

ORIGINAL RESEARCH

Revealed Comparative Advantage (RCA): A Comparative Analysis of Pre and Post US–GSP Suspension for RMG Industry of Bangladesh

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Abstract

This paper conducts a Revealed Comparative Advantage (RCA) examination for RMG products of Bangladesh and compares it with prime contenders of Bangladesh. In this paper, seven nations have been picked as prime contenders of Bangladesh: China, Hong Kong, India, Pakistan, Sri Lanka, and Vietnam. Mainly, the RCA has been investigated with the assistance of the Balassa Index for the two significant fare goals of Bangladesh's attire – the USA and the European Union (EU). The reason is to investigate the effect of the US-GSP suspension on Bangladesh just as how it impacts Bangladesh's assembling areas and the fare of RMG merchandise. The RCA breaks down the degree of fare rivalry among Bangladesh and its significant rivals. The study applies the Balassa Index. It claims that the level of competition among significant contenders escalates with the usage of the US-GSP prerequisites to get the GSP facilities in the US market. This examination shows a period series investigation of RCA of 18 years, beginning from 2000 to 2018, for Bangladesh's exports to the EU and the US markets. The findings from this paper propose that Bangladesh has a close favored position over other major contending countries in the USA and EU markets for the main ten RMG things. This result shows that Bangladesh's RMG part is more significant in the EU market than in the USA market.

1 | INTRODUCTION

Comparative advantage is a term for financial matters that was first introduced by David Ricardo in the nineteenth century [7]. RCA shows which nation has a superior fare for a specific item compared to its contending nations [8]. Balassa further created it, and its file made the correlation simple to figure [1]. RCA is also used to decide exchange points of interest for a nation or weakness for others [9]. Be that as it may, this paper focuses on the RCA of Bangladesh in correlation with its significant rivals in the field of the RMG sector.

This paper examines the fare of the EU and the USA, which are the two biggest markets for the RMG sector in Bangladesh. RCA estimation can be effectively utilized to decide a relative bit of leeway in exchange, such as: examples of exchange specialization, exchange examples, and worldwide exchange advantages [10].

The Heckscher–Ohlin theory claims that a country's comparative advantage depends on relative factor endowment across nations, and that trade affects relative factor prices both within and across nations [11]. The United States (US) and the European Union (EU) are two of the biggest Ready-Made Garments (Here, RMG comprises Bangladesh's main ten trading knitwear (Harmonized System-HS 61) and woven wear (HS-62) markets for Bangladesh [12]. Bangladesh is the second largest exporter of these products to both the US and EU markets [13]. The Generalized System of Preferences (GSP) gives chances to a large number of the developed and least developed nations to utilize exchange benefits, for example, zero levies to develop their economies [14].

At present, Bangladesh is confronting competition from significant global contenders of the RMG sector, especially China, India, Pakistan, Sri Lanka, Vietnam, and Cambodia [6]. This study breaks down the upper hand of the RMG

sector by utilizing the RCA Balassa Index (1965) [2], at the Harmonized System (HS) 6 – 6-digit level. It plans to introduce an overall situation of the RMG exports of Bangladesh in the global markets and to think about its leeway during the pre- and post-suspension of the US-GSP with significant key rivals in the US and EU markets.

2 | MATERIALS

The objective of this investigation is to determine the comparative advantage and competitiveness of the RMG sector in Bangladesh compared to its other significant rivals. Moreover, the study endeavors to assess the RCA status of the pre and post-suspension of the USA-GSP.

To achieve this objective, the following explicit goals are set for this investigation:

- a) To measure the export trends of Bangladesh, particularly in woven and knitwear;
- b) To show the patterns of exchange of RMG industry of Bangladesh compared to other contending nations;
- c) To make a relative exchange examination of the RMG industry of Bangladesh with its significant rivals during the pre and post-suspension of the US-GSP.

3 | LITERATURE REVIEW

RCA list is a significant analytical instrument for assessing a country's relatively favorable position over time. It gives data on the top contender nations regarding exchange development and relatively favorable positions over a given period [4]. Numerous studies have been found to utilize the idea of RCA by analyzing trade information.

In economics, theories related to advantage started with

Adam Smith. In his famous book *The Wealth of a Nations*, Adam Smith mentioned absolute advantage [5]. It is achieved when one supplier can produce a competitive product using fewer resources. David Ricardo introduced comparative advantage, which tries to reduce the opportunity cost of a particular production.

Bangladesh is well known for its clothing items around the globe. This largest sending out industry in Bangladesh has been boosting the economy for the previous two decades. As indicated by the Annual Report of Bangladesh Bank for FY-2013-14, the macroeconomic circumstance in Bangladesh has been very steady in recent years [15]. Fare income from the RMG sector and settlement inflows help to accomplishing the strong financial development rate, where the RMG sector contributes 14.09% of the total GDP [4]. The RMG sector plays a key role in job and salary procuring, especially for the poor people [16]. About 4.5 million workers (directly) and more than 15 million occupants are secondarily connected to the RMG industry in Bangladesh [17]. RMG is an assembling-based industry, and Bangladesh is now the second-largest RMG producer in the world. As Bangladesh is probably one of the least expensive clothing-delivering nations because of lower labor costs, a major emphasis has been given by the progressive governments to the advancement of this part for receiving the rewards of the plentiful accessibility of its less expensive work power [18]. At present, around 5000 RMG manufacturing plants are running at full capacity in the nation. The RMG part's total earning was USD 28.09 billion in 2015, 14.7% higher than the previous year [19]. The contribution of the RMG sector to the national export earnings was 81.16% in 2014. Table 1 shows the current image of Bangladesh's RMG's export share to the world, the USA, and the European Union (EU).

Table 1: Bangladesh's RMG Market Share in the World, the USA, and the EU Markets [Source: ITC, Geneva, 2016].

Destination	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
World (%)	2.54	2.72	2.73	3.31	3.89	4.27	4.70	5.66	5.99	6.17	6.83
USA (%)	3.27	3.91	4.02	4.66	5.25	5.37	5.60	5.60	6.01	5.68	6.12
EU (%)	4.20	5.09	4.73	5.15	5.94	6.54	7.81	8.76	9.49	9.89	11.06

The following table shows Bangladesh's global garment export market share from 2015 to 2018.

Country	Year			
	2015	2016	2017	2018
China	39.3	36.4	34.9	31.3
Bangladesh	5.9	6.4	6.5	6.4
Vietnam	4.8	5.5	5.9	6.2
India	4.1	4.0	4.1	3.3
Turkey	3.4	3.4	3.3	3.1

HS-61 represents the knitted products of Bangladesh. This sector has stronger value addition and retention compared to the woven sector. One study reveals that the Knitwear sector had a retention of 48% and value addition of 75% in 2014 [20]. On the contrary, to make woven garments, Bangladesh has to import woven fabrics from other countries. Fabric constitutes a major portion of an order and it costs 75% for woven garments. Thus, a huge amount of money leaves the country and retention becomes less.

4 | DATA AND METHODOLOGY

This analysis examines the Revealed Comparative Advantage (RCA) using the Balassa Index for the RMG industry and for significant contenders of Bangladesh independently [3]. For this reason, the information has been collected from the International Trade Center (ITC) Map, Geneva for the factors of RCA list. The RCA record is a standard way to deal with a nation's near-favorable position or relative disservice in wares, enterprises, or divisions.

This analysis applies the RCA list to address the similar comparative advantage of Bangladesh's significant competitor nations in the USA and EU markets. The following equation is utilized dependent on the Balassa Index [1].

$$RCA = \frac{\frac{x_{ij}}{x_i}}{\frac{x_{sj}}{x_s}}$$

Where,

x_{ij} : i^{th} , the country's export of commodity j to the USA and European Union markets

x_i : i^{th} , the country's total exports to the USA and European Union markets

x_{sj} : The major competing countries' exports of commodity j to the USA and European Union markets

x_s : The major competing countries' total exports to the USA and the European Union markets

As indicated by the estimation of this record, if $RCA > 1$, then a country has a relatively preferred position; and, on the off chance, if $RCA < 1$, then a country has a comparative disadvantage in that product or industry. By utilizing the Balassa index, the examination endeavors to compute the RCA. It is calculated for the period before and after the US - GSP suspension.

5 | RESULT AND DISCUSSION

Bangladesh is the second largest RMGs exporter in the

world. This sector in this way, plays a key role in business age and provide financial support to the helpless networks in the nation. About 4.5 million workers are directly, and over 15 million occupants are by implication associated with the RMG sector in Bangladesh. Its RMG market is an unpredictable and ordinary vacillates compared to the contending nations, just as accomplishing the additional offices. Consequently, this paper attempts to survey and evaluate the upper hands of the top ten RMG products of Bangladesh to investigate its exchange possibility of this area. At last, an experimental examination of the pre and post-US GSP suspension has been dissected by estimating the Revealed Comparative Advantage and intensity its RMG industry.

Table 3 shows the Revealed Comparative Advantage (RCA) for HS-61 Products of Bangladesh.

For Product HS-6101, in 2000 and 2001, there was a competitive advantage initially but after that, the RCA dropped to less than 1 over the next 18 years. More importantly, the value of RCA has followed a decreasing trend for this product. Almost a similar trend has been observed for the HS-6102.

Bangladesh had a comparative disadvantage in the Product HS- 6106 (women's or girls' blouses, shirts, and shirt blouses, knitted or crocheted) up to 2007. Over the next 11 years, the RCA was above 1 consistently and never dropped below 1. It can be seen from the data that, Bangladesh has improved its position in producing this product in recent years.

HS-6105(men's or boys' shirts, knitted or crocheted) maintained a comparative advantage during this 18 years. In this long period, the RCA always remained above 1 and followed an upward trend.

Similarly, the RCA of HS-6109 (T-shirts, singlets, and other vests, knitted or crocheted) was the highest among the 17 subcategories in HS-61. It always remained above 3, which is way higher compared to other products in HS-61. It can be said that Bangladesh has a strong comparative advantage in this product.

Other categories had an RCA of under 1, which shows a similar burden of these items. In the previous discussion, the maintenance of the knit sector has been clarified. HS-6106, HS-6105, and HS-6109 can continue to generate income. Be that as it may, these three product categories have a similar preferred position while the others are on the weaker side. Annex A is written at the end of the paper for better clarification of this data calculation method.

6 | CONCLUSION

In this paper, an effort has been made to provide evidence of the relative comparative advantage of Bangladesh, just as other major contending nations, for the top ten RMG products as demonstrated by the item arrangement of their

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HS Code	Product	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
HS-6101	Mens Coat	2.52	1.18	0.82	0.89	0.74	0.63	0.56	0.39	0.33	0.41	0.43	0.35	0.37	0.46	0.44	0.47	0.51	0.46	0.45
HS-6102	Womens Coat	1.48	0.68	0.83	1.02	0.71	0.56	0.5	0.33	0.34	0.34	0.45	0.48	0.54	0.51	0.46	0.5	0.53	0.55	0.58
HS-6103	Mens Jacket	0.82	0.57	0.9	0.78	0.73	1.22	1.43	1.25	1.38	1.24	1.28	0.94	0.91	0.93	0.94	0.92	0.91	0.88	0.84
HS-6104	Womens Jacket	0.37	0.29	0.34	0.3	0.35	0.37	0.39	0.46	0.53	0.63	0.65	0.63	0.61	0.67	0.67	0.73	0.76	0.75	0.79
HS-6105	Mens Shirt	1.38	1.25	1.17	1.19	1.15	1.52	1.45	1.49	1.67	1.77	1.74	1.88	1.79	1.75	1.77	1.69	1.7	1.77	1.78
HS-6106	Womens Shirt	0.58	0.62	0.56	0.45	0.44	0.76	0.79	0.98	1.11	1.11	1.04	1.21	1.31	1.21	1.24	1.14	1.13	1.22	1.12
HS-6107	Mens UW	0.35	0.43	0.46	0.39	0.35	0.34	0.35	0.34	0.43	0.48	0.54	0.59	0.77	0.79	0.77	0.8	0.83	0.81	0.82
HS-6108	Womens Brief	0.63	0.66	0.62	0.55	0.42	0.41	0.38	0.45	0.45	0.44	0.47	0.48	0.59	0.6	0.59	0.66	0.67	0.66	0.69
HS-6109	T-shirt	4.05	3.77	3.44	3.66	3.66	3.27	3.22	3.25	3.26	3.25	3.31	3.51	3.66	3.61	3.67	3.57	3.41	3.47	3.42
HS-6110	Jersey	0.88	0.97	1.11	1.22	1.31	1.12	1.15	1.08	1.01	0.97	0.96	0.94	0.87	0.88	0.89	0.89	0.93	0.93	0.95
HS-6111	Baby Garments	0.36	0.37	0.21	0.15	0.11	0.16	0.19	0.25	0.35	0.45	0.52	0.55	0.63	0.72	0.72	0.82	0.8	0.85	0.89
HS-6112	Swimwear	0.43	0.3	0.19	0.16	0.16	0.25	0.16	0.19	0.15	0.2	0.15	0.18	0.21	0.25	0.22	0.21	0.17	0.19	0.23
HS-6113	Garments	0.16	0.22	0.37	0.32	0.24	0.47	0.33	0.29	0.12	0.2	0.13	0.22	0.16	0.14	0.14	0.18	0.31	0.28	0.2
HS-6114	Other Garments	0.27	0.2	0.15	0.17	0.15	0.12	0.24	0.29	0.36	0.37	0.4	0.32	0.34	0.39	0.37	0.44	0.43	0.44	0.46
HS-6115	Socks	0.27	0.27	0.16	0.07	0.03	0.04	0.03	0.03	0.02	0.01	0.01	0.01	0.02	0.03	0.04	0.05	0.05	0.04	0.02
HS-6116	Gloves	0.12	0.11	0.05	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.04	0.04	0.05	0.04	0.05	0.05	0.05
HS-6117	Clothing Accessories	0.08	0.04	0.03	0.05	0.04	0.06	0.03	0.04	0.05	0.07	0.06	0.07	0.06	0.05	0.05	0.07	0.06	0.07	0.08

Table 3. Revealed Comparative Advantage (RCA) for HS 61 Products of Bangladesh in different years

fares to the USA and EU markets. The findings from this paper suggest that Bangladesh has a near-preferred position over other major competing nations in the USA and EU markets for the top ten RMG items. This outcome shows that Bangladesh's RMG part is greater in the EU market than in the USA market.

In accordance with the principles of the US-GSP facilities, the relative comparative advantage of Bangladesh, as well that of other major contending nations, seems to lie because of the exchange strategy of goal nations like the US-GSP suspension for Bangladesh's items in the USA market. Among these nations, crude materials and vitality dominate exchange help activities. Indian material arrangement supports to increase in its RMG trade volume compared to its other rival nations, particularly Bangladesh, to the markets like the USA and EU. Therefore, the US-GSP status and the fleeting material approach of Bangladesh may have contributed to the expansion of Bangladesh's fares to the global market. It is expected that the suggestions

based on this study will help with the amendment of Bangladesh's political discretion, just as the observational arrangement measurements, for its RMG part to expand RMG export volume, GDP growth, work openings, and women's empowerment among other factors.

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ANNEXES

Annex A- RCA calculation for Harmonized System (HS-61) products of Bangladesh comparing with other seven nations.

Link: <https://tinyurl.com/5ef5zdvi>

Annex B- Bilateral imports by detailed HS codes (2,4,6 digit) (US\$) to the EU and the US from 2000 to 2018 by the World Trade Organization (WTO).

Link: <https://tinyurl.com/s4s83e4p>

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