

Revealed Comparative Advantage of Bangladesh Readymade Garments Industry

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Keywords: Export competitiveness, RCA, NRCA, RMG industry, Bangladesh

Introduction: Bangladesh is the second largest exporter of ready-made garments (RMG) in the world, with USD 42.61 billion worth of exports in 2022 (BGMEA, 2022; Swazan & Das, 2022). It is also among the fastest-growing economies in the world, with a GDP growth rate of 7.1 percent in fiscal year 2022 (The World Bank, 2023). The RMG industry is the lifeblood of Bangladesh's economy, contributing heavily to the country's economic development and creating numerous employment opportunities. The RMG industry has seen astronomical growth, expanding to more than 4,600 registered factories in 2022 from a handful of factories in the 1970s, with a compound annual growth rate of 14.8 percent. It employs roughly 4.1 million people and is the second largest employer after the agricultural industry (BGMEA, 2022).

Literature Review: COVID-19 had a drastic impact on Bangladesh's RMG export sector. The country lost its second position to Vietnam in 2020 because of the pandemic. Bangladesh's RMG exports declined by 17.4 percent during the 2018 to 2020 period, whereas Vietnam's RMG exports went down by only 2.96 percent (Berg et al., 2021). The RMG sector is plagued with various challenges, such as a lack of product diversification, backward linkage, low labor productivity, labor safety and compliance issues, infrastructure problems, and concerns regarding losing preferential trade facilities (Islam, 2021). Factory accidents such as the Rana Plaza collapse and the Tazreen factory fire have dented Bangladesh's reputation as a safe and sustainable RMG exporter. Even though the RMG industry is the backbone of Bangladesh's economy, very few studies have examined its competitiveness. Therefore, this study aims to measure the competitiveness of Bangladesh's RMG industry by identifying the product categories that provide a comparative advantage to the nation.

Revealed comparative advantage (RCA) is an economic concept often used to measure the competitiveness of certain industries. RCA values range from 0 to ∞ ; values below 1 indicate a country's comparative disadvantage, whereas values equal to 1 suggest neutral advantage, and values above 1 indicate comparative advantage. Normalized revealed comparative advantage (NRCA) is a variant of RCA that provides stable means across commodities and countries. It is symmetric around zero, and its divergence from zero represents a nation's comparative advantage or disadvantage (Saki et al., 2019). Many researchers have applied the RCA and NRCA framework to measure the competitiveness of the textile and apparel industries (Chi et al., 2005; Kathuria, 2013; Saki et al., 2019). This study uses RCA and NRCA to assess Bangladesh's RMG export competitiveness.

Methodology: The study uses trade data from the United Nations Commodity Trade database. The dataset includes chapters 61 and 62 (HS61 and HS62), which contain knitted and non-

knitted apparel products and accessories. RCA and NRCA are calculated at two and four-digit sub-categories of products within the Harmonized System (HS) from 2011 to 2020. A non-parametric rank correlation test was conducted to assess the relative rankings of RCA and NRCA in those ten selected years. Top-performing categories are identified based on their NRCA magnitudes, and their major export destinations are analyzed to determine the factors facilitating Bangladesh's RMG exports.

Results: The non-parametric test yielded a positive Spearman's rho ($\rho = 0.4542$, $p\text{-value} < 0.001$), suggesting the correlation between RCA and NRCA. Primary analysis revealed that Bangladesh had a comparative advantage in HS61 and HS62 throughout the ten-year timeframe. To precisely locate the sources of competitiveness, further investigation was conducted into the four-digit sub-categories of HS61 and HS62. Each chapter contained seventeen sub-categories at the four-digit level, resulting in thirty-four in total. In HS61, the RCA and NRCA indices indicated that Bangladesh had advantages in all the sub-categories except only HS6115, which showed disadvantage in 2011. Though HS6115 was the only source of disadvantage in HS61, some other sub-categories indicated very few advantages during the studied period. The analysis of HS62 revealed advantages in all the sub-categories between 2011 and 2020 except for HS6213, HS6214, HS6215, and HS6216. These four sub-categories negatively affected Bangladesh's overall export competitiveness. Another sub-category (HS6210) disclosed a disadvantage in 2011; however, it surprisingly turned into a significantly advantageous sub-category in the following years.

HS6109 (knitted t-shirts, singlets) was the top sub-category of chapter 61, having the highest NRCA magnitude from 2011 to 2020. The analysis of export destinations revealed that Bangladesh exported 20.18% of its products to Germany in 2020, which was the major importer of this category. HS6110 (knitted jerseys, pullovers, cardigans, waistcoats) possessed the second highest NRCA value over the ten years, followed by HS6104 (knitted women's or girl's ensembles, suits). HS6203 (non-knitted men's or boy's suits, ensembles, jackets, blazers, trousers) secured the highest NRCA magnitude among all the four-digit sub-categories within chapter 62 throughout the targeted period (2011-2020). The United States was the top importer of this category. HS6204 (non-knitted women's or girl's suits, ensembles, skirts) came next in the table, holding the second highest NRCA values, followed by HS6205 (non-knitted shirts, Men's or boy's), and HS6206 (non-knitted shirts and shirt-blouses, women's or girl's).

Conclusions: The present study has pointed out the exact product categories from which Bangladesh is gaining its RMG export competitiveness. It also highlighted the categories that are affecting the country's export competency. The study results will help the government, policymakers, and industry associations recognize the clusters where incentives could be given to increase the export of those RMG categories. It will also assist the RMG exporters in distinguishing the product categories where comparative advantage can be regained after removing the constraints that have restricted the growth of this sector.

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