Backward Linkages in Readymade Garment Industry of Bangladesh: Appraisal and Policy Implications

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ABSTRACT

In global apparel markets, international buyers place an order with competitive pricing along with shortest possible lead time. For Bangladesh, lead time is fast emerging as a serious bottleneck. Backward linkages are playing major part of a garment industry to reduce lead time and offer competitive price in the international market. It is inevitable that one of the major issues of success in readymade garment (RMG) industry in Bangladesh must depend on backward linkage conditions, support, and strategy formulation. This paper briefly discusses the present condition of backward integration, needs for further development within respect to Post Multi-fiber Arrangement (MFA) situation in the RMG industry in Bangladesh. This paper will focus on policy implication on backward Linkage sub-sectors in respect of free trade apparel market.

Keywords: Readymade garment industry, Bangladesh garment industry, policy formulation, backward integration.

Introduction

The performance of the readymade garment (RMG) sector has been one of the most notable success stories of the Bangladesh economy over the last two decades. Nearly two million women workers were directly and more than ten million habitants were indirectly associated with this industry. Over the past twenty years, the number of manufacturing industries grew from 180 to over 3600. On the average this sector alone fetches over 75% of the total export earnings of the country (BGMEA, March 2007). Today, the RMG export sector consists of multibillion dollar manufacturing and export industries in the country. The overall impact of the readymade garment exports is certainly one of the most significant social and economic developments in contemporary Bangladesh. Because the economy of Bangladesh largely depends on the RMG sector, in short, this sector is still considered as the lifeline of the Bangladesh's economy and plays an indispensable role for the social stability of the country.

Backward linkage for Bangladesh RMG

Backward linkage means the use by one firm or industry of produced inputs from another firm or industry (Alan V Deardorff, 2001). That means the finished garment
relies on three steps; first level for converting fibers/cotton to yarns, second step for converting yarns to grey fabrics and the final step for converting gray fabrics to dyed, printed of other finished fabrics. These three steps are integrated into each other as shown in Table 1. It shows that these three steps are essential for backward linkage integration (BGMEA, January 2005).

<table>
<thead>
<tr>
<th>Fibers/Fabrics</th>
<th>Yarns</th>
<th>Grey fabrics</th>
<th>Finished Fabrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton</td>
<td>Spinning</td>
<td>Weaving or Knitting</td>
<td>Dyeing, Printing, Finishing</td>
</tr>
</tbody>
</table>

Table 1
Steps from fibers/cotton to finished fabrics

Out of three steps, Bangladesh is only capable of knitting, finishing in knitted sectors but far behind in producing yarn, fabrics which is a major factor for woven section. Only success came to accessories where 80% demand of our country was fulfilled.

The success of the garment industry very much depends on how effectively RMG sector linkages may operate backward and forward. If the manufacturer has effective control over the supply of raw materials, components and ancillary services needed to produce final product, then the production flow is likely to be interrupted. If the company develops an effective marketing service strategies that provide right signal, and if marketing and distributing systems as a whole are effective for having the products reach the target markets, then the sales revenue for the company is likely to be maximized. It means that to minimize cost of production and maximize sales revenues both backward and forward linkages need to be integrated. Here the issue of developing backward linkages is discussed with reference to the desirability of having control over the supply of inputs of RMG industry, mainly, fabric, yarn and processing status (Siddique, 2004).

Bangladesh RMG Sector – Need for Improved Backward Linkages in Post MFA

After abolition of quota in 2005, RMG sector in Bangladesh is facing stiff competition in global apparel export market. Moreover, increased competitions have been felt from neighboring countries including India, Pakistan, China and Thailand from where Bangladesh imports fabrics to meet the fabric demands of its RMG sector. These countries have stronger backward linkage support as they are able to utilize their locally produced yarns and fabric internally, resulting in higher prices in the export market, putting pressure on the Bangladesh garment sectors. This observation is supported by the view of Ahmed Khakder Habib cited by Hafiz G A Siddiqi, (November 11, 1999):

“Particularly India, Pakistan, China and Thailand which are at a relatively higher stage of development and are richer compared to Bangladesh will in the near future move to the production of high-technology higher-value items where return on investment will be much higher than that in RGM.”

Bangladesh RMG sector, therefore, needs to develop the backward linkage sub-sectors further in order to reduce dependency on imported raw materials and intermediate goods if she is to meet the export target in...
the global market. Again, competitive pricing is vital with this backward linkage support. Otherwise, it is not possible to survive in the world apparel market in the post MFA era.

Faced with the quota-free global apparel trade, Bangladesh RMG sector must not only be competitive in product price but also in the lead time. Development and growth of backward linkage industries will reduce price ranges and lead-time in the long run. As the backward integration is needed for composite, spinning, weaving, finishing, dying and processing, all steps beginning with raw materials and ending with finished products must constitute backward linkages sub-sectors. The RMG sector then will be faced with more challenges in meeting these goals. Moreover, Bangladesh RMG sector has great advantages in terms of the lower in producing the fabric. The labor cost in Bangladesh, as shown in Table 2, is one of the lowest. The table compares average hourly wages (including fringe benefits) in the RMG industry (Sattar, 2004).

Table 2. Average Hourly Wages (including Fringe Benefits) in RMG Industry

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>HOURLY WAGE(US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SINGAPORE</td>
<td>3.56</td>
</tr>
<tr>
<td>MEXICO</td>
<td>2.40</td>
</tr>
<tr>
<td>MALAYSIA</td>
<td>1.20</td>
</tr>
<tr>
<td>THAILAND</td>
<td>1.04</td>
</tr>
<tr>
<td>PHILLIPINES</td>
<td>0.78</td>
</tr>
<tr>
<td>INDIA</td>
<td>0.56</td>
</tr>
<tr>
<td>PAKISTAN</td>
<td>0.49</td>
</tr>
<tr>
<td>INDONESIA</td>
<td>0.43</td>
</tr>
<tr>
<td>VIETNAM</td>
<td>0.40</td>
</tr>
<tr>
<td>SRILANKA</td>
<td>0.39</td>
</tr>
<tr>
<td>CHINA</td>
<td>0.40</td>
</tr>
<tr>
<td>BANGLADESH</td>
<td>0.23</td>
</tr>
</tbody>
</table>

With cheap labor advantage, Bangladesh garment industry is still holding competitive position in the global apparel market. Overall percentage of RMG sector growth has been steady although the sector has been affected by the USA market. This industry contributed 78% share of total trade of goods in Bangladesh, compared to the other South Asian countries like India 14%, Pakistan 23%, Sri Lanka 50% and Nepal 40% (Garment Association of Nepal, 2001).

In general, backward integration adds value and at the same time increases employment. Contribution of RMG sector in Bangladesh manufacturing can be measured by the increase in value-added (MVA) from 6.5 percent in 1993-94 to 30% in 1998-99 (CPD, October 2002). Another researcher (Khadker, January 2002) claimed that of Garment sector value added is only 25% and is much lower compare to other exported items which were contributed 60% to 70% in some cases. Two-third of garment’s export earnings is for the labor fabric purposes. To add more value it is imperative necessary to build and develop more backward linkages industries from yarn to finishing fabric process in Bangladesh.

**The Condition of Backward Linkage:**

Although the RMG industry in Bangladesh flourishes in the 80’s and 90’s, there has
been little development in the backward linkage sector (Habib, 2002). RMG manufacturers usually import fabric from different countries as locally produced raw materials cannot compete with imported materials in terms of price or in terms of quality.

At present, only 25%-30% value addition takes place to the RMG products as manufacturer import bulk of the raw materials. On the contrary, almost 70% value addition takes place to the jute products exported to different countries. The garment industry should need to increase at least 50% value addition through enhancement of backward integration in the RMG market.

Backward linkages sub-sector for RMG industry includes cotton production, spinning (cotton and synthetic yarn), weaving and knitting, dyeing and painting, and accessories and all of the above sub-sectors reflect the present condition of the backward integration in the RMG in Bangladesh.

Cotton

Cotton is the main raw material for yarn production while production of cotton in Bangladesh has very limited profit margin. Hence, Bangladeshi spinning mills depends on imported cotton from international markets. India, Pakistan, Turkey, China, Uzbekistan, USA are the main production sources where Bangladesh largely dependent on. Bangladesh Cotton Development Board (BCDB) undertakes cotton promotions activities but achievement is not satisfactory. BCDB is striving for higher production of cotton with a production range of 1,03,620 bales in four cultivating zones in southwestern part of the country. Cotton production requires vast land areas whereas in Bangladesh the land is in scarcity at only 144,000 square kilometers. Farmers prefer agriculture products that are more profitable than cotton. So in the context of cotton production, Bangladesh is in a dreadful situation. This implies that Bangladesh has to depend on imported cotton which involving large amount of foreign exchange. Bangladesh is not even in a position to move towards synthetic fiber production as it is capital intensive.

Spinning Mills

It is difficult to accurately determine the percentage of demand for yarn met locally because of the amount of yarn production varies with the efficiency of the spindles. Bangladesh Textile Mills Corporation (BTMC) and Bangladesh Textile Mills Association (BTMA) mills have spindles with different efficiency levels and there is no numeric data available on the efficiency levels of the spindles according to A M. Chowdhury (2002). But According BTMA, in year 2000 statistics, there are 148 spinning units (private 107 and public 41 units), installed capacity 3.6 million, with annual production 443 million kg, (BTMEA, 2001). Number of spinning mills increased to fulfill the gap of shortfall in local and domestic market.

As per BGMEA, 2005, number of unit of spinning mills increased to 202 (private sector 176, public sector 26), Installed capacity: 4,334,796 Spindles with annual production capacity of 50 million kgs of yarn. According to a report submitted by the Sub-Committee of the Parliamentary Standing Committee on Textile (May 1999) to meet the demand (2000) domestically, Bangladesh will have to established 148 Spinning Mills with 25,000 spindles each (Hafiz G.A ) and again to attain self-sufficiency in yarn to fulfill the domestic and export needs in year 2005, Bangladesh will need to established additional 98 spinning mills. So it shows that capacity of spinning mills in Bangladesh is not capable to cover demand of yarn that needed to produce fabric for RMG sector. The total demand for yarn by RMG producers and producers operating in the local market are more than the existing production capacity and there is requirement for an enormous
increase in capacity if Bangladesh wants to ensure adequate supply of yarn locally.

Handloom products may be suitable for the domestic market, but RMG producers cannot consider handloom as competitive because of consistent and large quantity demanded by quality fabric markets. On the other hand, power looms were originally targeted to serve the domestic market but to upgrade them for export quality is very difficult and costly.

**Weaving and Knitting Mills**

The next stage is weaving and knitting where yarn are converted to fabrics. Fabric is main raw material for making garment and accounts for 75 percent of the garment cost. Both hand looms and power looms are suitable for the domestic market, but a large demand of quality fabrics cannot be met by handloom production. But in case of power looms, they may increase the production capacity to satisfy part of the RMG sector demand with a large investment.

In the long run, Bangladesh weaving mills need a high volume of yarn production to fulfill the demand for domestic and export markets. In year 2000, fabric demand was 830 million meters, and soon after in year 2005 the demand almost doubled. In about 5 years of time, the demand would increase to 1600 million meters. To fill these huge demands and the fabric shortfall, the weaving industry needs to increase the production capacity by developing number of new weaving industries. Both new and reconditioned machines must be added in this sector. The associated large involvement required is almost $ 3.9 billion, $ 2.7 billion for new machines and $ 1.2 billion for reconditioned looms (CPD in the 12th EXPO).

**Dyeing, Printing and Finishing**

This is the final stage where the fabric either can be used for domestic market or RMG sector for export purposes. Dyeing, printing and finishing units in Bangladesh are currently able to process all of the locally produced grey. According to Bangladesh Textile Mills Association (BTMA, 2001) Bangladesh knitting, knit dyeing and finishing sub-sector had 282 firms (99 merchandized dyeing and finishing, 183 semi-merchandized dyeing and finishing) with annual fabric production capacity (fabric) of 680 million meters. On the other hand, the knitting sector had a total of 155 firms (23 domestically supported existing units and 132 export oriented units). Existing knitting, knit dyeing and finishing sub-sectors cover the local demand and the major portion of the export RMG sector in Bangladesh.

Due to the increased demand in RMG sector and to attain self-sufficiency in fabric supply, Bangladesh established 481 additional units of dyeing, printing and finishing units with 10 million meter fabric production capacity for each unit (Siddiqi, 2000). Dyeing, printing and finishing factors had depended mostly on imported fabrics as Bangladesh’s weaving sector could not fill the export demand of the RMG. This sector dramatically improved over the last five years due to the relatively low level of investment required. However, only a few firms could carry out proper dyeing operations due to deficiencies in dyeing know-how. Again, as the current dyeing facilities are mostly dependent on imported fabrics, their expansion does not depend on other sectors that impede the growth of backward linkage sub-sectors.

To develop dyeing, printing and finishing sub-sectors, it is imperative to build up modern units with appropriate technology, set up bonded warehouses that can meet the fabric demand until the local grey production can meet the quality and quantity, stocks of dyes and chemicals that can meet the demand of dyeing, printing, finishing sub-sectors. This sub-sector can contribute significantly to reduce lead time and price. It is suggested that dyeing, printing and finishing sub-sectors be in
better position than that for other backward integration sub-sectors when compared with spinning and weaving sectors. This statement is supported by Both Drs. Martelli and Gherzi who identified the finishing phase as an area for improved competitiveness in Bangladesh and recommended investment (BGMEA 2004).

Accessories

Only for accessories, Bangladeshi garment industry is in quite good position. About 80% of those known as accessories (zippers, buttons, threads, stiffeners, inter-linings, packaging materials, etc.) are available locally and meet the requirements of the international buyers. A considerable amount of backward linkage has already been established in this export support sector and it maintains its excellent position.

Policy Implications and Conclusions

This study briefly discussed the present condition of backward integration and its prospect as well as the negative impact on Bangladeshi garment industry in future.

Analyzing the present condition, status and facts and findings of the above in the RMG sector, there are number of target actions in several areas can be considered along with their policy implications that directly influence the backward integration. From cotton to finished products, all steps involved such as spinning, weaving, dyeing printing, finishing and accessories form an integral part of backward linkage procedure. The alternative support of central bonded warehouses is essential unless backward linkage satisfies itself in each sector by its components, especially in spinning and weaving sectors. The study tries to come up with possible suggestions for each sector, again using different researcher’s viewpoints.

Cotton

Cotton considered the first stage of backward linkage sub-sector which is the main source for producing yarn. Bangladeshi garment industry is fully dependent on imported cotton to fulfill the huge shortfall of yarn souring. Though Bangladesh needs to support cotton production but due to scarce land in Bangladesh, to build cotton industry in Bangladesh may not be recommended. This view is supported by Ahmed Khander Habib, who does not recommend it due to shortage of land and as well as the high cost involved. This situation is similar to Anatolia Project of Turkey. (Habib, 2002).

But in the another study in Development in Democracy (DID, 1991) argues that not having cotton is actually not a disadvantage due to increased import of high quality cotton from neighboring countries (mainly India and Pakistan) where low quality of cotton are produced.

But the question is raised that Bangladesh garment is not making high quality of garment nor it ranked as fashion/fancy garment market in the international apparel market. Bangladesh garment market is still categorized as a source of low to medium quality garment in the international market. So it may be necessary to sticks with low to medium range cottons. With the lower-price cotton markets, Bangladeshi is disadvantageous compared to Indian textile mills who buy cotton from Indian growers 25% to 30% cheaper than Bangladesh import the same cotton from India or international market. As a matter of Policy, by allowing this policy, Indian government provides in effect a subsidy to the Indian mill owners (Siddique, 2004). Similar subsidy is given in Pakistan and as a result their price is 20% lower than Bangladesh who buys the same cotton from Pakistan paying more. This creates a disadvantage for Bangladesh and it could possibly be overcome by reducing the conversation costs (labor, energy, depreciation, interest and other costs) and by improving the
management efficiency. The government needs to take some initiatives such as imposing no tariffs or quota on cotton import so that importers can get cotton cheaper and keep the cotton price down in the local market.

**Spinning Sector**

Handloom is the largest support in yarn in the Bangladeshi clothing industry. This sector contributes TK 10 billion to national economy and is capable of fulfilling three-fourth of the local requirement in the apparel sector. Bangladesh is only 10-20% self-sufficient in spinning as input supply or degree of backward integration. In the knitting and woven sectors, there are huge shortfalls in the RMG sector mainly in the export oriented operation. To overcome the gap between supply and demand of yarn in RMG sector, it was necessary to establish 98 spinning mills to have their estimated cost to be about Taka 73.5 billion, or equivalent to USD $1.05 billion (approx. US $1 = Taka 70 in 2008). Before making a huge investment to develop backward linkage sub-sector in spinning mills, it is imperative to assess the level of competitiveness and viability for such project. The conversion costs and the total manufacturing cost must be considered and must compare with that in China, India and Pakistan as Bangladesh import cotton from these competing countries.

It was also suggested by the Bangladesh Ministry of Commerce (2004) that the handloom sector should be modernized. A comprehensive training designed for the RMG sector, Skilled and Quality Development Programme (SQDP) imparted training at the grass root level to apply modern design, dyeing and weaving. The project tenure was five years at a cost of $4 million. Government should take some initiatives such as; to impose no barriers on import mechanism on back-to-back letter of credits (LCs); not to import yarns through ports; to ask recipients of cash subsidy to encourage the private and foreign investors to develop the backward integration.

**Weaving**

The analysis in the paper spells out number of points. It is noted that weaving sector is the largest component of the backward integration, where the import accounts almost 75% of the total export garment value. Bangladesh is only 20% self-sufficient in weaving input supply. Bangladesh weaving mills constantly fall short of production owing to chain link shortage of yarn production in spinning sub-sector. As a result, the country has to import 3.15 billion meters of grey fabrics per year. Shortfall 200 weaving mills amounts to 10 million meters of fabric (Siddiqi, 2000) and it could attain the self-sufficiency in yarn to fulfill the domestic and export needs in year 2005, which cost TK 50 each, amounting to TK 100 or equivalent to USD $1.43 billion (US $1 = Taka 70 approx. in 2008). The knitting segment of Bangladesh is better and the grey fabric demand is met by the domestic production. For the export market, around 85% the total woven fabric demand and about 35% of the total knit fabric demand are imported. Due to large demand-supply gap, the weaving and knitted sub-sectors require expansion at a rapid rate. Soon after the MFA phase-out, demand for fabric has risen making it imperative to increase the investment and modernized the machinery.

It is necessary to have private sector take positive initiatives to support the weaving sub-sector. It is considered that the weaving and spinning sub-sectors would be more attractive for large capital investment. If cost-effective investments in the spinning and weaving enhance the performance in the sub-sector, then Bangladesh has a possibility of building a competitive export-oriented sector in the Post MFA era.

In addition to making the large investments, the government has to waive import tax and VAT from spare parts, dyes and chemicals,
and support 5% free on board (FOB) value to deter the currency devaluation in of neighboring countries, provide loans with 7% flat interest rate on all advances and loans, provide financial subsidy of at least 6-7%, waive the peak hour electricity charges, establish textile development fund of TK 50 billions, build a textile park, reschedule the container handling charge, and build a training centre for developing skilled labor (Habib, 2002). Other issues may be to reduce the port charges for garment exports, to increase labor productivity and reduce the cost of doing business by Bangladesh Garment Manufacturers and Exporters Association (BGMEA) and the government. Unless these bottlenecks are removed, a simplified backward linkage industry may not be realized (Siddique, 2004).

**Dyeing, Printing and Finishing**

The final linkages in the textile industry, namely, dyeing, printing and finishing have improved dramatically over the last five years although only a few firms can match colors. The efficiency of the sub-sector however, depends mostly on the quality of the imported grey fabrics, which might be supplemented by domestically produced grey fabrics if their quality could be enhanced.

In some cases, facilities for which still unable to meet the standard of quality demanded by the export-oriented RMG industries. To get quality fabrics, some options can be considered. They include providing incentives for producing higher quality grey fabrics domestically and force the finishing industries to trim down the costs gradually to compete against the imported grey fabrics among others. Another strategy would be to provide bonded warehouses for fabrics until local grey production can meet the quality and quantity demands of the sub-sector. (Habib, 2002).

The government should also withdraw or reduce duty, advance income tax (AIT), infrastructure fees from dyeing, printing and finishing sub-sector in order to set up new units with advanced technology.

This dyeing, printing and fabric processing sub-sectors are doing well in Bangladesh as these sectors require only small-scale operations, small investments that are within reach of many entrepreneurs. All these mean that a stronger encouragement should be provided for the development of these components of the backward integration (Habib, 2002). This view has also been supported by a IFC report which suggested development of dyeing, printing and fabric production facilities. Bangladesh would do better if it improves the infrastructural and the transport facility and its logistics, streamline the import policy by removing the cumbersome procedures. In addition, upgrading the facility at Chittagong port and substantial upgrading of the national electricity grid are needed for uninterrupted supply of power. In addition, improved telecommunication facilities and improved seaport management are needed along with enhanced law and order.

Bangladesh garment industry faces serious challenges if it wants to maintain and improve its competitiveness position in the post-MFA era. The challenge should serve as a wakeup call for the garment industry for forming a new strategic position. With large labor resources, Bangladesh needs initiatives of private entrepreneurs along with a sustained government support.

To maintain the high export position for the Bangladesh RMG sector, it should not be supported only by the cheap labor, but also by factors such as growth of backward integration. The paper finds that the success in the finishing, dyeing, printing, accessories sub-sector, rapid expansion in the knitting sector alone even under slow development in the spinning and weaving sectors, the Bangladesh RMG sector is still in a viable position in the global appeal market. As it says “where there is a will there is a way,” the Bangladesh RMG sector will remain in
the same good position by taking all the steps identified in this paper, and hopefully, it will enhance its export performance in the global market as a competitive nation. Finally, it can be said that this study will be of significant value if the policy implications suggested in this research help develop plans for making Bangladesh RMG industry viable.

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