



## STRUCTURAL CHANGES OF THE TEXTILE AND GARMENT INDUSTRIES IN BANGLADESH

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KUS: 09/13-160409

Manuscript received: April 16, 2009; Accepted: August 26, 2010

**Abstract:** This study considers the sourcing, production and distribution channels of the textile and garment industry in Bangladesh to address structural changes over time. Mass use of traditional garments, dependency on tailoring system and increase in demand of cheap garment products generate less change in the down-stream section's structure of the domestic sector. However, closure/privatization of state owned textile firms and entrance of new private-owned firms contribute to change the up-stream section's structure of the domestic sector. The export sector of the industry has been experiencing more changes in its structure compared to domestic counterpart over the time period. The price cutting trend of garment products in international markets, elimination of the export quota system and compliance issue are creating pressures on the export sector. Bangladeshi firms have been responding by forming formal/informal groups, initiating linkage expansion and increasing inter and intra-industry coordination to face the challenges. This study finds the initiation of external demand driven positive moves in the industry structure. Degree of backward linkage expansion, openness to Foreign Direct Investment, business environment, initiatives for risk management and market expansion will determine the future structure of the industry.

**Keywords:** Bangladesh, textile, garment, industry, structure

### Introduction

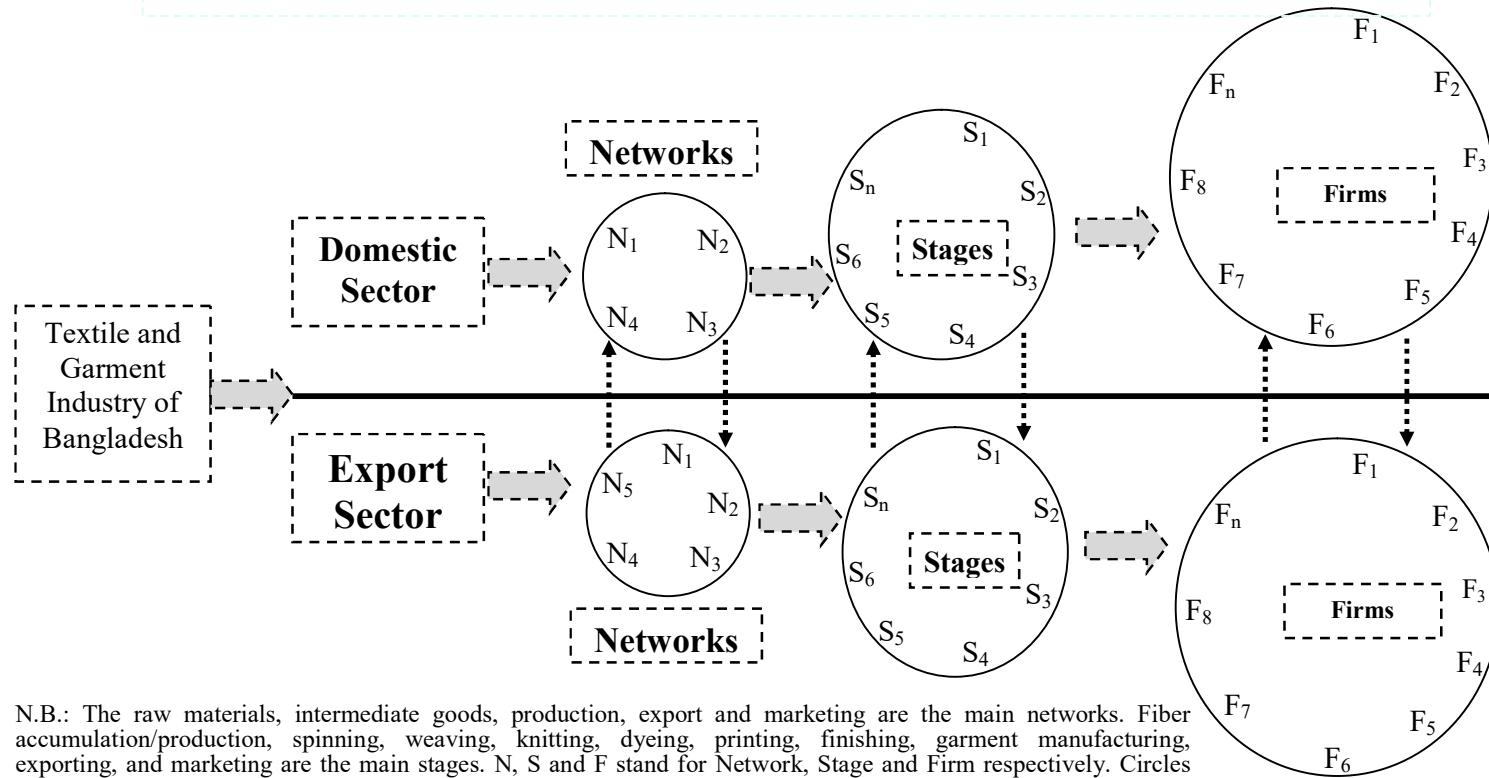
Industry structure is not static, rather a dynamic concept that changes over time. The structure of textile and garment industry in Bangladesh has also changed significantly over time. Both external and internal forces have driven the structural changes in every sector, network and stage of the industry. The process, degree, timing, root factors and impacts of such changes differ across the sectors, networks and stages.

This study follows Chandler (1962) to define industry structure. It explores the nature and degree of interactions for material, information and money among various sectors, networks, stages and firms of the Bangladesh textile and garment industry to describe industry structure. In this study, the term 'structural change' is defined from a broader sense. Changes in the sourcing, production and distribution channels characterize structural changes. Therefore, changes in fiber, yarn and fabric sourcing or production, garment manufacturing and distribution of garment products are covered by the term structural change.

The sectors, networks, stages and firms are the main segments to analyze industry structure (Fig. 1). The textile and garment industry is mainly divided into two sectors: domestic and export sectors (Haider, 2005). The raw materials, intermediate goods, production and marketing are the main four networks operating in the domestic sector of the industry. The export sector is comprised of the export network in addition to the four networks of the domestic sector (Appelbaum and Gereffi, 1994; Gereffi, 2002). These networks are divided into several stages. Spinning, weaving, knitting, dyeing, printing, finishing, designing, cutting, sewing, ironing, exporting and marketing are some important stages of the industry.

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DOI: <https://doi.org/10.53808/KUS.2010.10.1and2.0913-S>



N.B.: The raw materials, intermediate goods, production, export and marketing are the main networks. Fiber accumulation/production, spinning, weaving, knitting, dyeing, printing, finishing, garment manufacturing, exporting, and marketing are the main stages. N, S and F stand for Network, Stage and Firm respectively. Circles indicate interactions for material, information and money. Dotted vertical arrows indicate weak flows.

Fig. 1. Segments of the Bangladesh Textile and Garment Industry

Garments pass through a multi-stage complex structure of process to turn into final products from primary raw materials. That structure is not unique or well defined, rather it varies from place to place, country to country, or time to time. The textile and garment industry structure is an ideal example of a buyer-driven value chain in which large retailers, marketers and branded manufacturers play the pivotal role. Such buyer-driven value chain is characterized by highly competitive and globally decentralized factory systems with low entry barriers where profit comes from combination of high-value research, design, sales, marketing and financial services that allow the retailers, designers and marketers to act as strategic brokers in linking production factories and traders with product niches in their main consumer markets (Gereffi and Memedovic, 2003; Ramaswamy and Gereffi, 2000).

A thorough investigation on the literatures related to the Bangladesh textile and garment industry identifies three main study approaches. The first approach focuses on the textile segment of the industry (Ahmed, 2002; Dowlah, 1998). Industry history, stage-wise performance, present condition, future challenge, business environment and Government policy measures are the main tools used in this approach to analyze the textile industry. The approach concludes placing top priority on backward linkage expansion of the Bangladesh garment industry.

The second approach focuses on the garment segment of the industry. This approach handles export performance, challenges and potentials, growth and stability, and competitiveness issues of the garment industry. Bhattacharya (2000), Bhattacharya and Rahman (2001), Dowlah (1998), Haider (2006), Jabbar (2006), Nath (2001) and Rahman (2001) are the main contributors in this approach. The approach identifies 'low labor cost' and 'export-quota system' as the two main factors for the success of the industry. Backward linkage expansion, lead-time shortening, qualitative up-gradation and active role in product design are some priority tasks suggested by the approach for the Bangladesh garment industry to sustain in the competition.

The third approach deals with the social dimension of the industry. Absar (2001), Afsar (2001), Kabeer (2000), Kibria (2001), Paul-Majumder (1996) and Zohir (2001) are the main contributors in this approach. According to this approach, the role of the industry for accelerating access of women to formal economic activity, women empowerment, poverty alleviation and enhancing decision-making power are creditable. However, factory environment, working condition, health issue of factory workers, workers' wage, housing and transportation problem, sexual harassment and exploitation on garment workers are the areas where it is necessary to initiate some immediate improvement actions. The approach concludes that the overall situation of Bangladeshi garment factories needs to be improved for long run sustainability of the industry.

A careful investigation on the available literatures related to the Bangladesh textile and garment industry identifies that any in-depth analysis on textile segment or domestic sector is hardly available. Similarly, the evidence of research considering both textile and garment segments simultaneously or both domestic and export sectors simultaneously is also limited. Moreover, Bangladesh textile and garment industry structure or structural change related research is also scarce. This study is an attempt to fill those gaps. It simultaneously considers the textile and garment segments, and export and domestic sectors. The study will critically analyze various sectors, networks, stages and firms of the Bangladesh textile and garment industry to identify major structural changes of the industry over the time period, to explore the root causes behind the changes and to find out the impacts of such changes on the economy and society.

### **Materials and Methods**

This study considers both primary and secondary data to analyze structural changes of the Bangladesh textile and garment industry. Published books, journals, reports, newspapers and organizational database are the main secondary sources. Moreover, questionnaire survey and case study analyses are the primary sources for collecting field level data and information for this

study. The author conducted a questionnaire survey on 80 randomly selected sample garment firms of Bangladesh during December 2005 – January 2006 time period. The sample includes woven and knit garment firms of Bangladesh covering wide range of varieties about firm size, year of operation, location, manufacturing product and destination market.

The sample includes 100 per cent local owned, 100 per cent foreign owned and joint venture firms; direct exporter firms as well as sub-contracting firms; composite firms as well as only garment manufacturing firms; simple as well as high quality garment manufacturing firms; leader as well as follower firms; group as well as non-group firms; single as well as multi-product manufacturing firms; firms from different locations of Bangladesh; firms with and without own brand-name; firms with and without market diversification; and finally experienced as well as new entrant firms.

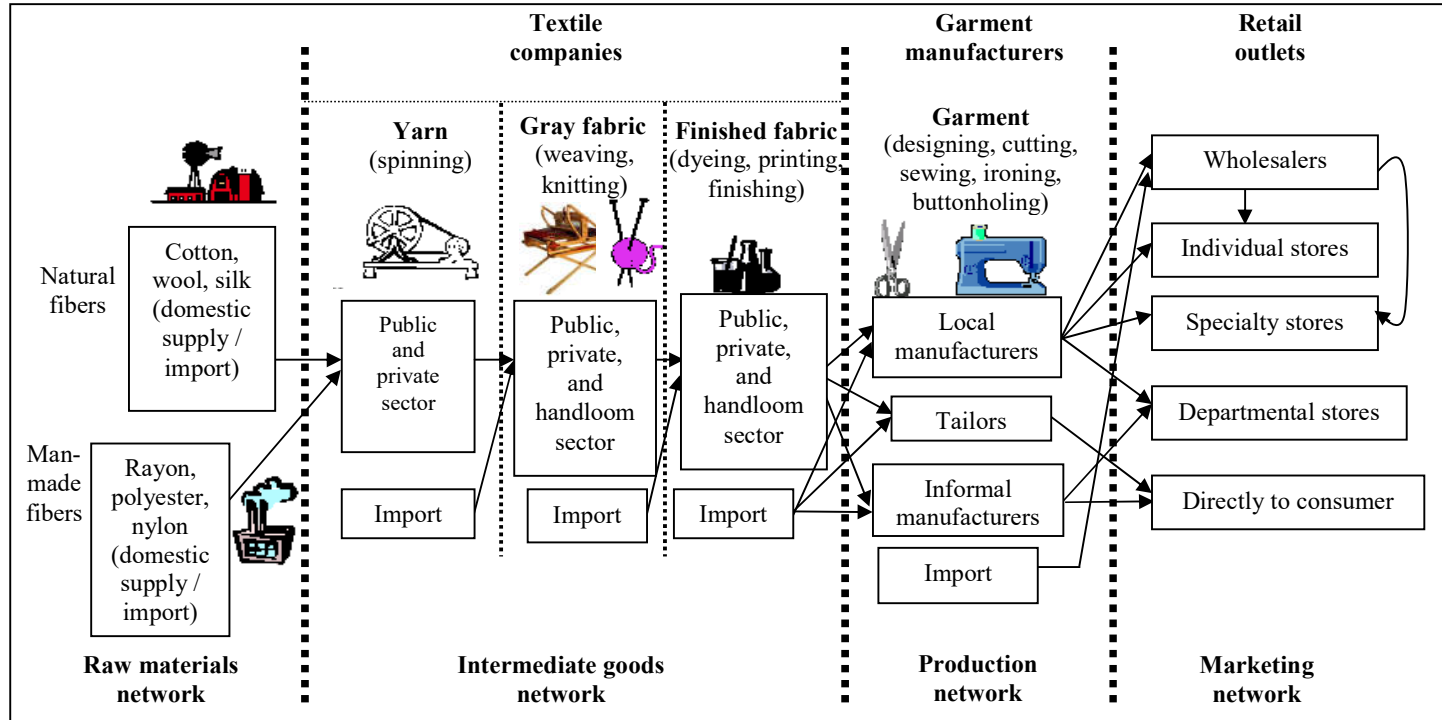
Moreover, the author conducted case study analyses on some representative garment firms of Bangladesh for collecting field level information. Special attention was given to explore true responses of the respondents and interviewees. Collected data and information are arranged, sorted and processed properly to make it usable for study and research. Finally, the study tries to point out the special findings of the research regarding the structural changes of the Bangladesh textile and garment industry.

## **Results**

***Structure of the Bangladesh Textile and Garment Industry:*** The textile and garment industry of Bangladesh has successfully substituted itself to the place of jute industry in the race of becoming the main export earning source for the country over the time period. The substitution process has changed the structure of the textile and garment industry of Bangladesh. Haider (2008) finds a clear separation between the two sectors (domestic and export sectors) of the industry. Haider (2008) also states that the export sector is bigger than the domestic sector in size.

The import dependency for raw materials and intermediate goods characterize the domestic sector structure (Figure 2) of Bangladesh textile and garment industry. The structure of the domestic sector is not well defined. The domestic enterprises perform almost all the tasks associated with the production and marketing networks. The tasks of the sector are mostly limited to manufacture and distribute average quality products to the local people.

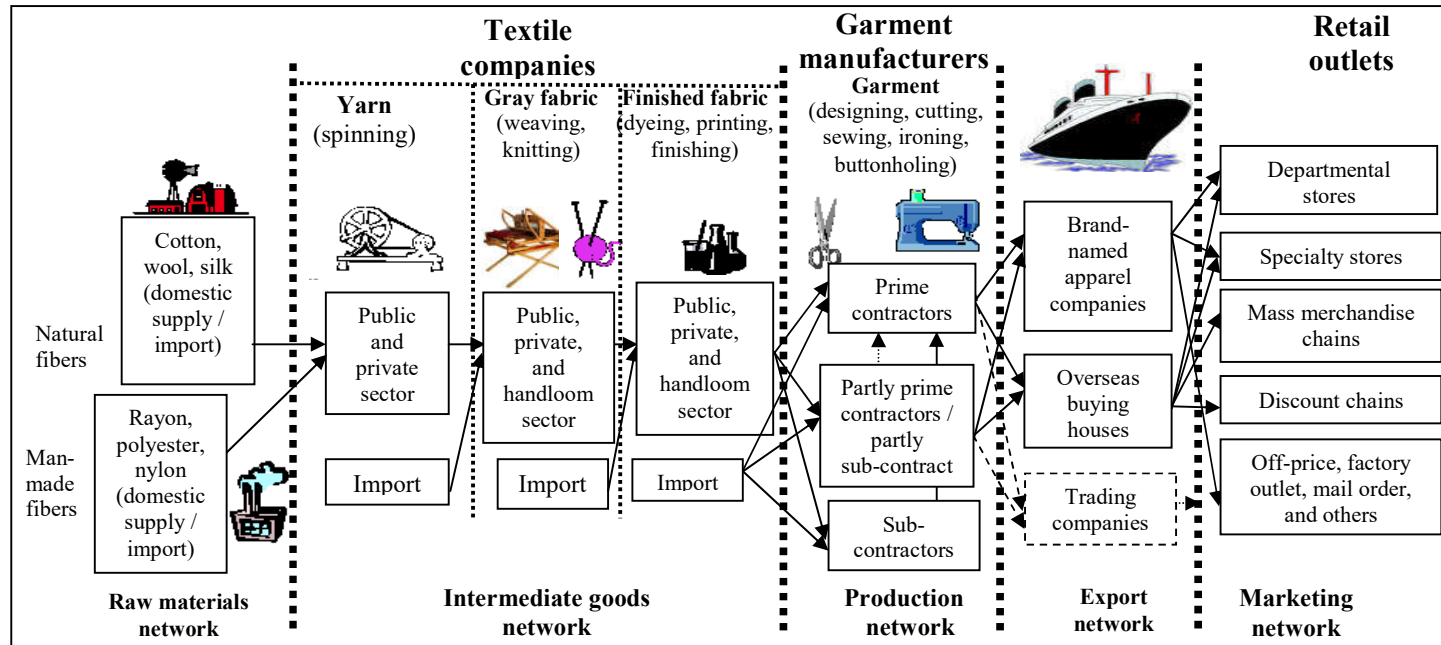
The export sector concentrates on manufacturing average to high quality garment products. Figure 3 illustrates the general structure of the export sector of Bangladesh textile and garment industry. Import dependency for raw materials and intermediate goods, dependency on foreign origin buying houses for exporting garment products and dependency on foreign companies for marketing the products characterize the export sector structure of the industry. Alternatively, Bangladeshi firms' activities are mainly concentrated in production network. They manufacture the garment products as per buyers' direction, mostly use buyer nominated raw materials/intermediate goods sources, follow buyer guided design, use foreign origin buying houses to export garment products and market the products via world famous buyer/retailer channels.



Source: Author's compilation based on Appelbaum and Gereffi (1994; Ahmed (2002); and Anon (2004a).

N.B.: The figure is divided into four major parts differentiated by bold dotted vertical lines to indicate four networks. The main inputs/outputs, organizations and tasks associated with each network are also presented in the figure in brief for well understanding the domestic sector structure of the Bangladesh textile and garment industry. The solid arrows of the figure basically indicate the material flow.

Fig. 2. Structure of the Bangladesh Textile and Garment Industry: Domestic Sector



Source: Author's compilation from Appelbaum and Gereffi (1994); Ahmed (2002); and Anon (2004a).

N.B.: The figure is divided into five major parts differentiated by bold dotted vertical lines to indicate five networks. The main inputs/outputs, organizations and tasks associated with each network are also presented in the figure in brief for well understanding the export sector structure of the Bangladesh textile and garment industry. The solid arrows of the figure basically indicate the material flow. Broken arrows indicate weak material flow. Dotted horizontal arrow denotes the destination of a product from one network to every sources of the destination network.

Fig. 3. Structure of the Bangladesh Textile and Garment Industry: Export Sector

**Structural Changes in the Domestic Sector:** The raw materials and intermediate goods networks manufacture fiber, yarn and fabric mostly for the domestic sector of the industry with some exceptions. There is a big gap between installed capacity and actual production in these networks. Actual yarn production of Bangladesh for year 2000 was only about 27 – 38 per cent of total installed capacity (Table 1). Inefficiency of the public sector spinning mills mainly generated the gap. Similarly, rough estimates indicate that the actual fabric production for year 2000 was around 72 per cent of country's total installed capacity (Table 1). Such inefficiencies pressured the state-owned spinning and weaving firms either to restructure for maximum utilization of installed capacity or factory closer. As a result, most of the public sector firms are already restructured through privatization or closer. However, the entrance of comparatively efficient private firms is the alternate response.

The handloom sector had been considered as the domestic market oriented and a very inefficient sector comprised of backdated technology, longer lead-time and huge installed but obsolete capacity. However, some recent moves toward manufacturing high quality fabrics have changed its so called negative status. Currently, some export-oriented RMG firms have been using those handloom fabrics.

Table 1. Capacity Utilization in the Textile and Garment Industry of Bangladesh

Item	Unit	Installed Capacity	Actual Production	Capacity Utilization
Yarn	Million kilogram	443	120 – 168	27 – 38 %
Fabric	Million meter	1630 - 1650	1180	72 %

N.B.: The data for Year 2000.

Source: Authors' compilation based on Ahmed (2002); Anon (2000); Anon (2004d); Latif (1997) and Quasem (2002).

Local consumers' attitude change in garment selection, their rising desire to wear imported brand-name garments and increasing cost of wearing order-made garments cause changes in sourcing, production and distribution channels of the domestic sector. Such moves are mainly concentrated in urban areas. Urban people are getting used to wear ready-made garments instead of so called order-made products day by day (Field Survey, 2005-2006). As a result, the number of individual stores, departmental stores and specialty stores has been increasing in urban areas. Besides, Bangladeshi people are becoming fond of imported garments. Some dishonest businessmen are capitalizing this opportunity by selling local products using foreign brand-name.<sup>1</sup> Frequent fashion changes also characterize urban people. But, the sourcing, production and distribution channels in rural areas don't change a lot. Rather, most of the rural people are still wearing the cheap average quality local products.

The degree of change in local consumers' taste toward garment products varies from item to item. For example, *sari*, *lungi* and *gamcha* are predominantly ready-made wears, and are available with a wide variety and diverse quality. On the contrary, pant is still mostly considered as an order-made product. For shirts and kids garments, Bangladeshi people are considerably diverting toward ready-made wears from order-made wears. For *pajama*, *panjabi* and ladies three-piece, both the choices of ready-made and order-made are found with no one's dominance. Such trends indicate that the structure of the domestic sector has not changed a lot, or at least the pace of change is slow.

<sup>1</sup> Interview with garment industry personalities endorses the validity of the statement. Though the dishonest businessmen are earning huge profit in such illegal practices, but concerned consumers are in dark. Similar practices are seen in other consumer product industries of Bangladesh.

In summary, the domestic sector structure of the Bangladesh textile and garment industry has not changed a lot. The big gap between installed capacity and actual production at various stages generate some sort of changes. Most of the changes that have taken place are urban area centric. Even in urban areas, the changes have just started, as urban people are gradually diverting from so called traditional wears.

**Structural Changes in the Export Sector: Why?:** Necessity of manufacturing quality products at the lowest cost, delivering manufactured products by the possible shortest time and allowing sufficient flexibility in the manufacturing process bind the export sector of the Bangladesh textile and garment industry to change its structure in order to remain competitive in international markets.

**Response to Price Changes:** China and other prominent garment suppliers are executing sharp price-cutting policy for capturing more market share in the international markets (Ganguli, 2005: 12, Anon, 2004c: 12; Anon, 2005: 21). Bangladeshi firms have been trying to adjust themselves with this price-cutting pressure. More than half of the surveyed firms have faced decrease in the average export price of their 'rank-1 garment product'<sup>2</sup> in year 2005 compared to the corresponding price of year 2004. Such price-cutting trend pressures Bangladesh to adjust its sourcing, production and distribution channels.

**Pressure for Shortening Lead-time:** Lead-time refers to the required time of supplying the ordered garment products after getting the export order. International buyers are creating immense pressures on garment suppliers to reduce the lead-time of garment manufacturing. Bangladeshi garment firms are trying to respond to that pressure. Survey findings indicate that the average lead-time of Bangladeshi garment firms decreased from about 4 months in year 1990 to less than 2 months in year 2005. Knit firms performed better than woven firms in reducing lead-time (Figure 4). The raw materials procurement from local sources has favored the knit sector to cut lead-time. The knit fabric sector of Bangladesh has the ability to supply more than two-third of total knit fabric demand, but the ratio for woven fabric sector is only less than 30 per cent of total woven fabric demand.

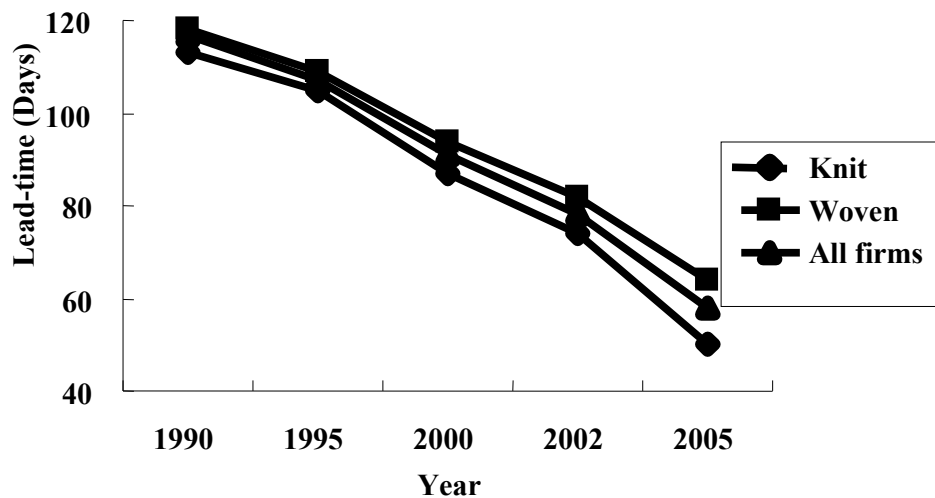


Fig. 4. Changes in Lead-time of Garment Manufacturing

**Pressure for Compliance Standard:** Final consumers and marketers are placing more importance on compliance issue in garment buying decisions. Stronger garment firms of Bangladesh are responding by taking various initiatives in areas such as working hour, wage, working

<sup>2</sup> Rank-1 garment product refers to the product that occupies the largest share in yearly production volume of concerned firm.

environment, safety or leave issues. However, weak firms often fail to cope with compliance standards, which make them difficult to get export orders directly from foreign buyers, and ultimately bind them to depend on stronger firms through sub-contracting system for getting work orders. Those weak firms have to work on very low profit margin. In addition, the ill practice of getting huge export order in the name of stronger firms, and later distributing to sub-contractors informally is spreading as a sequential impact of the compliance issue. Therefore, the compliance issue creates both positive and negative effects.

*Elimination of Export-Quota System:* Some researches described the absence of export-quota system as a massacre for the Bangladesh garment industry (Anon, 2003; Mlachila and Yang, 2004). This study surprisingly finds the reverse result. About one-third of the surveyed firms treat the phase-out of quota system as an opportunity for their business, and another one-third firms treat that phase-out issue as immaterial for them. The rest one-third firms treat the impact as uncertain or 'no comment' with only a few firms treating as threat. The dependency of Bangladeshi firms on the export-quota system has decreased over the time period. The surveyed firms having active business transaction with the USA exported about 55 per cent of their total garment export to the country through export-quota system in year 2000. The share decreased to 40 per cent in year 2004. Such trend indicates clear diversion of Bangladeshi firms from the so called quota market toward other markets and quota-free trade regimes. That diversion indicates changes in distribution channels and necessitates adjustments in sourcing and production channels of the export sector.

*Structural Changes in the Export Sector: How?:* The formation of formal/informal groups, linkage expansion initiatives and increasing inter and intra-industry coordination are the major changes taking place in the export sector's structure of the textile and garment industry of Bangladesh. The installation of modern machineries, changes in the production process, managerial efficiency enhancement, steps for employee motivation and active role in the decision making process are also seen as symptoms of structural changes in industry structure.

*Linkage Expansion:* Import dependency originated from a huge demand-supply gap at various stages is the main bottleneck of the Bangladesh textile and garment industry to cope with lead-time reducing strategy. The gaps make the room for changes in the industry structure through expansion. Table 2 provides stage-wise demand supply situation. Yarn manufacturing capacity of Bangladesh turned double in 2003/04 compared to its capacity in 1999/00. The yarn consumption-production gap also decreased in the same period, though the actual consumption increased every year. The spinning sector of the country has increased at an average annual rate of about 10 per cent in recent years. Fabric manufacturing also shows an increasing trend. Such increasing trend indicates the structural changes, especially the linkage expansion moves of the industry over the time period.

Table 2. Linkage Expansion of the Bangladesh RMG Industry (Anon, 2004d)

		Unit	MY	1999/00	2000/01	2001/02	2002/03	2003/04
Yarn	Production			145	174	192	275	290
	Consumption	'000' tons		488	495	500	525	532
	Gap			343	321	308	250	242
Fabric	Production			1160	1180	1190	1230	1260
	Consumption	Million meters		3650	3675	3690	3740	3800
	Gap			2490	2495	2500	2510	2540

N.B.: From August to July of next year is considered as a Market Year (MY) in this table.

Kee (2005) finds that Foreign Direct Investment (FDI) based garment firms of Bangladesh are 20 per cent more productive on average than domestic firms.<sup>3</sup> Moreover, FDI firms can play an important role to transfer technology to local garment firms (Thompson, 2003). However, the current investment and industrial policies of Bangladesh encourage FDI only in backward linkages. Therefore, opening the garment sector for FDI is the main concerning point. The survey findings indicate that many domestic garment firms are currently performing well in major export markets. In contrast, tiny backward linkage is the main bottleneck for Bangladesh. Therefore, giving proper incentives for attracting more investments (both domestic and foreign) in backward linkages is an urgent need.

*Speedy Expansion of Knit Industry:* The export market oriented knit industry is the outcome of domestic market oriented Bangladesh hosiery industry's qualitative extension. The Knit industry of Bangladesh has been expanding since the early 1990s. Survey results indicate that the woven firms have turned double, whereas the knit firms have turned triple in size on average by five years, from year 2000 to year 2005 (Table 3). Similarly, a major portion of new investment is blowing toward knit sector (Table 4).

Table 3. Size of Bangladeshi Garment Firms

Firm type	Frequency (No. of firms)	Number of employees per firm	
		Year 2000	Year 2005
Woven	54	825	1656
Knit	38	762	2087
All types	80	774	1625

N.B.: Garment firms having both woven and knit sectors are considered in both types separately.

Table 4. New Investment in the Bangladesh Textile and Garment Industry

Year	Unit	Woven	Knit (including sweater)	Total	Share of woven (%)
2001	Number of new firms	99	159	258	38
2002		46	154	200	23
2003		36	193	229	16
2004 (until April)		13	82	95	14

Source: Anon (2004b: 42).

*Group Formation:* Group formation is the most visible form of structural change taking place in the Bangladesh textile and garment industry. About 80 per cent of the surveyed garment firms are included in either formal or informal groups. Sharing production activities, mostly in the form of sub-contracting agreement is the main objective of informal grouping. For the very reason, the bondage of such informal groups is weak. Even some formal groups' activities are limited within sharing only production arena. However, some sort of stronger ties are also found in some formal groups. Besides production, the formal group firms share a wide range of areas covering input sourcing, financing, modernizing, training of manager and worker, transportation and technology. Risk diversification, horizontal coordination and vertical cooperation are the outcomes of such grouping activities.

<sup>3</sup> As per Kee (2005), FDI firms are in general larger in sales, in exports, in purchasing material inputs, in using imported materials, in hiring employees and in capital stock compared to domestic garment firms of Bangladesh. The domestic firms of the country may be benefited from the productivity spillover of FDI firms.

*Inter-Firm Horizontal Coordination:* Coordination refers co-presence of strong competition and cooperation among firms (Grandori, 1999). Sharing some common points with competitors, but at the same time developing own core is the best way of coordinating among firms (Contractor and Lorange, 1988). In Bangladesh, cooperation instead of competition is mostly practiced among the garment firms. Survey findings indicate that about 85 per cent firms share manufacturing activities within group members, and 95 per cent firms help each other within the group boundary in getting export order. Moreover, some firms are extending helping hands toward group members by sourcing raw materials/intermediate goods from subsidiary textile firms, or even from outside textile firms. Information sharing, machineries and equipment sharing, and jointly working on quality control or product design issues are also seen among group members with the aim of cooperation. At the same time, some firms of stronger groups are competing with each other on product quality, meeting production deadline, getting more export orders, cost minimization and meeting compliance standards. All such activities give the signal of increased inter-firm horizontal coordination among garment firms of Bangladesh.

*Inter-Firm Vertical Cooperation:* Stronger garment firms of Bangladesh are establishing their own textile and accessories plants in the up-stream part (Box 1). For down-stream part, garment firms are establishing stable relationship with buying houses, retailers and marketers. Research and development, product design, material sourcing, quality control, transportation and financing are some areas where stronger firms are breezing reliable business relationship with concerned up and down-stream domestic and foreign firms. But, weaker firms rarely deal with up and down-stream firms on such issues. Rather, they perform only the sub-contracting task, and mostly depend on original contractor firms for the rests.

**Box 1: Vertical Expansion: A Case Study**

G<sub>1</sub> is a 100 per cent export-oriented garment firm situated in the Dhaka Export Processing Zone (DEPZ), which belongs to a formal group of garment and textile firms located in Bangladesh and China. The head-office of the group is situated in Hong Kong. The firm was established in year 1995. Currently, 2,500 workers are employed in the firm. Cap is the main product manufactured by the firm.

Cutting, sewing, ironing, folding and packing are the main tasks done by the firm. It has some indirect contribution in product designing also. In addition to that, the firm has advantages in fabric sourcing from group members. More than half of its yearly fabric demand is met by group textile firm located in the DEPZ. The importers allow the firm to choose fabric suppliers almost independently with some exceptions. Besides, the firm has its own accessories manufacturing facilities inside the factory.

Average manufacturing capacity of the firm is more than two million pieces per month. More than half of the manufactured products are exported through FOB<sup>4</sup> system which facilitates the firm to get higher price in comparison to other average level garment firms engaged in Cut, Make and Trim (CMT) based business. The firm has been decreasing its dependency on the USA market for exporting garment products over the time period.

Lead-time reduction, installation of modern machineries, stable management, 50:50 male-female ratio among workers and commitment on compliance standard are some other notable features of the firm. Brand name, product diversification and wage issue are some areas where the firm needs to give importance in the coming days.

<sup>4</sup> FOB type business transaction allows the manufacturers to exercise somewhat direct/indirect roles in product design, order receiving and input sourcing in addition to the so called CMT type business transaction. For details, see Goto (2002: 7-12).

*Intra-Firm Efficiency Enhancement Initiatives:* Managerial efficiency enhancement, motivating workers, installation of modern machineries and adjustments in production process are some intra-firm efficiency enhancement initiatives undertaken by stronger firms to face the competitive pressures. For example, stronger firms are recruiting highly educated qualified human resources and trying to improve manager-worker relationship. The stronger firms are addressing the high labor turnover issue by offering somewhat secured job, providing various fringe benefits if not possible to increase wage, and updating working environment.

Survey findings indicate that 85 per cent firms have installed new machineries in their manufacturing lines in 2004-05 time periods. Introduction of modern multipurpose usable machines, multi skill development through job rotation, production line rearrangement, proper placement of man and machine, and quick response of material suppliers are some other strategies taken by the garment firms to face demand variations. All these initiatives contribute to change the firm and industry structures.

*Active Role in Decision-Making Process:* About 74 per cent of the respondent firms mentioned that they have direct or indirect contributions in product price fixation. More than 80 per cent of the respondent firms have the right to choose local fabric suppliers. About half of the surveyed garment firms are engaged in FOB type business practice, and other one-fourth firms are practicing both CMT and FOB options. The remaining one-fourth firms are mainly doing garment business on CMT basis. Such roles in price fixation, freedom in supplier selection and move toward FOB type business practices provide hint of some sort of positive changes in the business structure of the industry.

## **Discussion**

*Major Structural Changes:* The textile and garment industry of Bangladesh was solely domestic market oriented until the 1970s, but it has achieved significant export-orientation by last three decades. The successful transition of the domestic market oriented hosiery sector to the export market oriented knit sector over the time period signals a significant positive change within the industry structure. Factory closure or privatization of inefficient state-owned textile mills and simultaneous entrance of new private textile mills with modern technology also indicate structural change of the industry.

*Process of Structural Changes in the Export Sector:* Export sector of the industry has experienced more changes in its structure compared to domestic sector (Figure 5). Group formation is the most visible change in the export sector structure. Elimination of export-quota system, price-cutting trend of garment products in international markets and increasing importance of compliance issue among the buyers are creating immense pressures on the export sector. Bangladeshi firms are responding by increasing its inter-firm horizontal coordination within/outside the group boundary in production sharing, information sharing, export order collecting, material sourcing, machineries and equipment sharing, and joint effort for quality control or product design. Inter-firm vertical cooperation with up and down-stream firms for getting the right material at lowest cost to the right place at the right time are also spreading. In addition, installation of modern machineries, changes in the production process, managerial efficiency enhancement, steps for employee motivation and active role in the decision making process are also seen.

**Reasons behind Structural Changes in the Export Sector:** The major changes taking place in the Bangladesh textile and garment industry structure are external demand driven. Demand side pressures for shorter delivery, compliance standard, quality control and cheaper price. But, existing supply base often fail to match with those pressures. Such failure is the origin of changes taking place within the industry structure.

**Steps to adjust with Structural Changes:** The textile and garment industry of Bangladesh has already initiated the process of structural changes driven by pressures from the demand side. But, the pace of change is slow due to capacity, financial and technology constraints. FDI can play a significant role to fill the gap. The domestic enterprises are mostly unable to manage the risks involved in establishing backward linkages due to financial and technology constraints. In contrast, foreign investors are reluctant to undergo the risk, which is partly due to the local business environment and market uncertainty. Therefore, Bangladesh needs to ensure investment friendly business environment on a priority basis. In addition, the country needs to initiate some risk sharing mechanism between the foreign investors and domestic garment manufacturers through establishing long run reliable business relationship to efficiently coordinate and manage concerned risks. Such initiatives will significantly change the industry structure.

### **Conclusion**

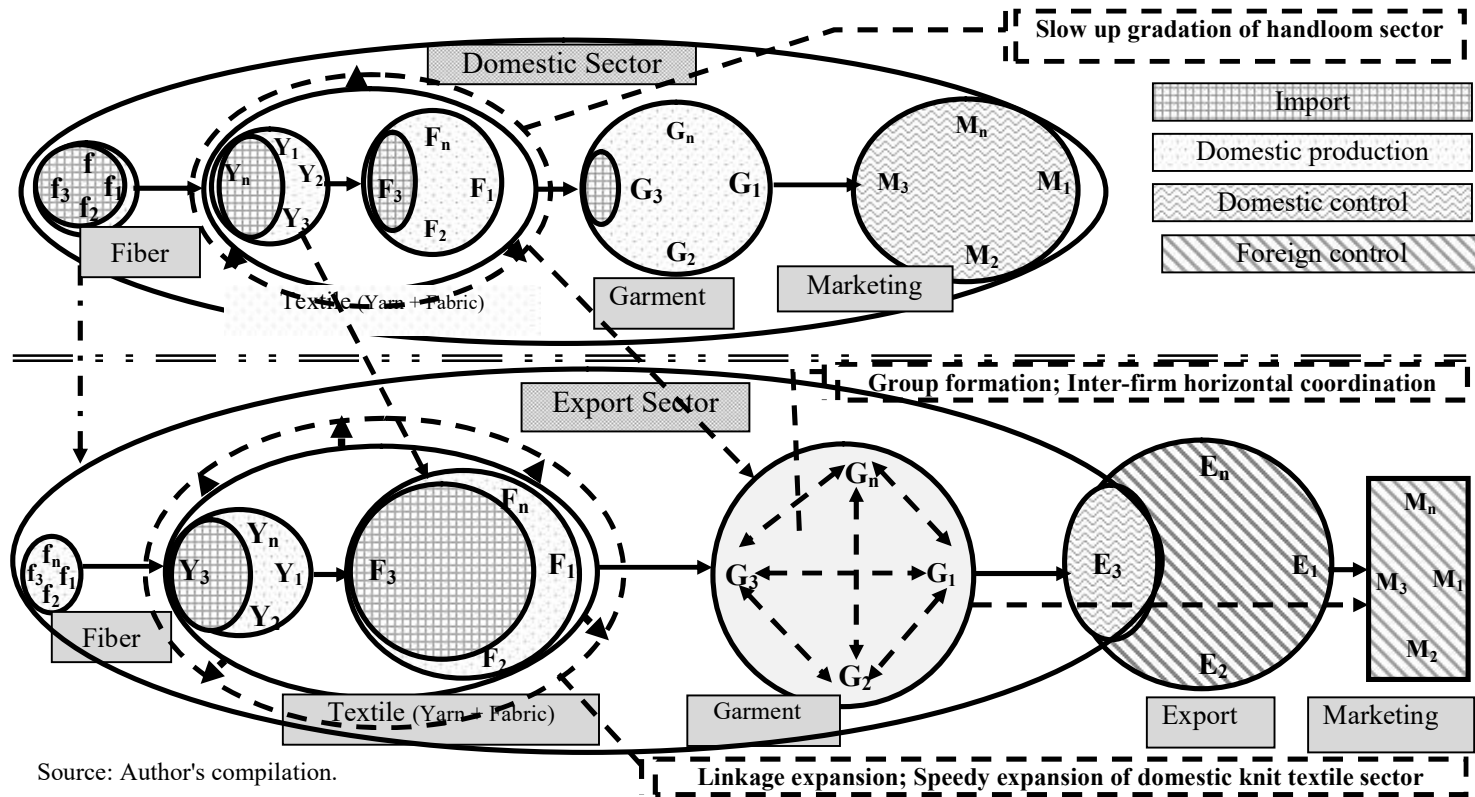
This study addresses structural changes of the textile and garment industry in Bangladesh. Import dependency for raw materials and intermediate goods like fiber, yarn and fabric characterizes the industry structure. The domestic and export sectors of the industry are almost separable. Mass use of traditional garments, dependency on tailoring system and increase in demand of cheap garment products generate less change in the down-stream section's structure of the domestic sector. However, closure/privatization of state owned textile firms and entrance of new private-owned firms contribute to change the up-stream section's structure.

The export sector of the industry has been experiencing more changes in its structure compared to domestic counterpart over the time period. The price cutting trend of garment products in international markets, elimination of the export quota system and compliance issue are creating pressures on the export sector. Bangladeshi firms have been responding by forming formal/informal groups, initiating linkage expansion and increasing inter and intra-industry coordination to face the challenges.

This study finds the initiation of external demand driven positive moves in the Bangladesh textile and garment industry structure. Backward linkage expansion, FDI attraction policy, exit/restructuring of weak firms, increase in the number of compliance standard firms and gradual shift toward FOB type production process are some important issues in shaping the future changes in the industry structure.

### **Acknowledgement**

This article is the revised version of a part of the author's Ph.D dissertation.



N.B.: The figure illustrates the relative size of various segments of the industry. Due to lack of sufficient and up-to-date data, the author has to depend on rough estimations and perceptions to shape the figure. Therefore, it may not represent the real absolute situation. At best, it may be used for relative conceptualization of the industry. The size of circles indicates relative market size. Dashed-dotted arrow indicates weak interaction and solid arrows indicate strong interactions among firms/networks/sectors for material and information. Dashed lines/arrows/circles indicate structural changes over the time period. N, S and F stand for Network, Stage and Firm respectively.

Fig. 5 Structural Changes of the Bangladesh Textile and Garment Industry

Haider, M.Z. 2010. Structural changes of the textile and garment industries in Bangladesh. *Khulna University Studies* 10 (1&2): 293-308

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