Industrial Upgrading of the Vietnamese Garment Industry: An Analysis from the Global Value Chains Perspective

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Abstract: This paper examines the Vietnamese garment industry development strategy which aims to increase value-added of garment exports through vertical integration and original brand exports. It argues that the government policy to promote vertical integration by active investment in its textile industry would have only limited effects in increasing domestic value-added contents. Instead, the level of value-added are determined on how Vietnamese supplies are positioned within value chains, what process it applies, what product it supplies, and what function it plays in the production and distribution networks. Evidence from enterprise data suggest that a jump from assembly operations to original brand exports is difficult, as Vietnam still lacks capacity to evolve as lead coordinators of their value chains and to manage the risks involved in the production and distribution networks. Policies therefore should focus on how to support the upgrading in process, product and function, rather than on emphasizing domestic vertical integration.

Keywords: Vietnam, global value chains, production and distribution networks, garment industry, industrial upgrading, industrial policy.

I. Introduction

Vietnam is one of the most competitive garment exporting countries in the world today. Foreign buyers provide materials for processing to Vietnamese suppliers and later buy the processed garments back for re-exporting. Being rich in skilled but relatively inexpensive labor, Vietnam has clear comparative advantage in this. Agglomeration of this type of garment manufacturing has proceeded thanks to the opening up of its economy since the Doi Moi policy in 1986.

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Strong dissatisfaction nevertheless exists in the government and part of the business community because of its low domestic value-added contents. The backwardness of the domestic textile sector is held mainly responsible for this. In response, the government crafted a strategy to upgrade its garment industry by developing the upstream sector and thereby promoting domestic vertical integration\(^2\). Essentially this strategy aims to rapidly increase the local content ratio of garment production through active investment promotion into the domestic textile sector. However, will this strategy work?

This paper examines the Vietnamese export oriented garment industry from the global value chain perspective, where it analyzes industries and its development possibilities according to the different types of upgrading trajectories (Kaplinsky 1998; Humphrey and Schmitz 2000; Schmitz 2004). It takes the position that the level of contribution in terms of value-added by the Vietnamese export oriented garment suppliers are determined based on 1) the processes that Vietnamese suppliers undertake, 2) the product it produces, and 3) the functional role it plays within the production and distribution networks. In light of this, it aims to assess the government strategy through looking at the ways Vietnamese suppliers are positioned in the export oriented value chain, their primary functions within the value chain, and what all these would suggest in terms of viable upgrading possibilities.

Information and data used in this paper are mainly primary data collected through interviews conducted during 2001 to 2003 in Vietnam. More than 60 firms and related organizations were formally interviewed including firms ranging from large state owned enterprises (SOEs) to small private household firms as well as foreign companies in both Hanoi and Ho Chi Minh City. International buyers, particularly those from Japan were also interviewed.

2. The garment industry in Vietnam

The Vietnamese garment industry has a dual structure depending on the market orientation - domestic or foreign. Suppliers for the global markets are enterprises including SOEs, joint ventures, private enterprises and foreign firms. These are typically

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large enterprises in terms of number of workers and capital endowments. The domestic garment market, on the other hand, is catered primarily by smaller private firms, of which a significant proportion operates in the informal economy (Goto 2005). The suppliers in the export oriented industry are also much more advanced in terms of production processes, access to formal financial resources and to foreign markets. This paper focuses its analysis on the larger suppliers that cater almost exclusively for the export market.

Garments are Vietnamese largest manufactured export items, which together with textiles account for 16.5 percent of total exports in 2002 (Nadvi and Thoburn 2004b). Garment exports has particularly grown rapidly since the late 80s and early 90s, and the bilateral trade agreement with the United States that came into effect in 2001 has further expanded Vietnamese garment exports dramatically (Hill 2000).

While Vietnam is clearly one of the most competitive garment suppliers in the world, it is currently only competitive in the export of a relatively narrow range of items. Garments that Vietnam is able to export are primarily cotton and polyester-cotton mixed woven fabric based garments for mid and low-end market segments. Product-wise they are items such as shirts, casual jackets, pants and sports apparel. Knitted garments including t-shirts, polo shirts and underwear are also being produced for exports, but the total volume remains relatively small. Higher-end products including suits and dresses are not produced yet due to limitations in processing techniques. Exports of yarn and textile are basically non-existent (Goto 2003).

3. The export sector – the CMT arrangement

As in many other garment exporting countries, the majority of the garment production for exports in Vietnam is under a contractual arrangement that is locally referred to as CMT (Goto 2003, Nadvi and Thoburn 2004a, Goto 2006). It is called CMT because garment production under this arrangement involves only the labor intensive assembly processes of cutting, sewing (make) and trimming. Under this arrangement, input materials including textiles and accessories are supplied to garment manufacturers by buyers, and such buyers are almost exclusively foreign trading firms, apparel firms or retailers\(^3\). As the value chain for garments are usually governed and coordinated by

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\(^3\) While exports for the EU and US markets are coordinated through a relatively heterogeneous group of retailers or traders (see Nadvi and Thoburn 2004b), export for the Japanese markets are most likely
buyers, these are the key decision makers, or lead firms in the chains (Gereffi 1999). Most of the materials supplied under this arrangement are imported. This high import intensity of production is due to the relatively weak domestic textile and accessory industry, which are perceived by buyers as weak particularly in terms of quality, price and timely delivery.

One of the main characteristics of the CMT arrangement is that the Vietnamese suppliers face relatively small risk in the production and distribution of garments. Such risks stem primarily from market uncertainty and asymmetric information structures in the production and distribution processes.

Risks stemming from market uncertainty are related to demand fluctuations that change frequently and unsystematically based on fashion trends and vogues. In this context, risks related to non-performing inventory becomes substantial, and therefore capabilities to effectively manage such risks are crucial. In addition, increased competition in the global garment market and shorter product cycles at the retail end is further contributing to market uncertainty (Nadvi and Thoburn 2004b). Reducing such risks require lead firms of the value chains to continuously introduce new product lines which is costly, and also require knowledge intensive skills in business functions such as marketing, branding and R&D. Vietnamese firms are currently not exposed to any of the markets risks - whatever the Vietnamese firms produce, they will be purchased by buyers regardless of the market situation as long as it is in compliance with the agreed specifications under the CMT contract. This is one of the main reasons why the value-added content of the current production modality is low for Vietnamese suppliers.

In terms of information asymmetricity, monitoring costs by buyers who coordinate the value chains become quite significant since the production and distribution processes is typically made up of complex networks of inter-firm relationships. Governing such networks is itself a highly knowledge intensive function, prone to contract uncertainty with serious post-contractual moral hazard issues. For

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4 Such industries where buyers are lead firms in the value chains are often termed as “buyer driven chains”. In contrast, the electronic and automobile industries are usually driven by suppliers, and hence are classified as “supplier driven chains”. See Gereffi (1999) for details.

5 From interviews, the biggest quality problems in the Vietnamese textile industry are the processes in dying and finishing, both which are not only dependent on machinery, but more so on skills, knowledge and managerial techniques which are all intangible assets that take time to acquire.
instance, quality control and timely delivery of final products are both important sources of competitiveness at the retail end, and coordinators of the value chain must make continuous efforts to monitor the production and distribution processes. If suppliers have any incentive to shirk on the level of efforts to comply with quality production and timely delivery, then the possibility of such opportunistic breaches of business contracts becomes a real cost to buyers. Likewise, as the CMT modality is practically equivalent of what is more generally known as the putting-out system under which buyers supply materials to the manufacturers for processing and later collect the products and pay a piecemeal processing fee, embezzlement of the input materials is a common concern for the buyers. Suppliers can, for instance, cheat the buyers and sell the input materials at local markets. Such problems are common in any putting-out systems, and to avoid such problems, buyers, as coordinators of the chain, must closely monitor the production and distribution processes.

Under such circumstances, buyers try to build an inter-firm relationship that provides an incentive structure in which garment manufacturing firms feel it more rational not to shirk on their contracts with coordinators. In fact, most buyers interviewed were trying to strategically control such issues by transferring particular types of technology and knowledge to Vietnamese suppliers that would upgrade their production capacity in both process and product fronts. In CMT arrangements, for instance, it is quite common for buyer firms to send their technicians to suppliers to help them upgrade their production processes in order to ensure delivery of quality products. Most of the interviewed Vietnamese firms have attributed this as the main source of technological transfer from buyers. Losing such upgrading channels seems to be working to some extent to deter opportunistic behavior, and such arrangements are practiced widely particularly in the initial stages of their business relationship.

It is also common, however, that buyers carefully select the types of technology and knowledge they transfer to the suppliers. Technology that is transferred tends to be confined to production techniques and product information which are helpful in process and product upgrading. The more knowledge intensive skills that would lead to functional upgrading are, however, rarely transferred to suppliers. The reason for this is that such knowledge intensive functions are the core competence areas for buyers themselves, enabling them to maintain rents in the value chain to reap a higher proportion of value-added. Such core business functions are related to the capacity of enterprises in acquiring and transforming market information into real
production and distribution network arrangements. These types of enterprise capacity are key in order to realize upgrading from simple assemblers type of operations (CMT) to higher level functions.

4. The “FOB” arrangement

While CMT is the most common type of production modality in the Vietnamese garment export sector, another form of contractual arrangement is emerging. The fundamental difference between this arrangement and that of the CMT is that the Vietnamese suppliers purchase the necessary input materials instead of being supplied for free by their buyers. In this contractual arrangement the Vietnamese suppliers are paid for the whole garment they export, and this type of production modality is referred locally as “FOB”. A note deserves attention to avoid confusion. While the term “FOB (Free-On-Board)” is an incoterm\(^6\) with a clear definition, its usage in this particular context of “FOB” production does not have any relationship to the original term defined as such. It is a term that is widely used in the Vietnamese garment industry, and it simply means that suppliers receive payment for the full price of the garment exported, not just for the assembly part (CMT) of the production process\(^7\).

Interviews with suppliers suggest that the “FOB” type of garment export seems to be emerging as a new form of production modality, and also becoming more common. Data collected through interviews with 23 Vietnamese suppliers indicate that for an average exporting garment manufacturer, the proportion of CMT based on total sales amount is 67% (33% is produced under FOB)\(^8\). This result indeed seems to imply that a significant proportion of garment exports are conducted based on FOB contracts, while admitting a large variation within the industry. These statistics, however, are overstating the extent of FOB exports because the CMT dollar amount per unit output is much smaller than that for the FOB, as the latter also includes the value of input materials in the per unit amount. Comparison should be ideally based on the percentage of value-added that is accrued from the two different production arrangements. However, as such data is very difficult to acquire, we estimate the significance of FOB exports based on the quantity of items exported. Readjusting the figures accordingly provides a

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\(^6\) International Rules for the Interpretation of Trade Terms, defined by the Interstate Commerce Commission.

\(^7\) See Goto (2003) and Nadvi and Thoburn et al (2004b) for more details.

\(^8\) Standard deviation =22.4
different view: an average proportion of 95% is based on CMT and only 5% on FOB\(^9\). This suggests that the FOB practice is still limited for the export sector of the Vietnamese textile-garment industry in terms its share in real production.

However, a closer look at the practices reveals that the actual operations which Vietnamese suppliers call FOB also vary significantly in the forms of the contractual relationships with foreign buyers. More specifically, the functional responsibilities in these are quite different, and they can be classified into the following three types of FOBs.

- **FOB I**: Vietnamese firms purchase input materials for processing from suppliers that are designated by foreign buyers. The difference between this and CMT is thus very small.
- **FOB II**: Vietnamese firms receive garment samples from foreign buyers. Based on these samples, they produce similar garments using materials that must procure somewhere without any directions from buyers.
- **FOB III**: Under this arrangement, the Vietnamese firms initiate production of garments based on their own design, with no prior commitment of any kind from foreign buyers.

Figure 1 summarizes the difference in the contractual arrangement of garment manufacturing under CMT and the three types of FOBs.

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\(^9\) In interviews with enterprises, it is common that all answers on output are quoted on the “sales amount” base, rather than value-added. As the unit price of a garment under the CMT and FOB differs significantly, to correctly reflect the real share of FOB modality, adjustment must be made. The reason for why the per unit price differs is because the FOB price includes the cost of input materials (textiles and accessories) while the CMT price does not. For instance, at one firm the FOB price for a woven-textile shirt was US$5. The CMT for the same shirt was about US$1, suggesting roughly US$4 is attributed to the cost of input materials. Therefore, if we calculate the value proportion of CMT and FOB (CMT-FOB ratio) for this particular item, it will be 20% ($1/$5). This means that for the same quantity sold, under the CMT the manufacturers receive only 20% of what they would have earned under a FOB production modality. At another firm, the FOB price for a sport-jacket was US$30 while the CMT was just US$3, which CMT-FOB ratio is 10%. In general, CMT ratio are smaller for heavy-apparel than lighter ones because it requires disproportionately more input materials than labor as factors of production. The CMT-FOB ratio used for this calculation is the sample average ratio, which is 15.3%.
Each type of FOB has their corresponding functional responsibilities and the associated risk characteristics. Under the FOB I type of production arrangement, buyers specify not only the exact specifications and color of the textile and accessories that Vietnamese suppliers must procure, but also from which textile producers they must procure. Matters related to production including output volume, prices and delivery schedules are pre-determined by foreign buyers as well. It is often the case that Vietnamese suppliers must reflect the prices of the materials prescribed by foreign buyers into the garment FOB price, where the profits that could be accrued by handling purchasing operations is only marginal. For instance, information from suppliers interviewed suggests an average profit margin of 7% for the procurement of the materials. Most of the interviewed Vietnamese suppliers claim, however, that this margin rate is too low to even just recapture the actual costs on logistics and the interests on the recurrent assets during production\textsuperscript{10}. Although this form of contractual arrangement takes the FOB form, the fundamental difference from the CMT is very small. Under this type of FOB contract, risks in production and distribution are borne by foreign buyers, and functionally Vietnamese suppliers play no additional role. Therefore in practice, this would leave only little potential, if not at all, to increase their share of value-added in the production and distribution of garments.

\textsuperscript{10} The time lag between the payment for the input materials and sales for the garment exported averaged around 3 months. With commercial annual interest rates as high as 10 percent, interests on the recurrent
Under the FOB II arrangement, Vietnamese suppliers receive from their buyers sample garments against which they must provide counter samples. If such counter samples are approved, then they receive bulk orders based on the specifications of the samples produced. In fact, some of the knitted-garment manufacturers already take this form of export arrangement because the textile-knitting and garment-sewing operations for such items are normally integrated due to technical reasons, which is a unique characteristic of the knitted-garments production process. For woven-fabric based garments, however, this is still an uncommon arrangement. Both FOB I and II type of arrangements are similar to what is more commonly referred to as original equipment manufacturers, or OEM. The most important difference between this production modality and FOB II and I is that under FOB II, suppliers have some level of leeway to develop their own supply bases and create value-added through sourcing of input materials. Product specification, design, branding and marketing nevertheless all remain as core functions of suppliers.

The most sophisticated form of garment production, which is also described as the goal in the Vietnamese industry development strategy mentioned earlier, is classified as FOB III arrangement in this paper. Under this arrangement, Vietnamese suppliers are supposed to initiate production of garments based on their own design, with no prior commitment of any kind from foreign buyers. Vietnamese firms produce garment samples and present them, for instance, at exhibitions, to potential buyers. Firms that operate under this modality have their own brand labels, and marketing their products becomes their own responsibility. In this setting, risks due to market uncertainty and information asymmetricity are both transferred to Vietnamese suppliers. Therefore, while this form of contractual arrangement provides the largest possibility to increase value-added, the associated risks become much larger as well. In the global value chain literature, suppliers under these types of arrangements are referred to as original brand manufacturers, or OBM. The most important difference between this production modality and that of others is that Vietnamese garment manufacturers have changed their primary function from suppliers to coordinators of their own value chain, with some functional responsibilities of buyers.
Out of the 23 suppliers interviewed, 20 had some form of FOB production. However, out of those 20 suppliers, 93.6% of their production were, on average, FOB I type arrangements. The remaining 6.4% were FOB II activities, and there was literally no supplier that produced garments for exports under the FOB III modality.

While few interviewed firms were enthusiastic about the recent increase in their share of FOB type of business contracts, it should be noted that the majority expressed a more negative view. The shift from CMT to FOB created possibilities to increase value-added, however most felt that the adverse effects stemming from the increased risks associated often outweighed these gains in reality. Several firms interviewed stated that it was more profitable to just keep focusing on exporting garments under the CMT arrangement, and two of them in fact “downgraded” their production modality and shifted their operation back from FOB to CMT.

For most suppliers interviewed, moving up into FOB type of export from CMT was difficult since they felt they lacked access to market information as well as the capacity to transform such information into actual product design. Most Vietnamese suppliers, regardless of the production modality, had only limited information, if not nothing at all, of what was going on at the retail end in terms of where the products were going to be exported, what kind of markets they were targeting, and at what price the garments were sold (see also Nadvi and Thoburn 2004b). They had no idea how the value chain in which they belonged to was organized and coordinated. Vietnamese export oriented garment suppliers usually lack experience in marketing their own products in competitive markets, including their own domestic market. Some large state owned enterprises have their own retail outlets in major cities including Hanoi and Ho Chi Minh City, but for most the domestic market is of little importance and the goods that are sold at such outlets are often overproduced garments for exports. No special product line was developed for the domestic market at least at the time the field work took place. Another interrelated but different area of competency for functional upgrading is to undertake coordination roles of the production and distribution networks and govern them efficiently. Most lead firms in the garment value chains are apparel firms, traders or retailers, and do not own their own production facilities. Most successful suppliers, particularly those from Hong Kong, that were able to move

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14 Standard deviation = 10.2, n = 11.
15 It should be noted that this is a typical characteristic of the export oriented garment sector. For the garment industry that caters mainly for the domestic market, there are quite a substantive number of enterprises that produce garments under FOB III type of arrangements (Goto 2006).
upwards functionally were the ones that evolved as efficient coordinators, outsourcing the more labour intensive manufacturing processes to others. No supplier in Vietnam has ever managed value chains from such vantage points. Such lack of experience makes it practically impossible for Vietnamese suppliers to correctly position themselves in the value chain, identify viable functional upgrading possibilities and actually design, brand and market their products overseas.

5. The industrial upgrading strategy

What does all this mean for Vietnam, particularly in light of its government strategy that aims to upgrade its export oriented garment industry? As briefly mentioned in the introduction, the Vietnamese government issued a development plan for the textile and garment industry that is often referred to as “the Speed-up Strategy for 2010” in 2001. This strategy essentially aims to promote backward linkages by encouraging investment in the upstream sector, and to rapidly increase high value-added garment exports which design and brand are original (FOB III exports). This paper challenges this strategy. Firstly, while good process equipments are important elements for a competitive textile industry, more important are technological skills and knowledge which take time to acquire. With Vietnam’s commitment to ASEAN Free Trade Area (AFTA) and as a full member of the WTO, import substitutionary policies are not viable options. Besides, it would be very difficult to become internationally competitive through protectionist policies in the extremely competitive regional textile market with exporting countries such as Thailand, Indonesia, and now also China, as direct competitors. Under such conditions, building local production capacity and supply of input materials including textiles through foreign direct investment (FDI) would be a highly desirable development path. Further agglomeration of the garment manufacturing would help promoting incoming FDI in this sector as it would create more demand for local textiles, making investment in this industry more attractive for foreign enterprises.16

The existence of a competitive textile sector alone does not, however, automatically lead to industrial upgrading. Increased value-added happens through a combination of upgrading in process, product and function. Having a competitive and dynamic textile industry domestically would help promoting upgrading of the garment industry in the above three channels, but are not necessarily sufficient conditions.

16 A manager of a Taiwanese synthetic fiber and textile manufacturer, which opened a large nylon textile plant in Vietnam in 2001, said that it was increased local demand for its products that made them decide
The immediate policy focus in the upgrading strategy of the Vietnamese garment industry would be to promote process upgrading by concentrating on where Vietnam is already competitive. There are still ample possibilities for dynamic efficiency gains in the current CMT arrangements through technological transfer from buyer firms. Evidence from interviews with major suppliers and technical experts from buyers both suggest that the productivity of Vietnamese garment suppliers are low compared to countries such as Japan and China\textsuperscript{17}. Clear bottlenecks in the production process exist, and overcoming them would contribute to strengthening competitiveness, and therefore policies that would encourage further accumulation of this type of garment exports should be given priority. At the same time, linkage with foreign buyers through CMT arrangements can further lead to product upgrading\textsuperscript{18}.

While in the short term ample upgrading possibilities exist in both processes and products, from a longer term perspective, however, it would eventually have to upgrade functionally and increasingly take on lead roles in the value chain. Such steps will take time as functional upgrading requires skills and knowledge in processing market information into design, production and marketing of commercially viable products. As the creation and management of efficient distribution systems is also important to functional upgrading, building capacity in this through promoting development of Vietnamese domestic markets is another way policy can support. These would be policies that focus more on investment in human capacity particularly in skills and knowledge, rather than in a narrowly defined set of machineries and technologies.

6. Conclusion

The Vietnamese garment industry upgrading strategy aims to increase value-added of garment exports through vertical integration and supply of original branded products. This paper examined whether this strategy makes sense, primarily from a global value chains perspective. First, the development of the textile sector is not just an issue of to invest and operate in Vietnam, rather than other conditions such as tax incentives or cheap labor costs.\textsuperscript{17} For a standard woven shirt with one pocket, the average labor productivity in terms of number of output (daily output, per person) is between 28 to 32 for Japanese and around 20 for Chinese suppliers, while that for Vietnamese suppliers the number ranged between 5 to 12.\textsuperscript{18} Interviews with buyers indicate that Vietnam can become more competitive in shifting its production category into more sophisticated product lines. Such product upgrading is already happening, and with process oriented technology, new skills and knowledge are being transferred from buyers to leading Vietnamese suppliers.
more capital investment into machinery. Technical and managerial capacity matter as well and building capacity in these takes time. Given the implementation of the ASEAN Free Trade Area (AFTA) and Vietnam’s recent accession to the WTO, protectionist policies would not be realistic to nurture such capacity. It would be most rational to acquire this through a dynamic and open integration process, by further encouraging FDI in this sector. Establishing an encouraging environment that attracts more FDI in this sector, primarily by promoting further agglomeration of the garment sector rather than direct backward linkage promotion and vertical integration sounds more logical.

More important from an industry upgrading point of view is that while the backwardness of the domestic textile sector due to outdated technology is problematic, the relationship between the backwardness of this sector and the low value-added contents of garment exports is only indirect. Increasing value-added by Vietnamese suppliers in the global garment value chain can be only done through either, or a mix of, process, product or functional upgrading. What the government policy is aiming for is to jump from assembly type of operation (CMT) to highly knowledge intensive own brand manufacturing exports (FOB III). Evidence suggest that such jump is difficult at the current stage, as there are still only limited cases of more higher functional types of exports. Vietnam is not yet at a stage for such own brand exports. The Vietnamese industry still lacks capacity to evolve as lead coordinators of their own value chains and govern them efficiently. Policies should focus on how to support these three aspects of upgrading rather than emphasizing developing backward linkages and aiming a radical jump in industrial upgrading through promoting domestic vertical integration.
References


