn! (Viet Nam’s automotive industry: Still in dilemma),” *VietNamNet*, 23/8/2007. Retrieved on 27/02/2010 from <http://vietnamnet.vn/kinhte/2007/08/733022/>.

<sup>49</sup> “Vietnam’s Automotive Component Industry: Ready to go Global?” PricewaterhouseCoopers, 2007. Retrieved 24/01/2010 from [http://www.pwc.com/en\\_GX/gx/automotive/pdf/pwc\\_vietnam\\_auto.pdf](http://www.pwc.com/en_GX/gx/automotive/pdf/pwc_vietnam_auto.pdf)

<sup>50</sup> “Loạn đầu tư lắp ráp ôtô (Disorder of automobile assembly),” *VnExpress*, 30/6/2005. Retrieved 24/01/2010 from <http://thitruongvietnam.com.vn/gpmaster.gp-media.thi-truong-viet-nam.gpprint.6818.gpside.1.asmx>.

<sup>51</sup> “Vietnam’s Auto Parts Industry and Investment Environment,” Nguyễn Xuân Chuẩn, Unido, Tokyo, 2007. Retrieved 24/01/2010 from

<http://www.grips.ac.jp/vietnam/VDFTokyo/Temp/Doc/2007/72WSNXChuanJun07Slides.pdf>.

<sup>52</sup> *VietNamNet*, 23/8/2007, ibid.

The inconsistency in government's policies to develop electronics and automotive industries is often criticized by manufacturers. The major cause of their complaint is that there are too many authorities involved in the enforcement of these policies. For example, there are five ministries involved in formulating the policies for developing the automotive industry, namely, the Ministry of Industry and Commerce, the Ministry of Finance, the Ministry of Science and Technology, the Ministry of Transportation, and the Ministry of Resource and Environment. On many occasions their work overlaps and there and coordination is poor.<sup>53</sup> Besides, they said, policies change often.<sup>54</sup>

### **3. OTHER SURVEY FINDINGS**

#### **3.1. Overview of the Survey**

In 2008 Dinh Hien Minh, Trinh Quang Long, Nguyen Minh Thao conducted a survey among 30 enterprises in Da Nang, 16 of which were textile and garment enterprises and the rest were mechanical and electronic ones. They undertook a similar survey among 35 enterprises in Ho Chi Minh City, including 15 textile and garment enterprises and 11 mechanical and electronic firms.

Ishida Masami, Nguyen Binh Giang, Vo Thi Minh Le (2009) also conducted a survey among firms in old and new industries, mainly in the northern provinces. The respondents consisted of nine firms in the textile and apparel industry (including two from the south), four in the footwear industry (including one from the south), two firms

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<sup>53</sup> VietNamNet, 23/8/2007, ibid.

<sup>54</sup> “Ngành ôtô 'chạy' ì ạch vì chính sách thiếu ổn định (Automotive industry moves ploddingly due to instability of policies),” VietNamNet, 11/10/2009. Retrieved on 27/02/2010 from <http://vietnamnet.vn/kinhte/chinhsach/200910/Nganhanh-oto-chay-i-ach-vi-chinh-sach-thieu-on-dinh-873072/>

in the wood processing industry and a policy maker from a relevant agency of government , three firms in the agro-processing industry (including one from the south), four firms in the automotive industry (including one in the supporting industry making motorbikes), two firms in the electronic industry, and a sanitary ware manufacturer. There were also two interviews with the associations in textile and apparel and footwear industries.

### **3.2. Hard Infrastructure**

As shown in Table 3 and Table 4, most respondents to the survey said they were not satisfied with electricity distribution, water supply and transport. They specifically complained about unnoticed power cuts and high electricity costs. A number of enterprises complained about the long duration of power cuts. Respondents from Ho Chi Minh City said electricity supply was not good. Viet Nam's transport system was reported to be poor in terms of cost, efficiency and reliability. Traffic jams were frequent objects of complaint in Ho Chi Minh City. Communication services were generally described as acceptable.

Based on their interviews with some firms in Ho Chi Minh City, Dong Nai, Ishida, Nguyen, and Vo (2009) learned that companies located inside industrial zones have virtually no black-outs. Power failures in the industrial zones usually only happens due to electricity network maintenance or natural disasters. There are electric generators in some industrial zones provided by the zones' board of management. However, those firms located outside the industry zones often face power outages and voltage instability. Such outages, though, usually last only up to 10 minutes, but may happen several times

**Table 3: Result of Survey on Needs for Soft and Hard Infrastructure (Continues)**

Respondents by industry	Logistics						
	Improvement of smoothness of national roads	Improvement of time consume for logistics	Improvement of transport in major cities	Increase in shipping frequency	Improvement of roads ports	Improvement of airport tax	Improvement of gasoline price
Knitting	3	3					
Footwear		4			5		
Knitting	3						
Garment				3			
Footwear			3				
Automotive		3		3		3	3
Spinning			2				
Handicraft	1	1					
Agro-industry	1						
Garment			2				
Garment	2	2	2				
Garment	3						
Agro-industry	2						
Agro-industry		2					
Knitting	2						

Note: 1 = first (bigest) priority; 2 = second priority; 3 = third priority; 4 = forth priority; 5 = fifth priority.

Source: Ishida Masami, Nguyen Binh Giang and Vo Thi Minh Le (2009).

**Table 3: Result of Survey on Needs for Soft and Hard Infrastructure (Continued)**

Respondents by industry	Labour			Investment climate		Telecom		Electricity				
	Dealing with strike action	Vocation training for exist workers	Vocation training for new workers	Improvement of education quality in university and college	Labor procurement	Improvement of customs	Improvement of corruption	Mobile phone service price	Plain old telephone service price	Electricity price	Electricity stability	Black-out
Knitting		2				1						
Footwear		3				1	1				2	
Logistics						2					1	
Knitting	1					2		5		4		
Garment	1					2		4			5	
Footwear	1					2					4	
Automotive		1				2		4	4		5	5
Garment				1		1	1				2	
Spinning			1			4					3	
Handicraft						3					2	
Agro-industry						2						
Garment	1				1							
Garment					1		4				3	
Footwear		1				2						
Garment		1									2	
Agro-industry	4					3					1	
Agro-industry						1					3	
Knitting	1										3	

Note: 1 = first (bigest) priority; 2 = second priority; 3 = third priority; 4 = forth priority; 5 = fifth priority.

Source: Ishida Masami, Nguyen Binh Giang and Vo Thi Minh Le (2009).

a day.

All firms interviewed in Ho Chi Minh City complained about road transport conditions, especially the traffic jams, the blocking of container trucks in peak hours, extended queues to enter Cat Lai Port, Sai Gon Station and Tan Son Nhat Airport. The yet-to-be-completed upgrading of the national route No. 51 and the provincial route No. 25, which is expected to facilitate ease of access to Thi Vai-Cai Mep ports, as well as the construction of the access road to Hiep Phuoc Port compounds the respondents' problems, since getting in and out of the ports becomes even more difficult for the trucks. Although the distance from Bien Hoa to Cat Lai Port is 40 km, trucks take two to four hours to get into the harbor. Having to queue for too long – as was the case in 2007 and 2008 – forces firms to pay additional costs, or demurrage, for ships waiting off ports. Additional costs incurred by the container vans waiting are up to 50 U.S. dollars a month for a 20-ft container and 100 U.S. dollars a month for a 40-ft container. Total additional costs incurred by a ship owner can reach more than 10 thousand U.S. dollars a month as in the case of a large garments company in Ho Chi Minh City.

One respondent in the footwear industry complained about the flooding in the inner city of Ho Chi Minh during the rainy season, which he said makes the traffic conditions in urban areas worse. Similarly, interviews with firms in the north showed that those outside the industry zones often complain about electricity. Notably, many textile, garment, and footwear factories that are still outside the industry zones are severely affected by the poor state of electricity supply. A respondent firm in the motorcycle industry, operating an outside industrial zone, said the no warning black-out has caused huge damage to his company in terms of broken products and workers falling sick. This firm has decided to build a new factory in an industrial zone to receive

better power and water supply and be closer to its customers. Some respondent firms bewail the high electricity costs, particularly those imposed during peak hours. A firm in the garments industry complained that the peak period in the morning was expanded by the power supplier, thus increasing its production cost.

Respondent firms in the north also complained a lot about transportation in the inner Ha Noi and Hai Phong and about the national routes. Roads in cities are admittedly narrow and the turnpoints are not rationally designed, making it difficult for container trucks and container yards to maneuver and, in many instances, causing traffic jams. One company said it cannot use 40-ft container trucks because of an existing regulation in Hai Phong setting a limit to the height of container trucks that companies could use, and thus disallowing of 40 ft container trucks, which are deemed too high. Respondents also complained about the speed limit on national routes, the numerous intersection points in the national route No.5 connecting Ha Noi and Hai Phong Port, and the narrowing of the section from Nam Dinh to Ha Noi in the national route No.1A amid too much traffic.

The distance from the center of Ha Noi to Hai Phong Port is just about 100 km but it can take up to three hours to traverse it. Traveling the distance from – which is about 90 km – Nam Dinh city to the center of Ha Noi may take three hours too. Some respondent firms think that it is too time-consuming for logistics as well as for container handling in ports. Railway transportation is cheaper but it is less frequent and more cumbersome compared to truck transportation.

One respondent in the textile and apparel industry complained about the lack of transparency in infrastructure master planning, making it difficult to develop its own business plan.

### **3.3. Human Resource Development**

The survey by Dinh Hien Minh, Trinh Quang Long, Nguyen Minh Thao (2008) shows that firms in Ho Chi Minh City and Da Nang mostly complained about the frequency of employee turnover, lack of or poor quality of labor, engineers and other department officials. In Da Nang, about 48 percent of workers finished high schools and 20 percent received vocational training. In Ho Chi Minh City, the proportion of workers with high schools is only 41 percent and vocational school 11 percent.

Interviews with respondents also showed that textile and shoe factories located in Ha Noi face difficulty in recruiting workers. Respondents attributed this to work disincentives, specifically low wages, including those for temporary jobs, and overtime work, especially since many potential have to travel long distances from their rural homes to factories.

On quality of workers, the survey of firms in the northern provinces confirmed the shortage of skilled labors. Textile firms tend to cooperate with technical colleges to open training courses for their new and existing middle managers, engineers, heads of production lines and other skilled laborers. A garment firm in Ha Noi even established a junior college.

Wood processing firms faced a serious shortage of skilled carpenters. The automotive and motor industry alongside electronic firms also suffer from a severe shortage of mechanics and technicians. A firm in the motor industry said it had gone several times to colleges, junior colleges and vocational schools in many provinces in search of potential employees. These efforts notwithstanding, it still could not find

qualified applicants, particularly for managerial posts. Respondents generally bewail the poor quality of university graduates.

The high turnover of engineers and middle managers is a major concern among respondents. One respondent said that fresh graduate engineers and middle managers tend to change jobs often in search of better opportunities while others set up their own businesses.

### **3.4. Investment Climate**

Firms' evaluation of customs service is mixed. Some respondents appreciate the efforts of customs officers, particularly those that are targeted at reforms. Others are critical of these officers' work ethics. Almost all of respondents, however, admitted that they do or used to give gifts to customs officers in order to fast-track the clearance of their goods or relevant transactions. A respondent said the amount involved is minimal, usually ranging from 1 to 10 U.S. dollars. Offering bribe to customs officials is indispensable, he said, because otherwise the cost to the firm is enormous if his customs clearance is not expedited. Large firms with stable import markets have fewer complaints about customs officers. Small firms tend to hire intermediaries to facilitate their customs transactions.

Two respondents in the north complained about the bribe solicitation strategies of some tax officials as well as traffic inspectors.

Electronic customs clearance and tax declarations have been piloted in some localities beginning in early 2009. But some respondents are skeptical about these efforts. Firstly, even with the advent of electronic declarations, respondents said they are still required to submit hard copies of the dossiers to the customs or tax office.

Secondly, the online processing often fails **owing to poor transmission lines**. Thirdly, respondents complain that shipping forms and documents downloadable from customs websites either cannot be read or typed over. Some template files and programs used by customs offices may even conflict with the security software in the respondents' computers, which prevent them from being opened. Then, too, filling out template files may be too complex to someone who is barely computer literate.

Firms' evaluation of electronic payment of customs fees – which was piloted in mid-2009 – is mixed. For instance, a respondent from Ha Noi revealed that he still pays customs fees using the ATM machine at the customs office. This shows that notwithstanding the purported benefits of the electronic services at customs, some firms have yet to buy into such reforms.

## **CONCLUSIONS AND RECOMMENDATIONS**

After 20 years of industrialization and despite a modernized Viet Nam, its industrial structure remains less developed. The industries – such as in textile and apparel, footwear, and wood processing industries – bring large export volumes and contribute significantly to job creation. Yet they have largely remained OEMs. The industries that are expected to help to modernize Viet Nam's economy such as automotive and electronic industry are basically still operating as complete knock down assemblers.

To upgrade themselves, the above industries are accelerating the development of their supporting industries and exploiting the potential domestic market. Yet the member firms are faced with many obstacles, including those involving soft and hard

infrastructure. The dearth of quality human resource is a huge obstacle. Firms lack competent engineers, middle managers and skilled workers.

Low wage now may not a competitive advantage of Viet Nam because it is not attractive to labor in major urban areas. To locate factories or defrag their production into rural areas, firms face disadvantages in transport infrastructure due to the national routes system is under developed. Even in major cities, transport infrastructure in its current state still does not support firms. Traffic jams and restrictive regulations on container trucks are persistent objects of complaint. Moreover, customs service has not been reformed enough to eliminate corruption among custom officers, resulting in firms enduring unnecessary delays and coughing up huge fees. In sum, the underdeveloped logistics infrastructure is negating the efforts of domestic firms to increase their competitiveness and turning away potential foreign investors.

High price and low reliability of electricity are other major obstacles. The high electricity prices together with broken products due to unanticipated black-outs or unstable frequencies, and costs entailed by the use of back-up generators, push up firms' production cost and pull down their competitiveness.

These things explain why when being interviewed in our survey, all firms demand for improving transport infrastructure, reducing black-out, reducing corruption by customs officers and shortening the time of customs clearance as well the time for logistics. In other words, a comprehensive development of combined soft and hard infrastructure and human resource will be vital to upgrading and diversifying industrial structure of Viet Nam.

To get higher value added, textile and apparel, footwear, wood-processing firms first should become original design manufacturers and later turn into own brand

manufacturers. For this to happen, companies should capture the interest of the domestic market. This strategy requires firms to improve their human resources and modernize their distribution networks. In the short term human resource development should focus on raising the skills of workers; long-term measures should focus on raising the quality of product design and brand building. At the same time, government must establish vocational schools for new and existing workers and improve the quality of higher education (particularly in vocational schools, junior colleges and colleges/universities). Modernizing the distribution networks will depend greatly on both production logistics management by firms and the transport and telecommunication infrastructure provided by the government. Besides, supporting industries for textile and apparel as well as footwear industries should be strongly promoted.

In the case of Viet Nam, becoming original design manufacturers and own brand manufacturers may be big a mission for the electronics and automotive industries in both the short and medium terms. Yet, these industries can still move to more value-added products by becoming supporting manufacturers to multinational corporations.

Developing the supporting industries cannot be stressed enough when it comes to upgrading and diversifying Viet Nam's industrial structure. Efforts toward this end have been initiated by both the government and major business groups in the textile and apparel industry. Within the supporting industries, small and medium-sized firms as well FDI play a crucial role in these industries' development. Yet they are vulnerable to obstacles from infrastructure and poor labor force skills and high employee turnover. Foreign investors are also sensitive to these obstacles since they can easily set their sights on other countries with more conducive investment climates. Multinational enterprises may hesitate to defrag their production into countries where logistics

connectivity is underdeveloped. Thus, human resource development is of prime importance while infrastructure and logistics development may easily foster the supporting industries.

In the panorama of intra-regional production networks led by multinational corporations, attracting FDIs in supporting industries depends on the agglomeration and industrial corridor approaches.<sup>55</sup> Viet Nam should establish supporting special economic zones and industrial corridors, which link those zones through integrated supply chain networks.<sup>56, 57</sup>

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<sup>55</sup> Kimura and Kobayashi (2009) and Kimura (2009).

<sup>56</sup> Ishida (2009).

<sup>57</sup> Banomyong (2009).

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