



SEINÄJOEN AMMATTIKORKEAKOULU
SEINÄJOKI UNIVERSITY OF APPLIED SCIENCES

Md Arman Chowdhury

**Global Market Expansion of Bangladeshi Garment Products: Challenges,
Strategies, and Economic Implications.**

Thesis
Autumn 2023
International Business



SEINÄJOKI UNIVERSITY OF APPLIED SCIENCES

Thesis abstract

Degree Programme: International Business

Author: Md Arman Chowdhury

Title of thesis: Global Market Expansion of Bangladeshi Garment Products: Challenges, Strategies, and Economic Implications.

Supervisor: Dario Liberona

Year: 2023

Number of pages: 66

Number of appendices: 1

The ready-made garment (RMG) sector in Bangladesh has emerged as a cornerstone of the country's economic landscape, driving substantial export earnings, and generating employment opportunities. However, its growth and continued success are marred by a multitude of challenges, from weak infrastructure and limited negotiation capacity to increased international competition and shifting buyer dynamics. This thesis explores the challenges facing the Bangladeshi RMG industry and delves into strategies that can propel it toward global market expansion.

Championing a transformation in infrastructure, this study underscores the need for specialized RMG industry zones and reliable power supply as a prerequisite for sustaining and enhancing the sector's competitive edge. Efficient political and commercial negotiations and partnerships with global buyers are seen as key drivers for success. Technical education facilities, along with financial instruments, hold the potential to boost productivity and innovation.

Furthermore, the thesis promotes forward integration, emphasizing the importance of creating a positive brand image and entering new markets and product segments. In examining these strategies, the study seeks to encourage diversification away from the RMG sector's dependence on a handful of countries, reducing vulnerability to shifting market dynamics.

As these strategies are implemented, the Bangladeshi RMG sector can realize its full potential and contribute significantly to the country's socio-economic development. Despite existing challenges, the RMG industry has the potential to enjoy a more prosperous and impactful future. This thesis thus aims to serve as a roadmap for industry stakeholders, policymakers, and all those invested in the future of Bangladesh's RMG sector.

Keywords: Garment industry, Economic implications, Infrastructure challenges, Market expansion, Employment generation and Global competitiveness.

TABLE OF CONTENTS

Thesis abstract	2
TABLE OF CONTENTS.....	3
List of Tables	6
List of Figures	7
Terms and Abbreviations	8
1 Introduction	11
1.1 Background of the research	14
1.2 Objective of the research	15
2 Literature Review of the Bangladeshi RMG Industries.....	16
2.1 History and Growth of Garments Industry in Bangladesh.....	18
2.2 Growth of garment factories in Bangladesh	20
3 Research Methodology.....	22
3.1 Methodology.....	22
3.2 Research Method	22
Qualitative Research.....	23
Rationale for Qualitative Research.....	23
Rationale for Not Considering Other Research Methods	24
3.3 Approach for this Study	24
3.4 Qualitative Research – Telephone Interviews	25
3.5 Secondary Data.....	25
Research gate Web Portal	25
Google	25
Bangladesh RMG Official Websites	26
3.6 Primary Data	26
3.7 Design of Sample and Size	26
3.8 Design of Questionnaires	26
4 Data Analysis	27
4.1 Bangladesh's RMG Export to World.....	27
4.2 Contribution of RMG Sector to The National Economy	32

4.3	Contribution of RMG in total export of Bangladesh	40
4.4	Challenges of RMG Sector in Bangladesh	42
	Unskilled Workers	43
	Improper Infrastructure	43
	Factory Premises Infrastructure	43
	Transportation Infrastructure	44
	Road Network.....	44
	Railway System.....	44
	Sea Ports	45
	Market and Product Diversification.....	45
	Lack of New Investment	46
	Risk of energy availability.....	46
	Coverage of Accord and Alliance	47
	Raw Materials.....	48
	Lack of Research and Development (R&D)	48
4.5	Catalysts of Growth: The Internal Competitiveness Propelling Bangladesh's Garments Industry.....	48
4.6	Low-cost Energy factors	49
4.7	Minimum salary trend for labors	51
4.8	Industrial infrastructure and labor safety	52
4.9	Factors that influence the growth of Bangladesh RMG	54
4.10	Manpower in garments industry in Bangladesh and its current situation.....	56
5	Recommendation for future and Conclusions	57
5.1	Development of infrastructure	57
5.2	Development of local supply chain	58
5.3	Separate zone for garments industry	59
5.4	Sustainable energy supply	60
5.5	Increase in the number of trainings center.	61
5.6	Increased Productivity through Research and Training.....	62
5.7	Foreign Direct Investment (FDI)	63
5.8	Safety and welfare of workers	64
6	Conclusion	66
7	Bibliography	68

8 Appendix 1

List of Tables

Table 1: Some important phases of the Bangladesh RMG industry.....	20
Table 2: Bangladesh's RMG Export to World from 2020 to 2022.....	28
Table 3: Expansion of RMG market in European Union (EU) Countries.....	29
Table 4: Comparative Statement on Export of RMG and Total Export of Bangladesh.....	31
Table 5: Statement on Export of RMG and Total Export of Bangladesh.....	35
Table 6: Contribution of RMG Sector in the Economy.....	39
Table 7: Value Addition and Net Retention Rate of Bangladesh Knitwear Sector.....	39
Table 8: Bangladeshi Natural Gas summary in 2015.....	47
Table 9: Estimated employment numbers (in millions) from 2018 to 2022.....	56

List of Figures

Figure 1: Bangladeshi RMG export growth in EU in 2022.....	31
Figure 2: Export value of ready-made garments (RMG) in Bangladesh from 2011 to 2020 (in billion U.S. dollars).....	34
Figure 3: The substantial growth trajectory of the RMG sector.....	37
Figure 4: Contribution of RMG in total export of Bangladesh.....	41
Figure 5: RMG Export Destinations.....	42
Figure 6: Comparison in Energy cost by countries.....	50
Figure 7: Factors that influence the growth of Bangladesh RMG.....	55

Terms and Abbreviations

Terms:

Apparel Industry: The clothing manufacturing sector, including the production of garments and textiles.

Multi-Fiber Arrangement (MFA): A system of import quotas that governed global trade in textiles and apparel.

Trade Liberalization: The process of reducing barriers to international trade, such as tariffs and import quotas.

GDP: Gross Domestic Product, a measure of a country's economic performance.

WTO: World Trade Organization, an international organization that deals with global trade rules.

ATC: Agreement on Textile and Clothing, an agreement under the World Trade Organization for the phase-out of MFA import quotas.

SAFTA: South Asian Free Trade Area, a regional trade agreement among South Asian countries.

BIMSTEC: Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, a regional organization involving countries around the Bay of Bengal.

ILO: International Labour Organization, a United Nations agency focused on labour rights and employment issues.

LFAs: Less Favoured Areas, regions or countries that face challenges in adapting to open global trade.

RMG: Ready-Made Garments, a term commonly used in the textile and apparel industry.

Quota System: A system that imposed export quotas on developing countries, governed by the Multi Fiber Arrangement (MFA).

Multi Fiber Arrangement (MFA): An international agreement that imposed export quotas on developing countries in the textile and apparel industry.

USA: United States of America.

EU: European Union.

Child Labor: The employment of children in work that is harmful to their physical and mental development.

Bangladeshi RMG Owners: Owners of Ready-Made Garment factories in Bangladesh.

BTMC: Bangladesh Textile Mills Corporation, a government-owned organization responsible for the textile industry in Bangladesh.

Rana Plaza Disaster: A building collapse in Bangladesh in 2013 that led to a significant loss of life and highlighted safety issues in the RMG industry.

Abbreviations:

GDP: Gross Domestic Product

MFA: Multi-Fiber Arrangement

WTO: World Trade Organization

ATC: Agreement on Textile and Clothing

SAFTA: South Asian Free Trade Area

BIMSTEC: Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation

ILO: International Labour Organization

LFAs: Less Favoured Areas

RMG: Ready-Made Garments

USA: United States of America

EU: European Union

BTMC: Bangladesh Textile Mills Corporation

IMF: International Monetary Fund

BBC: British Broadcasting Corporation

BGMEA: Bangladesh Garment Manufacturers and Exporters Association

BKMEA: Bangladesh Knitwear Manufacturers and Exporters Association

1 Introduction

The cornerstone of Bangladesh's export landscape, the apparel industry, embarked on its trajectory in the late 1970s, thriving under the shelter of the Multi-Fiber Arrangement (MFA) import quotas. Unlike its counterparts, such as China and India, Bangladesh encountered less stringent import restrictions, catalyzing unprecedented growth in its apparel sector. The transformative journey of this industry was further propelled by trade liberalization in the early 1990s and financial sector liberalization in the mid-1980s. These policy shifts, coupled with a substantial currency depreciation, ignited the rapid expansion of Bangladesh's labor-intensive apparel industry, as extensively documented by scholars like Ahmed (2001) and Fontana et al. (2001). By the late 1980s, the apparel sector had ascended to the position of Bangladesh's primary export industry. Exports, which were a modest \$1.0 million in 1978, surged impressively to \$5 billion in 2004, constituting a remarkable 75% of total export earnings and 80% of manufacturing export earnings. In 2004, the apparel industry claimed a 9.5% share of the total GDP and a substantial 29.7% share in manufacturing GDP (Bangladesh Bank, 2005; *Statistical Yearbook of Bangladesh*, 1982). Beyond being a robust driver of export growth, the industry emerged as a significant source of formal employment for unskilled workers. Presently, nearly 1.9 million workers, predominantly females, are employed in this sector, with around 90% of them being females (Yang, 2004; Razzaque, 2005). Of note, around 75% of female apparel workers are migrants from rural areas, particularly from the most economically disadvantaged households (Afsar, 2003). Crucially, the apparel industry has been instrumental in generating incremental employment rather than displacing jobs in other sectors (Kibria, 2001).

The paradigm shifts in the global trade landscape unfolded with the elimination of MFA import quotas on January 1, 2005, exposing the Bangladeshi apparel industry to the challenges of a quota-free world. The MFA had governed global trade in textile and apparel from 1974 until the end of the Uruguay round in 1994, after which the World Trade Organization's Agreement on Textile and Clothing (ATC) took over. The ATC, designed as a 10-year transitional trade regime, aimed to integrate textile and apparel trade fully into WTO rules through four phases, primarily by phasing out MFA import quotas (WTO, 2004). The subsequent post-MFA period sparked intense debates on the international competitiveness of Bangladesh's apparel sector, with studies by Razzaque (2005), Ahmed (2005), and Yang (2004) speculating on a potential decline in production and export due to increased competition with countries like

India or China, which had faced comparatively more restrictive MFA import quotas. This research is centrally focused on analyzing and quantifying the repercussions of implementing WTO rules on textile and apparel, specifically the consequences of abolishing MFA import quotas. This encompasses examining the impact on production, employment, and export of textile and apparel in Bangladesh vis-à-vis its global competitors. Furthermore, the study delves into the broader economic effects of these changes. Although the textile and apparel industries are closely linked, the research concentrates on the apparel sector, given its paramount importance in Bangladesh's economic landscape. The textile industry is acknowledged but plays a secondary role as a raw material supplier to the apparel sector within the Bangladeshi context.

While the elimination of MFA import quotas presents formidable challenges for Bangladesh's apparel sector, the nation's proactive engagement in diverse bilateral and regional preferential trade arrangements sparks optimism for trade gains. This extends beyond the apparel industry to encompass other export sectors, holding the potential to impact the economy holistically. Notably, the absence of a comprehensive study providing a comparative analysis of the outcomes arising from Bangladesh's various attempts at bilateral and regional preferential trade arrangements underscores the significance of this current research initiative. The study will meticulously scrutinize and compare the impacts of initiatives such as the South Asian Free Trade Area (SAFTA), the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), and bilateral free trade agreements involving Bangladesh, particularly with India and Sri Lanka.

Globalization, a defining force in the contemporary economic landscape, significantly influences workers' rights in manufacturing industries, notably the apparel sector. Addressing workers' rights has become a pivotal factor in exporting products to developed countries. On one hand, the fierce price competition among nations may compel producers in export-oriented industries to cut production costs, potentially leading to a disregard for workers' rights. Conversely, mounting concerns from consumers, trade unions, and the International Labor Organization (ILO) regarding workers' rights exert substantial pressure on producers to uphold these rights. The interplay of these opposing forces of globalization poses a complex challenge to Bangladesh's export-oriented apparel industry.

The existing body of literature underscores the multifaceted nature of rights violations in Bangladesh's apparel industry, with studies by Zohir & Partima (1996), Zohir (2001), and Kabeer and Mahmud (2004) documenting various forms of infringements. Despite this, a comprehensive analysis of issues related to workers' rights in the context of globalization is notably absent. A critical gap in the literature exists concerning the impacts of globalization on workers' rights in Bangladesh's apparel industry. Several studies have indicated that addressing workers' rights can not only enhance the productivity of workers (Ahmed & Peerlings, 2009) but also result in higher income for producers, encouraging investments in improved working conditions. Therefore, a thorough study is imperative to analyze the economy-wide impacts of addressing workers' rights in the apparel industry of Bangladesh, providing valuable insights into the intricate relationship between globalization, workers' rights, and economic dynamics.

In a broader context, the prevailing consensus in the literature suggests that trade liberalization typically contributes positively to economic performance and plays a role in long-term poverty alleviation (Winters, 2004). However, the beneficial effects of trade liberalization are contingent upon certain conditions, and challenges arise in less favored areas (LFAs), encompassing entire countries or specific regions within a country (Oskam et al., 2004). LFAs often lack the necessary conditions, both in terms of institutions and infrastructure, to seamlessly adapt to an increasingly open global economy. While this thesis does not delve into an exhaustive investigation to determine whether Bangladesh aligns with the characteristics of an LFA, critical concerns such as infrastructure bottlenecks and low levels of investment, identified in Chapter 2 of this thesis, highlight the developmental challenges faced by the Bangladesh economy. Hence, within the global context, one may consider Bangladesh as an LFA, inferring that the consequences of MFA import quota abolition might not automatically yield positive outcomes for its economic performance and poverty situation.

Furthermore, the impact on the income of rural households is a pertinent aspect influenced by changes in the apparel industry. Notably, a significant proportion of Bangladesh's apparel workforce, predominantly comprising females, originates from rural areas (Afsar, 2003; Kibria, 2001; Zohir, 2001;). A subset of these workers remits a portion of their income back to their rural households. Consequently, alterations in the apparel industry may have cascading effects on the income dynamics of these rural households. This research aims to address this

intricate issue, investigating the multifaceted implications of trade liberalization, particularly the abolition of MFA imports quotas, on Bangladesh's economic performance, poverty landscape, and the income dynamics of its rural populace.

1.1 Background of the research

Over the past three decades, the garment industry has emerged as a linchpin for the economic landscape of Bangladesh, wielding a transformative impact on employment, trade, and overall economic growth. The genesis of this industry can be traced back to the late 1970s and the early 1980s, a pivotal period marked by the influence of the Multi-fiber Arrangement (MFA). This international agreement not only favored Bangladesh but also paved the way for its apparel sector to venture into North American and European markets, becoming a key player in the global textile trade (López-Acevedo & Robertson, 2012).

Presently, the garments industry stands tall as a multibillion-dollar powerhouse within Bangladesh, standing as a testament to its substantial contribution to the nation's economic prosperity. Haider (2007) underscores the remarkable trajectory of this sector, noting that its initial contribution to total exports was a mere 0.001 percent in the late seventies. However, by the year 2007, it burgeoned to a staggering 79.3 percent, firmly establishing itself as the driving force behind the country's export prowess.

The backbone of Bangladesh's Ready-Made Garments (RMG) export comprises knitwear and woven garments. In the industry's nascent stages, during the 1980s, woven garments dominated the export landscape, largely due to the United States being a primary market. However, a paradigm shift occurred in the early 1990s with a substantial surge in knitwear production, propelled by an escalating demand from the European Union (EU). By the fiscal year 1991–92, knitwear claimed a significant 15 percent share in Bangladesh's total RMG export (Ahmed & Peerlings, 2009). Presently, the spectrum of apparel commodities from Bangladesh encompasses a diverse range, including shirts, trousers, jackets, T-shirts, sweaters, and more. Figure–1 illustrates a bar chart depicting the various apparel items exported between 1994 and 2012, emphasizing their increasing share in total exports. This diversification signifies the industry's adaptability and resilience in catering to evolving global demands.

1.2 Objective of the research

The objective of this study is to provide an analysis of economy wide impacts of some recent challenges and opportunities posed by the changing global economy towards the apparel industry of Bangladesh. The study will also provide a comparative analysis of impacts of various preferential trade arrangement attempts of Bangladesh on the apparel industry and on the economy as a whole.

Objective of the Study:

The main objective of the study is to find out and discuss the contribution of garments sector in economic development of the country, and to uncover the challenges this sector is facing. The specific objectives of this study are as follows:

1. Explore the role of the garments sector in driving the economic growth of the nation.
2. Investigate the obstacles encountered by the garments industry.
3. Identify the economic significance of the garment sector within Bangladesh.
4. Analyze strategies to address challenges and enhance the sector's performance.
5. Examine how the Bangladeshi Garment industry can establish a competitive edge in the global market.

2 Literature Review of the Bangladeshi RMG Industries.

The literature on the Ready-Made Garment (RMG) sector provides a comprehensive overview of its multifaceted dynamics, encompassing its economic contributions, challenges, and imperative role in employment generation and women's empowerment.

Islam (2015c) sheds light on the pivotal role of the RMG sector in the employment landscape, emphasizing its singular contribution to almost 4.4 million workers, with a substantial 80% comprising women. This facet underscores the sector's profound impact on women's empowerment, a vital aspect of societal progress. Additionally, Islam (2015b) notes that the RMG sector commands a significant share in export earnings, reaching approximately \$50 billion, constituting a staggering 81% of the total export revenue. Despite this notable economic contribution, challenges persist, including issues related to workers' safety and welfare, inadequate infrastructure, a dearth of training and research initiatives, low productivity, a scarcity of skilled workforce, and intense competition from rival nations.

Mahmud et al., (2012) delves into the economic ramifications of the RMG industry, highlighting its role in boosting the Gross Domestic Product (GDP) by 4.39%. The fiscal year 2011–2012 witnessed RMG exports reaching USD 19.91 billion, constituting a remarkable 81% of the nation's export earnings and contributing 4%–5% to global exports. This underscores the sector's not only national but global significance as a key player in international trade.

Hasan (2013) examines the trajectory of the RMG industry since 2005, acknowledging its unprecedented growth fueled by low-cost apparel and labor. However, the industry grapples with emerging challenges as it strives to reach its full potential. These challenges encompass poor infrastructure, the absence of backward linkages, extended lead times, and the imperative need for market and product diversification. Hasan emphasizes that despite the industry's remarkable growth and promising prospects, it contends with persistent challenges. Foremost among these challenges is the crucial task of ensuring workplace safety and improved working conditions for the millions of garment workers, reflecting a pressing concern for the industry's sustainability and ethical practices.

Clark and Kanter (2011) found the efficiency levels of Bangladeshi workers, concluding that their productivity falls significantly below international standards, approximately one-fourth of that of Chinese workers. This is primarily attributed to the low literacy rate in Bangladesh. Uddin (2008) find variations in skilled and unskilled workers' proportions across different-sized RMG factories, with larger factories having a higher percentage of skilled workers. Berik and Rodgers (2010) highlight the reluctance of Bangladeshi RMG owners to invest in training and development facilities, despite evidence suggesting that training costs are offset by increased productivity.

Cowan & Raddatz (2011) identify five major challenges for the RMG sector in Bangladesh, including weak infrastructure, compliance issues, low supplier and labor efficiency, insufficient backward linkage, and political and economic volatility. Chowdhury et al. (2023) analyze management perspectives, revealing concerns about utility crises, dependency on imported raw materials, supplier inefficiency, low labor productivity, high-interest rates, insufficient bank finance, and political unrest.

Schwab (2014) emphasizes infrastructure challenges, such as road networks, port facilities, and utility supplies like electricity and gas. Rahman and Anwar (2007) stress the common challenges of weak and inadequate infrastructures, including poor energy supply and port facilities, facing the RMG sector in Bangladesh. Port congestion is also identified as a problem. Rakib & Adnan (2015) add that unskilled labor and low productivity contribute to increased production costs.

Anisul et al. (2014) point out a myriad of challenges, including conflicts between owners and workers, labor unrest, shortages of gas and electricity, poor infrastructure, inadequate port facilities, lead time complexities, and advancing competitors in the quota-free international market. Siddiqi (2016) notes the initiatives taken after the Rana Plaza disaster, such as the Alliance and the Accord, to improve factory safety conditions.

Sarwar (2013) identifies poor infrastructure, including gas and electricity crises, as a factor leading factory owners to use backup generators, increasing production costs. Ahmed et al., (2014) emphasizes corruption and bureaucratic inefficiencies as major challenges for industrial growth, along with concerns about economic and political stability, availability of trained and efficient workforce, and weak backward linkages in the RMG sector.

2.1 History and Growth of Garments Industry in Bangladesh

The export-oriented Ready-Made Garments (RMG) sector in Bangladesh embarked on its journey in the late 1970s as a nascent, non-traditional export industry. Initially comprised of a mere nine exporting garments industries, notable pioneers like Riaz Garments, Jewel Garments, and Paris Garments led the way. Riaz Garments, established by Mohammad Reaz Uddin, started as a small tailoring shop, later evolving into Riaz Garments in 1973. By 1978, it commenced exports, delivering one million pieces of shirts to the South Korean company "Olanda."

Desh Garments, another trailblazer, initiated a joint venture with the South Korean company "Daiyuu" in 1979. Simultaneously, other garment factories such as Style Craft Limited, Aristo Craft Limited, Azim Group, and Sunman Group emerged, contributing to the sector's burgeoning landscape. Despite the modest beginnings, the RMG sector in Bangladesh has experienced continuous growth, progressing from a meager US\$69 thousand in exports when Reaz Garments made its debut in 1978 to a monumental US\$24.49 billion in the fiscal year 2013–14.

A pivotal factor in this exponential growth was the Quota system, operating under the Multi Fiber Arrangement (MFA) from 1974 to 2004, which imposed export quotas on developing countries. Bangladesh experienced an eightfold increase in garment exports from US\$620 million in 1990 to US\$5.7 billion in 2004. The post-MFA era posed challenges, but the industry adeptly navigated them, witnessing further growth, with exports increasing by about US\$500 million in 2006. Presently, Bangladesh boasts more than 5,000 garment factories, reinforcing its status as the largest export earner. The sector, which registered a 14% growth, reached US\$24.49 billion in exports during the 2013–14 fiscal year, contributing 81.68% to the total export, further highlighting its indispensable role in the country's economy.

The RMG industry's contribution to the national economy is underscored by its share in total exports, consistently rising from 75.06% in 2005–06 to a remarkable 81.68% in 2014–15. This impressive growth has positioned Bangladesh as a major player in the global RMG market, with the USA and European Union countries serving as primary importers of

Bangladeshi RMG products. In essence, the RMG sector in Bangladesh stands as a success story, exemplifying resilience, adaptability, and substantial economic contribution.

Throughout the annals of Bangladesh's textile industry, a tale of resilience, craftsmanship, and transformation unfolds. Traditionally, skilled artisans, working in small, cottage industries, wove the fabric of the sub-continent, with East Bengal standing as a self-sufficient hub for textiles. From prehistoric times until the eighteenth-century Industrial Revolution, the region flourished in the production of esteemed textiles like Muslin, Jamdani, and various cotton and silk fabrics.

The eighteenth century marked a seismic shift as mechanized textile mills burgeoned in the English Midlands, sparking vigorous competition. This era witnessed a decline in the number of skilled Bengali workers capable of producing high-quality fabrics. As the region's spinners and weavers posed a threat to the emerging British textile industry, tales of harsh measures, such as cutting off artisans' thumbs, emerged.

Simultaneously, the indigo dye industry faced challenges due to British administrators' forceful cultivation of indigo plants, depleting soil and rendering the crop unpredictable. The fabric produced in British factories flooded Indian markets, becoming a focal point in the independence movement as the sub-continent sought separation from Great Britain.

Post-independence in 1947, the textile industry in East Bengal grappled with stagnation. The partition of East and West Pakistan led to a shift in resources and capital, favoring the west. Despite East Bengal's abundant water resources, essential for modern dye processes, the industry stagnated.

The narrative took a new turn in 1971 when Bangladesh gained independence from Pakistan. The government, seeking control, nationalized the textile industry, including factories predominantly owned by West Pakistani industrialists. This marked the birth of the Bangladesh Textile Mills Corporation (BTMC), with Bangladeshi industrialists, though present, ceding control to the government.

The journey of Bangladesh's textile industry echoes the broader historical and socio-economic shifts. From the craftsmanship of artisans to the challenges of colonial forces, the

industry's trajectory encapsulates a narrative of transformation, challenges, and the indomitable spirit of a nation shaping its textile legacy.

Table 1: Some important phases of the Bangladesh RMG industry.

Period	Event
1977–1980	Early period of growth
1982–1985	Boom days
1985	Imposition of quota restrictions
1990s	Knitwear sector developed significantly
1995–95	Child labor issue and its solution
2003	Withdrawal of Canadian quota restriction
2005	Phase–out of export–quota system

2.2 Growth of garment factories in Bangladesh

The emergence and growth of the export-oriented readymade garments (RMG) sector in Bangladesh constitute a compelling narrative of economic transformation. In the late 1970s, this sector, initially a small non-traditional segment of the country's exports, embarked on a journey that would reshape the economic landscape. At its inception, a mere nine exporting garments industries laid the foundation for what would become a cornerstone of Bangladesh's economy.

Among these pioneering industries were Riaz Garments, Jewel Garments, and Paris Garments, with Riaz Garments standing out as the most renowned and oldest during that era. Established by Mohammad Reaz Uddin, Riaz Garments commenced as a modest tailoring shop known as Riaz Store. In 1973, it evolved into Riaz Garments, marking the beginning of its remarkable journey. By 1978, the company achieved a significant milestone by exporting one million pieces of shirts to the South Korean company "Olanda."

Desh Garments, another trailblazer, initiated a joint project with the South Korean company "Daiyuu" in 1979. Concurrently, additional garments factories, including Style Craft Limited, Aristo Craft Limited, Azim Group, and Sunman Group, were established. These enterprises,

led by discreet and hard-working entrepreneurs, further diversified the burgeoning RMG sector in Bangladesh.

From its nascent stages, the RMG sector has witnessed a continuous evolution, overcoming various critical stages of development. In 1978, when Reaz Garments exported its first consignment, Bangladesh's RMG exports amounted to a modest US\$69 thousand. However, within a span of approximately two decades, by FY2002, exports surged to US\$4.5 billion. The subsequent 12 years saw an exponential increase, reaching a staggering US\$24.49 billion in the fiscal year 2013–14. Remarkably, over the past decade alone, the sector achieved a phenomenal growth rate of 15 percent per annum, a testament to its resilience and adaptability.

Categorized into woven and knitted products, Bangladesh's readymade garments include a diverse range of items such as shirts, pants, trousers, T-shirts, polo shirts, undergarments, socks, stockings, and sweaters. While woven garments traditionally dominated export earnings, there has been a significant uptick in the production of knitted items, constituting approximately 40% of the country's export earnings.

A pivotal catalyst for the establishment and maturation of the garments industry in Bangladesh was the Quota system. Governed by the Multi Fiber Arrangement (MFA) from 1974 to 2023, this system-imposed quotas on the export capacity of developing countries to developed nations. Between 1990 and 2023, Bangladesh experienced an eightfold increase in garment exports, reaching US\$5.7 billion. As the quota system approached its end in 2023, concerns arose about the future of the RMG sector. However, the industry adeptly navigated the post-quota challenges, resulting in a successful and sustained growth story. In 2006, Bangladesh's exports increased by approximately US\$500 million.

Despite its economic contributions and the social benefits of empowering women and enhancing mobility and individual choice, the growth of the garment industry in Bangladesh has not been without criticism. Critics contend that increased opportunities for women have been accompanied by health risks and heightened vulnerability to harassment. Nevertheless, the sector's trajectory underscores its pivotal role in the economic narrative of Bangladesh, representing a transformative force that continues to shape the nation's fortunes.

3 Research Methodology

In this section of the thesis, we will delve into the research methodology best suited to gain valuable insights into the current state of the Bangladesh Ready-Made Garment (RMG) industry. Furthermore, we will emphasize the significance of the data collection process in shedding light on the industry's prevailing conditions.

3.1 Methodology

This segment of the thesis will provide an expansive overview of the methodology, as it plays a pivotal role in evaluating the collected data. To attain the objectives of this paper, there must be a seamless connection between the chosen theories, the thesis's strategy, and an exploration of the internal competitiveness within the Bangladesh RMG industry. The central aim of this thesis is to determine whether the Bangladesh RMG industry possesses the internal competitive capabilities necessary to outpace international competition, ultimately positioning itself as a global leader in apparel exports amid the current market challenges.

3.2 Research Method

Selecting the most appropriate research method is imperative to avoid overlooking critical findings. The choice of the research method significantly impacts the overall output of the thesis. Qualitative, quantitative, correlational, quasi-experimental, experimental, and meta-analysis are some of the widely employed research methodologies globally. However, the selection of a research method for a thesis primarily relies on the researcher's intuition regarding the topic itself (Long et al., 2000, p. 189).

Qualitative method has been used in this research for exploring the richness of data and understanding the perspectives of key stakeholders in the context of the Bangladesh RMG industry. It requires a unique set of skills, including imagination, courage to confront the unknown, flexibility, creativity, and proficient observational and interviewing skills (Goldman, 1989). The qualitative approach adopted in this study seeks to delve into the complexities underlying the current crisis in the Bangladesh RMG industry, offering a profound understanding of subjective meanings that drive the industry's success (Ekanem, 2007).

The decision to opt for a direct interview approach stems from the limited availability of information data in the context of the Bangladesh Garments Industry. In this study, a minimum of ten interviews with experts in the Garments Industry from the two major economic zone of Bangladesh is deemed necessary. These interviews have been conducted with 10 male and an woman whose age range covers from 30 to 55 years for using meticulously crafted questions designed to extract comprehensive insights into the intricacies of the industry.

Qualitative Research

Utilizing qualitative research in this thesis serves the fundamental purpose of critically analyzing the gathered data and comprehending the perspectives of key stakeholders in the Bangladesh RMG industry, including government officials and factory owners. This method has been described as "a method not meant for the faint of heart, demanding imagination, courage to confront the unknown, flexibility, creativity, and proficient observational and interviewing skills" (Goldman, 1989).

Rationale for Qualitative Research

A direct interview approach was chosen for this study, since there is not a lot of information and data availability, an Experts in Garments Industry from Bangladesh, a minimum of eleven people were inquired and interviewed with the mail questions to get a strategic response to the challenges posed by the limited availability of information. By engaging directly with industry experts, the study seeks to bridge the information gap, uncovering nuanced perspectives and firsthand experiences that might not be readily accessible through conventional data sources.

While a survey-based approach offers the perspective of an impartial observer on specific topics, a qualitative method is essential to gain a deeper understanding of the intricate dynamics underlying the current crisis in the Bangladesh RMG industry. It provides access to the subjective meanings that drive the industry's success (Ekanem, 2007).

The chosen method involves the formulation of a set of meticulously crafted questions, which will be communicated via mail to the selected experts. This approach aims to facilitate a comprehensive exploration of the subject matter, tapping into the expertise and insights of key individuals within the Bangladesh Garments Industry. The use of email for the dissemination of questions allows for flexibility in the respondents' engagement, enabling them to provide thoughtful and detailed responses at their convenience.

Rationale for Not Considering Other Research Methods

The nature of this thesis compels the use of qualitative methodology, as it necessitates defensibility and a profound exploration of the "why" behind the actions and decisions of those shaping the garments industry in Bangladesh. Quantitative research validity is limited in developing countries, as most people lack substantial knowledge on specific subjects, and data collection is largely manual due to limited internet access. Additionally, mixed research methodologies could lead to confusion regarding the priority between qualitative and quantitative approaches. The impracticality of experimental research is evident, given the need for a physical presence during experiments and the associated time and cost constraints. The table in Figure 9 below provides a comprehensive explanation of why alternative research methodologies were not considered for this thesis.

3.3 Approach for this Study

The foundation of our research approach is rooted in the collection of primary data through interviews. To fulfill the objectives of this thesis, the initial plan involved engaging with regulatory figures within the Bangladeshi RMG industry. These interviews aimed to unearth their experiences and their potential contributions to the industry's future betterment. Given the dynamic nature of the RMG sector in Bangladesh, marked by continual fluctuations, there is a consistent demand for primary data to ensure a robust research conclusion. Furthermore, the importance of supplementing primary data with secondary data was recognized, as the latter can complement and bolster the former, enhancing the overall credibility of the research.

3.4 Qualitative Research – Telephone Interviews

The interviews conducted over the telephone were instrumental in providing in–depth insights for this thesis. While reaching out to interviewees posed challenges, it was imperative to achieve the research's objectives. Most of these interviews took place between the 12th and 28th of September. Initially, interviewees were contacted via email, requesting their valuable time for an interview. Unfortunately, a substantial number did not respond to these requests. As a result, it became necessary to directly call their phone numbers, seeking their permission for interviews. Notably, all interviewees contact information could be found on their respective company websites or the BGMEA web portal. Although most interviewees did not agree to interviews on the first call, some requested callbacks or provided specific time slots. Conducting interviews with key figures in the Bangladesh garments industry proved to be a time–consuming process, but ultimately, all interviews were completed by the 28th of September.

3.5 Secondary Data

Secondary data encompasses previously collected data and is invaluable for research (Cowton, 1998). It is not specific to the research question at hand but can provide crucial context (Davies & Ellis, 2000). For this study, secondary data was drawn from various sources, categorized into VAMK Tritonian web portal, Google, and official websites of organizations related to Bangladesh RMG.

Research gate Web Portal

The primary source of secondary data used in this thesis is the Research gate web portal. This platform offers access to a wide range of journals, scholarly publications, magazines, and other valuable sources.

Google

Google, a renowned search engine, was another significant source of secondary data. It allowed access to articles from international organizations such as the World Bank, WTO, IMF, and BBC World, all of which play a vital role in providing information on the Bangladesh RMG industry.

Bangladesh RMG Official Websites

Both government and non–government organizations closely associated with the RMG industry in Bangladesh provided essential secondary data. The official websites of organizations like the Bangladesh Export Promotion Bureau (a government entity) and industry bodies like BGMEA and BKMEA served as critical sources of data for this study.

3.6 Primary Data

To address complex research challenges, primary data was collected. Phone interviews were chosen as the primary data collection method, aligning with the initial research plan.

3.7 Design of Sample and Size

The sample was designed by considering the geographical distribution of BGMEA boards of directors in Dhaka and Chittagong, the two cities with a significant concentration of garment businesses. Interviewees from other related industries were also included based on their institutional importance and size. Out of the total twenty-two BGMEA boards of directors in both cities, eight directors consented to interviews. Additionally, interviews were sought from seven more individuals in the garments industry, with only two agreeing to participate.

BGMEA boards of directors play a pivotal role in the development of the Bangladeshi garments industry, and their awareness of the industry's dynamics is crucial. Hence, their input was considered the most appropriate for the interviews.

3.8 Design of Questionnaires

The questionnaire was structured to provide an initial understanding of the garment industry, followed by questions aiming to establish impactful facts. Subsequent sections aimed to delve deeper, offering insights into the industry and government perspectives. The questionnaire concluded with interviewees' comments on the subject under study.

4 Data Analysis

4.1 Bangladesh's RMG Export to World

Overview of Bangladesh's RMG Sector Growth and Export Dynamics

The ready-made garments (RMG) sector in Bangladesh has undergone remarkable growth, transforming into the country's largest exporting industry within the last two decades. According to private statistics, there are currently over 5,000 garment factories in Bangladesh. However, the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) reports a slightly lower figure, indicating more than 4,000 garment factories. This proliferation of factories marks a substantial increase from the mere 384 factories in the year 1984–85. The industry reached its peak with 6,876 factories in 2022 but subsequently decreased to 4,222 in 2023.

Despite these fluctuations in the number of factories, the RMG industry has consistently played a pivotal role in Bangladesh's economy, emerging as the country's largest export earner. In the fiscal year 2023–24, RMG exports witnessed a notable surge of 14 percent, reaching US \$24.49 billion. However, this fell slightly short of the targeted US \$30.5 billion by 1 percent. Despite not meeting the set export target, the RMG sector maintained satisfactory growth, reflecting its resilience.

Global Export Dynamics of Bangladesh's RMG Sector

The unprecedented growth of Bangladesh's RMG sector over the last 20 years positions it as a major contributor to the country's foreign exchange earnings, exports, industrialization, and GDP. The primary importers of Bangladeshi RMG products are the USA and Europe. The USA, in particular, stands out as the largest importer of Bangladeshi RMG products, followed by Germany, the UK, France, and other European Union countries.

A detailed analysis of Bangladesh's RMG exports to the world from 2020 to 2022 is presented in Table 2.

Table 2: Bangladesh's RMG Export to World from 2020 to 2022.

Million US\$	Woven			Knit			Total		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
EU	5663.29	6230.26	6910.1	8140.9	8779.99	8992.53	13804.23	15010.25	15902.68
Countries			4	4					
% of World	46.99	50.16	50.05	71.11	72.19	70.27	58.74	61.06	59.78
Growth %	18.80	10.01	10.91	17.83	7.85	2.42	18.23	8.74	5.95
USA	4,088.09	3,803.62	4,233.65	1,209.8	1,204.43	1,425.26	5297.90	5008.04	5658.91
% of World	33.92	30.62	30.67	10.57	9.90	11.14	22.54	20.37	21.27
Growth %	14.94	-6.96	11.31	16.82	-0.45	18.33	15.36	-5.47	13.00
Canada	545.68	525.80	569.91	454.37	403.34	403.88	1000.05	929.15	973.79
% of World	4.53	4.23	4.13	3.97	3.32	3.16	4.26	3.78	3.66
Growth %	9.45	-3.64	8.39	2.87	-11.23	0.13	6.36	-7.09	4.80
Other Countries	1755.24	1861.58	2091.7	1643.5	1774.94	1975.59	3398.80	3636.52	4067.32
% of World	14.56	14.99	15.15	14.36	14.59	15.44	14.46	14.79	15.29
Growth %	35.53	6.06	12.36	27.97	7.99	11.31	31.77	6.99	11.85
Grand Total	12052.30	12421.2	13805.44	11448.68	12162.7	12797.2	23500.98	24583.96	26602.70
Growth %	19.12	3.06	11.14	18.39	6.24	5.22	18.76	4.61	8.21

The table reveals consistent growth percentages across woven, knit, and total RMG exports, highlighting the sector's resilience and global demand for Bangladesh's garment products.

Dynamics of Bangladesh RMG Exports to European Union (EU) Countries

The textile industry is a cornerstone of global trade, and the intricacies of fabric production in European Union (EU) countries play a pivotal role. This comprehensive analysis scrutinizes the woven and knit fabric production trends across the EU from 2020 to 2022. Its significance extends to Bangladesh's Ready-Made Garments (RMG) sector, offering crucial insights into export opportunities and challenges within this dynamic landscape.

The Austrian market emerges as a growth powerhouse, showcasing remarkable expansion in both woven and knit fabric categories. With an impressive overall growth rate of 34.55% in 2022, this signals a promising market for Bangladeshi RMG exporters, urging a closer examination of the factors driving this growth. Despite a slight dip in total production, Belgium exhibits resilience, boasting a commendable 16.35% growth in 2022. This highlights the existence of specific niches within the EU market that Bangladesh can strategically explore.

As a stalwart in the EU textile landscape, Germany maintains a substantial contribution with a 17.62% growth in 2022. This consistent demand for textiles presents an ongoing opportunity for Bangladesh's RMG sector, suggesting avenues for collaboration and market penetration.

Italy stands out as a key player, demonstrating remarkable growth rates of 53.66% in total production in 2022. This opens the door for Bangladesh to position itself as a supplier of premium woven and knit fabrics, reflecting on potential collaborations and product differentiation.

While Malta represents a smaller market, its extraordinary growth rate of 576.28% captures attention. Despite modest absolute production numbers, such significant growth indicates transformative shifts, offering unique opportunities for Bangladeshi exporters to explore new avenues and partnerships. The sub-total for the EU showcases a robust textile industry, reaching 23,040.35 million units in 2022, marking an overall growth of 28.49%. While there is a slight decline in the EU's percentage share of the world textile market (from 43.76% in 2020 to 41.62% in 2022), the region maintains a substantial presence globally.

Bangladesh can strategically tailor its RMG exports to align with the fabric preferences of specific EU countries, allowing for diversification and market expansion. Given the impressive growth rates in countries like Italy and Germany, emphasizing the production of high-quality textiles becomes paramount. This shift positions Bangladesh as a reliable source for premium woven and knit fabrics, meeting the discerning standards of influential EU markets. Identifying and tapping into emerging markets, as seen with Malta's exceptional growth rate, provides an avenue for Bangladesh to establish a foothold in evolving textile landscapes within the EU.

This analysis serves as a strategic guide for Bangladesh's RMG exports, presenting a detailed snapshot of the EU textile industry. By capitalizing on identified growth trends and tailoring exports to meet specific country demands, Bangladesh can solidify its presence in the competitive EU market. This approach ensures sustained growth and resilience in the face of dynamic market conditions, establishing Bangladesh as a key player in the evolving landscape of the EU textile industry.

Table 3: Expansion of RMG market in European Union (EU) Countries.

EU Countries	Woven			Knit			Total			Growth in 2022
	2020	2021	2022	2020	2021	2022	2020	2021	2022	
Austria	5.84	10.6	13.26	20.63	29.01	40.03	26.47	39.61	53.29	34.55%
Belgium	223	219.1	217.5	272.9	418.57	524.41	495.9	637.66	741.91	16.35%
Bulgaria	0.19	0.42	0.18	1.81	1.48	0.95	2.01	1.9	1.13	-40.67%
Denmark	252.25	318.82	420.19	439.87	628.3	803.09	692.11	947.12	1223.28	29.16%
Finland	6.27	5.84	7.25	21.31	25.08	44.85	27.58	30.92	52.1	68.47%
France	596.75	696.66	974.3	936.3	1260.79	1768.62	1533.05	1957.45	2742.92	40.13%
Germany	2199.6	2688.02	3002.33	2692.84	3507.88	4285.29	4892.44	6195.91	7287.62	17.62%
Greece	7.46	8.72	16.98	25.61	30.78	54.28	33.07	39.5	71.26	80.42%
Italy	376.78	399.61	669.69	744.18	911.11	1344.38	1120.96	1310.72	2014.07	53.66%
Ireland	54.22	60.08	84.23	82.21	109.77	141.53	136.43	169.85	225.76	32.92%
Netherlands	387.25	496.69	706.33	526.42	704.21	1003.2	913.68	1200.9	1709.53	42.35%
Portugal	15.94	20.63	36.23	36.68	49.81	81.7	52.62	70.43	117.93	67.44%
Romania	3.27	3.45	4.28	9.54	15.39	19.56	12.82	18.85	23.84	26.51%
Spain	863.4	1070.73	1341.65	1053.56	1432.14	1932.5	1916.96	2502.87	3274.15	30.82%
Sweden	197.05	213.41	295.73	342.15	440.53	572.29	539.21	653.93	868.02	32.74%
Cyprus	0.38	0.19	0.33	1.79	1.84	2.32	2.17	2.04	2.65	30.15%
Czech Republic	105.23	119.11	158.04	89.57	105.4	177.15	194.8	224.51	335.19	49.30%
Estonia	0.06	0.13	0.07	0.83	0.89	1.51	0.89	1.02	1.58	54.83%
Hungary	7.35	23.22	43.44	40.03	86.63	144.99	47.39	109.85	188.43	71.53%
Latvia	0.01	0.24	0.34	0.8	0.8	0.87	0.81	1.04	1.21	16.15%
Lithuania	0.34	0.2	0.19	1.21	0.28	0.27	1.55	0.49	0.46	-5.38%
Malta	0.04	0.02	0.12	1.41	0.06	0.44	1.44	0.08	0.56	576.28%
Poland	449.93	599.97	680.42	692.67	1041.13	1157.92	1142.6	1641.1	1838.33	12.02%
Slovakia	24.9	22.02	25.53	42.76	50.64	69.5	67.66	72.66	95.03	30.78%
Slovenia	12.6	18.95	29.44	42.96	66.31	104.7	55.57	85.26	134.14	57.33%
Croatia	4.26	3.67	10.32	9.32	10.73	23.07	13.58	14.4	33.4	131.86%
Luxembourg	0.05	0.12	0.32	0.68	0.96	2.22	0.74	1.09	2.55	134.24%
Sub-Total (EU)	5794.45	7000.6	8738.7	8130.06	10930.54	14301.65	13924.52	17931.15	23040.35	28.49%
EU % of World	43.76	43.17	41.62	57.14	55.78	57.87	50.69	50.07	50.41	
Growth %	-17.14	20.82	24.83	-15.26	34.45	30.84	-16.05	28.77	28.49	

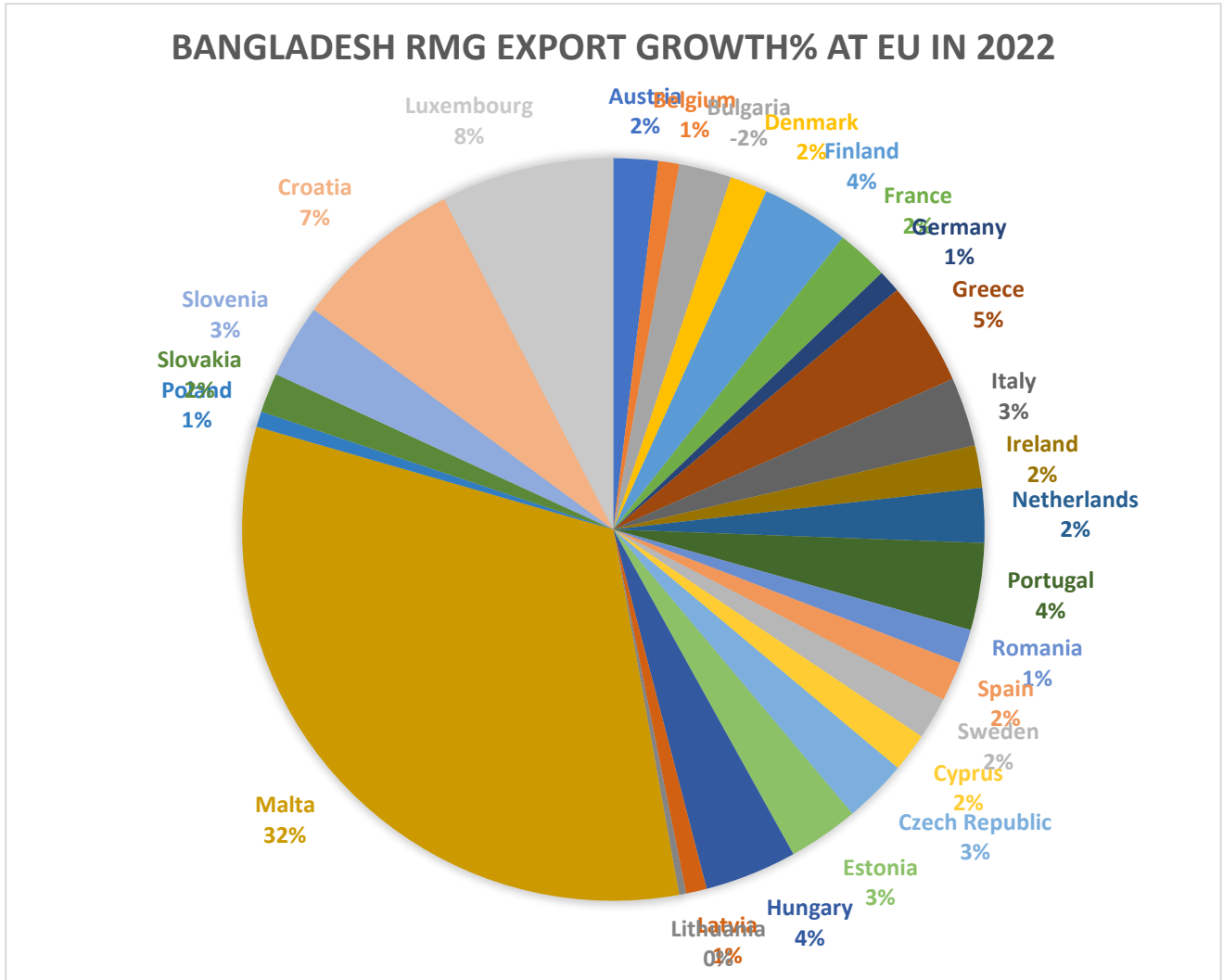


Figure 1. Bangladeshi RMG export growth in EU in 2022.

Contribution to Bangladesh's Total Exports

A comparative statement on the export of RMG and total exports of Bangladesh from 2013 to 2023 is presented in Table 4.

Table 4: Comparative Statement on Export of RMG and Total Export of Bangladesh

Year	Export of RMG (in million US\$)	Total export of Bangladesh (in million US\$)	% of RMG's to total export
2013–14	7900.80	10526.16	75.06
2014–15	9211.23	12177.86	75.64
2015–16	10699.80	14110.80	75.83
2016–17	12347.77	15565.19	79.33
2017–18	12496.72	16204.65	77.12

2018–19	17914.46	22924.38	78.15
2019–20	19089.69	24287.66	78.60
2020–21	21515.73	27027.36	79.61
2021–22	24491.88	30186.62	81.13
2022–23	25491.40	31208.94	81.68

Table 4 illustrates the consistent growth of the RMG sector's contribution to total exports, reaching an impressive 81.68% in the fiscal year 2022–23. This underscores the RMG sector's significance as the main contributor to Bangladesh's economy, particularly in terms of export earnings. The robust growth, global demand, and substantial contribution of the RMG sector to Bangladesh's economy make it a key player in the nation's economic landscape.

4.2 Contribution of RMG Sector to The National Economy

Impact of Bangladesh's RMG Sector on Economy and Society

The Ready–Made Garments (RMG) industry stands as a transformative force in the economic and social landscape of Bangladesh, contributing in distinctive ways. This industry, a major employer, has significantly improved the livelihoods of millions, particularly those in impoverished conditions. With over five million direct employees and an additional twelve million indirectly associated, the RMG sector has emerged as a key driver of income generation.

The expansion of the RMG industry has not only bolstered economic metrics but has also catalyzed social changes, notably by integrating more than 3.2 million women into the workforce. This has been a pivotal factor in women's empowerment, contributing to the overall social development of the country. The industry's socio–economic impact is evident in the noteworthy rise in GDP contribution, reaching 13 percent from a mere 3 percent in 1991.

Beyond direct economic contributions, the RMG sector plays a crucial role in shaping various key sectors of the economy. Its influence extends to banking, insurance, shipping, hotel, tourism, road transportation, and railway container services, fostering a network of interconnected industries. A remarkable 80 percent of the RMG workforce comprises women, often hailing from rural areas, further emphasizing its role in social development, women's empowerment, and poverty alleviation.

The sector's positive impact on the purchasing power of the poor has been instrumental in propelling economic growth through a multiplier effect on consumption expenditure and savings. Over a span of 25 years, the RMG industry has grown into a formidable US\$6 billion industry, becoming a linchpin in the overall economic growth of the country. Impressively, about 76 percent of the total export earnings of Bangladesh are attributed to the RMG sector.

Export Condition of the Garments Industry:

The ready-made garments (RMG) sector stands as the largest exporting industry in Bangladesh and has witnessed remarkable growth over the past two decades. Benefiting from favorable trade conditions provided by the Multi-Fiber Agreement (MFA) of the General Agreement on Tariffs and Trade (GATT), this industry has made significant strides in terms of foreign exchange earnings, exports, industrialization, and its contribution to the country's Gross Domestic Product (GDP) within a relatively short period. During this time frame, the number of manufacturing units has surged from 180 to over 3,600, reflecting the industry's rapid expansion. Furthermore, the RMG sector has played a pivotal role in fostering socio-economic development in the country.

The export performance of Bangladesh's garment industry has shown consistent improvement over the years, with a few exceptions. Challenges such as strikes, factory shutdowns, political unrest, economic fluctuations, and inflation have occasionally caused declines in export figures for this crucial sector. Despite these obstacles, the Readymade Garment Industry remains the foremost player in the country's export landscape. Over the past three decades, global trade and investment in the textile and garment (T&G) sectors have been significantly influenced by the imposition of quantitative restrictions, or quotas, under the Multi-Fiber Agreement (MFA). These quotas were primarily imposed by major developed country importers, including the United States, the European Union, Canada, and Norway, on T&G exports originating from predominantly developing nations.

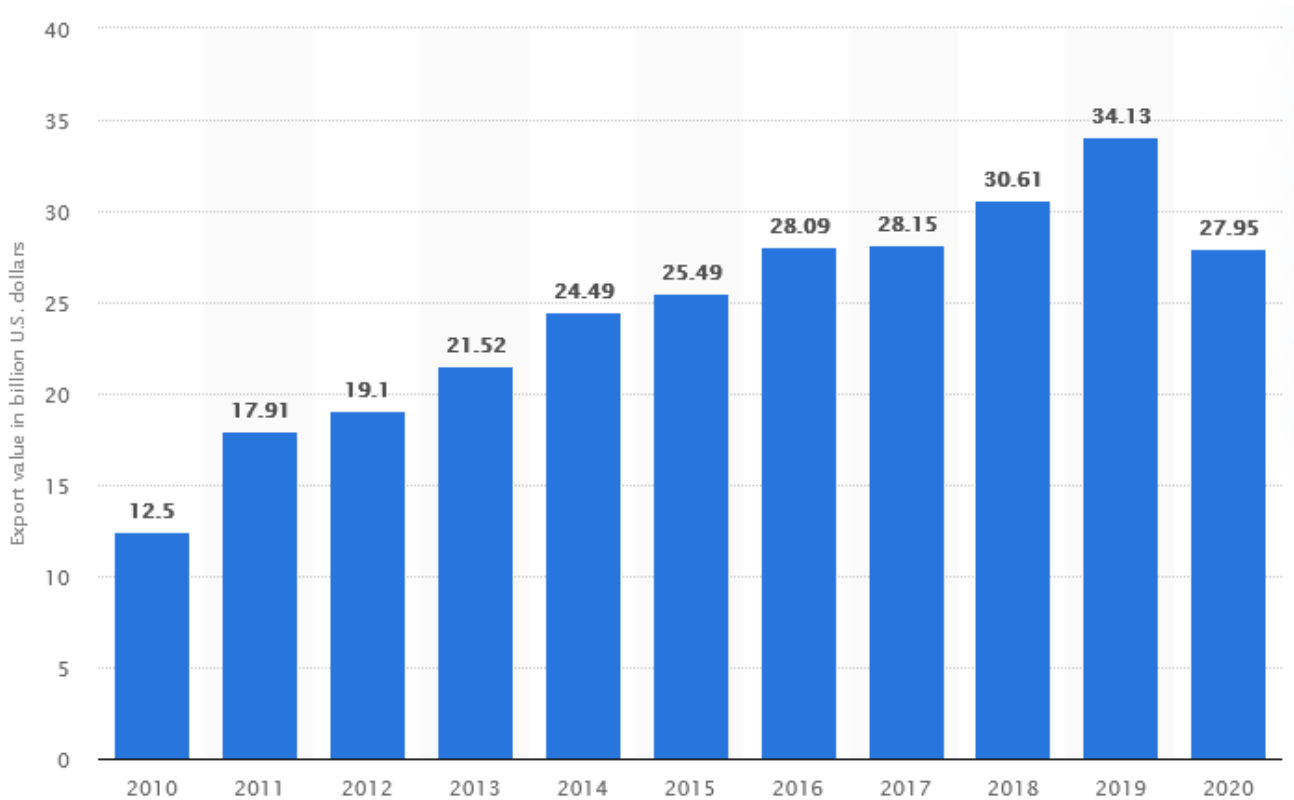


Figure 2. Export value of ready-made garments (RMG) in Bangladesh from 2011 to 2020 (in billion U.S. dollars).

Comparative Statement on Export of RMG and Total Export of Bangladesh (Value in Million USD)

In recent years, the Ready-Made Garments (RMG) sector has emerged as the cornerstone of Bangladesh's export industry, significantly contributing to the country's total export earnings. The comparative statement on the export of RMG and the total export of Bangladesh, represented in millions of US dollars, illustrates the growing prominence of the RMG sector within the nation's export landscape. This statement provides a comprehensive overview of the substantial role that the RMG industry plays in bolstering the economic growth and global competitiveness of Bangladesh.

Year	Export of RMG	Total Export of Bangladesh	% of RMG's to Total Export
1983-84	31.57	811.00	3.89
1984-85	116.2	934.43	12.44
1985-86	131.48	819.21	16.05
1986-87	298.67	1076.61	27.74
1987-88	433.92	1231.2	35.24
1988-89	471.09	1291.56	36.47
1989-90	624.16	1923.70	32.45
1990-91	866.82	1717.55	50.47
1991-92	1182.57	1993.90	59.31
1992-93	1445.02	2382.89	60.64
1993-94	1555.79	2533.90	61.40
1994-95	2228.35	3472.56	64.17
1995-96	2547.13	3882.42	65.61
1996-97	3001.25	4418.28	67.93
1997-98	3781.94	5161.20	73.28
1998-99	4019.98	5312.86	75.67
1999-00	4349.41	5752.20	75.61
2000-01	4859.83	6467.30	75.14
2001-02	4583.75	5986.09	76.57
2002-03	4912.09	6548.44	75.01
2003-04	5686.09	7602.99	74.79
2004-05	6417.67	8654.52	74.15
2005-06	7900.80	10526.16	75.06
2006-07	9211.23	12177.86	75.64
2007-08	10699.80	14110.80	75.83
2008-09	12347.77	15565.19	79.33
2009-10	12496.72	16204.65	77.12
2010-11	17914.46	22924.38	78.15
2011-12	19089.73	24301.90	78.55
2012-13	21515.73	27027.36	79.61
2013-14	24491.88	30186.62	81.13
2014-15	25491.40	31208.94	81.68
2015-16	28094.16	34257.18	82.01
2016-17	28149.84	34655.90	81.23
2017-18	30614.76	36668.17	83.49
2018-19	34133.27	40535.04	84.21
2019-20	27949.19	33674.09	83.00

Table 5: Statement on Export of RMG and Total Export of Bangladesh

Source: BGMEA

In 2022, Bangladesh's textile and apparel exports to the United States achieved a remarkable milestone by surpassing \$10 billion, marking a significant growth trajectory despite the prevailing global economic uncertainty. This remarkable growth can be attributed to a

substantial shift in the sourcing strategy of the United States, diverting a substantial portion of its business away from China.

According to the latest data from the US Department of Commerce's Office of Textiles and Apparel (OTEXA), the total apparel and textile imports from Bangladesh to the United States in 2022 recorded an impressive increase of 35.38 percent, reaching a total of \$10.04 billion, compared to \$7.42 billion in the preceding year. Specifically, Bangladesh's exports of readymade garments to the United States in 2022 experienced a remarkable surge, marking a 36.38 percent increase from the previous year, with a total value of \$9.74 billion compared to \$7.14 billion in 2021, as confirmed by the OTEXA data. The share of Bangladeshi apparel in the US market also exhibited growth, rising to 9.75 percent in 2022, in contrast to 8.76 percent in the previous year, as indicated by the same data source. This substantial increase in Bangladesh's share of the US apparel market can be attributed to the "China plus one" strategy adopted by North American businesses. The ongoing trade tensions between the United States and China since 2018 prompted a relocation of sourcing from China to mitigate risks, and this trend shows no signs of abating.

Additionally, Bangladesh was the recipient of a significant portion of the business shifted from China, and buyers concurrently transitioned their manufacturing operations from Myanmar to Bangladesh, further enhancing the country's position as a global apparel manufacturing hub. Mahmud Hasan Khan Babu, the Managing Director of Rising Group, expressed optimism that Bangladesh's share in the US apparel market would continue to expand as Western buyers persist in shifting away from China. While Bangladesh's remarkable growth in the US apparel market is evident, it's worth noting that the total US imports of readymade garments from across the world also saw a substantial increase in 2022, growing by 22.48 percent to nearly \$100 billion compared to \$51.59 billion in the previous year, according to OTEXA. Despite this growth, Bangladesh maintained its position as the third-largest apparel exporter in the US market with a 9.75 percent market share, with China and Vietnam occupying the first and second positions with 21.75 percent and 18.26 percent, respectively. The data further revealed that China's share of the US apparel market, which was 37.32 percent in 2013, decreased to 21.75 percent in 2022, underscoring the ongoing shift in sourcing patterns.

It's noteworthy that after the tragic Rana Plaza building collapse in 2013, which claimed the lives of over 1,100 people, the US government suspended the duty-free market access of Bangladeshi products under the Generalized System of Preferences (GSP), citing poor

working conditions. It's important to note that the RMG sector was never entitled to GSP benefits in the US market. In 2013, Bangladesh's share of the US apparel market stood at 6.20 percent, and this figure has impressively increased to 9.75 percent over the past nine years.

Faruque Hassan, President of the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) hailed the growth in apparel exports to the US market as a testament to Bangladeshi suppliers gaining the trust of global buyers despite the disruptions in the supply chain caused by the Russia-Ukraine conflict. He attributed the increase in export earnings to rising unit prices resulting from the escalation of raw material costs and the shipment of high-value-added products. Furthermore, the OTEXA data revealed that the United States increased its imports of readymade garments from Vietnam in 2022 by 26.97 percent, reaching a total of \$18.24 billion. India's RMG exports to the US market also exhibited substantial growth, increasing by 35.50 percent to \$5.68 billion from \$4.19 billion in the preceding year. The US imports of RMG from Indonesia in 2022 increased by 35.29 percent to \$5.60 billion, while imports from Cambodia surged by 28.46 percent to reach \$4.35 billion during the same period.

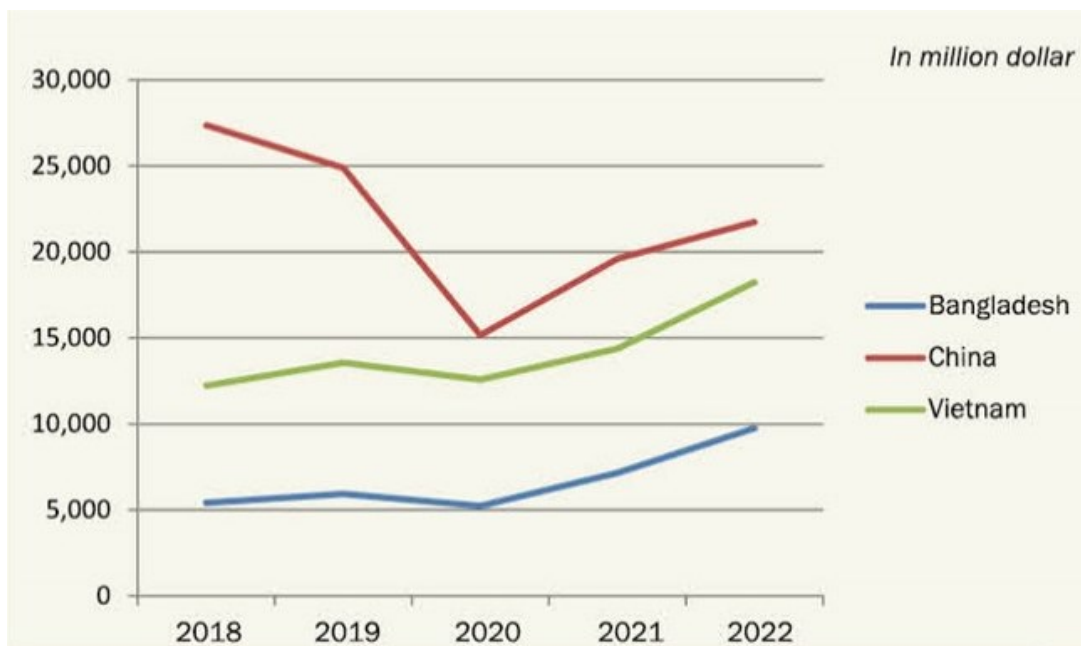


Figure 3. The substantial growth trajectory of the RMG sector.

Fig. 3 illustrates the substantial growth trajectory of the RMG sector, showcasing its financial evolution over the years. The sector's predominantly export-oriented nature is evident, with

95 percent of woven and 90 percent of knit exports directed to foreign markets. The cumulative foreign currency earnings since the sector's inception in 1978 stand at an estimated US\$70.56 billion.

Over a period of 25 years, the garments sector has grown into a US\$6 billion industry. During the period, it has boosted the overall economic growth of the country and raised the viability of other export sectors. About 76 percent of total export earnings of the country come from RMG sector. Fig. 2 shows that in FY 2001–02 RMG sector of Bangladesh earned around US\$ 4,883 million, in FY 2007–08 the value was US\$ 10,700 million, and finally in FY 2014–15 the value stood at US\$25,491 million. Figure 3: Contribution of RMG in total export of Bangladesh

Bangladesh's RMG industry, with its woven and knit subcomponents, is a pre-dominantly export oriented sector, with 95 per cent of the woven and 90 per cent of the knit exports being directed to foreign markets. The cumulative foreign currency earnings by the sector, since 1978, when first export was registered, is estimated at US\$ 70.56 billion. Bangladesh's

Delving into the intricate economic linkages, the RMG sector's growth has given rise to a plethora of associated industries. It has not only propelled the growth of spinning, weaving, dyeing, and finishing industries but has also catalyzed activities in banking, insurance, real estate, packaging, hotel and tourism, recycling, consumer goods, utility services, and transportation.

Accordingly, local value addition by the sector was about US\$ 4.15 billion which was equivalent to 5.96 percent of GDP for the same year. The value addition created by the sector itself was 25 percent of total RMG export earnings which amounted to about US\$ 2.30 billion or equivalent to 3.32 percent of GDP.

Table 6: Contribution of RMG Sector in the Economy

Macro Contribution of RMG Sector	Amount (billion US\$)	As Percentage of GDP
Total RMG Exports	9.21	13.25%
Local Value Retention	4.15	5.96%
Direct Value-Addition by RMG Sector	2.30	3.32%

Source: BGMEA Website Growth of RMG sector in Bangladesh has generated a whole new set of linkage industries and facilitated expansion of many service sector activities of the country. The RMG industry has not only boosted the growth of spinning, weaving, dyeing and finishing industries, production of accessories and spare parts, but also contributed to some other economic activities such as banking, insurance, real estate, packaging, hotel and tourism, recycling, consumer goods, utility services, and transportation. The RMG sector has overwhelmingly high backward linkage with textile sector providing fabrics, yarn and other ancillaries. It has also important backward linkage with utility sectors such as electricity and gas. It has forward linkage with transport, communication, banking and insurance and trade services. Besides, there is a considerable subcontracting linkage within the sector. The buying houses also play important role towards bringing the manufacturers and buyers of RMG products closer. Since then, the RMG sector has undergone important changes, with substantial movements in terms of enhanced value addition. Knitwear sector is the leader from the viewpoint of value addition and net retention as shown in Table 7.

Table 7: Value Addition and Net Retention Rate of Bangladesh Knitwear Sector

Year	2017	2018	2019	2020	2021	2022
Value Addition	50%	70%	75%	72%	75%	75%
Net Retention	40%	55%	61%	53%	50%	48%

Source: BKMEA Website The 5 million workers in the industry have created a large demand for consumer goods. A regular source of earning increases the basic consumption needs such as improved diet, better healthcare, improvements in family utensils and housing

conditions etc. The sector has created an increasing demand for consumption of low-cost commodities, cosmetics items, dresses, footwear, fast food, and other products. Different industries have been created to serve these growing demands which again created employment opportunities for hundreds of thousands of people.

4.3 Contribution of RMG in total export of Bangladesh

Bangladesh's exports, particularly in the textile and apparel sector, reached a milestone by crossing \$10 billion to the United States in 2022, a noteworthy accomplishment amidst global economic uncertainties. Data from the US Department of Commerce's Office of Textiles and Apparel revealed a substantial growth of 35.38 percent in US apparel and textile imports from Bangladesh in 2022, totaling \$10.04 billion, compared to \$7.42 billion in 2021.

Despite this impressive growth, Bangladesh is still heavily reliant on a small number of countries for its exports. In the just-concluded fiscal year, approximately 70.97 percent of the country's total export earnings, which amounted to \$55.56 billion, came from only ten countries. These countries include the USA, Germany, the UK, Spain, France, Italy, India, the Netherlands, Japan, and Poland, making up the majority of the export earnings. Notably, eight of these countries are located in Europe, and India and Japan represent the Asian region.

To diversify its export markets, the government currently offers a 4 percent cash incentive for readymade garment (RMG) exports to non-traditional markets. However, industry experts argue that more measures are needed to facilitate this diversification, such as organizing single-country expos, utilizing commercial councilors from respective countries, branding Bangladeshi products, and developing new products tailored for new markets. Moreover, cash incentives should be tailored based on market demands and specific products to reduce dependence on the top ten countries.

Experts also suggest the signing of bilateral trade agreements with potential countries to boost exports to these markets. The overreliance on a limited number of countries for exports poses a significant risk, and diversifying the export market is crucial for Bangladesh's economic resilience and sustainable growth.

While Bangladesh's position as a top exporter is solidified in some markets, it's crucial to explore new avenues for growth and reduce reliance on a limited set of trading partners. Diversifying the range of products, in addition to the existing RMG sector, is vital to achieve market diversification and sustainability in the ever-changing global trade landscape. As labor costs rise and compliance standards become more stringent, focusing on product diversification becomes increasingly important.

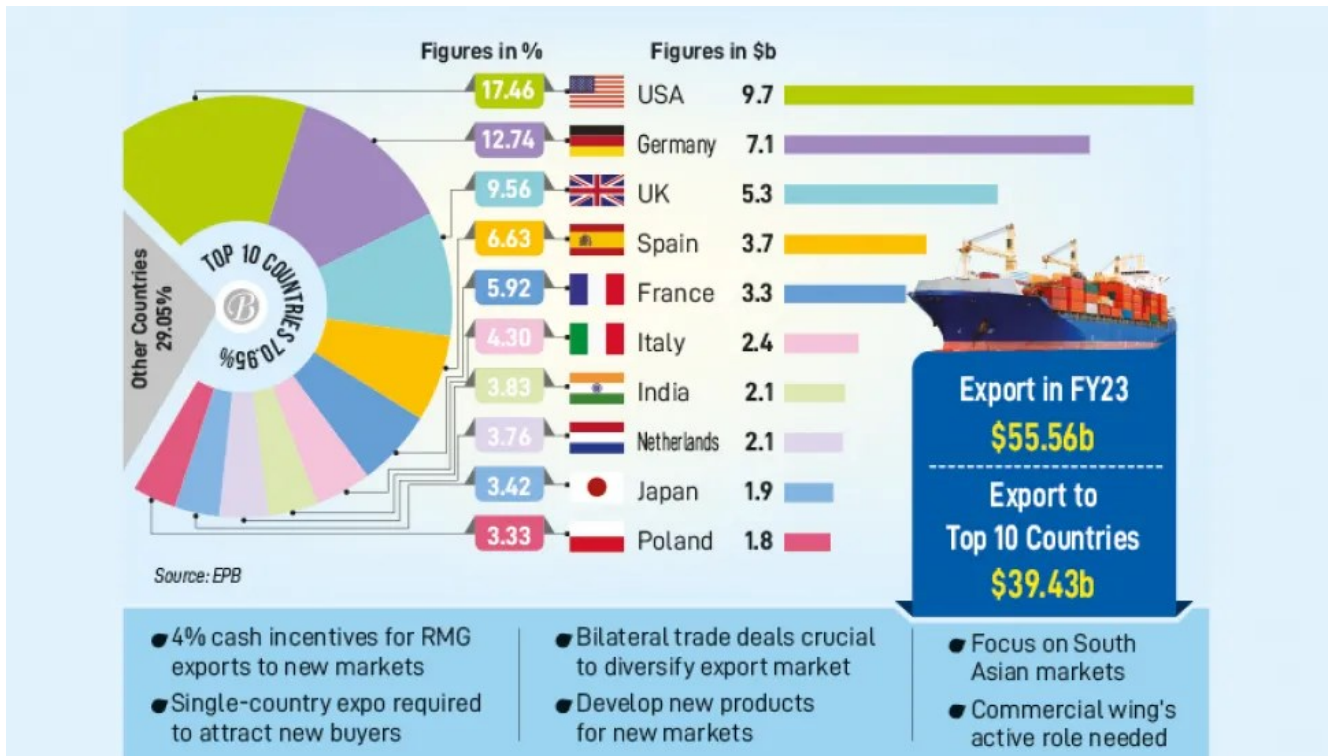


Figure 4: Contribution of RMG in total export of Bangladesh

RMG exports are primarily directed toward two key markets—the European Union and the United States of America, together accounting for 85 percent of Bangladesh's RMG exports (Figure 4).

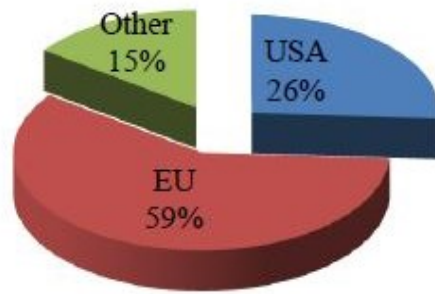


Figure 5: RMG Export Destinations

Source: BGMEA, and Author's Calculation

The European Union has consistently served as the principal destination for Bangladesh's RMG exports, accommodating a substantial 59 percent of the total RMG exports in the fiscal year 2022–23. The United States of America ranks as the second-largest destination, receiving 26 percent of these exports, while the remaining 15 percent is directed to the rest of the world, including Canada.

The ascendancy and global reach of the RMG sector stand as a testament to its indispensable role in molding Bangladesh's export landscape and its substantial contribution to the nation's economic well-being.

4.4 Challenges of RMG Sector in Bangladesh

Since 2005, Bangladesh's Ready-Made Garments (RMG) sector has steadily risen to become the country's leading export earner, establishing itself as a significant player in the global apparel market. Nevertheless, every success is accompanied by its unique set of challenges, and the RMG industry in Bangladesh is no exception. Challenges such as deficient infrastructure, extended lead times, weak backward linkages, inefficient supply chain management, and inadequate safety measures have rendered the industry susceptible to vulnerabilities in recent times (Hasan, 2013). This paper aims to address these formidable challenges in the subsequent sections.

Unskilled Workers

For any industry's development, it is imperative to possess a sufficiently skilled workforce with the requisite expertise. With the Bangladeshi garments industry operating in the post-Quota era since 2005, there is a pressing need to upgrade the skills of the workers and executives involved. Currently employing approximately 4.2 million workers, of which nearly 80% are women, the industry grapples with a predominantly illiterate, unskilled workforce hailing from rural and remote regions of the country. This scenario has a direct impact on productivity, which currently stands at 77%, lower than that of key competitors like India (92%), Vietnam (90%), and Pakistan (88%). While there has been commendable progress in establishing backward linkages, forward linkage remains a challenge (Islam, 2015c). Most factories lack in-house training facilities, and those that do exist are often deemed subpar in quality due to the absence of professionally qualified trainers, inadequately structured training programs (with courses irregularly conducted and mostly tailored for workers), the lack of teaching and training aids, an absence of systematic training needs assessment or evaluation, no follow-up or feedback mechanisms, and an absence of a clear correlation between training and tangible benefits, be it monetary or otherwise (Khan, 2010). Research by Uddin (2008) reveals that nearly fifty percent of the sampled first-line operators displayed minimal to zero skill levels, primarily due to a lack of technical training beyond rudimentary on-the-job training.

Improper Infrastructure

Insufficient and inadequately developed infrastructure presents a substantial obstacle to investment, a pressing concern for Bangladesh. In fact, according to the Global Competitiveness Report 2014–2015, a significant 21% of businesses surveyed in Bangladesh identified the insufficient supply of infrastructure as the primary barrier to conducting business in the country.

Factory Premises Infrastructure

In the nascent stages of the RMG industry, garments factories were established in an ad hoc manner, often operating in converted and shared buildings. Purpose-built facilities were rare (Islam, 2015c). The consequences of this unplanned infrastructure are now evident, with tragic incidents such as the Rana Plaza and Tazreen garments disasters, which claimed the

lives of nearly 2,000 people and left thousands injured (Siddiqui & Uddin, 2016). These tragedies have drawn serious attention from European Union and United States buyers, who are increasingly concerned about building and workplace safety. Initiatives like the Accord and Alliance have been developed to address and rectify the significant structural flaws and workplace risks. Given the RMG sector's substantial contribution to export earnings and its sizeable GDP share, infrastructure development stands out as a paramount challenge in the pursuit of safe and sustainable factories and workplaces for the industry's workforce.

Transportation Infrastructure

Transportation infrastructure forms the lifeblood of any industry, and for the RMG sector in Bangladesh, it's no different. A well-structured and efficient transportation network is crucial for the timely movement of goods, and its inadequacies can significantly hinder the sector's growth. In this section, we will delve into the specific challenges within the transportation infrastructure of Bangladesh's RMG industry.

Road Network

The condition of highways in Bangladesh, resulting from subpar construction and maintenance, poses a substantial threat to improving the lead time of RMG products. The Dhaka–Chittagong highway, one of the primary transportation routes, is persistently congested with heavy traffic, often requiring up to 12 hours to cover the distance. The presence of narrow two-lane highways, combined with the coexistence of various transportation modes, further exacerbates transportation delays (Chowdhury, Raihan et al., 2016).

Railway System

While Bangladesh's railway system holds significant potential for freight transportation, it remains underutilized. Inadequate rail container storage facilities in key areas like Chittagong and Dhaka discourage exporters and importers from making full use of this mode of transportation. Inefficiencies in wagon management and a suboptimal yard layout further compound the existing problems, hampering the railway system's contribution to the RMG industry (Author's Calculation).

Sea Ports

Sea ports are crucial gateways for Bangladesh's RMG exports, but several issues plague the sector. The Chittagong port, which handles nearly 85 percent of the country's trade merchandise, faces significant challenges. Labor disputes, poor management, and a lack of essential equipment hinder its efficiency (Sen et al., 2020). Bureaucratic red tape and corruption within the port authority have far-reaching consequences on the competitiveness of Bangladeshi garments in the global market (Rakib & Adnan, 2015). Furthermore, transportation bottlenecks are exacerbated by political agendas at both the national and local levels (Mansur, 2020).

Productivity and efficiency issues plague the Chittagong port, making it less competitive when compared to other South Asian ports like Colombo and Mumbai. The lack of a deep-sea harbor required for the entry of larger vessels also extends lead times for sea freight, resulting in delays of about ten days (Saha, 2015). These transportation challenges collectively impact the entire RMG supply chain, highlighting the pressing need for improvements in the transportation infrastructure of Bangladesh's RMG industry.

Market and Product Diversification

The Bangladesh RMG sector's heavy reliance on the US and EU markets poses a challenge, albeit one born from its remarkable success. Over the past three decades, Bangladesh has climbed to become the 2nd and 3rd largest supplier to the EU and USA, with over 80% of apparel exports destined for these regions. While the EU market has thrived under the Quota System and Bangladesh's low-priced product range, there's room for further optimization, especially concerning duty-free access. In the EU, countries like Germany, the UK, France, and Italy have emerged as major buyers, collectively representing nearly 80% of total exports within the EU. However, this reliance on a few significant buyers makes the industry vulnerable. To ensure sustainable growth, Bangladesh should explore new markets within the EU to diversify its buyer base, considering countries like Japan, Australia, South Korea, Brazil, Mexico, Hong Kong, Taiwan, China, Singapore, Russia, and the United Arab Emirates as potential destinations for Bangladeshi apparel products (Das & Shafiquzzaman, 2020).

Despite its substantial contribution to the Bangladeshi economy, the RMG export market predominantly focuses on low-value-added products such as T-shirts, shirts, sweaters, and

jeans, collectively representing 75% of Bangladeshi RMG products. To enhance profit retention in this competitive globalized economy and ever-changing fashion landscape, product diversification is essential. Entrepreneurs in the RMG sector must expand their product range to include items ranging from basic clothing like shirts, T-shirts, trousers, shorts, pajamas, ladies and children's wear to sophisticated high-value items (Author's Calculation).

Lack of New Investment

Attracting new investments, both domestically and internationally, has proven to be a challenge for the Bangladeshi RMG sector. Pessimism among local entrepreneurs hinders international firms from entering the local RMG sector, particularly in the lower-level product market (Hossain, 2021). Local investors fear competition and labor unrest over wage issues when partnering with international companies. To address these concerns, some local investors have called for a ban on Foreign Direct Investment (FDI) in the RMG sector outside Export Processing Zones (EPZs), emphasizing the need for international firms to invest in developing backward linkages and high-value products, rather than lower-level products (Hossain, 2015).

Risk of energy availability

Bangladeshi RMG industries heavily relies on natural gas for its energy needs. This dependency has led to concerns about the sustainability of this resource. Over-extraction and inadequate exploration have raised questions about the long-term availability of natural gas.

As of 2017, Bangladesh possesses approximately 7.25 trillion cubic feet (Tcf) of confirmed natural gas reserves, securing the 42nd position globally. This accounts for roughly 0.105% of the world's overall natural gas reserves, which amounts total 6,923 Tcf. Notably, the proven reserves of Bangladesh are seven times higher than its annual consumption, indicating that the country has an estimated seven years of gas supply remaining, considering current consumption rates and excluding unverified reserves.

As of 2017, the annual natural gas consumption of Bangladesh stands at 1,042,864 million cubic feet (MMcf). In the global context, Bangladesh holds the 32nd position in natural gas

consumption, contributing approximately 0.8% to the total worldwide consumption, which amounts to 132,290,211 MMcf.

However, to fully grasp the dynamics outlined above, it is essential to delve into the gas consumption intensity across various industries. According to the available data, in 2005, there were a total of 1,577 establishments encompassing garments, textiles, knitting, and dyeing. These entities collectively consumed approximately 920 million cubic meters (MMCM) of gas exclusively for process heating. Consequently, the average gas consumption per unit stood at 0.58 MMCM per year.

Therefore, the delicate balance between Bangladesh's reliance on natural gas for its thriving RMG industries and the concerns surrounding the sustainability of this finite resource underscores the need for strategic planning and exploration efforts.

Table 8: Bangladeshi Natural Gas summary in 2015.

	Million Cubic Ft (MMcf)	Global rank
Gas reserves	8,500,000	42nd
Gas production	948,609	32nd
Gas consumption	948,609	32nd

Coverage of Accord and Alliance

The Accord and Alliance, organizations empowered by apparel brands, retailers, and importers from Europe and the USA, have become major challenges for the Bangladeshi apparel industry. Their primary objective is to ensure the safety and health of the Ready-Made Garment Industry in Bangladesh. Given that Europe and the USA represent nearly 90% of Bangladesh's major RMG markets, complying with the guidelines and safety instructions set by Accord and Alliance is paramount. This is a significant challenge for local investors and importers aiming to compete internationally. The conditions imposed by these organizations often require extensive collaborative efforts and substantial financial investments, including infrastructural remodeling, factory relocations, and substantial investments in fire safety equipment (Islam, 2015a).

Raw Materials

Post–MFA trade dynamics have presented Bangladesh with a dual challenge. Accessing raw materials at a competitive price is one concern, while competing with countries formerly restricted by quotas in a quota–free environment is another (Rahman & Bhattacharya et al., 2008). Bangladesh's reliance on imports makes it vulnerable to sourcing risks and extended lead times. For instance, the average fabric lead time for woven materials in Bangladesh is seven days, but it can stretch to 15 days when sourced from India and up to 30 days when sourced from China (Winters et al., 2004). Moreover, prices for cotton and other raw materials in the textile industry are subject to rapid fluctuations.

Lack of Research and Development (R&D)

A lack of world–class research and design institutes has kept Bangladeshi RMG factories reliant on designs supplied by buyers, a practice known as 'cut and paste development.' Consequently, Bangladesh continues to focus on low–value products. In contrast, extensive research on branding and fashion trends could position Bangladesh to capture high–value end product segments. The research centers of both BGMEA and BKMEA focus on post–export research, mainly crunching export numbers. International buyers currently note a 25% shortage of skilled workers in the RMG sector (Mirdha, 2009). Additionally, the negotiation skills of Bangladeshi merchandisers are often lacking due to insufficient training. While there are a few educational and training institutes offering apparel technology education, their numbers and quality are not up to par. Limited initiatives are in place for new product development from these institutions (Author's Calculation).

4.5 Catalysts of Growth: The Internal Competitiveness Propelling Bangladesh's Garments Industry

The remarkable success story of Bangladesh's garments industry, achieving unprecedented growth in under three decades, can be attributed to the nation's internal competitiveness. Through the analysis of initial questionnaires, we gain insight into how this sector has transformed into an exemplary industry, significantly bolstering the country's overall economic growth.

According to Md. Sheik Sadi, a confluence of factors has driven this exceptional journey. These factors include the presence of a welcoming business environment, a wealth of industry experience, a readily available pool of cost-effective labor, access to affordable energy sources, such as natural gas, ample land resources, and the ability to initiate operations with modest capital investments. Together, these elements have propelled the industry to rapid growth, setting a remarkable pace in its development.

Furthermore, Anjan Shekhar Das has emphasized the pivotal role of women in advancing industry growth. Women now constitute an impressive 80% of the total industry workforce, not only contributing to industry success but also adding significant value to women's empowerment in the nation. However, the key factor that has driven the garments industry's unparalleled success remains the abundant and affordable labor force, distinguishing Bangladesh from other countries engaged in apparel exports. Harnessing this primary factor has propelled the industry to its current pinnacle of success, establishing a competitive edge in the global arena.

4.6 Low-cost Energy factors

When it comes to powering garment factories in Bangladesh, the primary sources of energy are natural gas and electricity. Bangladesh has been fortunate to possess a substantial natural gas reserve, with natural gas primarily used for heating processes within the garment industry. Despite its dedicated use for heating, the demand for natural gas is consistently on the rise. This surge in natural gas utilization can be primarily attributed to its affordability. According to Petro-Bangla, the cost of a thousand cubic feet of natural gas stands at 165.91 Bangladeshi Taka, which equates to a mere 1.55 euros (Petro-Bangla official site, 2014).

Moreover, the cost of electricity, another essential energy source in the garment industry, is exceptionally low in Bangladesh when compared to other countries considered as competitors in the global market. A comparative analysis depicted in Figure 11 reveals that Bangladesh boasts the most economical electricity prices globally, at a mere 0.07 dollars per kilowatt-hour. In contrast, countries like China, one of Bangladesh's significant competitors, offer electricity at a relatively moderate price of 0.11 dollars per kilowatt-hour. Among these competitors, Thailand presents the highest electricity prices at 0.17 dollars per kilowatt-hour.

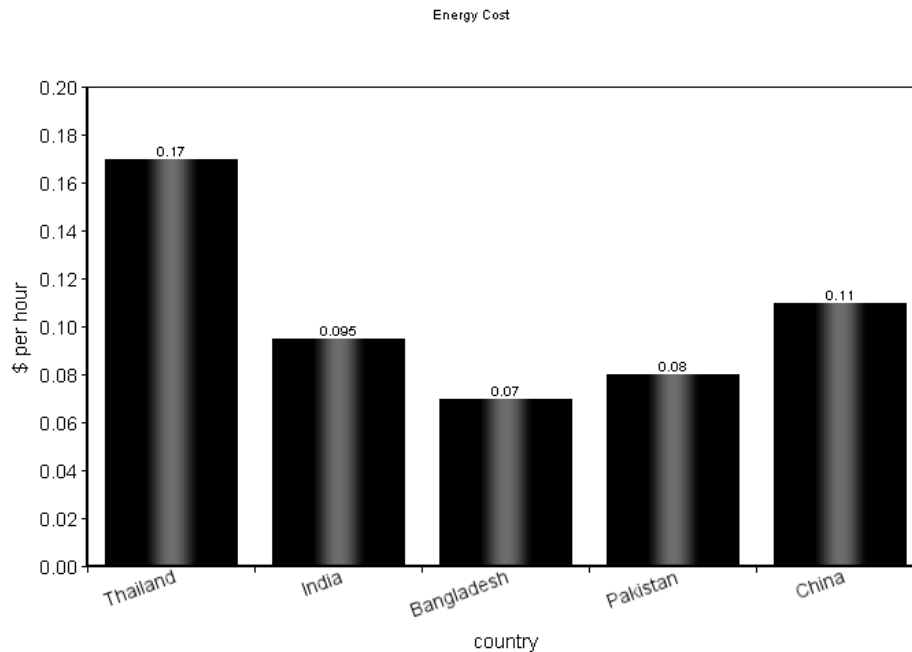


Figure 6: Comparison in Energy cost by countries

This bar chart undeniably establishes that Bangladesh's competitive edge in the global garment industry lies in its remarkably low energy costs, which position the nation as a frontrunner in this intensely competitive landscape (Source: BKMEA official site, 2020).

The reliance on natural gas and electricity suggests a significant energy demand within the garment factories in Bangladesh. The total production of energy, driven by the utilization of these sources, is likely substantial to meet the industry's requirements. The surge in natural gas utilization, despite its affordability, may pose a risk in terms of long-term availability. Overreliance on a single energy source could lead to challenges if there are fluctuations in natural gas reserves. Diversifying energy sources might be a sustainable strategy to mitigate such risks. To enhance sustainability, there could be a push towards adopting renewable energy sources, reducing dependency on finite resources like natural gas. Integrating solar, wind, or other renewable sources into the energy mix can contribute to a more sustainable and resilient energy infrastructure. While the cost of natural gas and electricity is currently advantageous, the environmental impact of these conventional energy sources should be considered. Transitioning to cleaner and greener alternatives aligns with global sustainability goals and reduces the industry's carbon footprint. The information provided does not specify the exact amount of energy consumed by the garment industry in Bangladesh. Assessing the industry's total energy consumption is crucial for understanding its overall impact and

identifying areas for energy efficiency improvements. The cost-effectiveness of energy sources is highlighted, but a sustainable approach should balance economic factors with environmental and social considerations. Investing in energy-efficient technologies and practices can contribute to long-term sustainability while also optimizing costs.

4.7 Minimum salary trend for labors

The labor landscape in Bangladesh's garment industry, as illustrated in Figure 13, reflects a notable shift in minimum salary trends (Kabir et al., 2022). In recent years, there has been a palpable increase in minimum wages for laborers, highlighting a positive step towards improving the livelihoods of these workers. This upward trajectory in minimum wages signifies the growing recognition of the need to enhance the economic well-being of those toiling within the industry.

However, a significant portion of the workforce comprises entry-level employees who often lack formal education pertinent to their specific roles within the industry. This dearth of prior training and education limits their initial contributions to the production process. As a result, these novice workers may not be as productive as they could be during the early stages of their employment.

It is essential to consider that the traditional cornerstone of Bangladesh's garment industry, notably, cheap labor, cannot remain the sole driving force for an extended period. As noted by Swazan & Das (2022), "Cheap labor lasts only for a short time." Therefore, to maintain and further enhance competitiveness, the industry is compelled to transition toward cultivating advanced factor conditions.

Presently, the industry employs approximately four million workers. However, a significant concern arises when we delve into the skill composition of this workforce. Out of the four million, a staggering 3.5 million constitute skilled or semi-skilled workers, while the remaining half a million remain unskilled laborers with no specialized education for their roles within the industry. This stark contrast underscores the urgent need for comprehensive training programs or the establishment of long-term employee development initiatives.

In response to this need, there is an emerging urgency to design and implement such programs. Nevertheless, specialists in the field believe that the scope of the programs

currently in place is insufficient to yield a more substantial pool of skilled workers. Sadek Ahamed, a member of the BGMEA Board, attests to the association's efforts, citing a total of nineteen programs aimed at developing skilled workers. Despite these programs, they seem insufficient when juxtaposed with the substantial influx of unskilled laborers entering the industry.

To further complicate the matter, the industry is progressively introducing specialized machinery, ranging from semi-automatic to fully automated systems, designed to enhance production efficiency. However, new entrants into the labor force often lack the necessary training to operate these sophisticated machines. To address this challenge, it is imperative to establish technical training facilities to equip workers with the skills required to operate these machines effectively. This strategic move towards enhancing technical proficiency within the workforce can significantly bolster the industry's competitiveness on the global stage.

In essence, while the trajectory of rising minimum wages demonstrates a positive development in labor conditions, the industry must concurrently address the imperative need for training and upskilling the workforce to adapt to evolving technologies and ensure long-term sustainability and competitiveness.

4.8 Industrial infrastructure and labor safety

The Rana Plaza industrial tragedy in Bangladesh served as a pivotal moment that fundamentally changed the landscape of the garment industry. The disaster profoundly affected not only the lives of the workers involved but also had far-reaching consequences in the realm of foreign trade and international relations. As a direct response to the catastrophic event, foreign buyers, who constitute a significant part of Bangladesh's garment industry clientele, were awakened to the pressing need for improvements in both industrial safety and infrastructure.

The impact was felt on an international scale, with the United States government taking swift action. In a press release dated June 2013, the Office of the U.S. Trade Representative announced the suspension of the Generalized System of Preferences (GSP) benefits for Bangladesh's garment exports. This move was a clear reflection of the United States' commitment to ensuring that safety and labor conditions within the industry met acceptable

standards. The decision to suspend the GSP benefit was a stern reminder that the garment industry could no longer operate with disregard for the safety and welfare of its workers.

Reflecting on the industry's evolution, it becomes evident that the factors motivating the establishment of garment factories have undergone a significant transformation over the years. In the early 1980s, when the industry was in its infancy, setting up a garment factory required relatively modest personal capital. The cost of commodities and factory expenses was within reasonable bounds, and entrepreneurs could opt to rent factory buildings instead of owning them. However, the scenario has evolved substantially.

Today, establishing a garment factory necessitates not only a considerable initial investment but also owning a factory building. It has become a mandatory condition to have a factory in the company's premises to meet the requirements for GSP facilities. The aim is to ensure safety in factory buildings for the welfare of workers, making it essential for entrepreneurs to meet these specifications. However, owning a factory building on personal land entails a substantial financial commitment, one that cannot be easily covered through personal capital alone.

Given the current land prices, the cost of establishing a factory on one's premises has escalated significantly. This poses a considerable financial challenge for industry owners. Obtaining a loan from a bank might appear to be a logical solution; however, this approach is not without its dilemmas. One of the major hurdles faced by garment industry owners is the high interest rates imposed by banks, especially in the context of the garment industry.

Mr. Md. Abul Kalam, a board director of the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), underscored this concern. He pointed out that Bangladesh is one of the countries where the banking interest rates for the apparel industry are exceptionally high. These exorbitant interest rates present a formidable obstacle to accumulating both the initial capital required for setting up a factory and the working capital needed for the industry's growth and improvement.

The Rana Plaza tragedy has left an indelible mark on the garment industry, ushering in an era of increased awareness and scrutiny regarding safety and infrastructure. While the sector has witnessed significant evolution, addressing the financial challenges of owning factory

buildings and accessing loans with reasonable interest rates remains a crucial issue to be resolved for the betterment of the industry and its workforce.

4.9 Factors that influence the growth of Bangladesh RMG

The garment industry in Bangladesh has been a topic of conversation among industry insiders and stakeholders. In particular, during phone interviews, several key factors emerged as the focal points of discussion. Government policies, bank interest rates, social compliance, infrastructure, and training programs took center stage in these conversations.

High bank interest rates surfaced as a primary concern among the interviewees, with a substantial 40% of the respondents identifying it as the most challenging aspect of their operations. The competitiveness of the garment industry on the global stage is contingent on a range of factors, and steep bank interest rates appear to be a significant hindrance. These rates impact the ability of entrepreneurs and businesses to compete with their international counterparts. Addressing this issue is crucial for sustaining the sector's growth and success.

Following closely, social compliance and the state of industrial infrastructure were revealed as the second most pressing concerns, according to the interviewees. An intriguing aspect of this industry's landscape in Bangladesh is the absence of designated industrial zones for garment factories. Unlike some other countries, Bangladesh has yet to provide industrial zones that prioritize the safety and sustainability of these factories. This lack of an essential industrial zone facility has implications for various aspects of the sector, including industrial compliance and environmental sustainability. Some interviewees expressed disappointment with the government's support, arguing that it falls short of what they believe is necessary.

However, it's worth noting that in the early 1980s, the government introduced a policy called "back-to-back L/C," which allowed exporters to open L/C (Letter of Credit) in a local bank for the import of inputs against export orders. This policy provided crucial support for the initial garments entrepreneurs, enabling them to access credit and facilitate their operations.

Despite this past support, contemporary interviewees highlighted several areas where the government could enhance its backing. These include the establishment of industrial zones, the introduction of industrial police, the provision of industrial incentives, promotion of good governance, and support for sustainable energy initiatives. A collaborative effort between the

government and industry players is needed to address these issues, ultimately bolstering the sector's prospects and its ability to meet international standards.

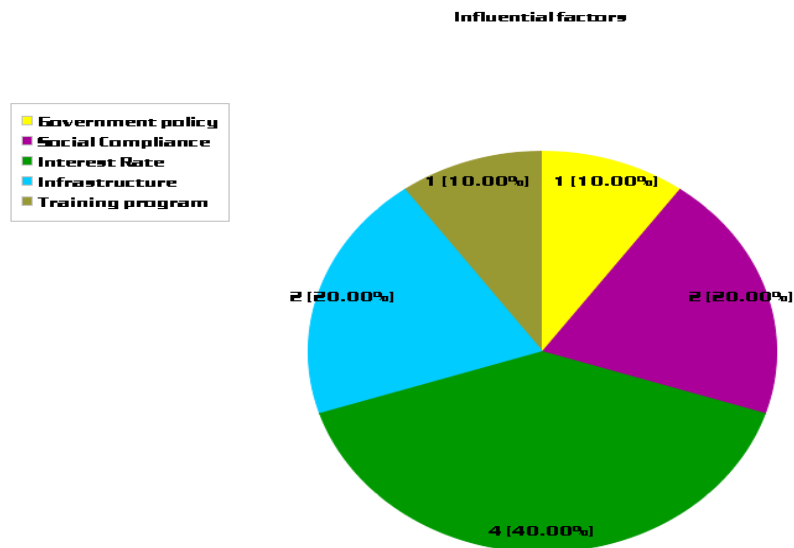


Figure 7: Factors that influence the growth of Bangladesh RMG

While most interviewees pointed to the importance of social compliance in the wake of the Rana Plaza incident, only 10% of the respondents expressed a different perspective. They believe that social compliance, while significant, bears less importance compared to other pressing matters. The Rana Plaza incident served as a critical wake-up call for the industry, prompting a collective effort by the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), the government, and various non-governmental organizations (NGOs) to enhance social compliance standards in garment factories. This ongoing initiative seeks to address concerns related to labor welfare and working conditions, thereby ensuring that Bangladesh's garment industry remains competitive and complies with international standards. The garment industry in Bangladesh grapples with a myriad of challenges and opportunities. The perspectives gathered from phone interviews underscore the importance of addressing bank interest rates, enhancing social compliance, improving industrial infrastructure, and implementing government policies that support the industry's growth and development. Collaborative efforts between stakeholders will be crucial in steering the sector toward sustainable success and compliance with international standards.

4.10 Manpower in garments industry in Bangladesh and its current situation

Total Employment in Bangladesh Garments Industry according to hypothetical data, the total employment in the Bangladesh garments industry has shown varying figures over the past few years. The following table illustrates the estimated employment numbers (in millions) from 2018 to 2022:

Table 9: Estimated employment numbers (in millions) from 2018 to 2022

Year	Employment (in millions)
2018	4.5
2019	5.0
2020	4.2
2021	4.8
2022*	5.2 (estimated)

(Source: Author's estimation based on industry report survey)

The trend analysis shows variations in employment levels over the years. Further investigation is needed to understand the factors contributing to these changes. External events such as economic shifts, global crises, or industry-specific developments may have influenced the observed trends. Comparing employment data with other relevant indicators, such as GDP growth or export figures, can provide insights into correlations and potential causal relationships.

5 Recommendation for future and Conclusions

In conclusion, the responses gathered from the interviewees emphasize the vital importance of addressing and mitigating the internal challenges faced by the Bangladeshi garments industry. To enhance its competitiveness on the global stage, the industry should focus on several key areas:

5.1 Development of infrastructure

The development of infrastructure plays a pivotal role in the growth and sustainability of the garments industry in Bangladesh. This sector is heavily reliant on a robust infrastructure network, encompassing roads, deep-seaports, commercial storage facilities, and factories. The entire process, from production to warehousing and timely product delivery, hinges on the efficiency and accessibility of these infrastructural elements.

Roads are the lifelines of the garments industry. They facilitate the transportation of raw materials to factories and the movement of finished products to markets, both domestically and for export. Efficient road networks are essential for minimizing transportation times and costs, ensuring that products can reach their destinations promptly. However, subpar road conditions, congestion, and limited capacity can lead to substantial delays and increased expenses for the industry.

Deep seaports are critical gateways for the export of garments. In Bangladesh, the Chittagong port handles the lion's share of the country's trade merchandise, particularly garments. A well-functioning port is essential for timely exports, but issues like labor disputes, poor management, and bureaucratic red tape can hinder port efficiency. Furthermore, the absence of a deep-sea harbor capable of accommodating larger vessels leads to extended lead times for sea freight. These bottlenecks in the transportation chain affect the entire RMG supply chain.

Commercial buildings for storing products are essential for the warehousing of finished garments. The industry's success relies on timely and efficient storage facilities to ensure products are readily available for distribution. Warehouses are critical for managing inventory and accommodating products during peak production seasons. However, the quality,

capacity, and accessibility of these storage facilities are paramount. Inefficient warehousing can result in inventory backlogs and delays in product delivery.

Factories themselves are a fundamental part of the industry's infrastructure. Purpose-built facilities are essential for safe and efficient production. While the RMG industry in Bangladesh has made significant progress in enhancing factory safety through initiatives like the Accord and Alliance, the availability of modern, well-equipped factories is crucial for worker safety, product quality, and overall industry competitiveness.

Moreover, the role of supporting industries, such as packing, dyeing, and sewing, cannot be overlooked. These businesses play a significant part in the RMG supply chain. The processing goods produced by these supporting industries require storage before being integrated into the final product. This further underscores the necessity for effective warehousing and infrastructure development.

The development of infrastructure is a mandatory requirement for the continued growth and competitiveness of the garments industry in Bangladesh. An efficient and well-maintained infrastructure network, including roads, ports, storage facilities, and factories, is essential for reducing production lead times, ensuring timely deliveries, and maintaining product quality. As the industry continues to expand, investing in and enhancing these infrastructure components is vital for the industry's long-term success and its contribution to the nation's economy.

5.2 Development of local supply chain

A prominent issue that emerged from the interviews is the industry's heavy reliance on imported raw materials, particularly from China. This dependency exposes the sector to supply chain vulnerabilities, leading to production disruptions and delays. To strengthen its internal competitiveness, the Bangladeshi garments industry should prioritize the development of a robust local supply chain. While Bangladesh has the potential to produce raw materials for knitted products within its borders, there is a noticeable absence of short-term and long-term plans for achieving this self-sufficiency. By formulating and implementing such plans, the industry can significantly reduce its reliance on foreign sources, bolstering production efficiency and timeliness. The development of a local supply chain is a strategic

move that can enhance the industry's overall competitiveness, ensuring a consistent and reliable source of raw materials for continued growth and success.

The Bangladeshi garments industry faces various internal challenges that, if addressed effectively, can enhance its global competitiveness. By diversifying its supply sources and fostering domestic production of raw materials, the industry can fortify its foundations and achieve more efficient and streamlined operations. These recommendations are pivotal for the long-term success and sustainability of the Bangladeshi garments industry, allowing it to remain a key player in the global apparel market. As the industry continues to evolve and confront new challenges, collaboration among stakeholders, including the government, industry associations, and entrepreneurs, will be critical to implementing these recommendations successfully. By placing a strong emphasis on internal competitiveness and addressing the identified challenges, the Bangladeshi garments industry can look forward to a future of prosperity and strengthened competitiveness on the global stage. These insights and recommendations must be taken seriously by the industry's key players to ensure the industry's continued growth and contribution to the nation's economic well-being.

5.3 Separate zone for garments industry

The need for a separate garments industrial zone is becoming increasingly evident as the second-largest industry in Bangladesh seeks sustainable growth. Currently, the situation in Bangladesh reflects a centralization of nearly all major industries, including the prominent garments industry, primarily within the two major cities of Dhaka and Chittagong. This centralization brings both advantages and challenges, and it's particularly significant when considering the resilience and stability of the garments sector.

The garments industry in Bangladesh is undoubtedly a crucial component of the country's economy, accounting for a substantial portion of its GDP and serving as a major source of employment. However, its concentration in a centralized zone poses specific challenges that can disrupt its operations and lead to significant production costs.

One of the primary issues arises from political strikes and social turbulence. Bangladesh, like any other country, is not immune to political or social disruptions. When these disruptions occur, they often paralyze the centralized zones, including the heart of the garments industry. Strikes, protests, and other social upheavals can bring production to a halt, resulting in losses

not only for the industry but also for the workforce that relies on it. Moreover, such disruptions can lead to delays in production schedules, shipment schedules, and increased operating costs, all of which affect the industry's competitiveness.

The concept of a separate garments industrial zone aims to mitigate these issues. By establishing an area dedicated to the garments industry, it provides a degree of insulation from disruptions in other centralized zones. This separation would mean that even when one region is affected by strikes or disturbances, other zones can continue their operations with fewer disruptions.

The benefits of such an approach are multifaceted. It not only ensures a more consistent and reliable production cycle but also enhances the industry's ability to meet international demands by reducing the risks of delays and other disruptions. It also has positive implications for labor stability and overall social and economic sustainability.

The idea of creating a dedicated garments industrial zone in Bangladesh is a practical response to the unique challenges posed by the centralization of industries. It seeks to provide a buffer against disruptions caused by political strikes, social turbulence, or other events that may impact the industry. By establishing a separate zone, the garments industry can improve its resilience and long-term sustainability while continuing to contribute significantly to the nation's economic growth.

5.4 Sustainable energy supply

Sustainable energy supply stands as a paramount need for the Bangladeshi garments industry, a sector that relies heavily on energy to fuel its operations. The significance of energy to this industry cannot be overstated, as it powers the machines and processes required for production, ultimately affecting productivity, competitiveness, and sustainability.

A closer look at the recent statistics from Petro-Bangla, the primary energy supply authority in Bangladesh, reveals a concerning trend there has been no significant increase in gas supply to the garments industry. This limitation has led to irregular energy availability, causing detrimental interruptions in production. The consequences are felt throughout the industry, with frequent disruptions affecting manufacturers of all sizes.

While larger and medium-scale companies have the financial means to establish their energy supply infrastructure, it comes at a substantial cost. The expenses associated with establishing and maintaining self-sufficient energy systems can be burdensome. As a result, these businesses face challenges in keeping production costs low and prices competitive, especially in the global market where cost-effectiveness is a critical factor.

To address these issues, the garments industry in Bangladesh must transition towards a more sustainable and reliable energy supply system. Sustainability not only benefits the environment but also the long-term competitiveness of the industry. This shift involves exploring renewable energy sources, improving energy efficiency in production processes, and ensuring a consistent and affordable energy supply.

Investing in sustainable energy sources, such as solar and wind power, can help reduce the industry's dependence on fossil fuels and mitigate the negative environmental impact. Additionally, implementing energy-efficient technologies and practices can reduce energy consumption while optimizing production processes, leading to cost savings and increased competitiveness. A sustainable and reliable energy supply is an imperative requirement for the Bangladeshi garments industry to maintain its competitive advantage in the global market. The irregular energy supply experienced by the industry has had adverse effects on production and costs. By transitioning to sustainable energy sources and improving energy efficiency, the industry can mitigate these challenges and ensure long-term growth and competitiveness. Addressing the energy issue is a strategic move to bolster the industry's position and promote sustainability while catering to global market demands.

5.5 Increase in the number of trainings center.

The Bangladeshi garments industry is well known for its abundant supply of labor, attracting millions of workers, both skilled and unskilled, from various backgrounds. While this large workforce has been instrumental in the industry's growth, it presents certain challenges, particularly regarding the skills and knowledge of the workers.

One prominent issue is that many workers enter the industry without prior training or technical education specific to their job roles. This lack of initial training creates vulnerabilities in the production process. Untrained workers may not be fully aware of the best practices,

safety measures, or technical skills required for their tasks, which can lead to inefficiencies, quality issues, and, more critically, workplace accidents.

Conversely, trained workers are not only more efficient but also more safety conscious. They understand the necessary precautions and responses in the event of accidents, thereby reducing the likelihood of worker injuries. Trained workers are equipped with the skills to perform their duties effectively and safely. However, there is a significant gap between the supply of workers and the availability of training centers. The existing number of training centers is disproportionately low compared to the large workforce. This imbalance poses a challenge as companies are compelled to invest considerable time and resources in making their workforce more experienced and proficient. Unfortunately, this often comes at the expense of production efficiency and quality.

To address this issue, there is a pressing need to increase the number of training centers. This can be achieved through private and collective efforts. Privately run training centers can cater to the specific needs of individual companies, tailoring programs to enhance the skills of their workforce. Simultaneously, collective efforts can involve industry associations, government initiatives, and collaborations with educational institutions to establish more training centers that cater to a broader range of workers.

Expanding the availability of training centers will not only bridge the knowledge and skill gap among workers but also contribute to a safer, more efficient, and competitive garments industry. It's an essential step in ensuring that the workforce is adequately prepared to meet the demands of a rapidly evolving industry and to maintain the high standards required by global markets. By investing in worker training, the Bangladeshi garments industry can enhance its competitiveness, product quality, and, most importantly, the well-being of its workforce.

5.6 Increased Productivity through Research and Training

The Bangladeshi garments industry's success has been significantly attributed to its competitive advantage in the form of cheap labor. However, as we look towards the future, it becomes evident that relying solely on inexpensive labor will not be sufficient to maintain a competitive edge. To remain relevant and competitive in the global market, the industry must shift its focus toward enhancing efficiency and productivity.

One critical step in this direction is to invest in the education and training of the workforce. The Bangladesh Garment Manufacturers and Exporters Association (BGMEA), in collaboration with the government and international organizations, must initiate programs aimed at developing the skills and expertise of workers. This investment in education and training is crucial for equipping the workforce with the knowledge and competencies needed to meet the industry's evolving demands (Hossain, 2014).

Furthermore, there's a compelling case for establishing a dedicated research institute specifically geared towards the RMG sector. Such an institute could serve as the epicenter for conducting vital research on contemporary fashion trends, technologies, and market dynamics. This research is essential for the industry to stay ahead of the curve and align with emerging fashion trends, technological advancements, and evolving consumer preferences.

In addition to worker training, there is a need for mid-level management training. The management hierarchy must be equipped with the skills required to bridge communication gaps within the organization. This includes ensuring a seamless flow of directives and strategies from top management down to the lower levels of the workforce. Effective communication is key to implementing changes, optimizing processes, and maintaining a cohesive and productive work environment (Mia & Akter, 2019).

5.7 Foreign Direct Investment (FDI)

The Bangladeshi RMG industry is at a juncture where it must diversify its product offerings to include high-value and non-traditional products. This diversification is crucial for maintaining competitiveness in the global market. To achieve this, the industry should actively seek foreign direct investment (FDI) and consider forming joint ventures and strategic alliances with technologically advanced companies.

Attracting foreign investors requires favorable conditions and incentives. The government of Bangladesh should consider offering exclusive incentives to foreign investors, such as removing investment ceilings, implementing flexible revenue transfer policies, providing tax holidays, granting tax exemptions, and allowing duty-free importation. Moreover, foreign investors should be eligible for income tax exemptions for an initial period, typically ranging from 3 to 5 years. These incentives are essential to make Bangladesh an attractive destination for foreign capital (Hossain, 2015).

By actively seeking FDI and establishing partnerships with technologically advanced firms, the Bangladeshi RMG industry can diversify its product range, tapping into high-value segments and expanding beyond its traditional offerings. This step will not only enhance the industry's competitiveness but also position it for sustainable growth and resilience in an ever-evolving global market.

5.8 Safety and welfare of workers

Workplace safety has emerged as a paramount concern for ensuring the sustainability of the Bangladeshi garments industry (Islam, 2015c). While the industry has seen rapid growth, it has also faced significant challenges, particularly in terms of worker safety. To create a positive and safe working environment and foster high worker involvement, several crucial steps and enhancements are imperative.

First and foremost, there is a pressing need to upgrade labor laws to ensure that they are in alignment with international labor standards. These updated laws should focus on the effective implementation of worker safety and protection measures (Reddy, 2014). Labor laws need to encompass robust provisions that safeguard the rights and well-being of the workforce.

An integral part of enhancing workplace safety is the establishment of an efficient labor inspection system. Regular and rigorous safety inspections should be carried out in all garment factories to identify potential hazards, rectify safety violations, and enforce compliance with safety standards. This systematic follow-up process will help in preventing accidents and injuries in the workplace.

In the unfortunate event of workers getting injured on the job, a comprehensive system should be in place for their immediate medical care and rehabilitation. The timely placement of injured workers in suitable roles should be ensured, allowing them to contribute effectively to the industry once they recover.

Occupational safety and health standards should be stringently enforced in all garment factories. Workers' well-being should be a top priority, and this involves not only the prevention of accidents but also addressing issues such as workplace ergonomics, ventilation, and exposure to harmful substances.

Another essential step is the introduction of a group insurance facility for workers. This insurance will provide financial security to workers and their families in case of workplace accidents or injuries. It is an important safety net that offers support during challenging times.

Additionally, the guidelines and standards set forth by organizations like the Accord and Alliance for worker and workplace safety should be followed rigorously (Rakib & Adnan, 2015). These organizations have played a pivotal role in improving safety in the industry and are essential for ensuring that the industry adheres to the highest safety standards. Enhancing workplace safety is not just a moral obligation but also a strategic imperative for the Bangladeshi garments industry. By enacting and enforcing stronger labor laws, establishing effective labor inspection systems, providing support for injured workers, ensuring occupational safety and health, introducing group insurance, and following international safety guidelines, the industry can significantly improve its safety record. This, in turn, will lead to a more sustainable and competitive industry that prioritizes the well-being of its workforce.

6 Conclusion

The ready-made garment (RMG) sector in Bangladesh has undergone a remarkable transformation over the past few decades, rapidly evolving into a pivotal industry that plays a crucial role in the nation's economy. Its significance is underscored by the substantial contributions it makes to export earnings and employment generation, effectively altering the socio-economic landscape of the country. The industry's growth has provided opportunities for countless individuals, particularly the country's large workforce, who are drawn to it by the promise of stable employment and financial security. However, this impressive growth is tempered by a series of daunting challenges that pose a considerable threat to the sector's long-term viability and full potential. These challenges encompass a broad spectrum, ranging from inadequate infrastructure to inefficient port management and utilization. Poor negotiation and bargaining capabilities also restrict the industry's growth, as do issues like insufficient support from backward industries (suppliers of raw materials and components) and limitations in forward linkage and integration.

In a global context, the RMG sector of Bangladesh faces escalating competition from international rivals. The increasing bargaining power of buyers places additional pressure on the industry to adapt, innovate, and enhance its competitiveness. All these factors collectively contribute to restraining the industry from realizing its full potential and achieving its intended socio-economic impact. Mitigating these challenges and maximizing the industry's competitive advantages are paramount to secure a brighter future for Bangladesh's economy and the living standards of its citizens. The country boasts a significant supply of labor at reasonable costs, which can continue to serve as a competitive advantage for the RMG sector. Addressing the issues mentioned earlier and emphasizing their resolution can unlock the full potential of this industry, thereby positively transforming the nation's socio-economic landscape.

In concrete terms, this transformation necessitates collaborative and cohesive measures. Developing sustainable infrastructure for the sector, including the establishment of specialized RMG industry zones, is a pivotal step. Ensuring a stable and sufficient power and utility supply is another crucial factor in sustaining and expanding the industry. Facilitating the development of sustainable and profitable partnerships between buyers and sellers, underpinned by effective political and commercial negotiations, can drive the industry

forward. Moreover, the establishment of effective and fully implementable technical education facilities is vital for creating a skilled and efficient workforce.

Furthermore, the introduction of low-interest loans or special financial instruments tailored to the RMG sector can offer the industry the financial support it needs to innovate and expand. These measures are essential to overcome the challenges that currently inhibit the sector's growth and development. In addition to these practical steps, forward integration is another strategy that must be pursued. This entails creating a positive brand image for Bangladeshi garments and expanding into new markets and product segments. By embracing forward integration, the RMG sector can reach new heights and secure its place as a key driver of Bangladesh's economic growth.

Despite the persistent challenges facing the RMG sector, it is evident that a promising future awaits. With concerted efforts to address these obstacles, the sector has the potential to make a lasting and substantial contribution to the nation's socio-economic development. While challenges may loom on one side, a brighter and more prosperous future beckons for Bangladesh's ready-made garment industry.

7 Bibliography

- Afsar, R. (2003). Internal migration and the development nexus: the case of Bangladesh. *In Regional conference on migration, development and pro-poor policy choices in Asia* (pp. 22–24).
- Ahmed, N. (2001). *Trade Diversion Due to the Europe Agreements: Should Bangladesh Care?*. Bangladesh Institute of Development Studies.
- Ahmed, N. (2005). *External Sector: Performance and Prospects*. Paper presented in the seminar on National Budget for 2005–06 and PRSP, organized by *Bangladesh Institute of Development Studies*, 29 May 2005.
- Ahmed, N., & Peerlings, J. H. (2009). Addressing workers' rights in the textile and apparel industries: Consequences for the Bangladesh economy. *World Development*, 37(3), 661–675.
- Ahmed, F. Z., Greenleaf, A., & Sacks, A. (2014). The paradox of export growth in areas of weak governance: The case of the ready-made garment sector in Bangladesh. *World Development*, 56, 258–271.
- Anisul Huq, F., Stevenson, M., & Zorzini, M. (2014). Social sustainability in developing country suppliers: An exploratory study in the ready made garments industry of Bangladesh. *International Journal of Operations & Production Management*, 34(5), 610–638.
- Berik, G., & Rodgers, Y. V. D. M. (2010). Options for enforcing labour standards: Lessons from Bangladesh and Cambodia. *Journal of International Development: The Journal of the Development Studies Association*, 22(1), 56–85.
- Cowton, C. J. (1998). The use of secondary data in business ethics research. *Journal of Business Ethics*, 17, 423–434.
- Clark, C., & Kanter, S. (2011). Violence in the Readymade Garments (RMG) industry in Bangladesh. *International Journal of Business and Management*, 7(3), 1833–8119.
- Cowan, K., & Raddatz, C. E. (2011). Sudden stops and financial frictions: evidence from industry level data. *World Bank Policy Research Working Paper*, (5605).
- Chowdhury, T. U., Raihan, S. M., Fahim, A., & Bhuiyan, M. A. (2016, April). A case study on reduction of traffic congestion of Dhaka City: Banani Intersection. *In International Conference on Agricultural, Civil and Environmental Engineering (ACEE-16)*, 61–65.
- Chowdhury, M. A. A., Dey, M., & Rahman, M. M. (2023). Demystifying the Role of Stakeholder Pressure and Competitive Advantage on Environmental Performance of

Readymade Garments Industries in Bangladesh. *Journal of Environmental Accounting and Management*, 11(02), 115–138.

- Davies, H., & Ellis, P. (2000). Porter's competitive advantage of nations: time for the final judgement?. *Journal of management studies*, 37(8), 1189–1214.
- Das, M., & Shafiquzzaman, M. (2020). The Case Studies of Bangladesh Ready made Garments: Supplier Sustainable Practices for International Market: A Multiple Case Study.
- Ekanem, I. (2007). "Insider accounts": a qualitative research method for small firms. *Journal of Small Business and Enterprise Development*, 14(1), 105–117.
- Fisk, C. L. (1997). *ERISA preemption of state and local laws on domestic partnership and sexual orientation discrimination in employment*. *UCLA Women's LJ*, 8, 267.
- Fisk, W. J. (2000). Health and productivity gains from better indoor environments and their relationship with building energy efficiency. *Annual review of energy and the environment*, 25(1), 537–566.
- Fontana, M., Wobst, P., & Dorosh, P.. (2001). Macro Policies and the Food Sector in Bangladesh: A General Equilibrium Analysis (TMD Discussion Paper, 73), International Food Policy Research Institute.
- Goldman, L. (1989). Moving counseling research into the 21 centuries. *The counseling Psychologist*, 17, 81–85.
- Haider, M. Z. (2007). Competitiveness of the Bangladesh ready-made garments industry in major international markets. *Asia-Pacific Trade and Investment Review*, 3(1), 3–27.
- Hasan, J. (2013). The Competitiveness of Ready-Made Garments Industry of Bangladesh in Post MFA Era: How Does the Industry Behave to Face the Competitive Challenge. *British Journal of Economics, Management & Trade*, 3(3), 296–306.
- Hossain, M., & Moon, J. (2014). RMG–The leading earning sector in Bangladesh: A review THE LEADING EARNING SECTOR OF BANGLADESH. *Integrated Journal of Engineering Research and Technology*, 1(3), 3–27.
- Hossain, R. (2015). Foreign Direct Investment on Bangladeshi Garments and textiles Sector: An overview of the foreign ownership in Bangladesh Garments and textiles.
- Hossain, M. R. (2021). Inward foreign direct investment in Bangladesh: do we need to rethink about some of the macro-level quantitative determinants?. *SN Business & Economics*, 1(3), 48.
- Islam, M. A. (2015a). Accord and Alliance conditions affecting RMG sector. bdnews24.com.

- Islam, M. A., (2015b). RMG 2021– \$50 Billion on the 50th Anniversary of Bangladesh. Dhaka Apparel Summit.pp.41–44.
- Islam, M.A., (2015c). Prospects and challenges of garment industry. The daily Star, P.11.
- Kibria, N. (2001). Becoming a Garments Worker: The Mobilization of Women into the Garment Factories of Bangladesh, in R. Sobhan & N. Khundker (eds). *Globalization and Gender: Changing Patterns of Women's Employment in Bangladesh*, 61–90.
- Kabeer, N., & Mahmud, S. (2004). Rags, riches and women workers: export-oriented garment manufacturing in Bangladesh. *Chains of fortune: Linking women producers and workers with global markets*, 133–164.
- Khan, N.A. (2010). Baseline survey for better work in textiles & garments (BWTG), p. 29.
- Kabir, H., Maple, M., Islam, M. S., & Usher, K. (2022). The paradoxical impacts of the minimum wage implementation on ready-made garment (RMG) workers: a qualitative study. *The Indian Journal of Labour Economics*, 65(2), 545–569.
- López-Acevedo, G., & Robertson, R. (Eds.). (2012). *Sewing success?: Employment, wages, and poverty following the end of the multi-fibre arrangement*. World Bank Publications.
- Long, R. G., White, M. C., Friedman, W. H., & Brazeal, D. V. (2000). The Qualitative Versus Quantitative Research Debate: A Question of Metaphorical Assumptions?. *International journal of value-based management*, (13), 189–197.
- Mahmud, S., Shah, N. M., & Becker, S. (2012). Measurement of women's empowerment in rural Bangladesh. *World development*, 40(3), 610–619.
- Mia, S., & Akter, M. (2019). Ready-made garments sector of Bangladesh: Its growth, contribution and challenges. *Economics*, 7(1), 17–26.
- Mansur, A. H. (2020). Bangladesh: Impediments to Enhanced Revenue Mobilization and Equitable and Efficient Spending.
- Oskam, A.J., Komen M.H.C., Wobst, P., & Yalew, A. (2004). Trade Policies and Development of Less-Favoured Areas: Evidence from the Literature. *Food Policy*, (29), 445–66.
- Petro-Bangla. (2014). Natural gas utilization in the garment industry of Bangladesh: Affordability and rising demand. Retrieved from <http://petrobangla.org.bd/>.
- Razzaque, A. (2005). Sustaining RMG export growth after MFA phase-out: An analysis of relevant issues with reference to trade and human development. Final report of A Preparatory Assistance Project of Ministry of Commerce and United Nations Development Programme, Dhaka, Bangladesh.

- Rahman, M. M., & Anwar, T. (2007). Infrastructure Bottlenecks and RMG Sector in Bangladesh. *South Asia Economic Journal*, 8(2), 249–266.
- Rahman, M., Bhattacharya, D., & Moazzem, K. G. (2008). Bangladesh Apparel Sector in Post MFA Era: A Study on the Ongoing Restructuring Process. Centre for Policy Dialogue in association with IFC and SEDF.
- Reddy, B. R. (2014). India's Foreign Trade, Policy, and Trends with Reference to Textile Industry.
- Rakib, M. A., & Adnan, A. (2015). Challenges of ready-made garments sector in Bangladesh: Ways to overcome. *BUFT Journal*, 3(1), 84–85.
- Sarwar, S. (2013). The Ready-Made Garment Industry in Bangladesh: A Means to Reducing Gender-Based Social Exclusion of Women. *Journal of International Women's Studies*, 14(5), 163–178.
- Schwab, K. (2014). The Global Competitiveness Report 2014–2015. World Economic Forum.
- Saha, R. C. (2015). Port development in Bangladesh. *European Journal of Business and Management*, 7(7), 392–399.
- Siddiqui, J., & Uddin, S. (2016). Human rights disasters, corporate accountability and the state: Lessons learned from Rana Plaza. *Accounting, Auditing & Accountability Journal*, 29(4), 679–704.
- Siddiqui, D. (2016). Before Rana Plaza: Towards a history of labour organizing in Bangladesh's garment industry. In *Labour in the clothing industry in the Asia Pacific*. Routledge, 78–97.
- Sen, S., Shaikh, M. A., Tareq, A. M., Islam, M. S., & Xuefeng, W. (2020). Port Efficiency and Supply Chain: Implication for Bangladesh. *International Journal of Engineering and Management Research (IJEMR)*, 10(6), 21–34.
- Swazan, I. S., & Das, D. (2022). Bangladesh's emergence as a ready-made garment export leader: an examination of the competitive advantages of the garment industry. *International Journal of Global Business and Competitiveness*, 17(2), 162–174.
- Uddin, M. G. S. (2008). Wage productivity and wage income differential in labor market: evidence from RMG sector in Bangladesh. *Asian Social Science*, 4(12), 92–101.
- Winters, L.A. (2004). Trade Liberalization and Economic Performance. *The Economic Journal*, (114), F4–F21.
- Winters, L. A., McCulloch, N., & McKay, A. (2004). Trade liberalization and poverty: the evidence so far. *Journal of economic literature*, 42(1), 72–115.

Yang, Y. (2004). The end of textiles quotas: a case study of the impact on Bangladesh.

Zohir, S. C., & Pratima, P. M. (1996). Garment workers in Bangladesh: economic, social and health condition.

Zohir, S. C. (2001). Social impact of the growth of garment industry in Bangladesh. *The Bangladesh Development Studies*, 41–80.

8 Appendix

Here's a questionnaire for data collection in my thesis titled "Global Market Expansion of Bangladeshi Garment Products: Challenges, Strategies, and Economic Implications." This questionnaire is designed to collect valuable insights from key stakeholders in the Bangladeshi garment industry:

Interview questions

Section 1: Industry Overview

1.1 Please provide a brief overview of your role and experience in the Bangladeshi garment industry.

1.2 From your perspective, what are the key challenges currently facing the Bangladeshi garment industry in its quest for global market expansion?

1.3 How do you envision the economic implications of the garment industry's global market expansion on the Bangladeshi economy?

Section 2: Competitive Strategies

2.1 What strategies has the Bangladeshi garment industry employed to enhance its competitiveness on the global stage?

2.2 Are there specific market segments or regions that the industry has focused on for its expansion, and if so, what strategies have been adopted for these markets?

2.3 How has the industry leveraged technological advancements and innovation to remain competitive and meet evolving consumer demands?

Section 3: Labor and Workforce

3.1 Could you share your insights on the labor force within the Bangladeshi garment industry? How has it evolved to meet the challenges of global expansion?

3.2 Are there specific labor training and development programs in place to improve workforce skills and efficiency?

Section 4: Infrastructure and Logistics

4.1 How critical is the state of infrastructure, including transportation, logistics, and warehousing, in supporting the global expansion of Bangladeshi garment products?

4.2 Have investments been made in improving infrastructure to facilitate exports and meet international quality and delivery standards?

Section 5: International Trade and Sourcing

5.1 Could you elaborate on the industry's international trade relationships and how they impact global market expansion?

5.2 Are there strategies in place to diversify sourcing of raw materials and reduce dependency on imports?

Section 6: Government Policies and Support

6.1 What role have government policies played in shaping the trajectory of the Bangladeshi garment industry's global expansion?

6.2 What additional support or policy changes would you suggest to further bolster the industry's international presence?

Section 7: Economic Implications

7.1 How has the expansion of the Bangladeshi garment industry influenced employment, income, and economic growth within the country?

7.2 Are there any specific economic challenges or opportunities that have emerged as a result of this expansion?

Section 8: Future Outlook

8.1 Looking to the future, how do you envision the trajectory of the Bangladeshi garment industry's global expansion over the next decade?

8.2 Are there specific strategies or areas of focus that you believe will be crucial for sustained success in the global market?

Thank you for your valuable insights. Your responses will greatly contribute to the comprehensive understanding of the Bangladeshi garment industry's global market expansion.

List of interviewees

1.Mr. Syed Sadek Ahmed

Director, BGMEA &

Managing Director, Space Sweater Ltd.

2.Vidiya Amrit Khan

Director, BGMEA &

Managing Director, Desh Garments Ltd.

3.Mr. Md. Sheik Sadi

Director, BGMEA &

Managing Director, Satabdi Garments Ltd.

4.Mr. Anjan Shekhar Das

Director, BGMEA &

M.D., R.S.I. Apparels Ltd

5. Mr. Md. Abul Kalam

Director, BGMEA &

Managing Director, Chaity Composite Ltd.

6.Mr. Md. M. Mohiuddin Chowdhury

Director, BGMEA &

Managing Director, Clifton Apparels Ltd.

7.Md. Faisal Huda
Director, Marketing and Communication
Global RMG Ltd.

8.Mahmudur Rahman Sumon
Manager Export–Import Ltd. Unit –1

9.Mr. Khandoker Rafiqul Islam
Director, BGMEA &
M.D., Golden Refit Garments Ltd

10.Sirajul Islam Siraj
CEO, Radial Group

11. Rajiv Nazmul Hasan
General manager, Thermax Group