

■ Refereed Article

## An Analysis of Market Positioning and Competitiveness of Bangladesh's Ready-Made Garment (RMG) Sector: Issues for Export Sustainability

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**Abstract:** The purposes of this study are to examine the market position of Bangladesh's ready-made garment (RMG) products in world exports and analyze its competition with newcomers. Data used are from the Standard International Trade Classification Revision 3 of the United Nations Comtrade database (UN Comtrade) for the period from 2000 to 2015. The empirical analysis employed the method of market positioning matrix (MPM) (Lall and Weiss, 2004) to assess the current position of RMG commodities in the world market, and the normalized revealed comparative advantage (NRCA) index (Yu et al., 2009) to examine international competition with newcomers. The analysis identified that Bangladesh's top three RMG commodities are "achievers in adversity," meaning that the export shares of these commodities in the global market increased during this period, even though the growth of the markets for these commodities was stagnant. This implies that the scope for further export expansion of these commodities is limited. The study also reveals that new entrants such as Vietnam and Cambodia have rapidly increased their export shares and their export competitiveness of RMG products. Since the market of the above RMG commodities is not growing faster and newcomers are increasing their competitiveness, this raises a question about the export sustainability of Bangladesh's RMG commodities. To maintain its position in the global market, Bangladesh's RMG sector should develop and export higher value-added RMG commodities. Since Bangladesh's exports depend heavily on limited RMG products, the fall of RMG exports will be detrimental not only to Bangladesh's export earnings but also to its national economy. Export diversification is absolutely necessary; hence, adequate policies should be implemented.

**Keywords:** Market Positioning, Export Sustainability, International Competition

### I. Introduction

Bangladesh's ready-made garment (RMG) sector is the country's economic backbone.<sup>1</sup> At the time of Bangladesh's independence in 1971, the contribution of RMG exports was non-existent. At that time, Bangladesh's exports depended on jute, jute goods, and major cash crops, such as, tea and mates. However, the export composition started to change in the late 1970s. For the first time, in 1977, a local tailoring shop named M/s Reaz Garments Limited exported men's shirts to France (Yunus and Yamagata, 2014). In 1978, Desh Garments Limited Bangladesh made an agreement with the Daewoo Corporation in South Korea for technical and commercial

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cooperation. In 1980, Trexim Limited Bangladesh was incorporated jointly with Youngone Corporation, a South Korean firm, and renamed Youngone Bangladesh (Yunus and Yamagata, 2014). These events were notable breakthroughs for the RMG sector in Bangladesh. Technology learned from these Korean companies spilled over quickly, making it possible for Bangladesh factories to produce export-quality RMG commodities. Bangladesh also benefitted from quota-free facilities given to developing countries for exporting textile items to developed countries such as the US and EU nations (Bhattacharya and Rahman, 2000; Ahmed, 2009). Thus, the RMG sector that produces both knitwear and woven products emerged as the country's essential export sector.

In 1980, the value of Bangladesh RMG exports was US\$ 1.7 million, which is equivalent to 0.2% of the total exports. In 2015, Bangladesh recorded US\$ 26,719.5 million in exports and accounted for 84.2% of total exports (United Nations, 2020).<sup>2</sup> Bangladesh has been ranked as the second-largest garment-exporting country in the world, following China, since 2015 (United Nations, 2020). Bangladesh's RMG sector has been playing an important role in the country's development in terms of employment generation, poverty alleviation, and other measures. It employs more than four million workers, 3.2 million of whom are female, in 4,621 RMG factories (Rahman and Siddiqui, 2015; BGMEA, 2020). Employment in the RMG sector has helped reduce poverty in Bangladesh (Bakht et al., 2009). The wages of female workers in the RMG sector are higher than the wages received in any other form of employment, transforming women working for RMG factories into independent actors (Kabeer and Mahmud, 2004).

While Bangladesh's RMG exports have been growing, the RMG sector is facing several challenges, including product and market concentration, low labor productivity, high lead time, infrastructure problems, labor safety, and compliance issues. The most pressing challenge is international competition with new entrants, such as Vietnam and Cambodia. Their exports have been rapidly increasing in recent years. For example, Vietnam's RMG exports increased from US\$ 1,821.2 million in 2000 to 12 times that—US\$ 21,948.5 million—in 2015. Cambodia's RMG exports increased by 6.1 times, from US\$ 970 million in 2000 to US\$ 5,937.8 million in 2015 (United Nations, 2020). Vietnam is the third-largest exporter of RMG commodities, up from the 31st position in 2000, and Cambodia is the 16<sup>th</sup>, up from the 35<sup>th</sup> position in 2000. Though Cambodia's ranking is not as high as Vietnam's, Cambodia's export share of one of Bangladesh's top five RMG export items has been higher in the world market than Bangladesh's share. Generally, the RMG sector uses low levels of technology. Therefore, it allows other countries with cheap labor and a certain level of infrastructure to start business easily. It is easy to imagine that they will soon become tough competitors for Bangladesh.

These advancements of newcomers have posed a serious threat to Bangladesh's RMG sector. Since more than 80% of Bangladesh's exports depend on RMG products and the top five RMG products accounted for 98.9% of total RMG exports in 2015, it is critically important for Bangladesh to keep the RMG sector competitive, particularly those top five products.<sup>3</sup> Otherwise, Bangladesh's overall export sector could collapse easily, and its impact on the nation's economy would be devastating.

Despite the importance of sustaining the export competitiveness of RMG products, there

has been a shortage of research on this issue. Most studies tend to examine whether the RMG sector or its products are competitive by simply looking at Bangladesh export data without referring to international competitors (Ahmed, 2009; Yunus and Yamagata, 2012; Alam and Natsuda, 2016) or by analyzing other issues including export competitiveness (Alam et al., 2017; Ashadullah, 2020). While these studies confirm that Bangladesh's RMG sector is currently competitive, what is necessary is to investigate whether it is possible to sustain its competitiveness in the world market and how. Answering these questions requires a detailed examination of where Bangladesh's RMG products stand in the world export market and how international competition with newcomers is taking place. Looking at these areas would make it possible to provide some input for policies related to keeping Bangladesh's RMG sector, as well as its overall exports, viable.

Thus, the objectives of this study are (a) to identify the position of Bangladesh's RMG products in the world export market, (b) to examine its competition with newcomers, which are rapidly growing, and (c) to provide some input for policy formulation. For the assessment of the current position of RMG commodities in the world market, the market positioning matrix (MPM) is applied (Lall and Weiss, 2004). MPM categorizes export products into four segments. It identifies whether a product of a country's concern is gaining or losing shares in world exports and whether the product's global market is growing or not. By doing this, MPM shows not only the presence of a country that exports a product of a concern in the world market but also the importance of the product in world trade. As for the examination of international competition with newcomers, normalized revealed comparative advantage (NRCA) indexes are used (Yu et al., 2009). Balassa's revealed comparative advantage (RCA) indexes are commonly used for measuring competitiveness; however, there are several shortcomings. One of those is that it is not possible to make a comparison of competitiveness among countries and products and between different periods. NRCA rectifies these shortcomings and makes it possible to compare inter-country competitiveness.

The paper's organization is as follows: the next section presents an analysis of the market positioning and international competition of Bangladesh's RMG commodities, the third section discusses the findings, and the fourth section concludes the study.

## **II . Analysis of the Market Positioning and International Competition of RMG Commodities**

This section analyzes the performance and direction of Bangladesh's RMG sector and its competition with newcomers. The data used here are from the United Nations' Comtrade database (UN Comtrade) for the period from 2000 to 2015.<sup>4</sup> Export commodities are classified by the three-digit level Standard International Trade Classification (SITC) revision 3.<sup>5</sup> Using the SITC 3-digit level data makes product-level analyses possible. First, the "market positioning matrix" (MPM) method is applied to identify the position of Bangladesh's top 10 export commodities, the majority of which are RMG products, in the world market. MPM analyzes not only the performance of a country that exports the product of concern in the world market but also the importance of the product in world trade. Then, the comparison of competitiveness between Bangladesh's RMG products and those of newcomers is presented by using the method of normalized revealed

comparative advantage” (NRCA). These two measures help in understanding the actual situation and competitiveness of Bangladesh’s RMG sector and its products in the world market and facilitate policy formulation.

## II.1 Market positioning of RMG commodities

This part identifies the performance and direction of Bangladesh’s RMG sector and its commodities in the global market by applying the MPM method developed by Lall and Weiss (2004). MPM considers the following two factors: whether a country’s product of concern is gaining or losing shares in world exports and whether the global market of the product is growing or declining. Market positioning can demonstrate how perfectly the exports are positioned in terms of commodity-wise competitiveness and the export market’s dynamism (Lall, 1999).

MPM is described by the following:

$$MPM_{ij} = \underbrace{\left\{ \frac{X_{ij\ t+\Delta}}{X_{wj\ t+\Delta}} - \frac{X_{ij\ t}}{X_{wj\ t}} \right\}}_{\text{Changes in a country's 'j' share in world j's export}}, \underbrace{\left( \frac{X_{wj\ t+\Delta}}{X_{wj\ t}} \right)^{1/\Delta} - 1}_{\text{Annual growth rate of j's export in world trade}}$$

where  $MPM_{ij}$  denotes the MPM of country  $i$  in commodity  $j$ ,  $X_{ij}$  denotes the export of commodity  $j$  by country  $i$ ,  $X_{wj}$  denotes the world exports of commodity  $j$ , with  $t$  representing time and  $\Delta$  representing time difference. The left-hand side of the bracket denotes the changes in Bangladesh’s  $j$  share in world  $j$ ’s export from  $t$  to  $t+\Delta$ , and the right-hand side denotes the annual growth rate of  $j$ ’s export in world trade from  $t$  to  $t+\Delta$ .

If the change of the share of the country’s export in world trade of a product is rising (falling), the product is called competitive (non-competitive). Similarly, if the export growth rate of the product relative to the growth rate of world trade is rising (falling), it is called a dynamic (stagnant). This  $2 \times 2$  combination creates the following four categories: “Champions,” “Underachievers,” “Achievers in Adversity,” and “Declining Sectors” (Lall and Weiss, 2004).

For a given country, the product in the category of “Champion” is considered optimal as its export share in world trade increases in the growing market. In the category of “Underachievers,” the product’s export share declines while the market for the product expands faster. The country is missing an opportunity in world trade because of its weakness and lack of competitiveness in the export of the product. In the category of “Achievers in Adversity,” the position of the product is vulnerable as its export share rises but in a stagnant market. Thus, the scope of further export

expansion is questionable. The product in the category of “Declining Sectors” needs restructuring as its export share in the world market declines in a stagnant market.

**Table 1: Market positioning matrix**

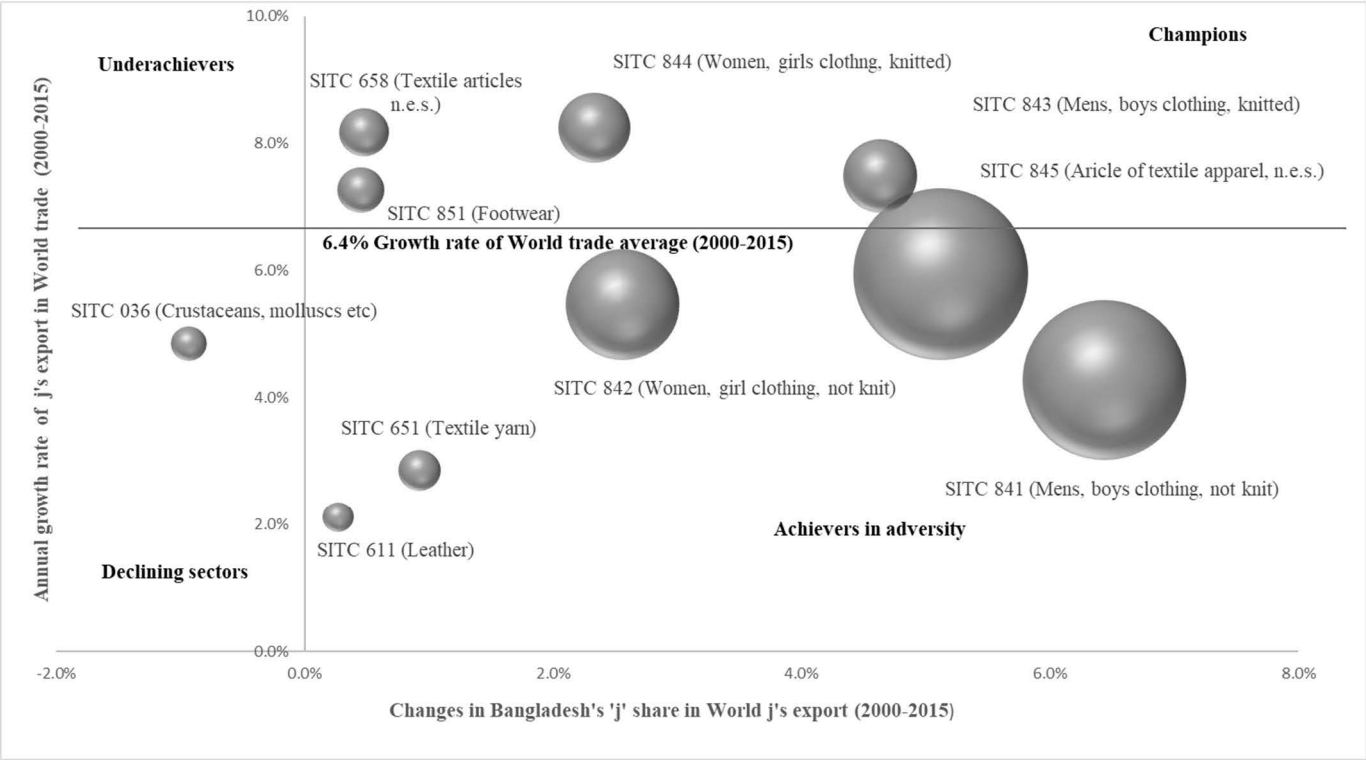
	Annual growth of product in World Trade	
Changes of share of the product in the country's export	Rising (Dynamic)	Falling (Stagnant)
Rising (Competitive)	Optimal “Champions”	Vulnerable “Achievers in Adversity”
Falling (Non-competitive)	Weakness “Underachievers”	Restructuring “Declining Sectors”

Source: Adapted from Lall and Weiss (2004)

Figure 1 shows graphically the export performance of Bangladesh’s top 10 export products from 2000 to 2015 by employing MPM. The top 10 commodities accounted for 92% of the total exports in 2015 (Table 2). Detailed figures and information are provided in Table 2. Figure 1 shows the annual growth rate of commodity *j*’s export in world trade on the vertical axis and changes in Bangladesh’s *j* share in world *j*’s export in terms of percentage on the horizontal axis. It also shows the export value of the product concerned in 2015 by the size of the bubble. The average annual growth rate of world trade was 6.4 % from 2000 to 2015. If a bubble is above (below) the average growth rate, the market for the product is growing faster (slower) than world trade. All commodities are classified into four segments according to Table 1. All of Bangladesh’s top five export commodities in 2015 were RMG products. The top exporting commodity was “Articles of textile apparel, n.e.s.” (SITC 845), which is categorized in the “Achievers in Adversity” segment. The second and third largest export commodities—“Men’s or boys’ clothing, not knitted” (SITC 841) and “Women’s or girls’ clothing, not knitted” (SITC 842)—are also in the category of “Achievers in Adversity.” This means that Bangladesh’s export shares of these products in the global market increased but that the growth of these products in world trade relative to the growth of world total export fell.

The fourth and fifth largest exporting commodities were “Men’s or boys’ clothing, knitted” (SITC 843) and “Women’s or girls’ clothing, knitted” (SITC 844). These RMG products belong to the “Champions” segment. This is an optimal situation as both products gain market share, and, at the same time, the markets for these products grow faster than the average growth rate of world export. However, they constituted only 10.8% of Bangladesh’s total export in 2015 (Table 2). The rest of the other commodities fall into the following categories: SITC 658 and SITC 851 belong to “Champions,” SITC 651 and SITC 611 to “Achievers in Adversity,” and SITC 036 to the “Declining Sectors” segment. The only one item in the top-10 list, SITC 036 (Crustaceans, molluscs, etc.) is categorized in the “Declining Sectors. Since the weight of manufactured items increases both in

Bangladesh and world exports, the relative importance of the primary item such as SITC 036 declines both in Bangladesh and in the world trade. As more manufactured items are exported, SITC 036 export remains in the declining sector.



Note: The growth rate of the world trade average (6.4%) is the author’s calculation based on UN Comtrade data. The bubble size indicates the US\$ value of exports in 2015

**Figure1: Export performance of Bangladesh’s top 10 export commodities (2000-2015)**

Source: Author’s construction, based on UN Comtrade data

Table 2 summarizes the market positioning of Bangladesh’s top 10 export commodities for the period from 2000 to 2015. Among the top 10 products, five are in the category of “Achievers in Adversity,” and their export share is 75.2% collectively, while four products are in “Champions” and one in “Declining Sectors,” accounting for export shares of 15.5% and 1.2%, respectively. Thus, the majority of Bangladesh’s export earnings come from products labeled as “Achievers in Adversity,” in which the growth of the market is stagnant. The top three export products, all being RMG products, are included in this category. This is a vulnerable situation for Bangladesh as the export shares of these products in the world market increase, but the growth of their market is stagnant, meaning that the scope of further export expansion is limited.

**Table 2: Market positioning of the top 10 export commodities of Bangladesh 2000-2015**

SITC	Commodity	Export value in 2015 (US\$ million)	Changes in Bangladesh's 'j' share in world j's export (%)	Annual growth rate of j's export in world trade (%)	MPM Category	Export share in 2015 (%)	Type of product
845	Articles of textile apparel, n.e.s.	10,047	5.1	5.9	Achievers in Adversity	31.7	RMG
841	Men's or boys' clothing, not knitted	8,749	6.4	4.3	Achievers in Adversity	27.6	RMG
842	Women's or girls' clothing, not knitted	4,201	2.6	5.5	Achievers in Adversity	13.2	RMG
843	Men's or boys' clothing, knitted	1,783	4.6	7.5	Champion	5.6	RMG
844	Women's or girls' clothing, knitted	1,656	2.3	8.2	Champion	5.2	RMG
658	Made-up articles, n.e.s.	779	0.5	8.2	Champion	2.5	Non-RMG
851	Footwear	697	0.5	7.3	Champion	2.2	Non-RMG
651	Textile yarn	565	0.9	2.9	Achievers in Adversity	1.8	Non-RMG
36	Crustaceans, molluscs etc.	395	-0.9	4.9	Declining Sectors	1.2	Non-RMG
611	Leather	298	0.3	2.1	Achievers in Adversity	0.9	Non-RMG

Source: Author's calculation, based on UN Comtrade data

## II.2 Comparison of competitiveness in the global market

This aims to compare the competitiveness of Bangladesh's top five RMG export commodities with those of newcomers and to understand the degree of competition between Bangladesh and newcomers. The NRCA index, developed by Yu et al. (2009), is employed in measuring and comparing competitiveness. The NRCA index is built on Balassa's RCA index (1965) and given by the equation below. It is calculated by dividing the share of a country's exports of the product of interest by its total exports and dividing that number by the share of world exports of the same product by total world exports:

$$RCA_{ij} = \frac{\frac{X_{ij}}{X_i}}{\frac{X_{wj}}{X_w}}$$

where  $X_{ij}$  refers to the export of commodity  $j$  by country  $i$ ;  $X_i$  is the total export of country  $i$ ;  $X_{wj}$  is commodity  $j$ 's world export, and  $X_w$  represents total world export. An RCA index value greater than 1 indicates that country  $i$  has a comparative advantage in exporting commodity  $j$  and vice versa.

The RCA index is widely used to assess comparative advantage. It has also been used to measure export competitiveness in several studies (see Siggel [2006] for details). However, the RCA index has several shortcomings. One is that it only specifies whether or not the country has competitiveness for a given commodity and cannot express its magnitude (Yeats, 1985). To rectify these problems, the NRCA index normalizes the RCA index to make it possible to compare competitiveness across countries, time, and commodities. The values range between -0.25 and 0.25, with 0 being the neutral point. Higher figures indicate higher competitiveness.

The NRCA index is described by the following equation. It is calculated by subtracting the share of a country's export of the product of interest in its world exports by the share of world exports of the same country's product in total world exports:

$$NRCA_{ij} = \frac{X_{ij}}{X_w} - \left( \frac{X_i}{X_w} \times \frac{X_{wj}}{X_w} \right)$$

where  $X_{ij}$  denotes the export of commodity  $j$  by country  $i$ ;  $X_i$  denotes country  $i$ 's total export,  $X_{wj}$  is commodity  $j$ 's world export, and  $X_w$  refers to the total world export. An NRCA index greater than 0 indicates that country  $i$  has a comparative advantage (competitive) in the export of the commodity and vice versa.

Table 3 shows the top 10 global competitors' NRCA values for Bangladesh's top five RMG commodities (SITC 845, SITC 841, SITC 842, SITC 843, and SITC 844) in order of the size of export shares in world trade from 2000 to 2015, with five-year intervals. The table shows that China has secured the first position for all top five RMG commodities in terms of export share since 2000. Bangladesh had only one commodity (SITC 841) in the top 10 lists in 2000, and the number of commodities listed in the top 10 increased to five in 2015, three (SITC 845, 841, and 843) of which were ranked in the top five in 2015. Bangladesh and China have been increasing their export shares in world trade for all top five products since 2000. Among the other existing competitors, China, Hong Kong SAR<sup>6</sup> and Italy have been in the top 10 lists since 2000. However, their export shares have fallen continuously. India was in the top 10 list for three products in 2000 (SITC 841, 842, and 843) and increased to five products in 2015 and has been increasing export share since 2000.

It is clear that the export share of newcomers such as Vietnam and Cambodia have been increasing in recent years, while the shares of existing competitors such as Italy, China, Hong Kong SAR have fallen. For example, Vietnam was not included in the top 10 global competitors' lists in 2000. However, all five RMG commodities are in the top 10 list, and all were ranked in the top five in 2015. Likewise, Cambodia was not ranked in the top 10 global competitors' list in 2000. However, two commodities (SITC 843 and SITC 844) were ranked in the top five in 2015. Even in some products, their shares exceeded Bangladesh's share. For instance, the export shares of Vietnam's two commodities (SITC 842 and SITC 844) and Cambodia's one commodity (SITC 844) were higher than Bangladesh's export share in 2015.

Table 3 also reveals that the NRCA values or competitiveness for China's and Bangladesh's five RMG commodities have been increasing (except SITC 841 in 2015 for China) since 2000. In contrast to the competitiveness of existing competitors, such as Italy and China Hong Kong SAR, five RMG products fell. The competitiveness of Vietnam's five RMG commodities and Cambodia's two RMG commodities (SITC 843 and SITC 844) have also been rising since 2000. Particularly Vietnam and Cambodia have demonstrated their strength in the export of knitted items (SITC 844) as both their export shares and competitiveness have surpassed those of Bangladesh. India is also gaining in competitiveness for these five products.

The integrated NRCA values for the top five RMG commodities in 2015 are 56.8, 15.9, 10.3, 6.9, and 3.5 for China, Bangladesh, Vietnam, India, and Cambodia, respectively.<sup>7</sup> These figures are up from 36.8, 6.2, 2.7, 6.2, and 1.6 in 2000, respectively. The above figures demonstrate that there is a huge gap between China and Bangladesh regarding competitiveness and that new



countries such as Vietnam and Cambodia are gaining export competitiveness. For example, Vietnam's competitiveness increased almost five times from 2000 to 2015. Thus, the RMG products of Cambodia and India are also becoming a threat to Bangladesh. The growing presence of these new entrants has posed a serious challenge for Bangladesh to maintain its existing position. As Bangladesh's exports are heavily dependent on the top five RMG commodities, this should be treated as the critical issue for Bangladesh's entire export as well as for the nation's economy.

**Table 3. The NRCA analysis of the top 10 global competitors for the top five RMG commodities of Bangladesh (2000–2015)**

Year	Rank	SITC 845 (Articles of textile apparel, n.e.s.)			SITC 841 (Men's or boys' clothing, not knitted)			SITC 842 (Women's or girls' clothing, not knitted)			SITC 843 (Men's or boys' clothing, knitted)			SITC 844 (Women's or girls' clothing, knitted)		
		Country	Export share %	NRCA	Country	Export share %	NRCA	Country	Export share %	NRCA	Country	Export share %	NRCA	Country	Export share %	NRCA
2015	1	China	33.4	17.5	China	30.9	8.1	China	39.4	14.9	China	39.5	4.8	China	46.7	11.5
	2	Bangladesh	6.9	6.0	Bangladesh	11.3	5.3	Italy	5.3	1.5	Bangladesh	5.8	1.1	Viet Nam	5.2	1.5
	3	China, HK SAR	5.5	2.2	Viet Nam	6.3	2.5	Viet Nam	5.1	2.4	Viet Nam	5.5	0.9	Turkey	3.8	1.0
	4	Viet Nam	4.6	3.2	Italy	4.9	1.0	India	4.8	1.8	India	5.4	0.7	Cambodia	3.6	1.3
	5	Italy	4.4	1.4	Germany	4.6	-1.7	Spain	4.8	1.8	Cambodia	4.4	0.8	Germany	3.4	-1.7
	6	India	4.1	2.2	India	3.2	0.7	Bangladesh	4.4	2.5	Pakistan	3.4	0.6	China, HK SAR	3.4	0.1
	7	Germany	3.7	-4.1	China, HK SAR	3.0	-0.1	China, HK SAR	4.4	0.7	China, HK SAR	3.0	0.0	Bangladesh	2.9	1.0
	8	Turkey	3.6	2.4	Turkey	2.9	1.0	Germany	4.0	-2.5	Turkey	2.5	0.3	India	2.6	0.3
	9	France	3.0	0.0	Spain	2.6	0.4	Turkey	3.7	1.6	Italy	2.4	-0.1	Italy	2.1	-0.2
	10	Spain	2.4	0.6	Mexico	2.4	0.0	UK	3.4	0.3	Belgium	2.4	0.0	Spain	2.0	0.1
2010	1	China	33.0	18.0	China	29.5	7.5	China	33.0	10.7	China	44.5	5.4	China	44.4	10.1
	2	China, HK SAR	8.7	4.8	Bangladesh	8.2	3.2	China, HK SAR	7.2	2.2	China, HK SAR	5.1	0.4	China, HK SAR	6.2	1.0
	3	Bangladesh	5.1	4.0	Italy	6.0	1.2	Italy	6.6	1.8	Bangladesh	4.3	0.7	Turkey	4.4	1.1
	4	Italy	4.9	1.6	Germany	5.8	-1.0	Germany	5.2	-1.5	India	4.1	0.4	Germany	3.9	-1.3
	5	Germany	4.4	-3.2	China, HK SAR	4.7	0.8	India	4.8	1.6	Pakistan	3.8	0.6	Viet Nam	2.8	0.7
	6	Turkey	3.7	2.4	Viet Nam	3.9	1.4	Turkey	3.5	1.3	Viet Nam	3.6	0.5	Cambodia	2.6	0.8
	7	France	3.6	0.1	Turkey	3.1	0.9	Spain	3.4	0.8	Cambodia	2.8	0.4	Italy	2.4	-0.2
	8	Viet Nam	2.7	1.7	Mexico	2.9	0.4	Viet Nam	3.2	1.3	Italy	2.5	-0.1	India	2.4	0.3
	9	Belgium	2.6	-0.1	India	2.6	0.4	France	2.8	-0.3	Germany	2.1	-1.0	France	2.0	-0.4
	10	Spain	2.3	0.5	Indonesia	2.4	0.5	Bangladesh	2.7	1.2	Turkey	2.0	0.2	Indonesia	1.8	0.2
2005	1	China	25.6	16.3	China	23.1	8.1	China	24.5	14.3	China	26.9	2.8	China	24.0	4.2
	2	China, HK SAR	11.4	7.7	Italy	6.9	1.7	China, HK SAR	11.0	6.8	China, HK SAR	6.5	0.5	China, HK SAR	11.6	2.2
	3	Italy	6.2	2.3	China, HK SAR	5.7	1.5	Italy	6.9	4.20	India	5.5	0.7	Turkey	5.0	1.1
	4	Turkey	4.8	3.7	Germany	5.1	-2.3	Germany	5.3	3.0	Pakistan	5.4	0.8	Cambodia	3.4	0.9
	5	France	4.3	0.0	Mexico	4.5	1.3	India	4.6	2.9	Bangladesh	3.6	0.5	Germany	3.1	-1.7
	6	Germany	4.1	-5.0	Bangladesh	4.4	2.2	Turkey	4.4	2.3	Thailand	3.4	0.3	India	2.8	0.5
	7	Bangladesh	2.9	2.5	Turkey	3.5	1.4	Romania	2.8	1.6	Cambodia	3.3	0.5	Italy	2.8	-0.2
	8	Belgium	2.8	-0.4	India	2.9	1.0	France	2.6	-1.1	Indonesia	3.0	0.3	Guatemala	2.7	0.7
	9	Mexico	2.3	0.2	Romania	2.7	1.3	Mexico	2.5	0.2	Viet Nam	2.8	0.4	Greece	2.4	0.6
	10	USA	2.0	-6.2	Belgium	2.6	-0.4	Spain	2.2	0.2	Italy	2.6	-0.2	Viet Nam	2.3	0.5
2000	1	China	17.8	13.5	China	18.6	9.5	China	17.0	8.8	China	16.8	2.1	China	16.5	3.4
	2	China, HK SAR	14.0	10.5	China, HK SAR	8.6	3.5	China, HK SAR	13.1	6.7	China, HK SAR	11.0	1.3	China, HK SAR	15.6	3.4
	3	Italy	7.1	3.3	Italy	5.9	1.4	Italy	6.6	1.9	USA	5.4	-1.1	Turkey	5.1	1.3
	4	USA	5.3	-6.8	Mexico	5.6	1.9	Germany	5.1	-2.4	India	5.2	0.7	Mexico	3.8	0.3
	5	Mexico	4.3	1.6	Bangladesh	4.9	3.1	Mexico	5.0	1.6	Pakistan	4.9	0.8	USA	3.5	-2.4
	6	France	4.1	-0.5	Germany	3.4	-3.4	India	4.7	2.7	Thailand	4.2	0.5	Italy	3.2	-0.2
	7	Turkey	3.9	3.3	USA	3.4	-5.8	Turkey	3.5	2.0	Mexico	4.0	0.2	Rep. of Korea	3.2	0.1
	8	Germany	3.0	-5.5	Indonesia	3.4	1.6	Indonesia	3.0	1.4	Indonesia	3.0	0.3	Greece	2.8	0.7
	9	Belgium	2.1	-0.8	India	3.1	1.6	France	2.4	-1.5	Rep. of Korea	2.9	0.0	Other Asia, nes	2.7	0.1
	10	Rep. of Korea	2.1	-0.6	Belgium	2.1	-0.5	Sri Lanka	2.1	1.4	Italy	2.7	-0.2	Germany	2.7	-1.6

Note: For a better presentation of the NRCA values, the result is rescaled by multiplying a constant of 10,000 without changing the result.

Source: Author's calculation based on the UN Comtrade database

### III. Discussion

Based on the findings in the previous section, this part discusses two important issues for Bangladesh's RMG sector. First, by using the MPM method of analysis, it was found that the export shares of Bangladesh's top five RMG commodities in the global market increased, while the growth of three products in world trade relative to total world export growth fell. Second, analyzing

international competition with global competitors by using the NRCA index revealed that new entrants, such as Vietnam and Cambodia, have rapidly increased the export shares and competitiveness of their RMG products.

The export shares of Bangladesh's RMG commodities are growing in the world market while the growth of markets for these products in world trade is stagnant. As the markets are not expanding, there is a limited scope for Bangladesh RMG exports. In addition, international competition with newcomers is becoming intense as countries such as Vietnam and Cambodia are growing rapidly in terms of export share and competitiveness. Since the global market of RMG commodities is not growing faster, and newcomers are increasing their competitiveness, Bangladesh is facing a difficult time. Furthermore, since the RMG products are classified as low technology manufactures (LT) by Lall (2000), the sector easily allows other countries to produce these items if labor is available. This means that more competition would be expected, and this happens in a market that is not expanding. It is a situation similar to eating a limited size of pie with many people. It raises an important question about Bangladesh's sustainability of competitiveness in the RMG sector. Because, as already noted, Bangladesh's economy is heavily dependent on the export of RMG commodities, retaining competitiveness and export volume in this sector is crucial for the Bangladesh economy. If the export of RMG collapses, it will be detrimental to not only Bangladesh's export earnings but also to the further development of the national economy.

As existing studies show, the low wage is the primary source of competitiveness in Bangladesh's RMG sector (Yunus and Yamagata, 2012; Fukunishi and Yamagata, 2013). In fact, the average wage for workers in Bangladesh is considerably lower than that of competitors. The average wage for workers per month in Phnom Penh (Cambodia), Ho Chi Minh (Vietnam), and Dhaka (Bangladesh) are US\$ 182, 183, and 95, respectively.<sup>8</sup> However, an interesting fact is that Vietnam and Cambodia are increasing their exports and gaining competitiveness despite their higher wages. This is possible because of their strategy of producing products with higher value addition. For example, the Government of Vietnam has planned to transform the RMG sector into a value-added one by designing and branding its own original clothes. This requires a drastic shift of production from the present original equipment manufacturer model to the original design and manufacturer models for higher value-added assembly (Just-style.com, 2017). In addition, Vietnam's RMG sector has initiated improvement of its backward linkages and production processes (Frederick, 2017). Because of these efforts, low value-added RMG product exports constituted 65% of RMG exports, while the high value-added accounted for 35% in 2019 (Vietnam-Briefing, 2020). This holds an important lesson for Bangladesh. Low wages are a major source of competitiveness in labor intensive industries such as the RMG sector, but Vietnam's advancement suggests that the creation of higher value-added products is more important as it is not possible to keep wages lower when the economy develops.

Therefore, in order for Bangladesh's RMG sector to keep its position in the global market and lessen the impact of rising wages in the future, it should develop a strategy for adding high value to RMG commodities. It requires functional upgrading of the RMG industry by adopting the

sophisticated level of production arrangement.<sup>9</sup> For these, heavy investment in technology upgradation, strong backward-forward linkage, advanced research and development, and workers' skill development are critical to attainment. In the export policy for fiscal years (FYs) 2015–2018, the Bangladesh Government prioritized exporting high value-added RMG commodities and garment accessories and initiated several schemes that support the RMG sector's upgrading.<sup>10</sup>

Simultaneously, Bangladesh should develop new products to diversify its export structure to mitigate the impact of intense RMG product competition. To promote export diversification, Bangladesh's latest export policy developed for FY 2018–2021 identified 32 sectors for product development, including high value-added RMG and garment accessories (first introduced in the export policy for FYs 2015–2018), pharmaceutical products, jute products, agro-products, and so on. Several benefits and incentives including accessible loan facilities, subsidies, duty draw-back and bond facilities, and tax benefits would be provided to these potential export sectors.<sup>11</sup> Moreover, the Ministry of Commerce has formed the Business Promotion Council (BPC) to diversify export products. At present, the BPC is working in six specific areas, such as leather products, fisheries, agro-products, and so on (BPC website, 2020) . However, these initiatives have not as of yet produced tangible achievements. Since the dependency on RMG commodities is huge, and it is not an easy task to diversify export products, Bangladesh should formulate and implement effective policies for promoting the potential export sector while its RMG commodities are competitive in the global market.

#### **IV. Conclusion**

By using the MPM method and the NRCA index, this study assessed the market positioning and international competition of Bangladesh's RMG commodities. The analyses revealed that Bangladesh's export shares of RMG commodities are expanding in the shrinking world market and that these commodities are under threat by newcomers such as Vietnam and Cambodia. This is a vulnerable situation for Bangladesh as the size of the global market for RMG commodities is not increasing, and Bangladesh is facing intense international competition at the same time. Moreover, the study points out that Bangladesh's export is highly dependent on RMG products, which use low-technology and are low value-added in nature. Its export basket lacks medium- and high-tech commodities, which produce higher value and are now the main export commodities in world trade (with the exception of oil). Low-technology commodities also increase the risk for the country's export competitiveness as other newly entered countries can easily start producing RMG items and export them. Bangladesh needs to reduce its dependency on low-tech RMG products, more value-additive commodities should be produced for the future development of the RMG sector, and the diversification of the export sector should be promoted.

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#### [Notes]

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<sup>1)</sup> The clothing industry is known as the ready-made garment industry (RMG) in Bangladesh. According to the Standard International Trade Classification (SITC) code of the United Nations, commodities that belong to SITC 84 are clothing, and they are termed as RMG commodities or products in the paper. This paper focuses on clothing only, which differs from textiles.

<sup>2)</sup> Figures are from the United Nations Comtrade database (<https://comtrade.un.org/>). Data is not available for Bangladesh exports after the year 2015. For uniformity of the analysis, this study uses data up to 2015.

<sup>3)</sup> Figures are calculated based on UN Comtrade data.

<sup>4)</sup> UN Comtrade is an official database of the United Nations containing international trade statistics. For details, see [www.uncomtrade.un.org](http://www.uncomtrade.un.org).

<sup>5)</sup> SITC is developed by the United Nations to classify the commodity exports and imports data of a country. It allows to compare various years and countries. The SITC classification is currently at revision four and was formulated in 2006 (the original SITC was in 1950, SITC revision 1 in 1960, SITC revision 2 in 1975, and SITC revision 3 in 1985).

<sup>6)</sup> China Hong Kong SAR is the Special Administrative Region of the People's Republic of China.

<sup>7)</sup> The integrated NRCA value for each country is calculated by the author. It is a sum of all the individual NRCA values of the top five RMG products.

<sup>8)</sup> Figures are from JETRO homepage

([https://www.jetro.go.jp/world/search/cost\\_result?countryId%5B%5D=800&countryId%5B%5D=1300&countryId%5B%5D=1600&countryId%5B%5D=1700&countryId%5B%5D=1800](https://www.jetro.go.jp/world/search/cost_result?countryId%5B%5D=800&countryId%5B%5D=1300&countryId%5B%5D=1600&countryId%5B%5D=1700&countryId%5B%5D=1800))

<sup>9)</sup> Functional upgrading refers to the movement of production activities into the original design and brand activities in the value chain. Generally, it contains the process of shifting from original equipment assembly (OEA) to original equipment manufacturer (OEM), then to original design manufacturer (ODM), and finally the original brand manufacturer (OBM). OEA is considered the lowest value-added function. Higher value-added functions start with OEM and spanning to ODM (Alam & Natsuda, 2016).

<sup>10)</sup> The fiscal year (FY) in Bangladesh ends in June. The export policy developed for FY 2015–18. For detail export policy, EPB homepage

[http://epb.gov.bd/sites/default/files/files/epb.portal.gov.bd/files/070dfa2f\\_2abc\\_4ea1\\_ad\\_20\\_786eae4b5ee6/2020-06-29-15-39-512937d53366f13b2dd59302952704efc.pdf](http://epb.gov.bd/sites/default/files/files/epb.portal.gov.bd/files/070dfa2f_2abc_4ea1_ad_20_786eae4b5ee6/2020-06-29-15-39-512937d53366f13b2dd59302952704efc.pdf)

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