

A STUDY ON COMPETITIVENESS OF READY-MADE GARMENTS FOR EXPORT-LED  
ECONOMIC GROWTH IN BANGLADESH: ISSUES AND CHALLENGES

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By

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## **Abstract**

Bangladesh achieved remarkable economic development in the last few decades, and the ready-made garment (RMG) industry played a vital role in this regard. The future economic development of the country depends on the success and continuation of such industrial sectors for export-led growth of the country. Considering the importance of the export-led economic growth strategy, this study assessed the global competitiveness of this industry. Michael Porter's Diamond model of national competitiveness is used as the main analytical framework to assess the sources of competitiveness. A SWOT analysis is also conducted to identify future challenges and critical success factor for the continuing contribution of the industry. The study followed a mixed method approach to investigate the research questions. Secondary literature, consisting mainly of reports and documents from government and the private sector, were collected to comprehend the contemporary industry. A survey of 199 respondents from 150 RMG factories was conducted to assess effects and relative weights of different factors included in the National Diamond model and to understand the basis of the competitiveness of the RMG industry of Bangladesh. A further 30 face-to-face interviews with representatives from five different stakeholder groups including international buyers were conducted to get further explanations and insights of different factors of importance for achieving and maintaining the competitiveness of the RMG industry of Bangladesh. The findings of the study reveal that not all the dimensions of Porter's National Diamond model contributed to the competitiveness of the RMG industry. Among the four main National Diamond dimensions, the RMG industry of Bangladesh appeared to enjoy competitiveness without having a favorable demand condition in the domestic market. The other three main dimensions—i.e., the factor conditions, related and support industries, and industry strategy, structure and rivalry—mostly played conducive roles in the development of the RMG industry in Bangladesh and provided the impetus to achieve competitive advantage in the global market. However, within factor conditions, the availability of a large unskilled workforce, strategic locations and reasonable infrastructure acted as sources of competitive advantage despite some limitations including a lack of highly skilled mid-level RMG professionals, limited access to adequate financing, and deficiencies in R&D activities. Similarly, regarding related and support industries, a large number of backward-linkage knitwear industries positively contributed towards competitiveness, though industry respondents indicated an absence of well-developed clusters as a limitation compared to other countries. In the case of industry strategy, structure and rivalry,

collaborative actions by the industry association regarding compliance issues, as well as collective responses to buyers' needs, were identified as sources of competitive advantage, while subcontracting to non-compliant factories and a lack of systematic R&D (e.g., an absence of a common e-platform) were considered as limitations. The findings indicate that the positive impact of favorable factors of those three dimensions (factor conditions, related and support industries, and industry strategy, structure and rivalry) were relatively stronger than the negative impacts, and contribute to the achievement of competitive advantage of the industry. Other than the four main factors, the study also found that government support has played a significant role in the development of the RMG industry in Bangladesh. The government provided these supports through various policy initiatives, financial incentives, and the negotiation of favorable trade agreements including tariff and import-quota free access to the European Union under the Generalized System of Preference (GSP) scheme. The study also recognized that three chance events greatly influenced the development of the RMG industry of Bangladesh and positively affected growth in the sector: a quota system levied against traditional RMG exporters (e.g. South Korea, Hong Kong) in the 1970s; the Multi-Fibre Arrangement (MFA) that governed world trade in textiles and garments from 1974 to 1994 and provided beneficial access for Bangladeshi exporters; and compliance issues raised after the 2013 Rana Plaza garment factory catastrophe. The findings further highlight the importance of Porter's double, multiple and rough diamond propositions in maintaining the continuous growth and development of the RMG industry in Bangladesh. It also briefly points out the potential impact of current COVID -19 pandemic on the RMG industry of Bangladesh. Finally, it proposes further research avenues to advance knowledge on competitiveness from different perspectives along with policy implications for the RMG sector of Bangladesh.

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## Dedication

It is an immense pleasure to dedicate this work to my beloved mother **Begum Rahima Fazal** and father **Mohammad Abul Fazal Mian** as a token of love, respect and gratitude to them.

It was my mother Rahima Fazal for whom I have finally decided to pursue a PhD against all odds. She was all along with me as a source of inspiration, moral support and encouragement till her last breath. In fact, she was always present in my mind after her death and reminded me to complete the rest of the work!! It gives me heavenly pleasure as I finally able to complete this degree and fulfilled my commitment to my most adored mother.

My father Mohammad Abul Fazal Mian had a cherished desire to see me as a PhD and my mother always encouraged me to fulfill his desire.

Both could have been the happiest persons in this world if they were alive today. What else I could do for you my Mom and Dad but pray to the AllahST to grant Jannatul Ferdaus and rest you in peace!!! Amin.

## Table of Contents

Permission to Use and Disclaimer	i
Abstract	ii
Acknowledgements	iv
Dedication	v
The Table of Contents	vi
The lists of Tables	xiii
The lists of Figures	xvi
The lists of Appendices	xviii
The list of Abbreviations	xix

<b>Chapter -1: Introduction</b>	<b>1</b>
1.1. Background and Rationale of the Study	2
1.2. Development of RMG Industry in Bangladesh	5
1.3. Major Challenges of RMG Industry of Bangladesh	7
1.4. Theoretical Framework of the Study	8
1.5. Objectives, Research Questions and Thesis Statement	9
1.6. Outline of the Thesis	10
1.7. Conclusion	12

## **Chapter -2: Theoretical Background and Literature Review – Export Led Growth and National Competitiveness**

2. Introduction	14
2.1.1 Export-Led Growth (ELG) and Economic Development: Global Perspective	15
2.1.2. The Rationale of Government Support in Export Development	18
2.1.3. Export Led Growth and Models of Effective Export Promotion Policies	20
2.2. Nation’s Competitiveness: “Porter’s Diamond” Model	23
2.2.1. Factor Conditions	25
2.2.2. Demand Conditions	27
2.2.3. Related and Supporting Industries	27
2.2.4 Firm Strategy, Structure and Rivalry	28
2.2.5. Chance and Government Role	29

2.2.6. Critics View of Porter’s “Diamond Model”	32
2.2.7. Consideration of ‘Double Diamond’:	
Combining ‘Domestic’ and ‘Foreign’ Diamonds	34
2.2.8. From ‘Double Diamond’ to ‘Multiple-Diamond’:	
Globalization and Role of Multinationals	35
2.3. Global Competitiveness Index (GCI):	
New Framework of Competitiveness Assessment	35
2.4. Justification of Porter’s Model as the Theoretical Framework of the Study	36
2.5. Conclusion	37

### **Chapter 3: Research Context - Bangladesh Economy and RMG Sector Development**

3. Introduction	39
3.1. Bangladesh Economy: Past and Present	40
3.1.1. Gross Domestic Products (GDP)	41
3.1.2. Human Development Index (HDI) and	
Social Development Indicators of Bangladesh	42
3.1.3. Official Development Assistance (ODA) of Bangladesh	44
3.1.4. Foreign Remittance	46
3.2. RMG Industry in Bangladesh: Evolution and Determinants of Growth	48
3.2.1. Bengal Textile: Historical Reputation	48
3.2.2. Story of the Beginners: Early Stage of the RMG Industry in Bangladesh	50
3.2.3. Growth of RMG Industry in Bangladesh: Internal factors	52
3.2.3.a. Opening the Free Market Economy of Bangladesh	52
3.2.3. b. Abundant Supply of Unskilled Manpower	53
3.2.3. c. Large Number of Factories, Increased Capacity and	
Volume of Production	54
3.2.3.d. Strong Backward Linkages and Support Industries	55



3.2.3.e. Comparative Lower Labour Cost and Price Competitiveness	58
3.2.3. f. Supply of Economical Sources of Power – Natural Gas	59
3.2.3. g. Trade-friendly Government Policies that helped the RMG Industry to Grow	59
3.2.3.h. Other Incentives, Liberalized Trade and Financial Policies Related to the RMG Sector	60
3.2.4. Growth of RMG Industry in Bangladesh: External factors	62
3.2.4. a. Quota Restriction and the MFA Phase-out	62
3.2.4.b. Other External Reasons for Accelerating the RMG Sector in Bangladesh	64
3.3. Current State and Performance of the RMG Industry of Bangladesh	64
3.3.1. Position of RMG Industry of Bangladesh in the World Apparel Market	64
3.3.2. Buyer-driven Market of RMG Industry	66
3.3.3. Market Concentration of the Garment Industry	66
3.3.4. Range of Products and Market Dependency	68
3.4. Broader Macro-economic Indicators of Bangladesh and their Effects on the RMG Sector	69
3.4.1. Ease of Doing Business – Where Bangladesh Stands!	70
3.4.2. Logistics Performance Index (LPI) of Bangladesh	72
3.4.3. Global Competitiveness Report and Performance of Bangladesh	73
3.4.4. The Economic Freedom index and Bangladesh	74
3.4.5. Global Corruption Perception Index and Bangladesh	75
3.4.6. The Global Innovation Index (GII) and Bangladesh.	75
3.5. Conclusion	76

## Chapter 4: Research Methodology

4. Introduction	77
4.1. Philosophical Perspectives of the Study	77
4.2. Research approach	78
4.3. Research methods	78
4.4. Data Collection Process	79
4.5. Data sources	80
4.5.1. Secondary Data	80
4.5.2. Primary Data	80
4.5.3. Reasons for using interview method	82
4.5.4. Group of Interviewees	82
4.5.5. Interviewee Selection Criteria	84
4.5.5.A. The representatives of the garments manufacturing companies of Bangladesh	84
4.5.5.B. The garments associations / chamber representatives	85
4.5.5.C. The list of the government officials/policy makers	86
4.5.5.D. The list of think-tank/professionals	86
4.5.5.E. The list of the RMG sourcing companies or buyers in Canada	86
4.5.6. Formalities of Interviewing	87
4.6. Sample selection and quantitative (survey) data collection	88
4.7. Ethics Approval	88
4.8. Survey and Interview Questionnaire Development	89
4.9. Survey data analysis	98
4.10. Survey Data analysis technique	99

4.10.1. Weighted average of responses	99
4.10.2. Frequency distribution of weighted average responses	100
4.11. Conclusion	101
<b>Chapter-5: Findings, Analysis, and Discussion of the Results</b>	
5. Introduction	102
5.1. Findings Related to Different Aspects of Diamond Model	103
5.1.1. Findings Related to ‘Factor Conditions’	103
5.1.1.a. Human Resources factors	103
5.1.1.b. Physical Resources factors	107
5.1.1.c. Knowledge Resources factors	110
5.1.1. d. Capital Resources factors	112
5.1.1.e. Infrastructure Resource factors	114
5.1.2. Findings Related to ‘Demand Conditions’	117
5.1.3. Findings Related to ‘Related and Support Industries’	122
5.1.4. Findings Related to ‘Firm Strategy, Structure and Rivalry’	127
5.1.5. Findings Related to ‘Government’	131
5.1.6. Findings Related to ‘Chance’	137
5.2. Identifying Critical Factors: Quantitative	
Assessment of Factors Related to Porter’s Model	139
5.3. Findings Related to SWOT Analysis	
of RMG Industry in Bangladesh	143
5.4. A Proposed Framework for Future Competitiveness	
of RMG Industry of Bangladesh	144
5.4.1. Human Resources	145

5.4.2. Infrastructure	147
5.4.3. Knowledge Resources	148
5.4.4. Access to Finance	149
5.4.5. Compliance	149
5.4.6. Demand Condition	150
5.5. Conclusion	151
<b>Chapter- 6: Conclusions, Policy Implications and Limitations</b>	
6. Introduction	153
6.1. Explaining Competitiveness of the RMG industry of Bangladesh- Porter’s Diamond Model Lens	153
6.2 Sustaining Bangladesh RMG's Competitiveness – Lens of Double Diamond, Multiple Diamond and Beyond	157
6.3 Sustaining Bangladesh RMG's Competitiveness - Policy Implications	161
6.3.1. Policy Considerations at the Enterprise Level	162
6.3.1.a. Safe Work Environment	162
6.3.1.b. Product Development and Innovation	162
6.3.1.c Market Diversification	162
6.3.1.d. Focus on Domestic Market	163
6.3.2. Policy Considerations at the Industry Level	163
6.3.2.a. Building Industry Capacity in Fashion Design	163
6.3.2.b. Supporting Domestic Market Development	163
6.3.2.c. Banning of Subcontracting to Non-compliant Factories	164
6.3.3. Policies related to the Government	164
6.3.3.a. Improvements in RMG Sector Infrastructure	164
6.3.3.b. Improvements in Access to Finance	164

6.3.3.c. Encourage Foreign Investment	164
6.3.3.d. Focus on Continuing Market Access	165
6.3.3.e. Expand Focus of Public Institutions on the RMG Sector	165
6.3.3.f. Strategic Focus on the RMG Sector	166
6.3.3.g. Factory Safety and Stability in Operating Environment	166
6.3.3.h. Law and Order and Peace	166
6.3.4. Collaborative Policy Considerations for Government and industry stakeholders	166
6.3.4.a. Monitoring Factory Compliance	166
6.3.4.b. Dedicated Industrial Parks, Compliances and Collaboration	166
6.3.4.c. Managerial Capacity Building	167
6.3.4. d. Developing New Foreign Market Destinations	167
6.3.4. e. Forward Linkages Development and Modern Marketing Strategies Adaptation	168
6.3.4. f. Improvement in the Supply Chain	169
6.3.5. Implementation of the Recommended Policies	169
6.4. COVID – 19 (Coronavirus Disease) Issue and Bangladesh RMG Industry	171
6.5. Limitation of the Study	173
6.6. Future Research Directions	174
6.7. Final Remarks	175
<b>References</b>	177
<b>Appendices</b>	199

## List of Tables

Table 3.1: Human development index (HDI) of Bangladesh in selective years	43
Table 3.2 Comparison of some social indicators of Bangladesh for the year of 1971 and 2015	44
Table 3.3: Foreign aid flow of Bangladesh	45
Table 3.4: Remittance as percentage of GDP, export and import and its growth for last ten years	47
Table 3.5: Population and available labor force of some selective countries	53
Table 3.6: Number of textile related factories in Bangladesh	56
Table 3.7. Competitiveness of Bangladesh Apparel products in the EU and USA Markets	58
Table 3.8: Voluntary Export Restraints on Textiles and Garments	63
Table 3.9: Comparison of easy of doing business for eight selective RMG manufacturing countries including Bangladesh	71
Table 3.10: Doing Business Ranking Analyses for Bangladesh (2013 – 2017)	72
Table 4.1 Major elements of philosophical assumptions	77
Table 4.2. Selection of interview groups and outcomes	83
Table 4.3. Human Resources	89
Table 4.4. Physical Resources	91
Table 4.5. Knowledge Resources	91
Table 4.6. Capital Resources	92
Table 4.7. Infrastructure	92
Table 4.8. Demand Condition	93

Table 4.9. Related and Support Industries	94
Table 4.10. Firm Strategy, Structure and Rivalry	95
Table 4.11. Government	96
Table 4.12. Chance	97
Table 5.1: Responses related to human resource factors	104
Table 5.2: Responses related to physical resource factors	108
Table 5.3: Responses related to knowledge resource factors	111
Table 5.4: Responses related to capital resource factors	112
Table 5.5: Responses related to infrastructure resource factors	114
Table 5.6: Responses related to demand conditions	119
Table 5.7. Related and Support Industries	123
Table 5.8. Firm Strategy, Structure and Rivalry	128
Table 5.9. Government	132
Table 5.10. Chance	138
Table 5. 11. Variables with related weighted averages	140
Table 5.12. Mean, Median, Mode and Standard Deviation	142
Table 5.13. SWOT Analysis of RMG Industry in Bangladesh	143
Table 6.1. Proposed time frame (short, medium and long term) for recommended policies	170
Table-D1: Time Series Data (1983-84 to 2018-19) of RMG Export Growth and Comparative Statement on Export of RMG and Total Export of Bangladesh	214

Table E-1: Export Value of Five Major Exportable Items of RMG from Bangladesh for the Year 1993-94 to 2017-18	216
Table F-1: Comparison of selective countries Logistic Performance Index – 2016	217
Table G-1: Comparison of seven selective countries including Bangladesh on specific pillars of competitiveness based on the Global Competitiveness Report 2016-17	218



## List of Figures

Figure 1.1: Major exportable products of Bangladesh and their market share in the FY 1972-73	3
Figure 1.2: Major exportable products of Bangladesh and their market share in the FY 2015-16	4
Figure 2.1: The trade policy/export competitiveness interface	23
Figure 2.2. Porter’s Diamond Framework	30
Figure 2.3: Global competitiveness index	36
Figure 3.1: Map of Bangladesh	39
Figure 3.2: Export volume and export-GDP ratio of Bangladesh for selective years	40
Figure 3.3: Import volume and import-GDP ratio of Bangladesh for selective years	41
Figure 3.4: GDP growth rate of Bangladesh (Y 2007 – 2016)	42
Figure 3.5: Remittance inflow of Bangladesh	46
Figure 3.6: Monthly minimum wage of selected RMG producing countries	54
Figure 3.7: Number of factories and employment in the RMG industry of Bangladesh	55
Figure 3.8: Number of RMG related accessories companies in Bangladesh	57
Figure 3.9: Number of accessories companies based on category	57
Figure 3.10: Major apparel producer countries in the world in 2015	65
Figure 3.11: Share of the markets’ of Bangladesh RMG export	67

Figure 3.12: Major RMG exportable products of Bangladesh	69
Figure 4.1 Three major components of research	79
Figure 4.2. Normal Distribution Model	100
Figure 5.1. Frequency distribution of 41 variables	142
Figure 5.2: Proposed competitiveness framework of Bangladesh RMG industry	145

## **List of Appendices**

Appendix -A: Questionnaire -A	199
Appendix -B: Questionnaire -C	206
Appendix -C: Questionnaire -B	212
Appendix -D: Time Series Data of RMG Export Growth and Comparative Statement on Export of RMG and Total Export of Bangladesh	214
Appendix -E: Export Value of Five Major Exportable Items of RMG from Bangladesh	216
Appendix-F: Comparison of selective countries – Logistic Performance Index- 2016	217
Appendix-G: Comparison of seven selective countries including Bangladesh on specific pillars of competitiveness based on the Global Competitiveness Report 2016-17	218
Appendix- H: Exemption letter related to Ethics Approval	219
Appendix- I: Joint Statement on the COVID-19 Crisis by STAR	220

## **List of Abbreviations**

AD: Anno Domini

ADB: Asian Development Bank

ADP: Annual Development Program

AGOA: African Growth and Opportunity Act

ATC: Agreement on Textile and Clothing

BBS: Bangladesh Bureau of Statistics

BEPZA: Bangladesh Export Processing Zone Authority

BGMEA: Bangladesh Garments Manufacturers and Exporters Association

BGAPMEA: Bangladesh Garments Accessories and Packaging Manufacturers and Exporters Association

BIDA: Bangladesh Investment Development Authority

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

BRICS: Acronym coined for an association of five emerging nations: Brazil, Russia, India, China and South Africa.

BTMA: Bangladesh Textile Mills Association

BKMEA: Bangladesh Knitwear Manufacturers & Exporters Association

CEO: Chief Executive Officer

COVID: Coronavirus Disease

CM: Cut and Make

CMT: Cut, Make and Trim

CNG: Compressed Natural Gas

CPD: Centre for Policy Dialogue

DDLG: Domestic Demand-Led Growth

DIFE: Department of Inspection for Factories and Establishment

EAB: Exporters Association of Bangladesh

ELG: Export-led Growth

EM: Emerging market

EP: Export Policy

EPB: Export Promotion Bureau

EPPs: Export Promotion Policies

ERD: Economic Relations Division

ETP: Effluent Treatment Plant  
EU: European Union  
FDI: Foreign Direct Investment  
FOB: Free on Board  
FY: Financial Year  
GAAT: General Agreement on Tariff and Trade  
GCI: Global Competitiveness Index  
GDP: Gross Domestic Product  
GII: Global Innovation Index  
GNI: Gross National Income  
GOB: Government of Bangladesh  
GSP: Generalized System of Preference  
HDI: Human Development Index  
HKTDC: Hong Kong Trade Development Council  
ICT: Information and Communications Technology  
IFC: International Finance Corporation  
ILO: International Labour Organization  
ISC: Industry Skill Council  
ITC: International Trade Centre  
IMF: International Monetary Fund  
IS: Import-substitution  
Kgs: Kilograms  
Lbs: Pounds  
L/C: Letter of Credit  
LDC: Least Developed Countries  
LPI: Logistics Performance Index  
LEED: Leadership in Energy and Environmental Design  
LNG: Liquefied Natural Gas  
LTA: Long-term Trade Agreement  
MFA: Multi Fibre Arrangement  
MW: Megawatt  
NGO: Non-Governmental Organisation  
OBM: Original Brand Manufacturing

ODA: Official Development Assistance  
ODM: Original Design Manufacturing  
OEM: Original Equipment Manufacturing  
PPP: Purchasing Power Parity  
PPP: Public Private Partnership  
PTA: Preferential Trade Agreement  
RCEP: Regional Comprehensive Economic Partnership  
R & D: Research and Development  
ROO: Rules of Origin  
RMG: Ready-made Garment  
STA: Short-term Trade Agreement  
SWOT: Strengths, Weaknesses, Opportunities and Threats  
TFO: Trade Facilitation Office  
TIB: Transparency International Bangladesh  
TTIP: Transatlantic Trade and Investment Partnership  
TPP: Trans-Pacific Partnership  
UK: United Kingdom  
UNCTAD: United Nations Conference on Trade and Development  
UNDP: United Nations Development Program  
UNESCO: United Nations Educational, Scientific and Cultural Organization  
USA: United States of America  
USAID: United States Agency for International Development  
VAT: Value Added Tax  
WB: World Bank  
WEF: World Economic Forum  
WIPO: World Intellectual Property Organization

## Chapter1: Introduction

Trade is considered as the engine of growth (Lewis1980; Riedel 1984) and no country in history has achieved economic success without export (Bergsten 2015). Trade creates specialization that enables exporters to gain market share and a dynamic internal domestic competition (Bergsten 2015). Exports are often referred to when speaking about international trade. Thus, export development is a high priority for governments all over the world (Belloc and Maio 2011). Export-led growth (ELG) has become the most desired model for many developing countries in recent past (Razmi and Hernandez, 2011).

Export-led growth is a trade policy aimed at improving productive capacity that can expedite the industrialization process of a country through exporting goods based on the comparative advantage of the nation (Hayami and Yoshihisa 2005). During 1950 to early 1970s, there was a broad consensus among the economists, researchers and policy makers that developing countries' trade policy should be based on 'import substitution'<sup>1</sup> and that governments should take various protection measures to support domestic industries manufacturing import-competing goods (Krueger, 1997). Later it was recognized and widely accepted that outer-oriented trade regime could greatly enhance the growth of emerging nations. As a result, several developing economies changed their strategy toward an export-led growth (Krueger, 1997). Reis and Farole (2012) claim that exports can exploit comparative advantages and allocate scarce resources, resulting in gains in efficiency. Alam (1989: 8), and Aggarwal and Huelin (2011:2) further state that exports also result in dynamic gains derived from greater competition, greater economies of scale, greater inflow of foreign direct investment, better use of capacity, dissemination of knowledge and know-how, technological progress, lower cost and improve the quality of domestic output, easing the exchange constraint, and reducing the opportunities for rent-seeking. Schwab (2016) argues that the success of export-led growth of a nation in the twenty first century highly depends on the competitiveness of an industry or sector.

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<sup>1</sup>Import substitution is an economic policy that protect domestic products from the competition of imports through various policy intervention e.g. applying quota, high tariff, special incentives for local investors etc.

Although the effects of 2008-2009 economic recession and the overall changed conditions of the emerging market (EM) and developed economies have opened-up the ELG model to challenges (Blecker 2000; Palley 2011), this model is still considered key to economic growth of developing nations (Bergsten 2015). However, most of the developing countries have limited exportable items to one or two major sectors which are generally competitive in the export markets. These key sectors constitute the large share of the total export, and their sustainability as well as further expansion are important for overall economic success of the nation.

Continuing success of export-led growth in developing countries broadly depends on how well the government and other related stakeholders adopt and pursue appropriate policies based on their country-specific contexts (Belloc and Maio 2011) and address them in the most effective manner to facilitate the competitiveness of their products. Thus, understanding the dynamics of export-led growth (ELG) is an imperative for any developing country. In-depth research targeting the key sector of one particular developing country as a case study could explain how effectively a nation can convert success and ensure competitiveness that ultimately lead into its overall national economic success. This study will discuss the issues and challenges of the RMG industry of Bangladesh and its competitiveness as an export-led growth strategy to the world market. Bangladesh has achieved accelerated economic growth which can be underpinned to strong export led growth, led almost entirely by the readymade garment export (Mahmud et al 2008:18). RMG currently contributes more than eighty percent (84.21) of the country's total exports (BGMEA website 2019).

### **1.1. Background and Rationale of the Study**

Right after independence in 1971, Bangladesh's economy was very small and fragile in nature. It was mostly dependent on foreign aid, and jute and jute goods were the major exportable items. For example, in 1972, the total export was only US\$ 0.26 billion of which raw jute and jute goods accounted for more than 90 percent and its contribution to GDP was less than 6 percent. Apart from jute, other mentionable export items were leather (4.57 percent) and tea (2.73 percent) (Yunus 2001).



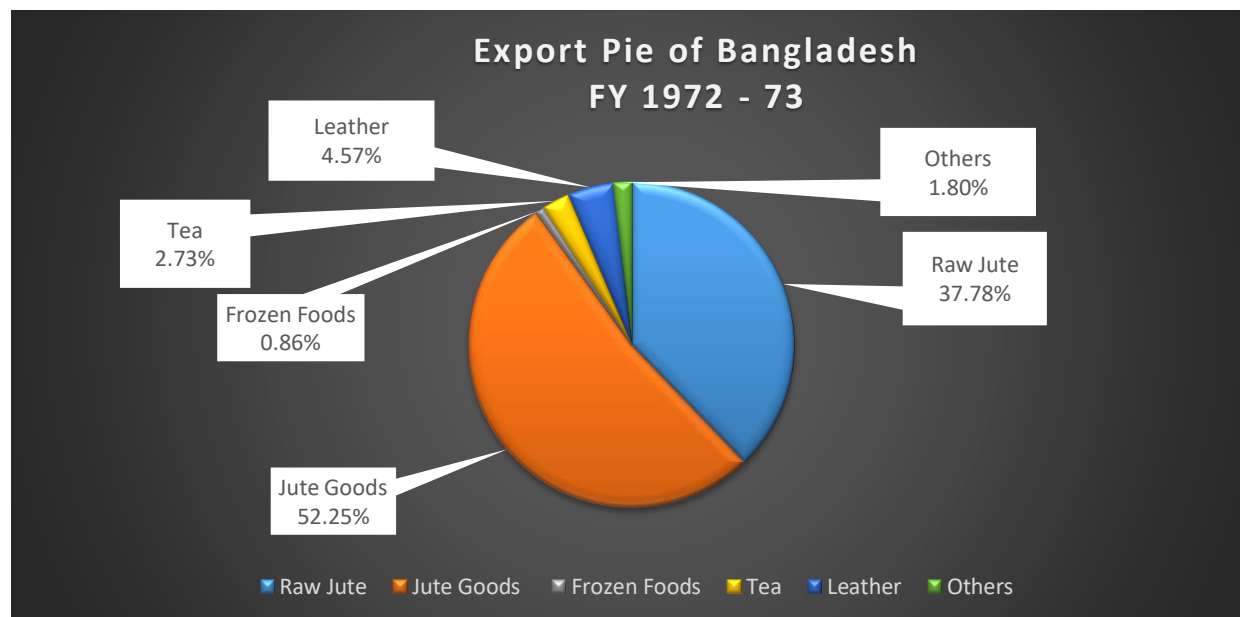


Figure 1.1: Major exportable products of Bangladesh and their market share in the FY 1972-73 (Yunus, 2001: 9).

However, since early 1980s, the demand of jute in the world markets has deteriorated due to the growing popularity of substitute synthetic products and consequently, jute products' contribution to export earnings of Bangladesh was only 2.69 percent in the FY2015-16. In parallel at this time, the readymade garments (RMG) industry gradually emerged as an important export sector for Bangladesh. In FY 2015 -16, total RMG (both woven and knitwear garments) exports was more than US\$ 28 billion which accounted for over 82 percent of the total export of the country and its GDP contribution was about 13 percent (EPB 2016).

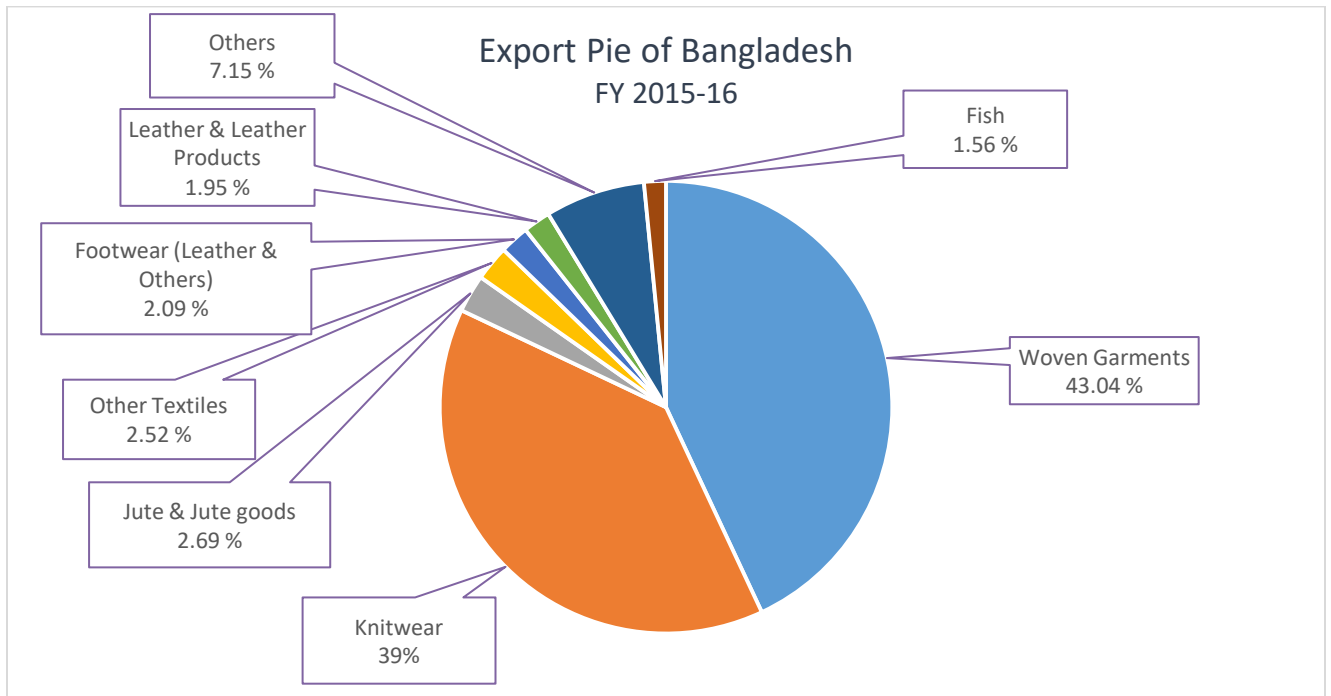


Figure 1.2: Major exportable products of Bangladesh and their market share in the FY 2015-16 (EPB 2016)

In the early 1990s, following the lessons from export-led growth model of East Asian countries, the government of Bangladesh initiated policy reforms to encourage low-skilled garments industry to take the lead for economic development of country. Since then, the contribution of RMG industry in the economic development of the country increased substantially, and now, the RMG sector constitutes approximately 84% of total export of the country. Readymade Garments (RMG) is the single major export industry of Bangladesh, with over 4,000 RMG industries and export earnings of US\$34 billion (BGMEA 2019). The industry employs directly about 2 million workers with 80% participation of women labor force (Hasan et. al 2016; Aman 2015; Bhuiyan 2012; Mirdha 2012). As of 2018, Bangladesh is the second largest apparel exporter in the world and the sector has grown at almost double-digit rates for the last two decades (BGMEA 2019) and in turn, has had a significant contribution in maintaining the average GDP growth rate above 7% plus for the last five years (World Bank 2019). Though RMG industry of Bangladesh is continuously growing and contribution of the RMG sector is substantiated, the industry is facing challenges from other competitive countries such as China, Vietnam, Cambodia

and some African countries. Thus, the sustainability and growth of the RMG sector is a vital issue for Bangladesh's economy. Sustaining a competitive edge in the RMG sector is also critical for Bangladesh.

## **1.2. Development of RMG Industry in Bangladesh**

The development of the RMG industry in Bangladesh is attributed to several key factors. General Agreement on Tariff and Trade (GATT) in 1974 was originally intended to temporarily protect domestic textile and garment industries of developed countries and give them time to adjust to foreign competition. It helped developing countries like Bangladesh to get access to the international market in an orderly manner (Aggarwal and Aggarwal 1985; Dheerasinghe 2009). Bangladesh was able to guarantee access to external market for its RMG products due to relatively less restrictive import quotas for Bangladesh as compared to a heavy quota system levied against Hong Kong, Singapore, South Korea, and Taiwan (Bhattacharya and Rahman, 2000; Chowdhury and Ullah 2010). Entrepreneurs from the above-mentioned countries seeking alternative production sites to bypass the quota developed partnerships with entrepreneurs from Bangladesh with less quota limits (Feldman, S. 2009. P-270). A special opportunity arose when the South Korean conglomerate Daewoo Corporation as part of their global business strategies, developed a joint venture initiative with a Bangladeshi company, Desh Garments Ltd. The agreement called for Daewoo to help Desh Garments train its staff. In return, they would receive 8% commission on all exports. Desh Garments sent 130 workers and management staff to be trained in Daewoo's state-of-the-art technologies at its Pusan plant in South Korea. Those selected trainees returned home after six-month training and became the core human resource base for the RMG industry of Bangladesh. Apart from Daewoo, another South Korean firm, Youngone Corporation, made a noticeable contribution to Bangladesh RMG sector development, forming the first equity joint venture garment factory with the local firm, Trexim Ltd. (Yunus and Yamagata 2014, pp. 84-6).

However, it was anticipated that phasing out of the quota system, many low-income country RMG industries, such as Bangladesh, would not be able to withstand the competition from China and India (Nordas, 2004). However, quota phase out brought opportunities for those who were prepared for it and Bangladesh, among the developing countries, was most successful.

Furthermore, Bangladesh has started following export-led growth policy since the late 1970s, earlier than neighboring India. The ethnic violence in Sri Lanka was prevalent in the 1980s.

As a result, during that period, the anti-export environment in India and the political unrest in Sri Lanka induced the buyers to shift attention to Bangladesh (Spinanger, 2000; Ahmed 2006) and these also led investors to choose Bangladesh as a more secure production sites in South Asia (Feldman, S. 2009).

The rapid industrialization of Asian Tigers (South Korea, Taiwan, Hong Kong), and other East Asian countries (Indonesia, Thailand, Malaysia) along with China through diversification of capital and technical intensive products raised the demand for their labor, and the cost of production (particularly labor) has increased significantly for the labor-intensive industries like RMG. Bangladesh has a plenty of unskilled and semi-skilled labor that was willing to work and that has created a favorable environment for the development of the RMG sector (Feldman, S. 2009. P-270).

Another important stimulator of the RMG sector in Bangladesh is the tariff and import quota-free access in the European Union (EU) under the Generalized System of Preference (GSP) scheme, which contributed to the expansion of apparel export in the EU market provided that Bangladesh meets the *rules of origin* (ROO) requirement. The GSP scheme allowed EU importers to claim full tariff (average 12.5 percent) drawback on imports when they import from Bangladesh (Bhattacharya and Rahman, 2000). Currently Bangladesh RMG products enjoy duty free market access in most of the developed countries and preferential trade agreement (PTA) in India, China, Korea and Malaysia (BGMEA 2019).

The government of Bangladesh developed and implemented various policies in response to the demands and needs of the RMG industry since its inception. Specially two uniquely favorable policies of the government at the early stage, involving the back-to-back Letter of Credit (L/C) and the bonded warehouse, helped the RMG industry expand its exports (Yunus and Yamagata 2014, p. 96).<sup>2</sup>

Most RMG factories are located in and vicinity of the capital city of Dhaka and port city of Chattogram. Knitwear factories are mainly concentrated in the district of Narayanganj, a place which was traditionally famous for hosiery. Other places with the most concentration of the RMG factories are at Gazipur and Savar, both are adjacent to the capital city. Three main reasons can be

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<sup>2</sup> The detail description of the back-to-back L/C and the bonded warehouse is available at chapter three 3.2.3.g. (page-59-60).

considered for this location concentration: First, most of the new starters begin their businesses in small spaces such as rented houses or floors of commercial spaces and expand their businesses to rented or bought land and relocate those to nearby places. Second, concentration of factories in same areas ensure availability of labor, and Third, accessibility of necessary electricity and gas connections.

### **1.3. Major Challenges of RMG Industry of Bangladesh**

The RMG industry of Bangladesh has developed in response to external market forces. Despite many macro-economic and wider socio-political barriers, RMG sector of Bangladesh has shone consistently and became number two global supplier of RMG products worldwide. But the competitiveness of the RMG sector of Bangladesh is vulnerable because of the limiting and competitive context of international business and global market forces, poor infrastructure, weak institutions, limited products and markets, disruptive technological changes, factory non-compliance, and failing to maintain standard working conditions. RMG manufacturers in Bangladesh thus have limited control over external market, and the structure or context of the market, sourcing pattern and buyers' motivation have also been changing consistently.

Since the beginning, Bangladesh RMG export market has been vastly dependent on two market regions i.e. EU and North America. These two regions are the destination of about 85 percent of the total RMG export of Bangladesh (BGMEA 2019). The high concentration of export destinations limits the opportunities for growth of the RMG industry of Bangladesh. It also places the sector in a vulnerable position as export depends and vary on the socio-economic and political contexts of these countries. It is anticipated that Bangladesh will lose its duty-free status to the EU markets upon graduation as middle-income country in 2021. Brexit issue also has a direct impact on the RMG export to the EU Market. Because of this changing scenario, Bangladesh now has to negotiate with the U.K government to maintain the duty-free access status of its RMG products. The product assortment of Bangladesh RMG factories, woven and knitwear, has been highly concentrated in only five low cost products i.e. Trousers, T-Shirt, Jackets, Sweater and Shirt. The dominance of these five categories of products has been seen since the inception of the RMG business in Bangladesh. In the FY2015-16, these five categories consist of 77.28 percent of total RMG exports of where trouser 23 percent, T-Shirt 22 percent, Jackets 13 percent, Sweater 11 percent and Shirts 8 percent (BGMEA 2017). Moreover, relationship with the destination countries

as well as their strategies might impact the growth of the RMG sector. For example, Bangladesh RMG is facing huge competition to the USA market due to the policies of the US government. In particular, the cancellation of GSP facilities after Rana Plaza disaster<sup>3</sup> by pointing to lack of safety-compliances put the RMG industry in a more vulnerable situation.

With more than three decades of experience, Bangladesh RMG industry should have a greater diversity in its product line and much to offer from the product basket particularly high-end products. It should have developed several brands meantime. However, due to availability of low-cost labor, entrepreneurs have been expanding their production capacity with same line of products and engaging themselves with short-sighted profit maximizing business behavior. Such a short run strategy is unsustainable as wage rates are rising fast and minimum wage range has increased more than two-fold within last five years in Bangladesh. Profit margin is being squeezed as competition has increased and product prices become static or even lower. Furthermore, most of the Bangladeshi RMG factories are practicing the very basic cut and make (CM)/ cut, make and trim (CMT) process<sup>4</sup> and only a very few do own equipment manufacturers (OEM)<sup>5</sup>. There is a general lack of more functional upgradation instead of CM/CMT and interest in getting involved in higher value-added activity to be competitive in the world market.

#### **1.4. Theoretical Framework of the Study**

To suggest possible solutions to the current challenges of RMG sector in Bangladesh, it is imperative to contextualize these challenges. The research study uses Porter's Diamond Model as the theoretical framework to analyze the significance of various challenges and determine the current state of competitiveness of Bangladesh's RMG sector. The "diamond framework" is a multilevel concept that explains the international competitiveness of countries holistically which

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<sup>3</sup>A tragic industrial accident which occurred on 24<sup>th</sup> April 2013: an eight-story multiplex housing of clothing factories collapsed which triggered the loss of 1134 garment workers. This disaster put Bangladesh in deep vulnerability and the country is now facing huge image crisis.

<sup>4</sup>The two basic forms of production are "cut and make" and "cut-make-trim" (CM/CMT). Specifications are provided by buyer and supplier is limited to cutting, sewing, embellishments and shipping. CMT contracts are driven by outward processing agreements and are common in export processing and free-trade zones.

<sup>5</sup>Own Equipment Manufacturers (OEM): In addition to tailoring, suppliers are involved in sourcing inputs. They also assume responsibility in the logistic chain as with added capacity, they can carry out entire production process for given order.

includes the relationship between firms, industries and nations. Other concept or theories attempt to determine competitiveness based on only one or two dimensions (Peng 2009, p. 125). The components in Porter's Diamond model have similarities with the components in the Global Competitiveness Index (GCI), which is a widely accepted measurement tool for competitiveness of nations. However, as the GCI does not provide room for detailed and contextualized analysis as Porter's Diamond model, the study has chosen to use the Porter model as its theoretical framework.

### **1.5. Objectives, Research Questions of the Study and Thesis Statement**

Considering the continuous growth of the RMG industry in Bangladesh and its contribution to the national economy, it is necessary to nurture and ensure the continuity of the industry for the sake of economic growth and development of the country. Sensing the significance of the export-oriented industry in the economic development of the developing and emerging countries, the study aims to investigate the competitiveness of RMG industry from the Porter's Diamond Model perspective. Using the tenets of 'Porter's Diamond Framework', the study conducted interviews and collected survey responses from different stakeholders to assess competitiveness as well as the strength and weaknesses of the sector. It is expected to unearth the possible explanation of competitiveness of RMG industry in Bangladesh and propose policy recommendations for continuous sustainable growth and competitiveness of the industry to ensure the export-led growth of Bangladesh economy. The findings of the study could be useful for further development of other export-oriented industries as well as could provide policy lessons for other developing nations. More precisely, the general and specific objectives and questions of the study are the following:

#### ***General Objectives:***

- 1. To assess the competitiveness of Bangladesh RMG sector following Porter's Diamond Framework.*

#### ***Specific Objectives:***

- 2. To identify the critical factors that sustain and accelerate export led growth in RMG sector of Bangladesh.*
- 3. To identify critical issues for necessary policy recommendations for the RMG sector of Bangladesh.*

***Research questions:***

***General Questions:***

1. *What is the basis of competitiveness of Bangladesh RMG sector based on the Porter Diamond Framework?*

***Specific Questions:***

2. *What are the critical factors that sustain and accelerate export led growth in RMG sector of Bangladesh?*
3. *What are the critical issues for necessary policy recommendations for the RMG sector of Bangladesh?*

**Thesis Statement**

Using insights from the Porter model and from interviews and survey responses from stakeholders in the Bangladeshi RMG industry, this thesis will assess the strengths and weaknesses of the sector and make recommendations for its future development.

**1.6. Outline of the Thesis**

The structure of the thesis is as follows:

**Chapter 1** serves the introduction of the full thesis. This section briefly discussed about export-led growth, economic development of Bangladesh and role of RMG industry. It also discussed the historical development of RMG industry. After setting the research context, it specified the research objectives, research questions and theoretical framework of the study. For the readers ease, it then provides brief summary of different chapters of the thesis. Finally, it indicated the possible contribution of the thesis.

**In Chapter 2**, relevant literature was reviewed to understand the importance of export-led growth in a developing countries context and discussed the Porter's diamond model of national competitiveness with contemporary critical views along with the global competitiveness index model to develop a theoretical framework of this research. Literature review chapter has divided into two parts: The first part dealt with contemporary views related to export-led growth and its importance for the economic emancipation of developing nations. It also discussed the role of



institutions in export-led economic growth (ELG), the rationale of government support and few models of effective policies, to ensure competitiveness in export development. The second part of this chapter mainly discussed the Michael E. Porter's "diamond framework" of competitiveness, which was based on his renowned book "The Competitive Advantage of Nations" and confers the critical views of his diamond model.

**Chapter 3** discussed the background of the Bangladesh economy and its current performance. It examined the historical and economic context of RMG sector in Bangladesh and analyzed the current literature on the determinants of its growth and present challenges. The first section of this chapter began with examining the economic growth trend of Bangladesh in terms of a few key indicators such as Human Development Index (HDI), Gross Domestic Product (GDP), export-import ratio, and then examined sectors significantly influencing growth such as foreign remittance, official development assistance (ODA) and RMG. The second section examined the history of growth of RMG, followed by the current determinants of growth and challenges.

**Chapter 4 (methodology)** starts with the discussion of the philosophical assumptions and the theoretical framework that the research is based on. It continued to explain the data collection processes starting from, questionnaire and interview schedule development, selection of interviewee and survey respondents followed by how the data was analyzed with a conclusion.

I followed the mixed method approach that collect and analyze both quantitative and qualitative data and integrate them to achieve the objectives. Both primary and secondary data is used in this research. Primary data was collected from two major sources i.e. interviews and survey results. Interviews have two respondent groups – one is buyers representatives based in Canada and another is RMG related stakeholders based in Bangladesh. Two set of questionnaires (questionnaire A and B in appendix- A & C) have been used for two different types of interviews. Questionnaire C which is a part of the questionnaire A was used as "survey questionnaire" to collect the survey data (Appendix- B). A total valid 199 survey results received from two initiatives (175 from survey and 24 from face to face interviews) was being analyzed.

The interviews were conducted to collect the information about the gradual development and possible challenges of the RMG sector from different stakeholders' perspective. The survey data were used to assess importance and relative weight of different factors as mentioned in 'Diamond Framework' in the competitiveness analysis of the RMG sector. In the analysis, I draw

tables using the theoretical framework developed for this research based on Porter's six factors. Two statistical analysis i.e. weighted average of responses and frequency distribution of weighted average responses were used to analyze the survey data and those data were presented in different tables.

**In chapter 5** (data analysis and findings), I tested the research problem through the lens of Porter's competitive theory of nations. Thematic findings were analyzed in this chapter using theoretical framework which was based on Porter's six components. For each of the six components of Porter's Diamond model, there were respective groups of variables. For each variable, responses were collected based on a five-point Likert scale of -2 (strongly disagree) to +2 (strongly agree) and 0 for a neutral position. The weighted average for the responses for each variable was then calculated. Empirical evidence revealed that some aspects of Porter's model arguably such as factors conditions, related and support industry, and rivalry and industry structures contributed to the competitiveness of garments industry. On the other hand, demand factor of the Porter model revealed to be one of the major limitations to provide competitive advantage of the RMG industry. Finally, the study discusses the related critical factors those have identified from the data analysis for sustainable growth of the RMG industry of Bangladesh.

**In Chapter 6**, a brief summary of the findings relating to Porter's diamond model are presented. It than critically assessed the applicability of the Porter's model to explain the competitiveness of the RMG industry of Bangladesh. The critical observation of the empirical findings indicated a possible modifications of Porter model, i.e., consideration of 'double', 'multiple' or 'rough' diamonds to explain the achievement and sustained competitiveness of the industry. It also provides some recommendations based on the significant variables identified from the research to ensure competitiveness and accelerated growth of RMG industry of Bangladesh. This chapter than briefly discussed the situation of Bangladesh RMG industry within the purview of current COVID-19 pandemic. Finally, it discussed about some limitations of the study and indicated possible future research in this area.

## **1.7. Conclusion**

This chapter covers the background and rational of the study, brief discussion about the RMG industry of Bangladesh, theoretical framework, research objectives, research questions and outline of the thesis. The next chapter examines relevant literatures on conceptual aspects of trade policies

related to ELG and competitiveness. It examines Porter's diamond model of national competitiveness with contemporary critical views of diamond framework and highlights the global competitiveness index model developed by the World Economic Forum. It also provides justification of using Porter's model as theoretical framework of study with a conclusion.

## **Chapter Two: Theoretical Background and Literature Review – Export Led Growth and National Competitiveness**

Being a driver of economic growth, trade remains central to the design of economic policies. All countries have their own policies and practices on export to achieve maximum benefits from trade and to make their products competitive. These policies, generally known as Export Policies (EPs), are wide-ranging and consist of programs and measures, such as the improvement of infrastructure, the development of cluster, the upgrading of processes and products, the diversification of market and the provision of export subsidies (Belloc and Maio, 2011; Palley, 2002). These policy solutions help exporters to access foreign markets, to become more competitive and to expand their businesses. Successful trade policy appeared to have contributed growth and development of many emerging and newly industrialized economies (Aggarwal and Hueline, 2011). There are both internal and external factors that may affect the competitiveness of any export market. The role of the government in selecting appropriate policies and the presence of proper institutions is vital to ensure competitiveness and to develop export-led industries in a country, particularly for developing nations.

Numerous theories, concepts, ideas, frameworks and policy advices are available in literature on trade and on enhancing export competitiveness. This literature review chapter is divided into two parts: The first part deals with contemporary views related to export-led growth and its importance for the economic emancipation of developing nations. It also discusses the role of institutions in export-led economic growth (ELG), the rationale of government support and few models of effective policies, to ensure competitiveness in export development. The second part of this chapter mainly discusses the Michael E. Porter's (1990) "diamond framework" of competitiveness, which is based on his renowned book "The Competitive Advantage of Nations" and confers the critical views of his diamond model. Finally, this chapter discusses the global competitiveness index model developed by the World Economic Forum. This literature review will help to understand the importance and effectiveness of the export-led growth model (ELG) for developing nations and will provide the foundation to analyse critically the competitiveness of the RMG industry of Bangladesh through the lens of related theories and models.

### **2.1.1 Export-Led Growth (ELG) and Economic Development: Global Perspective**

Trade has been considered as one of the major source of growth for developing countries since the eighteenth century (Prebisch 1950; Kravis 1970; Riedel 1984) though there are some concerns about the role of export as a contributing factor in economic development (Blecker 2000; Felipe 2003; Palley 2002, 2011; UNCTAD 2013). Between the end of the Second World War and the late 1970s, developing countries' trade was dominated by the import-substitution (IS) policies. Such IS policies include measures to develop, protect and nurturing local industries to substitute the imports as well as use tariffs, import-quotas and other barriers to restrict inflows of foreign goods in the countries (Adewale, 2019). There were some specific reasons for the developing nations to adopt "import substitutions" trade policy as a vehicle for economic development at the post-colonial era. It is argued that developing countries embraced import- substitution policies because of a common belief that substituting imports would be the first step towards industrialization (Krueger, 1997). The import- substitution policies were also incorporated into articles (Article XVIII) of the General Agreement on Tariffs and Trade (GATT) to provide additional facilities to developing nations so that they can maintain enough flexibility in tariff structure and apply quantitative restrictions to protect their industry. (Article XVIII of GATT)<sup>6</sup>. This special treatment within GATT gave legitimacy to the "inner-oriented trade policies" of developing countries. Many of them created various policies, such as: support to infant industries, restriction of imports (in various ways such as law of similar, import license, removal of goods from the import list and very high tariffs), special incentives for import-substitution investment, establishment of state-owned enterprises, and fixed nominal exchange rates (Aggarwal and Huelin, 2011; Ballocc and Maio, 2011). These policies had their own inbuilt limitations, and it was difficult to implement them with weak institutional support. Krueger (1997:7) stated that the "stabilization" programs undertaken by the International Monetary Fund (IMF) with a view to create simplified and rationalized import regimes could not bring expected results due to unsound policies and inappropriate institutional arrangement. There was always a tendency to engage in rent-seeking behavior, and vested interest groups sprung up around the policies that were adopted (Blecker, 2000).

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<sup>6</sup> Available at [https://www.wto.org/english/res\\_e/publications\\_e/ai17\\_e/gatt1994\\_art18\\_gatt47.pdf](https://www.wto.org/english/res_e/publications_e/ai17_e/gatt1994_art18_gatt47.pdf)  
Page- 488

With the above bleak scenarios of import substitution construct, export-led economic growth model started to gain popularities among the developing nations. Krueger (1997:7) identified three sets of research that were instrumental in changing trade policies from an inward to outward focus in developing countries. The first set of research investigated how import-substitution policies were actually working. The second set used theory to interpret the policies and the third set focused on alternative policies. In particular, the shortcomings of relying on import substitution became prominent while Economist provide evidence of more success from export-led growth through various comparative studies.

Since late 1970s, the export-led growth (ELG) policy gained popularity as an effective development model for the emerging economies. A good number of Asian countries have adopted the ELG strategy and achieved phenomenal progress in their economic development (Razmi and Hernandez, 2011). The four “East Asian Tigers” —South Korea, Taiwan, Hong Kong, and Singapore— pioneered the ELG strategy and were followed by other countries, including Thailand, Malaysia, Indonesia, and China. Research found significant relationship between export orientation and economic development of Singapore, South Korea and Taiwan during 1960s to 1990s. The percentage of total export to the GDP in that period was around 50-60 percent in South Korea and Taiwan, 80 per cent in Hong Kong, and 120 per cent in Singapore (Lam, 2013). The contribution of export of electronics industry of Taiwan (Chen and Tang, 1987), apparel industry of Thailand (Watchravesringkan et al., 2010), electronics and chemical industry of Korea (Lam, 2013) were recognized in empirical research evidence and provided policy guidelines for other Asian countries. All these countries have achieved impressive socio-economic progress within a reasonably short period, following the ELG development path.

Over time, most developing countries have tried using the ELG strategy, with mixed results (Palley, 2002). While early adopter of ELD strategy in some Asian countries (i.e., China, India, Thailand, Malaysia) may have achieved the expected goals, many other late ELD strategy adopters (i.e., Cambodia, Laos, Myanmar) are far from achieving the desired economic growth and development (Mania and Rieber, 2019). However, the financial crash of 2008 and the accompanying recession represented a turning point, even for countries that were benefiting from ELG (Razmi and Hernandez, 2011). These conditions have created a global demand shortage, which has had repercussions for export, making the process for emerging markets even more challenging than it was before (Palley, 2011). As a consequence, scholars have started debating

about the efficacy of the ELG model, and it is important to understand the usefulness of ELG as a vehicle of development for the developing world economy (Blecker, 2000; Palley, 2012; Razmi and Hernandez, 2011). Krueger (1997) states that the politicians and bureaucrats who are responsible for formulating and administering the policies have vital role to play in economic development of a nation and suggests that the combined effort of researchers, politicians and bureaucrats can result in more favourable outcomes.

Researchers such as Palley (2011) and Blecker (2000) claim that the ELG as a development paradigm has run its course because of the deteriorated economic conditions in both developing and developed countries. They point out that Europe is hampered by fiscal restraint and austerity, the US economy is burdened with debt, and Japan is weighed down by its dependency on ELG coupled with weak internal demand due to its aging population. These examples illustrate the stagnation of the industrialized economies and the overall low demand in the world market. Considering this bleak scenario for export-led growth and dire projections for the global economy, Palley (2011) recommends a move from ELG to a Domestic Demand-Led Growth (DDLG). However, he stated, “This does not mean the abandonment of exporting ..., it does mean building up the domestic demand side of the economy and reducing reliance on strategies aimed at attracting export-oriented FDI” (P. 18). To meet this challenge, Blecker (2000) suggests expanding global export markets and allowing all countries to provide to more reciprocal demand for each other’s products. He (Blecker) argues that the reliance on export growth may suffer from a “fallacy of composition.” The reason is that if too many countries try, simultaneously, to rely on export-led growth policies to stimulate growth under a given set of global demand conditions, the market for developing countries’ exports is limited by the capacity of the industrialized nations.

UNCTAD (2013) in its trade and development report acknowledges the ideas of Palley (2011) and advocates EM economies to adopt the strategy to rely more on DDLG for their development. The report states that if many trade partners in the developing world manage to expand their domestic demand simultaneously without beggar-thy-neighbour effects (no counterproductive wage and tax composition), they can spur South-South (among the developing countries) trade. In response to the proposition of shifting from ELG to DDLG, Felipe (2003) commented that, unlike import substitution, DDLG and ELG are not incompatible strategies; rather they are compatible and can supplement each other. Considering the complex global economic and business context, Felipe (2003) argues that a greater emphasis on DDLG is a promising development. However, according

to Palley (2011), strong political commitment, standard per capita income, good governance, developed infrastructure, increased provision of public goods (healthcare, education etc), restructured economy (social safety net, minimum wages, more tax, etc), and limit the incentives of ELG are some of the elements which need to be present in a country to get benefit from the DDLG. Unfortunately, most of the developing nations have deficiencies in these elements and therefore, are less likely to transform their export-led growth strategy into DDLG.

### **2.1.2. The Rationale of Government Support in Export Development**

Economic gains through export-led growth occur while countries are able to make better use of resources and harness their comparative advantage, and these gains rarely occur without government help (Aggarwal and Huelin, 2011). The role of government and public–private sector collaboration as well as appropriate policies and efficient institutions are imperative in export development. Evidence shows that in countries that successfully transformed from agrarian to modern economies– including those in Western Europe, North America, and more recently, in East Asia– governments created a conducive environment and coordinated the key investments of private sector that helped to launch new industries, and often provided incentives to pioneering firms (Gerschenkron, 1962; Amsden, 1989; Wade, 1990; Chang, 2003).

Although, the legitimacy of government intervention in trade has been established from the writings of eighteenth-century economists Adam Smith, Hamilton and others (Lin and Monga, 2013), two contemporary groups of macroeconomic theorists (neoclassical and neo-Keynesian) have emphasized very different rationales for industrial policy as well as government intervention. Neoclassical theory acknowledges the need for government intervention only in situations of market failures –when market mechanisms, left alone, do not allocate resources efficiently. Neo-Keynesian economists justify government intervention for productivity spillovers. For instance, evolutionary theorists stress the importance of innovation and technological changes in growth process and argue that government must play an important role in building the capacity of domestic institutions to anticipate major economic trends and cope with systemic change (Nelson, 1995). Other theorists have focused on incentives for cooperation between businesses in sectors of industrial innovation and in particular, the need to pool financial resources and complementary competences for research in areas where strong cooperation is required as new technologies become more complex and more expensive. They argue that cooperative research among private



firms but sponsored by governments can lead to positive information sharing and innovation, which are crucial for a knowledge-based economy (Spence, 1984; Katz, 1986).

Belloc and Maio (2011) argue that the rationale for government intervention in export has two objectives: (i) to increase export flows and (ii) to identify the sectors on which the country should focus. In the case of EM economies, the market itself cannot address these issues as there are market failures and it justifies government intervention to correct goods and factor markets' distortions (p. 8). According to Belloc and Maio (2011), market failure generates two types of government policies: functional and selective. Functional policies are intended to correct market failures by taking into account the entire national economy without altering resource allocation between sectors (e.g. public investment in physical or human capital, information and technical supports provision, production of knowledge goods). The selective policies should focus on resource allocation in particular sectors or regions (e.g. specific subsidies or tariffs, sector specific investment) (p.8). Therefore, Belloc and Maio (2011) argued that government should be actively involved in developing selective export promotion policies (EPPs) for the reasons to identify the protective sectors, for corrective actions of market imperfections, promoting comparative high risk industries, ensuring knowledge and research spillovers, and protect the intellectual properties developing (Belloc and Maio, 2011: p.8 -10).

Martincus and Carballo (2010) argue that the decision to enter new export markets or add a new product at destination countries is a challenge for developing countries, particularly for those companies that have little export experience. The authors state that to export to a new destination, companies have to be aware and learn dimensional things. For example, they must learn about distribution channels, potential business partners, market strategies for export, the costs of and methods for shipping, tariff and nontariff measures, technical regulations that apply to their goods, both at home and in destination countries; the preferences of domestic consumers vis a vis the good to be traded. In order to collect this information, companies need to invest in market-specific studies and that costs are mostly fixed or sunk in nature. Moreover, once collected, this information dissemination may have "free riders' problem" (p. 439). Government supported Export Promotion Policies (EPPs) have the means to correct this market failure, whereas private firms are less motivated to invest in such ventures because of the risk involved. This kind of government supported policies will facilitate the expansion of exporting to a new country or selling new goods abroad.

Xiangkang and Xiangshuo (2005) argue that export promotion measures such as export subsidies and devaluation benefit developing countries by updating technology, improving productivity, stimulating employment and reducing shortages of capital goods. These measures have a positive impact on the economy and are in themselves an incentive for domestic companies to invest in new export markets. The authors further recommend subsidizing capital imports to reap the benefits from capital investment. Wilkinson and Brouters (2006) examine the effectiveness of EPPs and their rationale from a company's perspective. Their findings reveal that firms using trade shows and other services (such as programs identifying agents and distributors) sponsored by the state governments of the US are likely to have positive export performance outcomes. Analyses also show that SMEs that tapped into available state export promotion programs can develop the competency and skill of their managers which ultimately supplement the scarce resources of the firms.

It is evident from this part of the discussion that there are enough reasons for government's intervention in export development and that EPPs have a significant impact on firm-level export success as well as the ELG of a country.

### **2.1.3. Export Led Growth and Models of Effective Export Promotion Policies**

Governments all over the world take various initiatives and a wide range of policy measures for ELG (Aggarwal and Huelin, 2011; Krueger, 1997; Razmi and Hernandez, 2011). It is argued that the description of EPPs sometimes appeared to be narrow (e.g., "effective exchange rate policies") or broad ("any policy that directly or indirectly affects export performance") or anything in between these two extremes (Belloc and Maio, 2011: p.37). There is no set instruments through which government can identify the optimal policy options, rather they need to learn how best policy mix may fit in a particular circumstance. The experiences of other countries can be motivating but, to be successful, each country has to find its own way (Belloc and Maio, 2011; Palley, 2011).

Based on the evidence from their research, Belloc and Maio (2011) recommend some best practices of EPPs for developing nations. The success of an EPP, the authors maintain, depends on a government's ability to design, apply, enforce and monitor the implemented policies. They also argue that strategic collaboration between different levels of the government and the private sector is key to export policy success. This observation indicates that the policy mix suggested for

a given country must be tailored on the capabilities of the national government and national agencies to engage in these activities. Belloc and Maio (2011) suggest that key to successful promotion strategies are clear priorities, goals and objectives. In particular they recommend that governments should develop export favorable environments, foster strategic collaboration among all the stakeholders, nurture innovation, provide credit assistance to exporters, develop supportive monetary and fiscal policies, build positive country image and help to improve competitive productivity of the export-oriented sectors (Belloc and Maio, 2011, p. 41).

ITC (2011) research paper identifies the public-private collaboration model as an effective EPP and recommends that countries should maximise this opportunity wherever possible. It is evident from the research that effective policy measures taken by export promotion agencies (EPAs) have statistically significant positive effect on export growth. Kang (2010) recommends EPAs to increase overseas network activities through market research and evaluation, whereas Lederman et al (2010) suggest for institutional restructuring, allocation of enough budget etc. Samen (2010) argues that government of any developing countries should make a good balance with a flexible combination of state intervention and market force at the time of selecting EPPs. He identified that developing countries with a thriving trade in exports use a combination of “permissive and positive policies” to accelerate their export growth and diversification (p. 8). Permissive policies remove obstacles that discourage exporting, thereby paving the way for more effective resource allocation. These policies consist of a blend of “price, fiscal, exchange rate and monetary policy tools” (p. 8). Positive policies are aimed at stimulating new export areas and activities. Positive policies can be subdivided into functional and selective policies: “Functional policies are across the broad measures with no intent to shift resource allocation, while selective policies are targeted to specific firms, sectors or activities with clearly declared and deliberate intent to shift resource allocation” (p. 8). Samon (2010) further states that open trade and selective transitional protection, micro and macro-policies, and public and private partnerships can play a key role in the improvement of developing countries’ export competitiveness and integration of their industries and SMEs into the global supply chain.

Grainger and McLinden (2013) argue that many countries face major supply-side constraints that prevent them from participating effectively in the international trading system and therefore trade facilitation has become an important development issue in recent years. According to Grainger and McLinden (2013), trade facilitation should focus on simplification, harmonization,

standardization, and modernization of trade and customs procedures. Although these procedures are undoubtedly necessary, the authors contend that the trade facilitation process should also include logistics, trade-related infrastructure, and transport facilitation.

The authors (Grainger and McLinden, 2013) argue that “inefficient border processing systems, procedures, and inadequate trade infrastructure result in high transaction costs, long delays in the clearance of imports, exports, and transit goods, and create an environment for administrative corruption” (p. 877). Because these problems hinder the business environment and competitiveness in the global marketplace, countries must address them through trade promotion policies. Gerschenkron (1962: 9) argues that a large number of labor cannot always lend a competitive advantage to developing nations because of non-existence of adequate suitable labor force. History suggests that low wage advantage cannot be sufficient for the long-term sustainability of any sector. For example, Japan invaded Lancashire’s (a city pioneered in textile industry in England) markets for textiles on the basis of better trading companies to procure raw cotton, more modern equipment, and a more integrated process flow, as well as on the basis of lower wages. Similarly, Korean cotton-spinning and weaving firms’ competitiveness with Japanese textiles were not the low wages but generous support from the government as subsidies including low interest rate long term loan, effective exchange rate, ensuring availability of raw materials etc. (Amsden 1989:143).

Aggarwal and Huelin (2011) contend that “a comprehensive and clearly articulated approach to trade policy and regulatory practices, with buy-in by all stakeholders, is vital to the success of an export strategy” (p. 3). The authors point out that trade policy must be dealt with in an integrated manner. Without such integration, it is difficult to “implement a coherent policy framework to support an export strategy” (p.3). A coherent trade policy framework not only links government departments; it also brings together the public and private (p. 3). They recommend that relevant stakeholders meet to determine with clear objectives, which are “driven by the common goal of export impact for good” (p. 3). They further argue that strategies need to be put together within the larger context of international trade to comply with regulations under the World Trade Organization (WTO) and other regional and bilateral agreements (p. 4). The authors present a framework to explain the interface between trade policy and export competitiveness (Figure -2.1).

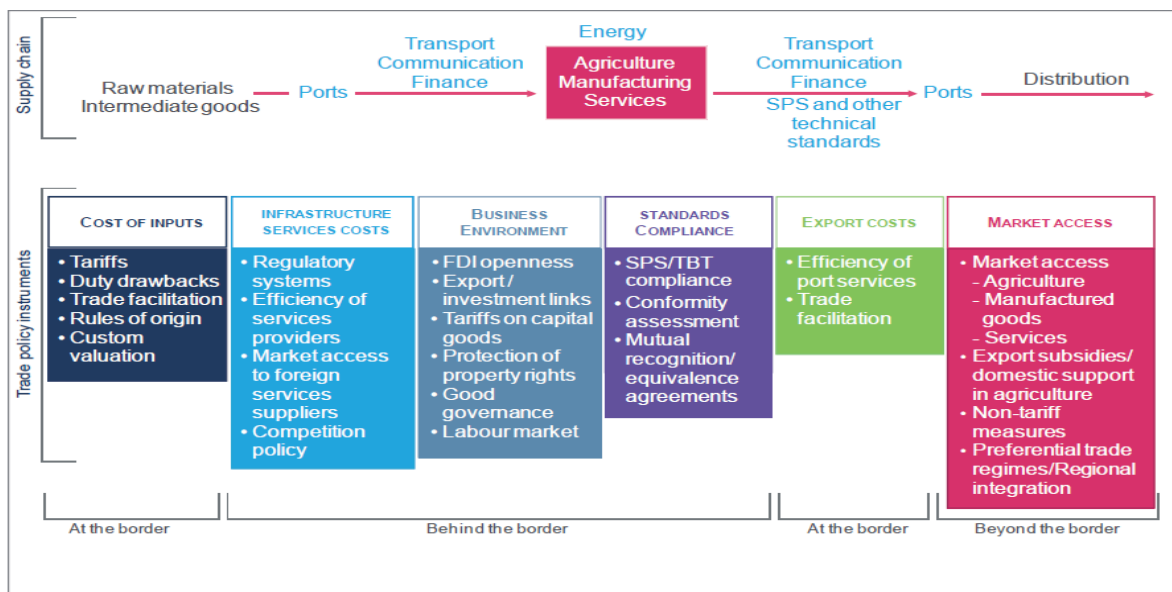


Figure-2.1: The trade policy/export competitiveness interface (Aggarwal and Huelin, 2011)

The given framework captures at a glance the scope for trade policy to influence export competitiveness. It illustrates the need for specific trade policy instruments to address constraints exporters face behind the border, at the border and beyond the border, related to every stage of production and distribution of manufactured goods, agricultural products and services for export (p. 6). Aggarwal and Huelin (2011) claim that strategic export promotion policies considering a framework like this could yield maximum benefit from the export-led growth of any developing countries.

From the above discussion, it can be inferred that no single model or policy package can be treated as a prescription for export-led growth for all the developing countries. Rather than adopting general policy principles from abroad, policy-makers are required to perform their own analysis based on country-specific data. Export promotion policies should be a combination of different policy measures based on the needs, capacity, and potential of a particular country.

## 2.2. Nation's Competitiveness: Porter's Diamond Model

This part of the literature discusses the ideas and concepts related to the competitiveness of a nation based on Porter's Diamond framework and the Global Competitiveness Index model with a view to understand what specific factors contribute to make a country more competitive than others. Porter (1990:5) argues that because most trade theories looked only at cost, a new theory is necessary that "should reflect a rich conception of competition that includes segmented markets,

differentiated products, technology differences, and economies of scale.” He further contends that this new theory should be able to explain why firms from particular nations choose better strategies than those from others competing in particular industries. Porter (1990:1) carried out a four-year field study involving ten countries: eight developed nations (Denmark, Germany, Italy, Japan, Sweden, Switzerland, United Kingdom and the United States) and two newly industrialized countries (South Korea and Singapore). Michael Porter and his team conducted the study in two phases. In the first instance, the researchers identified all industries from the specific country that appeared to be successful in international markets, basing their work on statistical data, supplementary published sources, and field interviews. While identifying the successful industries, Porter and the research team members gathered longitude information over three different time points (1971, 1978, and 1985) and analysed the patterns in the successful industries. In the second phase, the research team examined all the information from a historical perspective to comprehend the logics of the start and growth of the industry in specific countries, internationalization process, and competitiveness in the international markets. The Porter study explained the emergence of competitiveness of particular industries from specific countries. Finally, Porter proposed ‘national competitiveness’ framework to assess competitive advantage of the countries (Porter, 1990). In light of information from over 100 case studies selected from these countries, Porter finds that four attributes of the home environment - namely factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry - play a major role in shaping the context that allows domestic firms to gain and sustain competitive advantage. Michael Porter’s initial research mainly aimed to investigate the reasons for the competitive success of some industries from specific countries. Therefore, he selected only successful companies from those target countries. During the research, he identified the existence and contribution of macro or national level factors that aided corporate success. He proposed the ‘National Competitiveness’ framework or model to provide policy guidelines for focused or specific sectoral industrial development in the countries that had these commercial conditions. He refers these four interacting determinants as “national diamond” that forms the core of his theory. Porter also includes the roles played by government and ‘chance’ as factors influencing the functioning of these four major determinants. A brief discussion of the key features of Porter’s country competitiveness attributes is given below:

### 2.2.1. Factor Condition

Factor endowments are considered to be the core of the traditional theory of international comparative advantage. Porter analyzes the characteristics of factors of production in much greater detail that include the processes by which they are created, and their relationship to their firms' competitiveness (Porter, 1990). To understand the role of factors in competitive advantage, Porter (1990, p.77) categorizes them as basic or generalized factors (natural resources, location, climate, unskilled and semiskilled labor, and debt capital) and advanced or specialized factors (modern digital data communications infrastructure, highly skilled/educated personnel, reputed research facilities). He argued that basic factors are passively inherited, or that their creation requires relatively modest or unsophisticated private and social investment. He further claimed that such factors gradually become either unimportant to national competitive advantage or provide an advantage to the nation's firms that is unsustainable.

Porter (1990:74) argues that "to understand the role of factors in the competitive advantage of a nation", the concept of factor endowment needs to be explored more meaningfully than the traditional theory of international comparative advantage described the terms - land, labour, and capital. To know the dynamics and competitiveness of any strategically distinct industries, Porter (1990:74 -75) suggests to group the factor endowments into the following five broad categories:

- *Human resources*: the quantity, skills, and cost of personnel (including management), considering standard working hours and work ethic.
- *Physical resources*: the abundance, quality, accessibility, and cost of the nation's land, water, mineral, power etc. Geographical location, size and climate conditions are also considered as physical resources.
- *Knowledge resources*: the nation's stock of scientific, technical, and market knowledge bearing on goods and services. Quality of university research, government and private research facilities, market research reports and databases, trade associations and other sources.
- *Capital resources*: the amount and cost of capital available to finance industry.

- *Infrastructure*: the type, quality, and user cost of infrastructure available that affects competition. It includes logistics, transportation, ports, communications, living standard etc.

Competitive advantage of a nation is not mere access to the factor endowments rather it depends on “how efficiently and effectively they are deployed” (Porter 1990: 76). To understand the long-term impact of factors in competitive advantage of a nation in an industry, Porter (1990: 77-78) suggests to categorize and assess the factors into two different perspectives. First perspective to categories the factor endowments in two discrete groups. First group as the basic factors, and the second group as advanced factors. Second perspective to categories the factors in two distinctive groups, i.e., generalized factors and specialized factors.

*Basic factors* that include natural resources, unskilled and semi-skilled labor, location, debt capital etc. and *advanced factors* include modern digital data communications infrastructure, highly skilled and educated personnel, sophisticated research institutes, high quality education and training institutes etc. *Generalized factors* include the highway transport system, a supply of capital, or a pool of enthusiastic workforces with college educations and they can be deployed in various sectors. *Specialized factors* involve narrowly skilled personnel, infrastructure related to specific industries, knowledge bases in specific fields, and any other factors development for a limited range or even for a single industry.

It claims that the need for basic and generalized factors such as semiskilled labor or local raw materials can be reduced, circumvented or eliminated through innovation. For example, automation reduces labor content, new materials can eliminate the need for other materials. Innovation sometimes yielded second order benefits e.g. reducing labor content may help to reduce the rate of defects and increase product quality (Porter 1990). Ozlem, (2002) contends that basic factors are easy to achieve and thus not maintainable as the benefit accruing from them is not hard to imitate by others (p. 510). On the other hand, advanced or specialised factors are created or upgraded through investment and innovation. These factors are the more decisive and sustainable basis for national competitive advantage and, unlike basic factors whose supply depends upon exogenous ‘endowment’, advanced factors are a product of investment by individuals, companies, and government. (Porter, 1990).



According to Huggins and Izushi (2011), the relationship between the basic and advanced factors is complex. They state that “Basic factors can provide initial advantages which subsequently extended and reinforced through more advanced factors; conversely, disadvantages in basic factors can create pressures to invest in advanced factors (p. 115)”. However, the factors which provide the most enduring basis for competitive advantage of nations tend to be specialized rather than generalized, and thus the success of any particular industry heavily relies on the ability to create specialized factors related to that sector. Along Porter, many scholars are in favor of this proponent. For example, Shafaeddin and Reinert (2012) stated that “Advanced/Specialized factors contribute more to sustainability of competitive advantage” (p.54). Sledge (2005) also empirically reported that specialized factor conditions positively influenced an industry’s global competitiveness. However, Porter (1990) stresses the need for continuous upgradation of the factor conditions to ensure sustainability and competitiveness. A factor pool will depreciate if not continuously upgraded. This particularly applies to human and knowledge resource. Factor advantage at any time point of a nation therefore does not explain its long-term success.

### **2.2.2. Demand Conditions**

Porter believes that home demand has a considerable influence on competitive advantage, and he presents the composition, the size and pattern of growth, and the internationalisation of home demand as three broad attributes of it (Porter, 1990). According to Porter (1990), domestic demand is a primary source of a firm’s competition in a given industry. The degree of sophistication and level of local consumer demand are the driving forces for firms to manufacture quality products that meet or exceed consumers’ standards at the highest level of efficiency and productivity (Sakakibara and Porter 2001). Porter further states that it is the composition of home demand that shapes how firms perceive, interpret and respond to buyers’ needs. This forces home country firms to continually innovate and upgrade their competitive positions to meet the high standards in terms of product quality, features and service demands (Smit 2010: 116).

### **2.2.3. Related and Supporting Industries**

The existence of internationally competitive and supportive industries in a nation (i.e. clustering), is an important determinant of the creation and sustainability of competitive advantage. It refers to the national presence of suppliers and related industries that have international standard. One of the most pervasive findings of his study is the tendency for the successful industries within each

country to be grouped into “clusters” of related and supporting industries. Porter (1990) argues that specialization leads to the sticky (not easily moveable) location advantages that are the true sources of countries’ sustainable competitive advantage. Highly competitive clustering will drive the focal industry to be more competitive through innovation, upgrading, information flow, and shared technology development (Porter 1998). The relationships among these clusters of industries are critical to the success of a given industry within a nation because “they drive learning, innovation and competitiveness, and are considered to produce the maximum synergies when all requisite institutions necessary to drive learning, innovation, and competitiveness and economic agents are connected” (Rasiah 2009, p. 151). Krugman (1986) argues that, in a particular location, specialization takes place due to three main reasons and these are: resources-driven specialization, economies of scale at the firm level and external economies as a result of local clustering. Related and supporting industries can produce inputs that are critical for innovation and internationalization.

#### **2.2.4 Firm Strategy, Structure and Rivalry**

Porter (1990) defines the fourth broad determinant as including the strategies and structures of firms as well as the nature of domestic rivalry. Firm strategy, structure and rivalry refer to “the conditions in the nation governing how companies are created, organized, and managed, as well as the nature of domestic rivalry” (Porter 1990, p.71). Sledge (2005, p. 25) described strategy as “the types of actions firms utilize to achieve both long-range and short-range goals” and structure as the industry composition, which is the “degree to which an industry is concentrated or dispersed, competitive or monopolistic, or global or domestic”. The main emphasis here is that the strategies and structures of firms depend heavily on the national environment and that there are systematic differences in the business sectors in different countries that determine the way in which firms compete in each country and ultimately their competitive advantage (Smit 2010: 117). Strategic growth should be associated with higher competitiveness since the ability to pursue growth domestically or internationally would be an indicator of the health of the business (Sledge 2005).

Porter (1990) contends that a nation's success in industries tends to rely on favorable management practices and organizational modes suited to the industries' sources of competitive advantage. He further stated that domestic rivalry is a major motivation for firms to be innovative and hence succeed internationally. Rivalry is an indicator of an underlying competing firm's

structure and strategy (Watchravesringkan et al. 2010). Companies in proximity to each other tend to create competitive pressure, motivating each other to actively search for internationally competitive products and practices (Sakakibara and Porter, 2001). According to Porter (1990), international competitiveness of a country shapes firms' competitiveness and eventually firms compete internationally. The existence of intense domestic rivalry in particular is of special importance since it encourages firms to upgrade.

### **2.2.5. Chance and Government Role**

Porter (1990) proposes two other factors, namely chance (exogenous shocks) and government policy, which support and complement the system of national competitiveness (Smit 2010). Chance events are by definition beyond the control of firms but may create forces that reshape the industry structure, allowing shifts in competitive position. Any unexpected situation (e.g. accident, war), unintended consequences, political uncertainty, unpredictable technological discontinuation or innovation can have a huge impact on industry.

About the role of government, Porter (1990) contends that the government has a major role to play as a catalyst and challenger of an industry and therefore encourages companies to achieve higher levels of competitive performance. To achieve the goal of higher productivity, government needs to take necessary policy actions so that firms can have access to required pool of advanced and specialized human resources, standard infrastructure, scientific knowledge, economic information, and other related factors of production. Favorable factor conditions encourage firms to upgrade by introducing sophisticated technology and methods and penetrating more advanced segments of the industry. Although Porter (1990:620) advocates government to play indirect role in competitiveness, however he recommends government's direct role "where firms are unable to act" or where externalities<sup>7</sup> caused underinvestment.

Watchravesringkan et al. (2010) state that a government can influence (positively or negatively) each determinant that contributes to a nation's competitive advantage. For example, a government may assist in developing the quality of advanced factors (i.e. skilled labours) through creating an environment of proper education and training and by improving the quality of infrastructure

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<sup>7</sup>Externalities are a gain or loss of one's welfare caused by others without getting compensation for that loss.

necessary to support the growth of an industry. A government can also push global and local demands for goods through various initiatives, such as bilateral or regional trade negotiations and by encouraging local brands to take necessary policy measures. For related and supporting industries, a government may develop a strategy and take necessary policy actions to bring together the enterprises (e.g. suppliers, distributors, training and research institutions) that serve the industry. Finally, a government may encourage domestic rivalries by limiting direct assistance and by enforcing anti-trust laws. It can also emphasize globalization in the areas of firm structure and rivalry through alleviating entry barriers against foreign companies (Moon et al. 1998). According to Porter (1990), the complete framework, which he calls the ‘diamond’ (Fig-2.2), is a dynamic system in which all elements interact and reinforce each other.

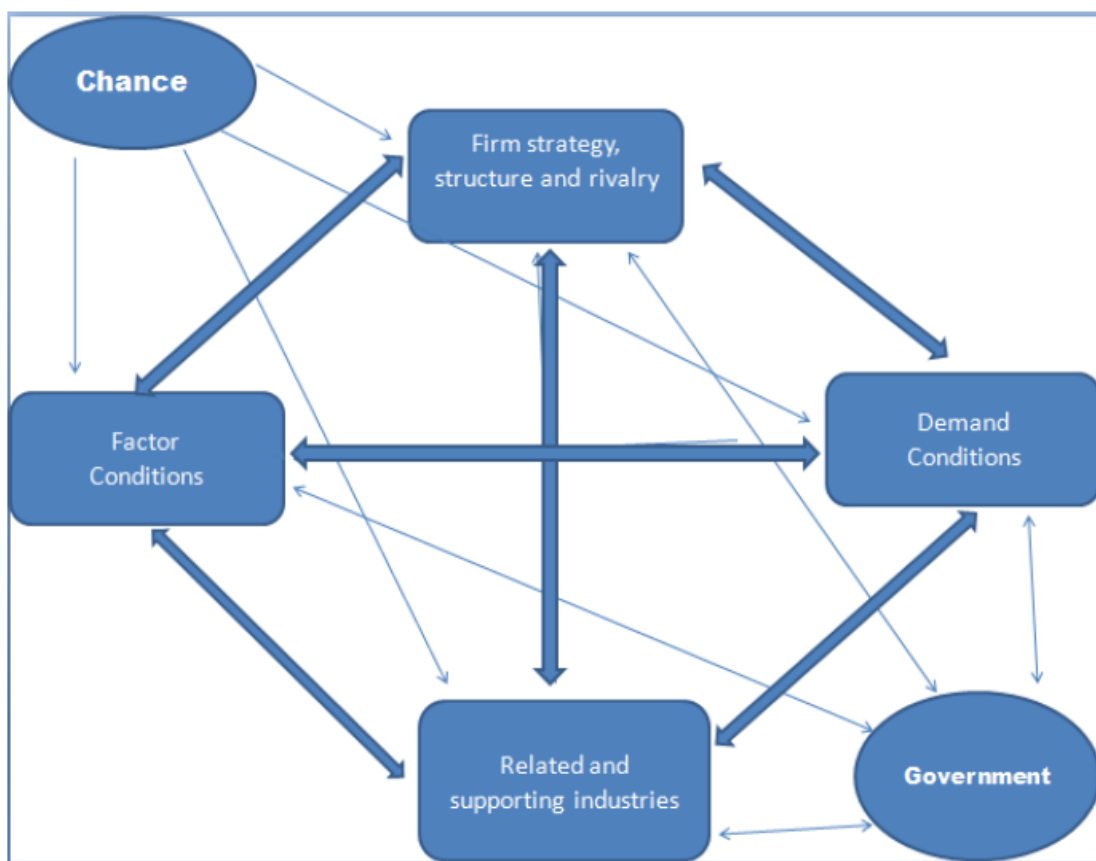


Figure- 2.2. Porter’s Diamond Framework (Porter 1990, p. 127)

Porter argues that a nation's competitiveness depends on the capacity of its industry to innovate and upgrade. The standards of factors for competitiveness are rapidly increasing. For example, a labor force with only basic literacy is no more considered as a real advantage (Porter 1990, P- 627). Porter states that some determinants provide a more sustainable basis for advantage than others. The current pool of factors, Porter added, "is less important than the presence of specialized and preeminent institutions for factor creation. [The] condition that provide dynamic advantages (faster innovation, early mover advantages, pressures for upgrading) are more important than those conferring static advantages such as factor costs and a large home market" (Porter 1990, p. 147).

In a world of global competition, the role of government has become more important and nations succeed in particular industries when their home environment is the most forward looking, dynamic, and challenging. Porter claims that:

*When a national environment permits and supports the most rapid accumulation of specialized assets and skills – sometime simply because of greater effort and commitment – companies gain a competitive advantage. When a national environment affords better ongoing information and insight into product and process needs, companies gain a competitive advantage. Finally, when the national environment pressures companies to innovate and invest, companies both gain a competitive advantage and upgrade those advantages over time.* (Porter 2008, p-183).

Thus, government's aim should be to create an environment in which firms can upgrade competitive advantages in established industries by introducing more advanced technology and methods and penetrating more sophisticated segments (Porter 1990, P- 618). Government is seen as the principal engine of factor creation (Porter 1990, P- 626) and the most important role of government is creating and upgrading factors, whether they are skilled human resources, infrastructure, economic information or basic scientific knowledge. Nations cannot gain much advantage from the factors available today as from the presence of unique institutional mechanism that upgrade them continually (Porter 1990, P- 626). Education and training is vital for competitiveness and the presence of standard vocational and technical education system along with specialized industry training could provide maximum leverage to upgrade the industry of a country (Porter 1990, p. 630).

### **2.2.6. Critics' View of Porter's "Diamond Model"**

Porter's "diamond model" and his concept of national competitiveness have received both praise and criticism from the researchers. Two different schools of thoughts consider Porter's ideas in opposite ways: i.e. the economic school ignores his notion of country competitiveness and management school supports it (Smit 2010:107). For example, eminent Nobel laureate economist Paul Krugman (1994) describes the concept of territorial competitiveness as a "dangerous obsession" and states that competition between companies and nations cannot be compared. He argues that the definition of competitiveness of a nation or a region should not be determined simply as the competitiveness of the business. Daniels (1991: 3-6) states that there is no consensus on how to measure, explain and predict international competitiveness of countries and thus he calls it "the elusive concept of national competitiveness". On the other hand, management academics generally believe that countries are somehow in competition with one another and Peng (2009) refers Porter's diamond framework as the most recent theory that explains the international competitiveness of countries. According to him, "It is the first multilevel theory to realistically connect firms, industries and nations, whereas previous theories only work on one or two dimensions" (Peng 2009, p. 125). However, Hill (2009:193) asserts that "although much of the [Porter's] theory sounds true, it has never been subjected to rigorous testing".

A good number of scholars have raised specific points or issues as limitations of Porter's "diamond model". For example, scholars such as Gray (1991) and Stopford and Stange (1991) criticize the lack of official detailed modeling in Porter's diamond, while others (e.g. Bellak and Weiss, 1993; Dunning, 1992; Grant, 1991; Gray 1991; Rugman and D'Cruz, 1993; Thurow, 1990) dispute the originality of his work. Gray (1991) criticizes Porter for the way he "treats" the macroeconomic policy, Grant (1991) and Thurow (1990) mention the lack of clear definitions of determinants and various key terms. Bellak and Weiss (1993) claim that Porter does not give enough attention to the modern theory of trade, whereas Van den Bosh and De Man (1994) mention the ignorance of the role of national culture.

The methodology which has been used in Porter's research on national competitiveness are also subject to criticism. Some scholars (e.g. Bellak and Weiss 1993; Cartwright 1993; Eilon, 1992; Grant, 1991; Rugman and D'Cruz 1993) claim that Porter heavily depends on exports as a measure of international competitiveness, whereas others (e.g. Bellak and Weiss, 1993; Dunning, 1992;

Hodgetts 1993; Rugman and D'Cruz 1993; Rugman and Verbeke 1993; Rugman, 1991) criticize the treatment of multinationals and foreign direct investment, and the inadequate treatment of relatively less competitive industries. While Porter and his research team used retrospective historical information to investigate the factors that influenced the success of specific industries from specific countries (Porter, 1990), research on the failure of other industries from those countries and comparisons of the success vs. the failure of other industries may provide a better understanding of countries competitive advantage vs. competitive disadvantage scenarios (Hanafi et al., 2017). However, considering the research context of the RMG industry (the only internationally competitive industry from Bangladesh), this study adopted the Porter's framework to investigate the competitiveness of RMG industry and aimed to provide policy recommendation for the future sustainable development of the industry.

Some scholars stress the need to review the model of Porter's diamond. Van den Bosch and De Man (1994) and Stopford and Strange (1991) state that the role of government featured by Porter is insufficient, and suggest to consider whether the government can be added as a fifth determinant in his model. Dunning (1992, 1993) claims that Porter undervalues the role of MNEs in the global economy and suggests to incorporate "transnational business" as a third exogenous factor, along with the "chance" and the "government". Dunning (1990) states that "..... there is ample evidence to suggest that MNEs are influenced in their competitiveness by the configuration of the diamond in other than their home countries, and that this, in turn, may impinge upon the competitiveness of the home countries" (p.11). Scholars (e.g. Rugman 1990, 1991; Hodgetts 1993; Rugman and D'Cruz 1993; Rugman and Verbeke 1993) argue that a firm's capability to tap into the location advantages of other nations are viewed as very limited in Porter's model. He (Porter) does not take the attributes of the home country's largest trading partner into account. To address this issue Rugman and others proposed the concept of "Double Diamond" which include home country characteristics as well as the attributes of the country's largest trading partner(s) (Rugman 1990; Rugman and D' Cruz's 1993). Within this 'double diamond approach', Rugman demonstrates that competitiveness depends on both domestic and foreign diamonds, and that the management of domestic firms should understand and exploit both diamonds if they wish to become or remain globally competitive (Rugman 1990; Rugman and D' Cruz's 1993; Smit 2010).

In subsequent research on competitiveness analysis of Japanese (Porter et al., 2000) and Canadian (Porter, 1991) industries, Porter clarified his original propositions and justified the Diamond model and its applicability to the industrial competitiveness of different sectors in different countries. Porter et al., (2000) indicated that within the dual industrial structure (i.e., competitive vs. uncompetitive sectors) of Japanese economy, the basis of competitiveness of outstanding sectors, such as electronics and automobiles, relied on traditional Diamond conditions, whereas uncompetitive sectors, such as agriculture, food, banking, and retailing, survived by depending on government support and policy of the ‘Japanese Industrial Convoy System’ (Edgington, 2002). More recently, while comparing the competitiveness of the Japanese and US automobile industries, Solvell (2016:476) identified the sophisticated resources and capabilities of Japanese auto manufacturers as one of the main sources of global advantage and indicated that industry ‘innovativeness’ was a major factor of Porter’s interacting diamond model. Similarly, while assessing the competitiveness of 25 different industries in Canada, Porter (1991) asserted that while traditional diamond factors provided early sources of competitive advantages, those Diamond factors need to be improved sustained competitive advantage of the Canadian industries.

### **2.2.7. Consideration of ‘Double Diamond’: Combining ‘Domestic’ and ‘Foreign’ Diamonds**

Rugman (1990) argued that a firm’s capability to tap into the location advantages of other nations are viewed as very limited in Porter’s model and he (Porter) does not take the attributes of the home country’s largest trading partner into account. To address this issue, a concept of “Double Diamond” was developed by Rugman which include home country characteristics as well as the attributes of the country’s largest trading partner(s) [Rugman (1990); Rugman and D’ Cruz’s (1993)]. Within this ‘double diamond approach’, Rugman demonstrates that competitiveness depends on both domestic and foreign diamonds, and that the management of domestic firms should understand and exploit both diamonds if they wish to become or remain globally competitive [Rugman (1990); Rugman and D’ Cruz’s (1993); Smit 2010]. Rugman suggests that the double diamond (DD) framework is not a substitute for Porter’s National-Diamond, but an extension, a new benchmark for decision making (Rugman 1990; Brouthers and Brouthers, 1997).



### **2.2.8. From ‘Double Diamond’ to ‘Multiple-Diamond’: Globalization and Role of Multinationals**

Dunning (1993) and others (e.g. Bellak and Weiss, 1993; Cartwright, 1993) suggest that a regional “Multiple-Diamond” may offer the best explanation for how small nations build competitive advantage and include the role of multinational organizations. These researchers state that competitive advantage should be determined using a Multiple-Diamond that would include the determinants of several related countries and consider the potential involvement of the MNEs in the Diamond. Dunning (1990) contends that, “... there is ample evidence to suggest that MNEs are influenced in their competitiveness by the configuration of the diamond in other than their home countries, and that this, in turn, may impinge upon the competitiveness of the home countries” (p.11). There are several scholars (Rugman and D’Cruz, 1993; Dunning, 1992; Rugman, 1991) who suggest that the influence of MNEs needs to be strengthened in the Porter model.

### **2.3. Global Competitiveness Index (GCI): New Framework of Competitiveness Assessment**

GCI is defined by the World Economic Forum as a set of institutions, policies, and factors that determine the level of productivity of a country, conditions of public institutions and technical conditions. Rating uses publicly accessible (statistic) data’s (WB, IMF, etc.) and results of findings made by World Economic Forum. These findings are made annually with the support of partner institutions (research institutions and business centres). GCI analyses the factors that play significant role in creating favorable business-climate environment in the country

The GCI factors have similarity with components of the Porter’s Diamond Model as illustrated (fig. 2.3). Global Competitiveness Index (GCI) is divided into three broad categories, namely, factor driven economies, efficiency driven economies, and innovation driven economies. Economy is primarily factor-driven, and countries compete based on factor endowments such as unskilled labor and natural resources. At this stage, public and private institutions (1st pillar), infrastructure (2nd pillar), a stable macroeconomic environment (3rd pillar), and a healthy workforce that has received at least a basic education (4th pillar) are key. As productivity increases, wages will rise. In order to remain competitive, without raising prices but increasing wages, nations move into efficiency-driven stage of development. At this stage they develop more-efficient production processes and increase product quality. At this point, competitiveness is increasingly driven by higher education and training (5th pillar), efficient goods market (6th pillar),

well-functioning labor market (7th pillar), developed financial market (8th pillar), the ability to harness the benefits of existing technologies (9th pillar), and a large domestic or foreign market (10th pillar). Finally, as countries move into the innovation-driven stage, wages will have risen so much that they are able to sustain those higher wages and the associated standard of living only if their businesses are able to compete using the most sophisticated production processes (11th pillar) and by innovating new ones (12th pillar) (Schwab 2016).

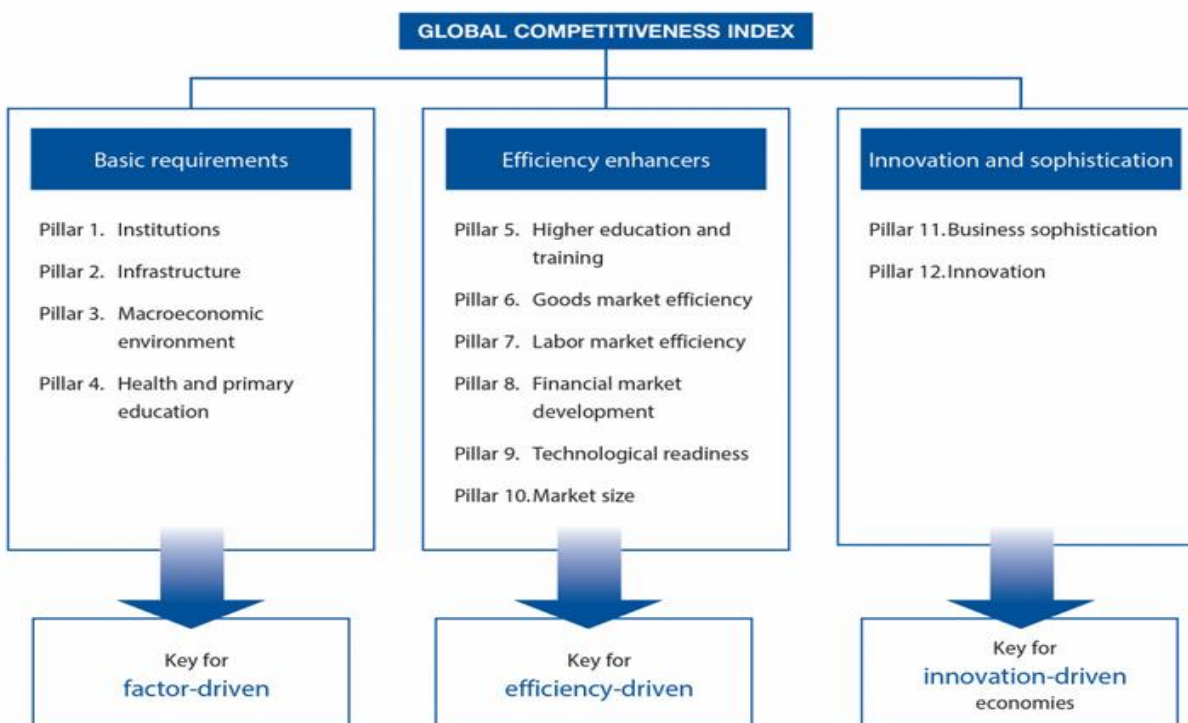


Figure 2.3: Global competitiveness index (Schwab 2016; The Global Competitiveness Report 2016-17: p. 5)

#### 2.4. Justification of Porter’s Model as the Theoretical Framework of the Study

Among the theories, the Theory of National Competitive Advantage of Industries widely known as Porter’s “Diamond Framework” is selected to be the theoretical framework. As the main limitation of Porter’s “diamond model” is that it was developed by studying ten developed countries, and that it has not been rigorously tested in the context of developing countries. This study attempts to address this limitation by understanding how best the model could explain the competitiveness in a developing country scenario, i.e. Bangladesh. Furthermore, the “diamond

model” is the recent multilevel theory that explains the international competitiveness of countries by holistically including the relationship between firms, industries and nations. Other theories attempt to determine competitiveness based on only one or two dimensions (Peng 2009, p. 125). Porter’s “Diamond Framework” also holistically combines and addresses all the best strategies as related to ELG by bringing related factors and issues under one comprehensive framework that is applicable contextually. The components in “Diamond Framework” as analyzed earlier also have a significant correlation with the globally accepted Global Competitiveness Index (GCI), and in addition it also provides an opportunity for a more focused analysis than the GCI.

Despite some limitations and critiques of the ‘Diamond Framework’ it is still considered as one of the most widely recognized and empirically applied analytical tool for industry and country competitiveness analysis (Hanafi et al., 2017; Solvell, 2016; Wilson et al., 2014). It needs to mention that Porter’s work related to “Diamond Framework” studied what factors successful existing sectors had in common rather than researching what sectors should do to be successful. While Porter’s model may not provide specific guidelines what the RMG industry should do in future (Magretta, 2012; Wilson et al., 2014), it will help to reveal the factors contributed towards the success and competitiveness of the RMG industry over the year. Moreover, it will give us a clear understanding about the milieu of Bangladesh RMG industry based on the Porter Diamond factors. The findings of the study could be used to proposed policy recommendations of the RMG industry that may also provide some strategic directions for other late export-led growth aspiring countries.

## **2.5. Conclusion**

The above literature review covers a wide range of issues related to the export-led growth model and competitiveness along with a number of theories and concepts. It discusses the importance of export and gives us understanding that export-led growth acts as an essential tool for the economic advancement of any developing nation. It provides views of scholars about the role of institutions in export-led economic growth, the rationale of government support and some effective policies that ensure competitiveness in export development. Apart from these, this chapter discusses the Porter’s theory of competitive advantage of nations or diamond framework in detail along with its limitations, and global competitiveness index of the World Economic Forum.

However, among the above ideas, theories, concepts and models, I use Porter's theory of competitive advantage (diamond framework) as a basis of this research to understand the competitiveness of the RMG sector of Bangladesh. The main reason of using Porter's diamond model is because it fits best with my research questions. I will also use relevant data and information from the global competitiveness report as a supplementary source. This will reinforce the result of the inquiry and help to get better understanding and precise answers of the questions of the research.

In his diamond model, Porter's says that factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry have played a major role in a nation's competitiveness and government has a crucial role to play to create a favorable atmosphere that influence the proper functioning of these four determinants. Porter also identifies 'chance' as a factor which are beyond the control of firms but may create forces that reshape the competitiveness of the industry. In this research, I examine the competitiveness of the RMG sector of Bangladesh through the lens of Porter's above mentioned six factors diamond model. The research also examines how best the RMG sector fit in the Porter's competitive diamond and what discrepancies (if any) would limit the use of this model.

### Chapter 3: Research Context - Bangladesh Economy and RMG Sector Development

Bangladesh is a country located in the South Asia with an area of 147,570 square kilometers (56,977 square miles) (BBS 2018: XX1). The geographical location, its land characteristics, multiplicity of rivers and the special type of monsoon climate mark Bangladesh as a country of highly vulnerable to natural hazards. The country has achieved remarkable progress in various socio-economic aspects over the last few decades. As of 2015, Bangladesh’s population was 161 million and ranked as the eighth largest populated country in the world (World Bank 2018).



Figure 3.1: Map of Bangladesh

This chapter aims to examine the historical and economic context of RMG sector in Bangladesh and analyses the current literature on the determinants of its growth and current challenges. The first section begins by examining the economic growth trend of Bangladesh in terms of a few key indicators such as Human Development Index (HDI), Gross Domestic Product (GDP), export-import ratio, and then examines sectors significantly influencing growth such as foreign remittance, Official Development Assistance (ODA) and RMG. The second section examines the history of growth of RMG, followed by the current determinants of growth and challenges.

**3.1. Bangladesh Economy: Past and Present**

Bangladesh started its economic journey after independence in 1971 following the import substitution model and export was not a priority to the government. After change in government in 1975, it begun to follow the export led economic growth policy and gradually opened up the economy for better integration. The positive impacts of export-led model corroborate with the growth trend of various economic indicators of the country. The GDP growth rate, export-import ratio in GDP, increase of foreign remittance and FDI and less dependency on ODI are some of the indicators that established the claim of the economic development of the country. The following two figures depict the export and import volume and their ratio in GDP for selective period since independence of Bangladesh.

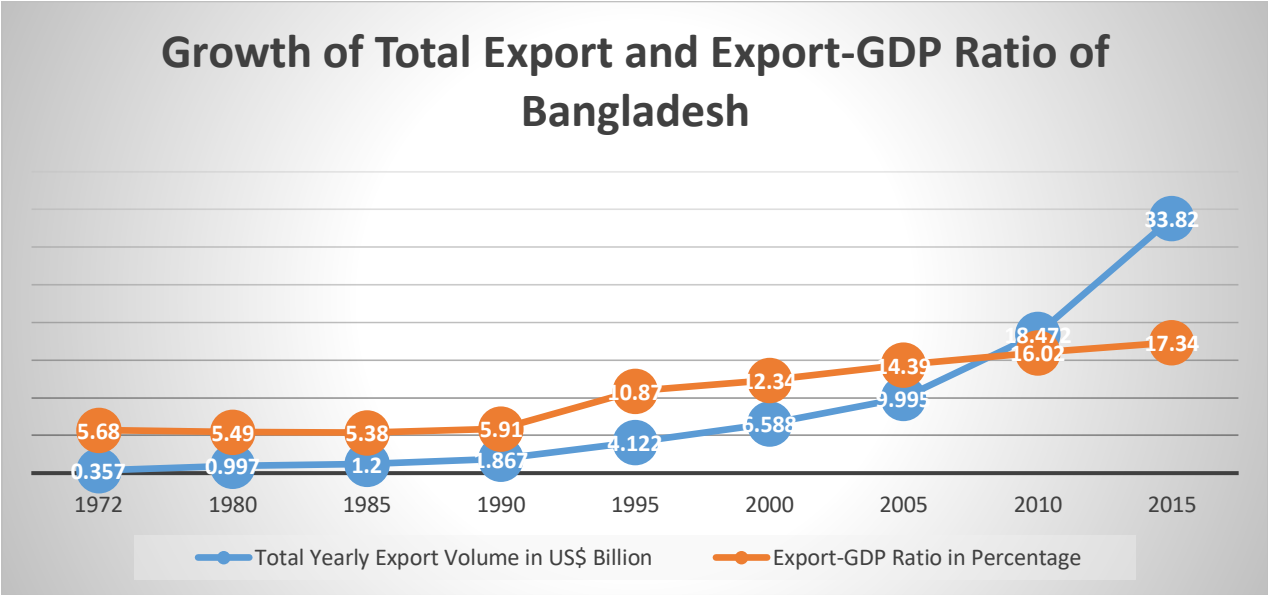


Figure 3.2: Export volume and export-GDP ratio of Bangladesh for selective years (World Bank, 2016)

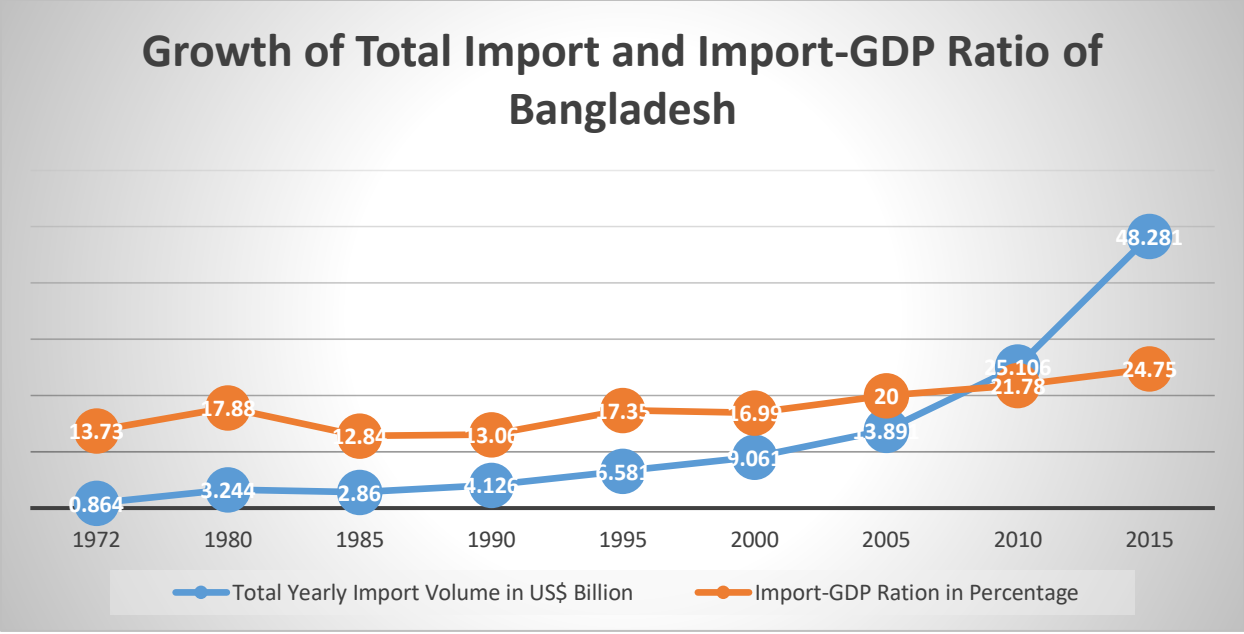


Figure 3.3: Import volume and import-GDP ratio of Bangladesh for selective years (World Bank, 2016)

According to the data of the Export Promotion Bureau (EPB), during FY2017-18, the RMG sector which is the largest foreign currency earner in the country – has exported \$34.13 billion worth of products out of \$4053 billion of total export. It means that 84.21 percent of total export earnings come from the RMG sector alone. (BGMEA 2019).

### 3.1.1. Gross Domestic Product (GDP)

The increased contribution of exports in GDP of Bangladesh is particularly significant as the size of the GDP has increased 43 times since independence (World Bank 2018). In 1971, GDP was US\$ 6.3 billion, in 1990, it was US\$ 31.6 billion, and it reached US\$ 274.1 billion in 2018 (World Bank 2018a). Bangladesh economy ranked 43<sup>th</sup> (30<sup>th</sup> in PPP value) out of 205 countries in the world in 2018 (World Bank 2018). In the year 2018, the GDP growth rate of Bangladesh was 7.9, one of the highest in the world (World Bank 2018). The average growth rates of Bangladesh GDP for the last ten years (2007 – 2016) was 6.2, whereas the world average for the year 2015 was 2.47 (World Bank 2016). In the 7<sup>th</sup> five-year plan (2016 -2020), Bangladesh projected its average GDP growth rate 7.4 with an ambition to become a middle-income country by 2021 (GOB 2015). Bangladesh's economy grew 7.9 percent in 2017-2018 where agriculture sector has special contribution. Industry grew at the rate of 12.1 percent and the services sector rose 6.4 percent (The

Daily Star 2018). The following diagram (3.4) depicts the year by year GDP growth rates of Bangladesh

for the last one decade.

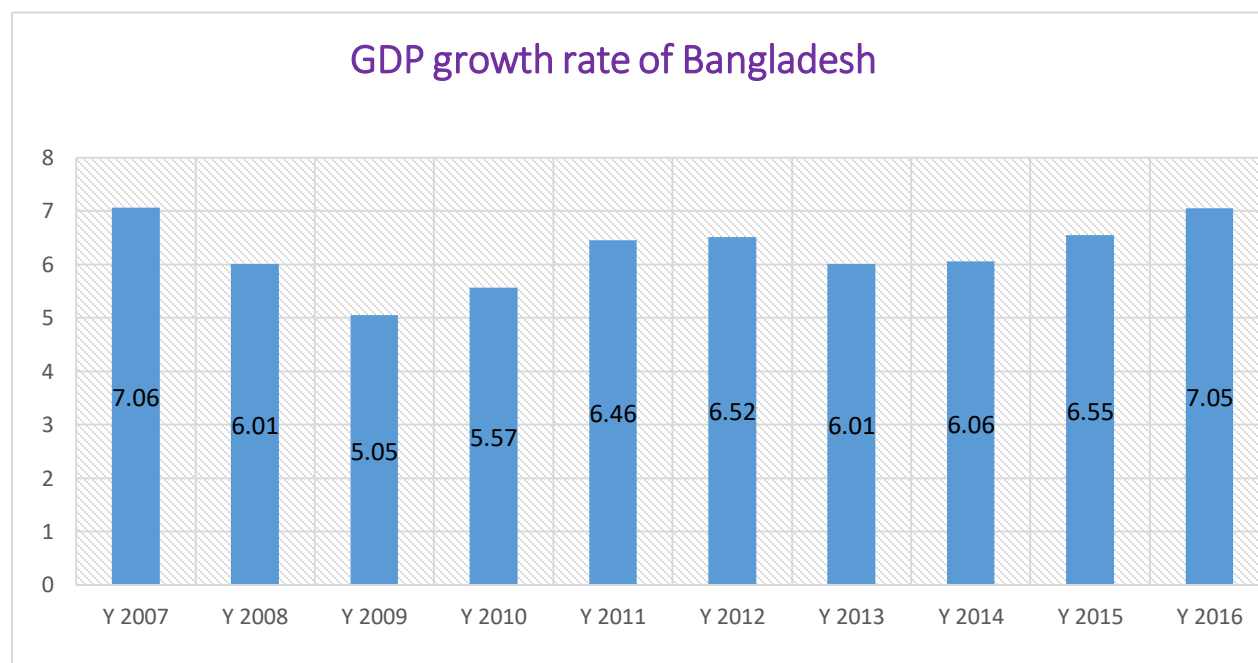


Figure 3.4: GDP growth rate of Bangladesh for the year 2007 – 2016 (World Bank, 2018)

### 3.1.2. Human Development Index (HDI) and Social Development Indicators of Bangladesh

According to the HDI index, Bangladesh is placed at the ‘medium human development category’ with a HDI value of 0.61 for the year 2017 and placed at 136 out of 189 countries in the world. The HDI value of Bangladesh has increased from 0.39 in 1990 to 0.61 in 2017, an increase of 57.1 percent. The following table reviews Bangladesh’s progress in each of the HDI indicators. Between 1990 and 2017, Bangladesh’s life expectancy at birth increased by 14.4 years, mean years of schooling increased by 3.0 years and expected years of schooling increased by 5.8 years. Bangladesh’s GNI per capita increased by 178.6 percent between 1990 and 2017. The following table (3.1) reviews Bangladesh’s progress in each of the HDI indicators.



Table 3.1: Human development index (HDI) of Bangladesh in selective years

Year	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI per capita (2011pp\$)	HDI value
<b>1990</b>	<b>58.4</b>	<b>5.6</b>	<b>2.8</b>	<b>1,320</b>	<b>0.387</b>
1995	61.9	6.6	3.3	1,485	0.425
2000	65.3	7.5	4.1	1,698	0.468
2005	67.9	8.4	4.5	2,018	0.505
<b>2010</b>	<b>70.2</b>	<b>9.4</b>	<b>4.9</b>	<b>2,641</b>	<b>0.545</b>
<b>2015</b>	<b>72.2</b>	<b>11.3</b>	<b>5.2</b>	<b>3,334</b>	<b>0.592</b>
2016	72.5	11.4	5.2	3,509	0.597
2017	72.8	11.4	5.8	3,677	0.608

(Source: UNDP 2018)

Similarly, since the independence, Bangladesh has achieved tremendous improvements in many social development indicators such as fertility rate, infant mortality, life expectancy and primary education. Table 3.2 shows the key social indicators and their respective progress since 1971. As illustrated, the fertility rate of Bangladesh in the year 1971 reduced from seven to two in 2015. In the year 1971, infant mortality was 150 per thousand which has reduced to 31 in the year 2015. Life expectancy of both male and female has improved to 70 years and 73 years respectively from 47 years within a period of four and half decades. The average literacy rate has increased at 70 percent in the year 2015 compared to mere 17 percent in 1971. Bangladesh has also achieved astounding success in primary education. In the year 2015, primary enrollment rate was 100 percent and average primary completion rate was 80 percent whereas, in the year of independence (1971), enrolment rate was 51 percent and completion rate was 43 percent only.

Table 3.2 Comparison of some social indicators of Bangladesh for the year of 1971 and 2015

Indicator	Year of independence 1971	Year 2015
Fertility rate (Birth per woman)	6.94	2.17
Infant mortality rate (per 1000 live birth)	150	31
Female life expectancy	47	73
Male life expectancy	47	70
Average literacy rate (15 year and above)	16.8	70
Gross average primary enrolment	51.2	100
Average primary completion (Both sexes)	43 (year 1976)	80

(Sources: Data compiled from BBS 2018; UNESCO 2012; Sen 2015, Schendel 2009)

### 3.1.3. Official Development Assistance (ODA) of Bangladesh.

As Bangladesh's economy size has grown, simultaneously the dependency on ODA has reduced significantly. For example, in 1972, 100 percent of Annual Development Program (ADP) was dependent on foreign aid and in the year 2013, it reduced at 42.9 percent (World Bank 2016). Aid as a percentage of budgets in early 1970s was 57.85 percent and in 2013 was 7.64 percent in Bangladesh (Hasan 2015: p.12). Foreign aid now (FY 2016 -17) contributes to only 1.47 percent of Bangladesh's annual GDP (Khatun 2018:5). It is also evident that the role and importance of ODA to the economy of Bangladesh have been decreasing noticeably since 1990s – when the country has started to follow aggressive export-led development strategy. Although the importance of ODA as a source of foreign exchange has gradually declined due as trade and remittances picked up, the contribution of foreign aid is still significant for different development projects, especially in health, education and physical infrastructure and thus the effective

utilization of aid fund is important for Bangladesh. The following table (3.3) depict the data about the commitment and actual disbursement of ODA, type and nature of aids in selective years.

Table 3.3: Foreign aid flow of Bangladesh

Year	Commitment (\$US million)	Disbursement (\$US million)	Type of Aids			Nature of Aids			
			Food Aid (%)	Commodity Aid (%)	Project Aid (%)	Loan (%)	Grants (%)	Bilatera l (%)	Multilatera l (%)
<b>1971/72</b>	<b>610.8</b>	<b>270.8</b>	<b>47.9</b>	<b>50.8</b>	<b>1.3</b>	<b>9.5</b>	<b>90.5</b>	<b>85.7</b>	<b>14.3</b>
1975/76	958.9	800.5	39.2	45.2	15.6	70.8	29.2	71.4	28.6
1980/81	1559.2	1146.5	16.9	34.2	48.8	48.2	51.8	72.1	27.9
1985/86	1661.5	1305.9	15.5	30.1	54.4	58.2	41.8	47.9	52.1
<b>1990/91</b>	<b>1370.3</b>	<b>1732.6</b>	<b>15.5</b>	<b>23.6</b>	<b>60.9</b>	<b>52.0</b>	<b>48.0</b>	<b>39.3</b>	<b>60.7</b>
1995/96	1279.6	1443.8	9.6	15.9	74.6	53.1	46.9	52.4	47.6
<b>2000/01</b>	<b>2052.8</b>	<b>1368.8</b>	<b>13.4</b>	<b>3.7</b>	<b>82.9</b>	<b>63.2</b>	<b>36.8</b>	<b>50.9</b>	<b>49.1</b>
2005/06	1787.4	1567.6	6.2	0.0	93.8	68.1	31.9	26.4	73.6
<b>2010/11</b>	<b>5968.6</b>	<b>1776.7</b>	<b>3.1</b>	<b>0.0</b>	<b>96.9</b>	<b>58.1</b>	<b>31.9</b>	<b>24.4</b>	<b>75.6</b>
<b>2014/15</b>	<b>5258.5</b>	<b>3043.1</b>	<b>1.2</b>	<b>0.0</b>	<b>98.8</b>	<b>81.2</b>	<b>18.8</b>	<b>31.1</b>	<b>68.9</b>

(Source: Data compiled from ERD 2016)

### 3.1.5. Foreign Remittance

Foreign remittance gradually becomes one of the major pillars of the economy of Bangladesh since opening up its economy. From 1980 to 2015, it has increased by 20 folds. In the year 1980 and 1990, Bangladesh received US\$ 0.34 billion and US\$ 0.78 billion worth of remittance respectively, whereas in the year 2018, it has increased at US\$15.53 billion (World Bank 2016; NewAge 2019). The following diagram (3.5) shows the remittance inflow in Bangladesh for the last ten years.

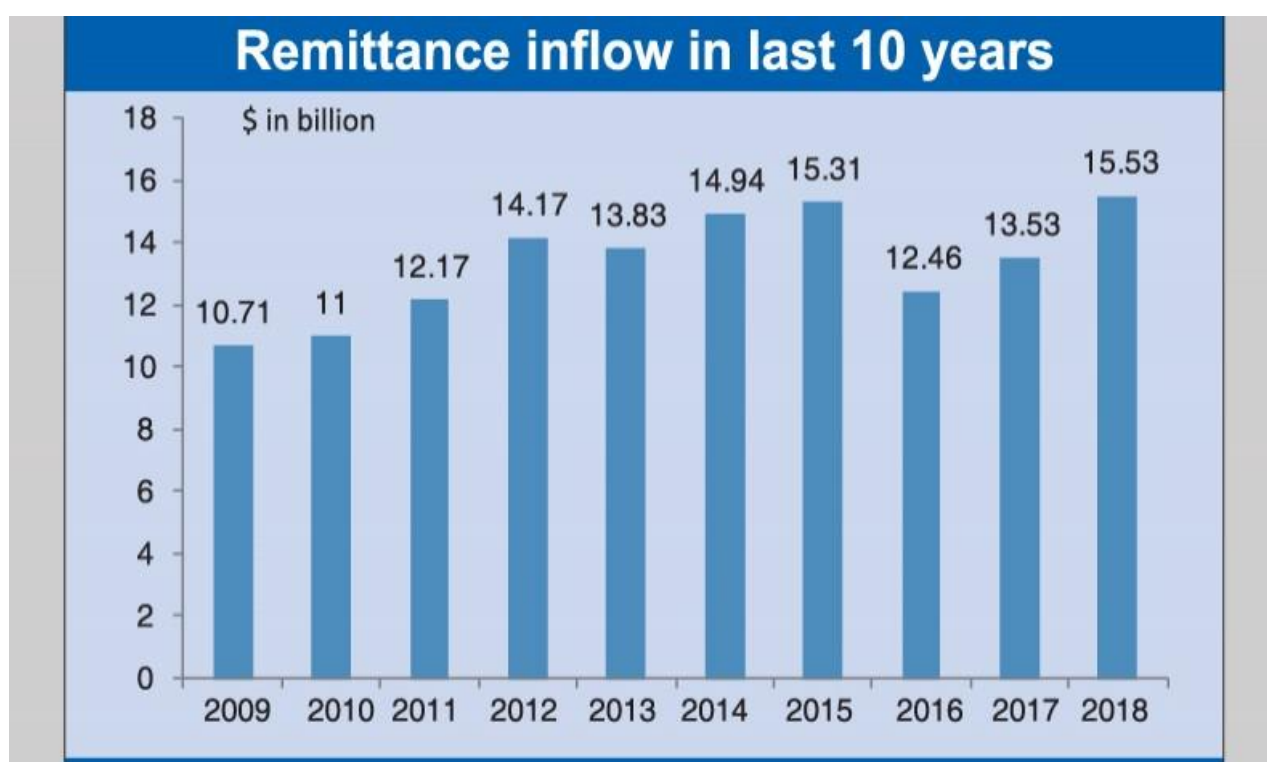


Figure 3.5: Remittance inflow of Bangladesh (Adapted from New Age 2019)

In FY2018, remittance was 5.50 percent of country's GDP and 40.86 percent of total export earnings and 27.51 percent of import payments (f.o.b) (Akhtaruzzaman, 2018).

Table 3.4: Remittance as percentage of GDP, export and import and its growth for last ten years

<b>Year</b>	<b>Remittance as % of GDP</b>	<b>Remittance as % of Export Earnings (f.o.b)</b>	<b>Remittance as % of Import Payments (f.o.ob)</b>	<b>Growth (%) of Remittance</b>
2007	7.51	49.60	38.54	24.50
2008	8.64	55.93	40.62	32.39
2009	9.44	62.11	47.70	22.28
2010	9.52	67.80	46.29	13.40
2011	9.05	50.64	34.61	6.03
2012	9.63	53.58	38.59	10.24
2013	9.64	54.43	43.07	12.51
2014	8.21	47.78	38.91	-1.61
2015	7.85	49.08	40.67	7.64
2016	6.74	43.59	37.42	-2.51
2017	5.11	36.85	29.36	-14.48
2018	5.50	40.86	27.51	17.32

(Source: Akhtaruzzaman, 2018:4)

The above information indicate that remittance has important contribution in the economy of Bangladesh.

### **3.2. RMG Industry in Bangladesh: Evolution and Determinants of Growth**

The RMG industry of Bangladesh has developed in response to the market forces affecting the outsourcing of apparel products by major retailers and brand marketers. It came to Bangladesh when the buyers from industrialized economies were searching for new suppliers and quota-exhausted newly industrialized countries (e.g. South Korea and Taiwan) looking for new places to relocate their labor intensive RMG industry. RMG manufacturers in Bangladesh have almost no control over external market, and the structure or context of the market, sourcing pattern and buyers' motivation have also been changing consistently.

As reviewed in the previous section of this chapter, Bangladesh has achieved accelerated economic growth which can be underpinned to strong export led growth, led almost entirely by the readymade garment sector (Mahmud et al 2008:18), which currently contributes more than eighty percent of the country's total exports (BGMEA 2018). Currently Bangladesh is the second largest apparel exporter in the world. The growth of the RMG sector in Bangladesh is unprecedented and it has grown at almost double-digit rates for more than last two decades (BGMEA 2018). A time series data from FY 1983-84 to 2018-19 of RMG export growth and comparative statement on export of RMG and total export of Bangladesh is available at Appendix-D.

However, despite the enormous development of the RMG sector of Bangladesh, the industry is facing multidimensional challenges and its competitiveness are in question. This section is an attempt to understand the dynamics of the RMG industry of Bangladesh and its competitive position based on various secondary sources.

#### **3.2.1. Bengal Textile: Historical Reputation**

Bengal (part of Indian subcontinent i.e. present Bangladesh and its surroundings) has a glorious history of textile and it was world famous for its textile long before the industrial revolution in England. Dacca<sup>8</sup> was the center of the most flourishing textile industries in India and became world famous particularly for its special product "muslin" – a superfine cotton cloth (Seabrook 2014: 130). History suggests that Dhaka's cotton products reached Arabia and Europe and other parts of India and the world even before second century A.D (Islam 1999:4). Milburn

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<sup>8</sup>became Dhaka in 1983- the capital of present Bangladesh

(1813) in his book, *Oriental Commerce* (vol. II:P.229), referred that the Roman historian Pliny (d. 113 A.D.) recorded the presence of Dhaka's textiles in the Mediterranean trade as early as 73 A.D. (in Islam 1999:3). In the eighteenth century, as many as 8,000 looms in Dacca (Dhaka) were producing muslin for the court and the international market [the Empire of the Great Mogul, all other neighboring kingdoms and the Europe] (Smith 1920). The 'muslin' was produced from the fabrics of a special *karpas* and the soil and climate of the Bengal region were very much favorable for it. The weaving of muslin was a labour-intensive process and it varied based on the products. For example, a customary size of 20 x 1 yards could be produced in a matter of days, but the finest pieces could take up to ten months to weave (Seabrook 2014: 131). The total exports from Dacca in 1753 were worth 2,850,000 Arcot rupees [2.59 Arcot rupees were equivalent to one ounce of standard silver at that time (source: Milburn 1813, vol.1:94)], of which 100,000 worth went to the emperor at Delhi; 300,000 to Murshidabad for the use of the *nawab* and the court; 150,000 to Jagat Seth, the banker of Murshidabad; 500,000 went to Armenian merchants for markets in the Arabian Sea; and 350,000 to the English Company for Europe (Sinha, 1970).

However, the glory of the Bengal textile began to decline with the growth in the East India Company's power following the Battle of Palassey (a battle that effectively marked the beginning of 200 years' British rule in India) in 1757. The Company operated an increasingly coercive policy, gradually eliminating its rivals and tethering weavers to its own system of procurement with declining rewards and compulsion (Seabrook 2014: 134). Finally, when the industrial revolution spurred the growth of the textile industry in Britain, the British heavily misused their power to prohibit the normal production of textiles in India and by the year 1820s, they had succeeded in displacing the cotton goods through closing the textile industries in Bengal. Ironically soon, India including the Bengal converted as a source of raw materials for the textile industry of Britain and became a market for their production (Islam 1999:17). As a result of the East India Company's closure of all its cloth establishments in Bengal in 1825, an estimated one million people were thrown out of work and if each family consisted of an average of six persons, some six million were directly affected which were approximately 16 percent of the population of the then Bengal (Sinha 1970). A similar connotation can be found from the write-up of Sir Charles Trevelyan of the East India Company in 1840: "Dacca which used to be the Manchester of India has fallen off from a flourishing town to a very poor and small one" (cited in Kabeer 2001:56). Thus the long presence of the then Bengal textile in the world market came to an end in early nineteenth century.

However, after near about two centuries, as a chance or historical accident, Readymade Garments came back to Bangladesh and emerged as the main industry of the country!

### **3.2.2. Story of the Beginners: Early Stage of the RMG Industry in Bangladesh**

As discussed previously, the economy of the independent Bangladesh was very small in size and fragile in nature. It was mostly dependent on foreign aid and jute, and jute goods were the major exportable items in 1970s. Later, jute exports exhibited a downward trend due to the dampening demand from overseas markets in the early 1980s and almost in parallel, the RMG industry gradually came up and emerged as the most important export sector for Bangladesh.

The history of the garment industry of Bangladesh is compelling. It was initiated by a few visionary entrepreneurs in the late 1970s in a very informal manner although the overall socio-economic context was not favorable to initiate such kind of venture. Like other developing nations at that period, Bangladesh was following the import substitution model of economic policy and export was not a priority. At a critical juncture of the economy of Bangladesh due to the diminishing demand of jute in the international market, by chance RMG sector was coming up as a successful development path for the country. In the year 1978, there were only nine export-oriented garment manufacturing units existed, generating export earnings of barely US\$1 million. Some of these units were very small and produced garments for both domestic and export markets. Buyers from Hong Kong placed orders with such firms with instructions that designated the specific fabric that must be used by the vendors. Therefore, conditions were generally unfavorable to those local firms (Quddus and Rashid 2000, p.62).

However, Desh Garments Ltd., which was founded by the late Noorul Quader (a retired senior government official with no business experience), has achieved the first actual milestone of this sector development. This opportunity arose while the then chairman of the South Korean conglomerate Daewoo Corporation Mr. Kim Woo-jung, as part of their global strategies, proposed an ambitious joint venture to the government of Bangladesh which involved the development and operation of the tire, leather goods, cement, and garment factories in 1977 (Rock 2001). On July 4, 1978, Noorul Quader was able to conclude a consignment contract between Desh Garments and Daewoo. It was a five-year partnership agreement which included collaborations in the areas of technical training, purchase of machinery and fabrics, plant set-up and marketing on a commission basis (Rock 2001). The agreement called for Daewoo to help Desh Garments train its staff and in



return Desh Garments would pay an 8 percent commission on all exports. In 1979, Desh Garments sent 130 workers and management staff to be trained in Daewoo's state-of-the-art technologies at its Pusan plant in South Korea. The 130 Desh-selected trainees returned home after six-month training period to form the nucleus of the garment industry's technology and its core human resource base. Consequently, Desh's modern factory was constructed on the basis of Daewoo's specifications and technical assistance. It consisted of six lines, 500 workers, producing five million pieces per year, and \$1.3 million in investments. (Yunus and Yamagata 2014, pp. 84-5; Quddus and Rashid 2000, pp. 62-3, 193-9; Rhee 1990).

The outcome of the Desh-Daewoo collaboration was multifold. First, the export value of Desh Garments grew at an annual average rate of 90 percent in the first five years of its operation and it reached more than \$5 million in 1986/87. Secondly, being associated with Daewoo's brand names and marketing network, Bangladesh received world apparel market exposure and foreign buyers identified it as a positive sourcing place. Third, the Desh-Daewoo collaboration was instrumental in influencing government to be interested in the RMG sector as the owner of the Desh Garments was in senior bureaucracy and he had had access up to the highest authority. Fourth and most significantly, out of the 130 trainees who went to the South Korea, many of them left Desh Garments Company at various times to set up their own competing garment firms and thus the training these employees received from Daewoo spread throughout the country (Rahman 2013; Khan 2015).

Youngone Corporation, another South Korean firm, has played a noticeable contribution in Bangladesh RMG sector development forming the first equity joint venture garment factory with a local firm called Trexim Ltd. Bangladesh partners contributed 51 percent of the equity and the firm was named Youngone Bangladesh, which exported its first consignment of jackets to Sweden in December 1980 (Yunus and Yamagata 2014, p. 86). Apart from these, Reaz Garments, a pioneer in garment exportation, initiated a new dimension in the Bangladeshi export industry by shipping 10,000 pieces of Bangladeshi-made garments (men's shirts) worth FF13 million to a Paris-based firm in 1977 ((Yunus and Yamagata 2014: 84). The entrepreneurial initiatives like Bond Garments, Paris Garments, Sunman Group and Aristocrat Limited in the early 1980s also had been a noticeable contribution in the development of the RMG industry in Bangladesh (BGMEA 2018).

The above-mentioned entrepreneurs are considered as the pioneer of the RMG industry of Bangladesh and they were taking heavy risks without any previous exposure in this business. However, the second group of garment manufacturers appeared in the 1980s who were employees in the garment factories of the earlier group of entrepreneurs. Having gained experience of the garment business, these employees left their jobs and established their own garment companies. The industry knowledge seeding of the RMG industry pioneers from the Korean owned garments is considered as the main catalyst for the initial establishment and subsequent growth of RMG industry in Bangladesh (Mostafa and Klepper, 2018). Such learning and utilization of the RMG industry related tacit knowledge helped former employees to become entrepreneurs. However, they were hardworking and had dynamic spirit for making profits by utilizing their own experience and connections. Another group of garment manufacturer came on the scene in the 1990s when industry became stable and was already in good shape. At that stage, people from multiple backgrounds got involved in the RMG business as it seemed a way of making huge profits within a reasonable period of time (Rahman 2013:23). A survey related to the owners of the RMG industry of Bangladesh found that most of the entrepreneurs were young, educated, and came from diverse backgrounds – e.g. the bureaucracy, the army, politics, university teaching, and various trading, export and manufacturing business (Quddus and Rashid 2000:91).

### **3.2.3. Growth of RMG Industry in Bangladesh: Internal factors**

The history of the RMG industry of Bangladesh suggests that the initial external forces have played the critical role for the development of this sector. However, there are both internal and external reasons and the following are some of the internal factors that have created a favorable environment in advancing the RMG industry of the country.

#### **3.2.3.a. Opening the Free Market Economy of Bangladesh**

Bangladesh opened up its economy much earlier compared to other neighboring countries (e.g. India) and started following the export-led growth strategy instead of import substitution policy since late 1970s. This opening up gradually created a welcoming environment for export development and coincidentally, at that moment, the RMG industry of the newly industrialized countries (e.g. South Korea, Taiwan, Hong Kong) were looking for relocating or joint venturing to other places like Bangladesh. So, by chance, the country has availed this opportunity and the RMG sector got its footprint in Bangladesh. Moreover, Bangladesh undertook several measures to

compete in the world market at that time, such as, liberalization of the financial sector in mid 1980s - which eased the restriction of foreign direct investment, liberalization of trade since the early 1990s, combined with the substantial depreciation of the currency and various fiscal and monetary benefits that stimulated rapid expansion of labor-intensive apparel industries in Bangladesh (Islam, 2001).

### 3.2.3. b. Abundant Supply of Unskilled Manpower

As one of highly populated country in the world, Bangladesh has an advantage of enormous labor force at a very competitive price. Availability of a huge number of low-cost labor is considered as one of the major reasons for the development of the RMG industry of Bangladesh. The huge pool of labor force positioned Bangladesh to meet the demand and continue supply of labor to its RMG sector. The total number of labor force of Bangladesh in the year 2017 was 67.14 million which was much higher compared to Vietnam, Cambodia or Sri Lanka. The following table (Table-3.5) depicts the total population and employment levels of major apparel manufacturing countries in the world.

Table 3.5: Population and available labor force of some selective countries

	Bangladesh	China	India	Indonesia	Vietnam	Pakistan	Cambodia	Sri Lanka
Population (Million) as of 2017	164.7	1386	1339	264	95.54	197	16.01	21.44
Labor Force as of 2017	67.14	789.9	503.17	129.12	56.4	72.1	8.91	8.59

(Source: World Bank 2018a)

The cost of labor in Bangladesh is lower compared to other apparel manufacturing countries in the world. Figure – 3.6 shows monthly minimum wages of different countries in year 2016 which indicates lower labor cost of Bangladesh among the competing countries to produce garment products (Lu 2016).



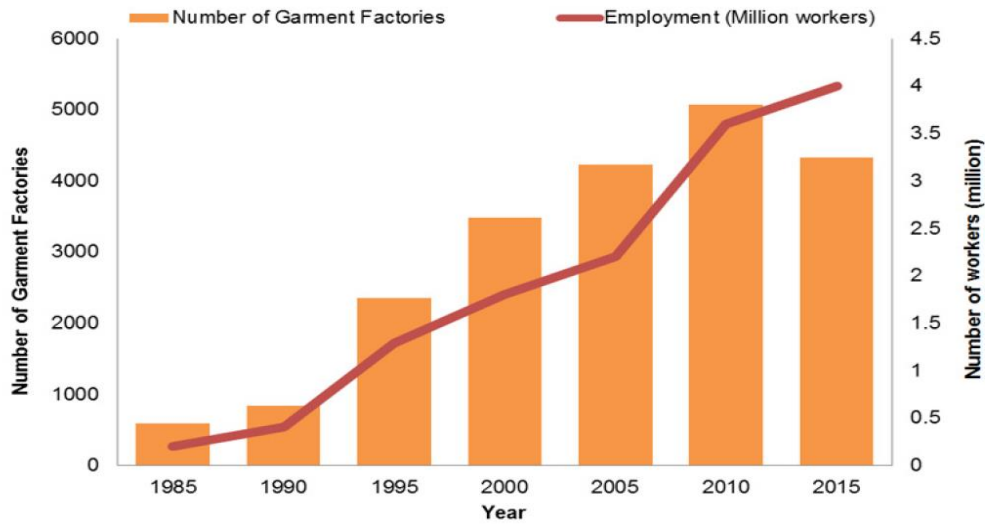
Figure 3.6: Monthly minimum wage of selected RMG producing countries (Lu, 2016)

### 3.2.3. c. Large Number of Factories, Increased Capacity and Volume of Production

The number of factories and capacity of production have increased exponentially with the growth of the RMG industry of Bangladesh. This huge volume of production capacity is an attraction for buyers and thus it helps the sector to continue to grow. Over the last three decades, a good number of world standard fully compliant green factories have developed. As of May 2019, Bangladesh has received 90 factories LEED (Leadership in Energy and Environmental Design) certification including 24 platinum rated building from the United States Green Building Council (USGBC) and six are amongst the top 10 in the world (The Daily Star, May 26, 2019).

In the FY1984-85, the total RMG factories were only 384 with a 0.12 million employment opportunities. Over a three-decade period, in FY 2015-16, the number of factories has increased at 4328 and generated more than 4 million direct jobs (Source -BGMEA) of which about 80 percent are women (Adnan et al. 2015).

## Development of Bangladesh's RMG Sector



Source: Bangladesh Garment Manufacturers and Exporters Association (BGMEA)

Figure 3.7: Number of factories and employment in the RMG industry of Bangladesh (Adopted from HKTDC 2016:4)

### 3.2.3.d. Strong Backward Linkages and Support Industries

At the beginning, Bangladesh RMG industry was fully dependent on the imported raw materials (e.g. fabrics and accessories). Later it started to develop backward linkage factories and other related support industries. A good number of composite factories were established. By creating such domestic capacity, the country has successfully reduced the dependency on the imported raw materials, namely, yarn, fabrics, dyeing, processing, printing and other related materials and accessories. All these initiatives helped add value in the process of product development and make the products more competitive. The knitwear sector's backward linkages are stronger than the woven and currently about 90 percent yarn demand for knit RMG and 35-40 percent yarn demand for woven RMG are met by local textile sources. The value addition in knit and woven RMG are over 70 percent and 35 percent respectively (BTMA 2019).

Data from the Bangladesh Textile Mills Association (BTMA) show that currently there are 1476 textile-related factories running of which 430 are yarn manufacturing mills with a production capacity of 2943 Million Kgs, 802 are fabric manufacturing mills with an annual woven fabric

production capacity of 3707 million meters, and 244 are dying-printing-finishing mills with annual processing capacity of 3448 million meters (BTMA 2019). However, to run these textile factories Bangladesh has to depend on imported raw-cotton and to utilize present capacity, yearly demand of about 10.50 million bales of raw-cotton (480 lbs each bale). Major raw cotton sourcing countries for Bangladesh are the USA, Australia, former Soviet Union countries, India, Pakistan, China, Central America, East and West Africa (BTMA 2019). The following table depicts the number of units, installed capacity and annual production of textile mills of Bangladesh.

Table 3.6: Number of textile related factories in Bangladesh

<b>Subsector</b>	<b>Number of Units</b>	<b>Installed Capacity</b>	<b>Annual Production Capacity</b>
Yarn Manufacturing Mills Synthetic Spinning Mills – 17 Acrylic Spinning Mills - 08	430	13.17 million Spindles and 0.231million Rotors	2943 million Kgs
Fabric Manufacturing Mills Denim – 32 Home Textile - 22	802	52,169 (Shuttle-less and Shuttle Loom)	3707 million Meters
Dying-Printing-Finishing Mills	244	Annual Fabric Processing Capacity: Woven Dying – 2480 million meters Yarn Dying – 396 million Kgs Knit Dying – 572 million Kgs	3448 million Meters

(Source: BTMA-2019)

According to the Bangladesh Garments Accessories and Packaging Manufacturers and Exporters Association (BGAPMEA), in 1991, there were only 17 trims and accessories-producing firms; later in 2001 the number increased to 508, then to 1075 in 2011. In 2018 there were about 1683 registered trims and accessories-producing firms in Bangladesh. The growth of such a significant accessories-producing industry is remarkable. These factories are fully capable to meet the demand of accessories like button, zipper, carton, poly, main label, price label, care label, size label, hang tag, bar tag etc. of the RMG industry of Bangladesh and their products are of international standard (BGAPMEA 2019). The following bar diagram (figure 3.8) shows the

yearly increase of the number and figure 3.9 shows numbers in different categories of RMG related accessories companies in Bangladesh.

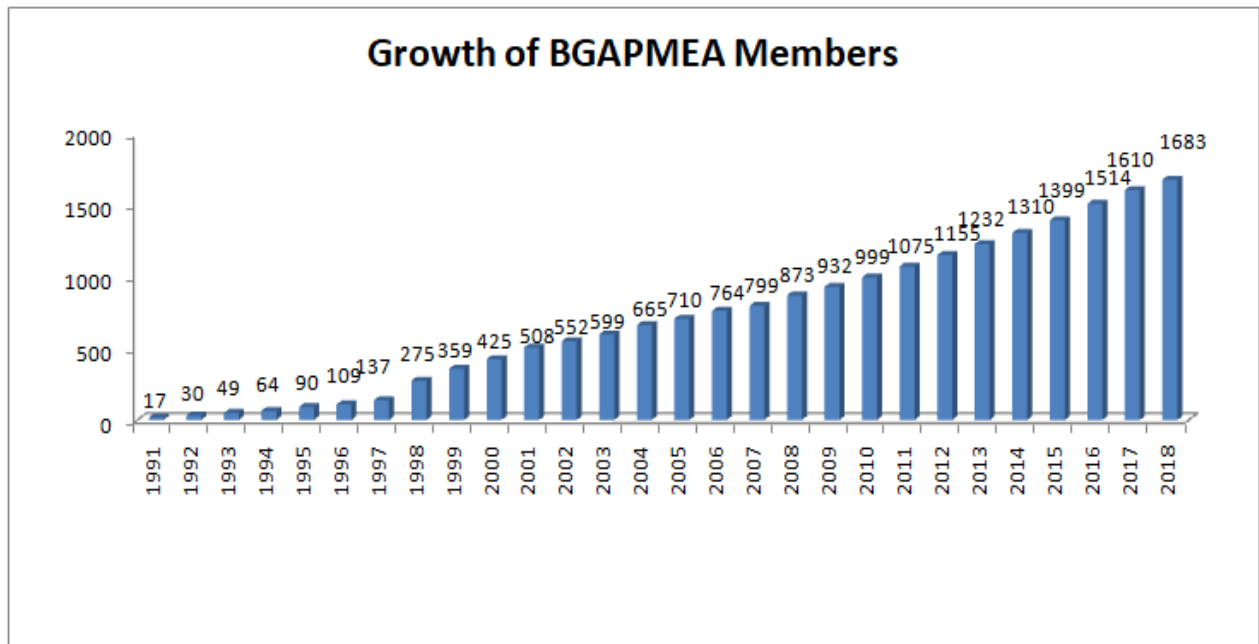


Figure 3.8: Number of RMG related accessories companies in Bangladesh (BGAPMEA 2019).

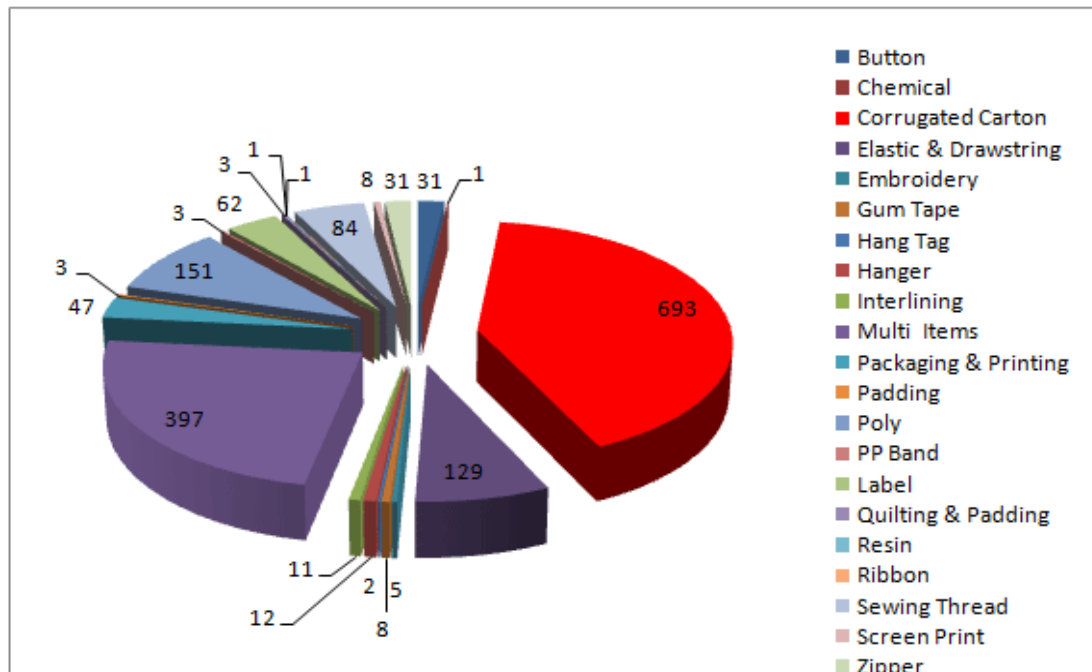


Figure 3.9: Number of accessories companies based on category (BGAPMEA 2019).

### 3.2.3.e. Comparative Lower Labour Cost and Price Competitiveness

The products of the RMG industry of Bangladesh are cost competitive compared to other apparel manufacturing countries in the world. The Bureau of Statistics of Bangladesh data analysis reveals that the prices of the Bangladesh-made polo shirt, tee shirt and pullover of both in EU and USA markets are competitive compared to many other countries. For example, in the year 2015, the cost of a Bangladesh-made polo shirt in the EU and USA markets were \$3.63 and \$3.39 respectively, whereas, a polo shirt from China costed \$7.36 and \$5.47 respectively. Similarly, the prices of Vietnam-made shirt were \$6.06 and \$4.74, and Cambodia-made shirts costed \$5.02 and \$3.25 respectively (Mohibullah et al. 2016). The following table shows the competitive price of three Bangladeshi products (i.e. polo shirt, tee shirt and pullover) in the EU and USA markets compared to some other countries.

Table – 3.7. Competitiveness of Bangladesh Apparel products in the EU and USA Markets

Country Name	EU Market			USA Market		
	Polo Shirt	T-Shirt	Pull Over	Polo Shirt	T-Shirt	Pull Over
<b>Bangladesh</b>	<b>3.63</b>	<b>2.10</b>	<b>5.46</b>	<b>3.39</b>	<b>1.70</b>	<b>2.94</b>
China	7.36	2.74	8.00	5.47	2.32	5.70
Indonesia	7.52	4.15	7.01	3.87	2.40	3.53
India	5.33	3.10	6.93	4.37	2.33	3.94
Cambodia	5.02	2.99	6.39	3.25	2.20	3.36
Sri Lanka	7.60	2.71	6.79	6.50	3.46	5.08
Vietnam	6.06	2.68	6.53	4.74	2.94	3.60

(Source: Mohibullah et al. 2016)

The above table shows that all three products of Bangladesh are cost competitive both in the European Union (EU) and United States of America (USA) markets compared to all other above mentioned six countries except for Cambodia's polo shirt price which is marginally lower. A polo shirt from Cambodia to the USA market cost \$3.25, whereas its Bangladesh price is \$3.39.



### **3.2.3. f. Supply of Economical Sources of Power – Natural Gas**

Availability and supply of the natural gas helps the RMG industry of Bangladesh to grow in the early stage. It attracted investors to invest in washing plants and composite factories. The cost of the natural gas is lower compare to other sources of power, and it helps the RMG products of Bangladesh to be competitive in the world market. However, the proven available natural gas is limited, and shortage of gas has already been noticed in the industrial sector.

### **3.2.3.g. Trade-friendly Government Policies that helped the RMG Industry to Grow**

The government of Bangladesh has developed and implemented various policies in response to the demand and need of the RMG sector since the inception of this industry. However, two unique favorable policies of the government at the early phase of the development of the RMG industry i.e. the back-to-back letter of credit (L/C) and the bonded warehouse are worthy to mention. There is a general belief that these two measures have tremendously helped the RMG industry to expand its exports (Yunus and Yamagata 2014, p. 96). Back-to-back L/Cs is used in international and domestic trade. It allows entrepreneurs to import related raw-materials or accessories without investing or spending money against their export orders. The parties to a back-to-back L/C are: the buyer and their bank, the seller/manufacturer and their bank, and the manufacturer's supplier and their bank. Under the back-to-back L/C scheme extended by commercial banks, garment exporters are able to import inputs (i.e. fabrics and accessories) against export orders placed in their favor by garment importers (foreign buyers). This type of documentary credit transaction is used when a seller/manufacturer has to purchase a component but may not have the cash flow to do so. The back-to-back L/C<sup>9</sup> works as follows. When an order is received by an exporter in a master (export) L/C form, the exporter approaches his/her bank (a local bank) to open an import L/C for the fabrics and trimming needed. After receiving the imported materials, the exporter produces the garments and sends them to the buyer. The owner of the garment company receives the amount of the export minus the cost of the import and the bank's commission. The bank also supplies the cost of imports to the buyers or supplier (Yunus and Yamagata 2014; Rahman 2013). This kind of L/C scheme has helped the Bangladeshi RMG

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<sup>9</sup>As in 1993, the revised import policy specified that the back-to-back L/C cannot exceed 70 percent of the mother L/C. This limitation implied that the foreign exchange spend on purchasing intermediate materials for manufacturing garments for export cannot exceed 70 percent of the value of the export earnings, thus ensuring at least 30 percent of net foreign exchange earnings on total export volume.

industry in two ways. First, it enables Bangladeshi exporters to avoid investing their own resources to finance working capital and allows them to overcome the constraints of obtaining necessary imported raw materials. Second, as banks earn a good profit on the entire transection through this kind of L/C system, positive relations between banks and garment entrepreneurs have been strengthened (Yunus and Yamagata 2014; Rahman 2013).

The inception of the system of bonded warehouse is a major government policy initiative that contributed a lot to the overall development of the RMG industry of Bangladesh. It allows the export oriented RMG industry to import their garment related accessories free of duty. Under the bonded warehouse facility, the imported inputs are cleared through customs against export orders without paying import duty because the inside of the bonded warehouse is viewed as foreign territory (Yunus and Yamagata 2014:96). A condition of the bonded warehouse facility is that all imported materials must be used for the garment industry export. The bonded warehouse system is preferable for garment producers over a duty drawback facility. The duty drawback involves payment of the duty and later putting claims on those taxes, whereas the bonded warehouse system enables export-oriented garment producers to avoid paying a duty on imported materials from the beginning. This system helps the exporter to run their business with less working capital and be more competitive in the market.

### **3.2.3.h. Other Incentives, Liberalized Trade and Financial Policies Related to the RMG Sector**

Since the FY1999-00, the government has been providing various cash incentives to the textile and apparel sector for export development. Initially the amount was up to 25 percent, which was reduced to 15 percent after three years (BKMEA 2015). For the FY 2015 -16, the cash incentives went to 10 percent, of which four percent for using domestic textiles, four percent for small and medium entrepreneur in textiles sector and three percent for new products or new markets of RMG i.e. except U.S.A., E.U. and Canada (Bangladesh Bank 2015).

Apart from the above cash incentives, following fiscal and policy supports are available for the apparel sector of Bangladesh (Based on Bangladesh Export Policy 2015-18 and BKMEA 2015)

- Duty free imports of all capital machineries and equipment;
- Import of 10 percent spare parts of capital machineries are allowed without tariff;

- Importers get duty free facilities for importing machineries to set up effluent treatment plant (ETP);
  - Value added tax (VAT) on fire fighting and safety equipment has been removed since 2015;
  - Exporters are allowed to get loan up to 90 percent against their irrevocable letter of credit (LC) from the respective banks;
  - Special and attractive incentives (e.g. tax holiday, tax rebate, full repatriation) are offered by the Export Processing Zone Authority (BEPZA) for foreign direct investment;
  - Industry owners get five percent cash incentives against repatriate value for using domestic yarn and fabrics;
  - Exporters get 80 percent VAT release for gas and 60 percent for water that used to export production process;
  - To facilitate factory compliance, government allows duty free imports of pre-fabricated building materials;
  - Exporters get VAT released facility for two years if they buy yarn from domestic market by Back to Back LC against their master LC;
  - Government investing in infrastructure development such as, developing roads and ports, increasing the capacity of the electricity;
  - Government amended the labor law and published the new labor rules and allowed the rights of trade unions;
  - Enhanced the capacity of the directorate of industry and establishment;
  - Contributory welfare fund for the RMG workers;
  - Limited initiatives for low cost financing in housing and compliance;
  - Government has taken various public private partnership (PPP) initiatives to train workers.
- (Sources: Compiled from the Export Policy 2015-18; BKMEA 2015, p. 65 -71)

### **3.2.4. Growth of RMG Industry in Bangladesh: External factors**

#### **3.2.4. a. Quota Restriction and the MFA Phase-out**

The growth of the RMG industry in Bangladesh is coined with the historical context of the international trade of textiles and garments industry and its globalization. Apparel is one of the oldest export industries and has often served as the starter industry for many of the export-oriented countries (Aggarwal and Aggarwal 1985; Abernathy et al. 2004; Gereffi 2002). Textile and clothing were at the forefront of industries leading the industrial revolution in the United Kingdom (Clark 2007 & Mokyr 1990 in Fukunishi and Yamagata 2014)

Although the labor-intensive downstream process (particularly sewing) of the RMG industry were moving into different Asian countries as a systemic “flying geese” pattern of industrial development during the post-World war II period, most of the industrialized countries (Global North) have their own garment and textile industries and they have long history of protectionism in a various manner. Many of the industrialized countries of the Global North including USA, Canada and various European Countries had voluntarily placed some form of quantitative and/ or duty restrictions since 1961 and limit the export of the RMG products from different countries to protect their domestic textile and garment industries. These include a Short-term Cotton Textile Trade Agreement (STA) which transitioned into the Long-term Cotton Textile Trade Agreement (LTA) and then four phases of the Multi Fibre Arrangement (MFA) designed under the General Agreement on Tariffs and Trade (GATT) starting in 1974, and finally the Agreement on Textile and Clothing (ATC) negotiated under the Uruguay Round, which also formed the World Trade Organization (WTO) (Keesing and Wolf 1980; Khan et al. 2009:34).

The MFA comprised four successive phases consisting of about one hundred bilateral agreements negotiated under the multilateral framework and covering roughly 80 percent of the world’s textile and garment exports. The Agreement on Textiles and Clothing (ATC) was designed to set up a transitional process that ultimately leads to an elimination of the quotas (Saxena 2014: 66). It needs to be mentioned that although the MFA was originally intended to temporarily protect domestic textile and garment industries of industrialized countries and giving them time to adjust to foreign competition, however it also helped developing countries to get access to the international market in an orderly manner (Aggarwal and Aggarwal 1985; Dheerasinghe 2009).

A country like Bangladesh is the direct beneficiary of it with their guaranteed market. Relatively less restrictive import quotas for Bangladesh under MFA compared to traditional apparel exporters acted as a *blessing in disguise* and stimulated the growth of its apparel industry (Bhattacharya and Rahman, 2000). The *quota system* levied against Hong Kong, Singapore, South Korea, and Taiwan that also led entrepreneurs from these countries to seek alternative production sites and develop partnerships with entrepreneurs from countries without quota limits (Feldman, S. 2009:270). For example, if there was no restriction on South Korean apparel export to the international market, Daewoo would not be willing to develop a partnership with Dosh Garments and Youngone Corporation would not go for a joint venture with the Bangladeshi company - the Trexim Ltd. The following table (table 3.8) is the synopsis of the restrictions applied over the period by the industrialized countries in RMG sector until the total elimination of the quotas system.

Table 3.8: Voluntary Export Restraints on Textiles and Garments

<i>Name of the Agreement</i>	<i>Effective Period</i>
Short-Term Arrangement Regarding International Trade in Cotton Textiles	1961 - 62
Long -Term Arrangement Regarding International Trade in Cotton Textiles	1962 - 73
Multi-Fibre Arrangement I	1974 - 77
Multi-Fibre Arrangement II	1978 - 81
Multi-Fibre Arrangement III	1982 - 86
Multi-Fibre Arrangement IV	1986 – July 1991 and extended three times, until December 1994
The WTO Agreement on Textiles and Clothing (ATC)	1995 - 2004

(Source: Adapted from Dheerasinghe 2009: 36)

It was anticipated that after the MFA phase-out and elimination of quota system, many low-income country RMG industries, such as Bangladesh, would not be able to withstand the competition from China and India (Nordus 2004). However, MFA phase-out brought opportunities for those who were ready for it and Bangladesh, among the LDC countries, was most successful to continue to grow even after the post MFA period. The RMG export of Bangladesh has been increased in many folds since MFA phase-out.

### **3.2.4.b. Other External Reasons for Accelerating the RMG Sector in Bangladesh**

Bangladesh has started to follow the export-led growth policy since the late 1970s earlier than the neighboring India. The ethnic violence in Sri Lanka was prevalent in the 1980s. As a result, during that period, the anti-export environment in India and the political unrest in Sri Lanka induced the buyers to shift attention to Bangladesh (Spinanger, 2000; Ahmed 2006) and these also led investors to choose Bangladesh as a more secure production sites in South Asia (Feldman, S. 2009).

The rapid industrialization of Asian Tigers (South Korea, Taiwan, Hong Kong), and other East Asian countries (Indonesia, Thailand, Malaysia) along with China through diversification of capital and technical intensive products raised the demand for their labor, and the cost of production (particularly labor) has increased significantly for the labor-intensive industries like RMG. Bangladesh has a plenty of unskilled and semi-skilled labor those were willing to work and that has created a favorable environment for the development of the RMG sector there (Feldman, S. 2009. P-270).

Another important stimulator of the growth of apparel in Bangladesh is the tariff and quota-free access in the European Union (EU) under the Generalized System of Preference (GSP) scheme, which contributed to the expansion of apparel export in the EU market provided that Bangladesh meets the *rules of origin* (ROO) requirement. The GSP scheme allows EU importers to claim full tariff (average 12.5 percent) drawback on imports when they import from Bangladesh (Bhattacharya and Rahman, 2000). Currently Bangladesh RMG products are enjoying the duty-free market access in most of the developed countries and preferential trade agreement (PTA) in India, China, Korea and Malaysia (BGMEA 2018).

## **3.3. Current State and Performance of the RMG Industry of Bangladesh**

### **3.3.1. Position of RMG Industry of Bangladesh in the World Apparel Market**

Bangladesh is ranked as the 2<sup>nd</sup> largest apparel exporting countries to the world (WTO 2016) and holding this position since 2010 (BGMEA 2018). World trade data analysis indicates that the share of Bangladesh's apparel export to the world market in the year 2015 was 5.9 percent

with an annual growth rate of 6 percent. China contributed 39.3 percent of the total market with a growth (negative) rate of - 6 percent. The contribution of Vietnam, India and Cambodia were 4.8, 4.1 and 1.4 and their growth showed positive trend. Other two major apparel exporters, Turkey and Indonesia, were exposed with negative growth. These seven top clothing manufacturing countries together produced US\$269 billion worth of apparel products and met more than 60 percent demand of US\$445 billion world apparel market (WTO 2016).

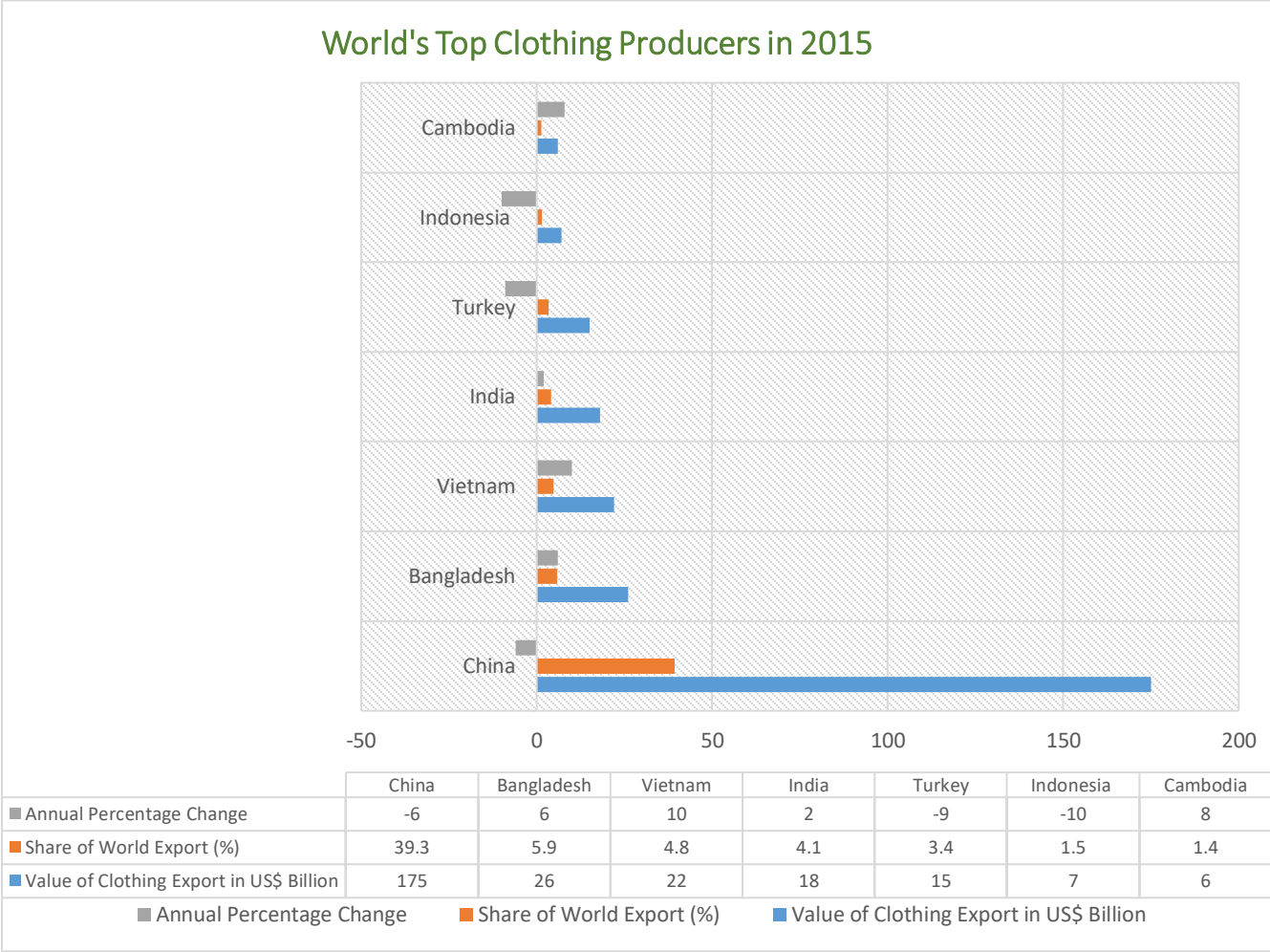


Figure 3.10: Major apparel producer countries in the world in 2015 (WTO 2016: World Trade Statistical Review 2016: 108).

### **3.3.2. Buyer-driven Market of RMG Industry**

Bangladesh RMG sector has grown up primarily due to the practice of major retailers in North America and European Community to outsource from producers around the globe who can meet their needs at the lowest cost possible. The ability of Bangladeshi RMG sector to respond to such outsourcing companies' demands at the lowest possible cost has not required proactive market development initiatives and instead, required the capacity to supply the volume expected by these outsourcing companies abroad. RMG products are made based on the demand and requirement of the buyers. Fernandez –Stark et al. (2011:7) state that the apparel industry is “the quintessential example of a buyer-driven commodity chain marked by power asymmetries between the suppliers and global buyers of final apparel products.” In the process, some lead firms that control design, branding and marketing have been able to exercise strong control over sourcing decisions, and hence over how, when and where specific parts of the production process will take place. In so doing, lead firms (buyers) have been able to control where value is expected and to whom profit accrues at each stage, essentially determining how basic value adding activities are distributed among the value chain (Fernandez –Stark et al. 2011).

As discussed earlier, the RMG industry of Bangladesh has developed in response to the market forces affecting the outsourcing of apparel products by major retailers and brand marketers. It came to Bangladesh while the buyers from industrialized economies were searching for new suppliers and quota-exhausted newly industrialized countries (e.g. South Korea and Taiwan) looking for new places to relocate their labor intensive RMG industry. RMG manufacturers in Bangladesh have almost no control over external market, and the structure or context of the market, sourcing pattern and buyers' motivation have also been changing consistently. As a result, many of the major buyers and brands have established their own offices or appointed representatives in Bangladesh for smooth functioning of their businesses.

### **3.3.3. Market Concentration of the Garment Industry**

Since the beginning, Bangladesh RMG export market has vastly dependent on two market regions i.e. EU and North America. These two regions are the destination of about 85 percent of the total RMG export of Bangladesh. The following figure (figure-3.11) illustrates the distribution of key export destinations for last five consecutive years. In the FY 2011-12, the RMG export of



Bangladesh to the EU, USA and Canada market consist of 88.04 percent while in FY 2015-16, it is 84.63 (BGMEA 2018).

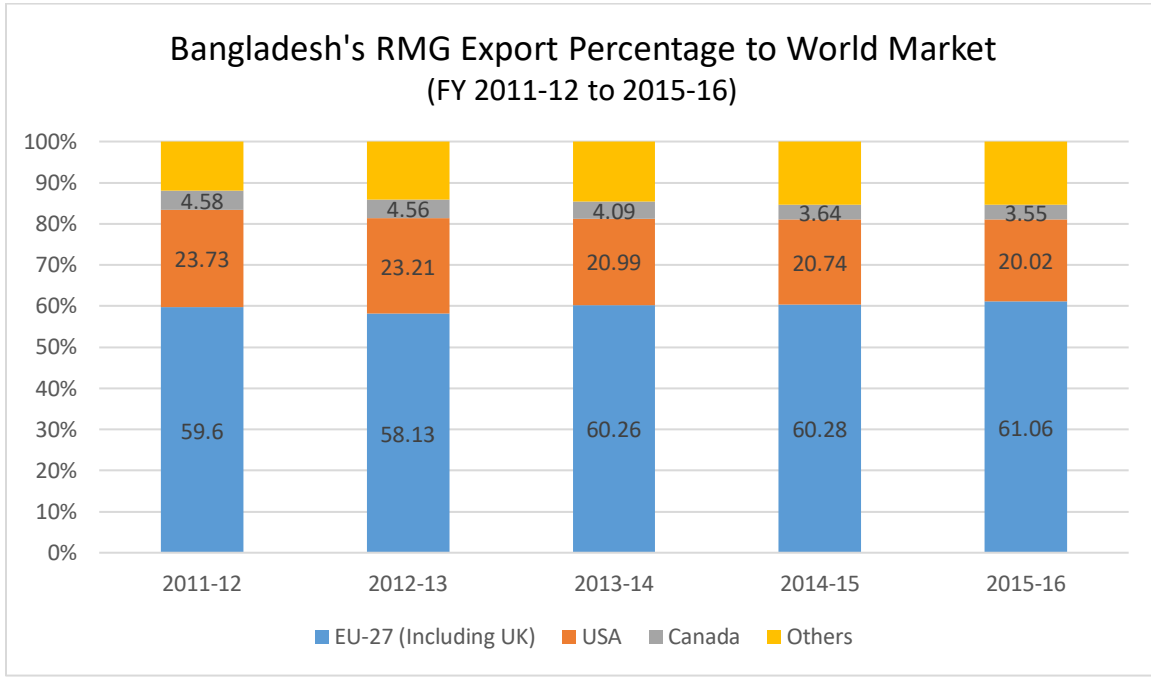


Figure 3.11: Share of the markets' of Bangladesh RMG export (EPB 2018 and BGMEA 2018)

The high concentration of export destinations limits the opportunities for growth of the RMG industry of Bangladesh. It also places the sector in a vulnerable position as exports depends and vary on the socio-economic and political contexts of these countries. Moreover, relationship of the competing countries with the destination countries as well as their strategies have impacted on the export development. As all the apparel manufacturing countries have been trying to increase their market share to the same destinations, an unhealthy competition has existed resulting in a risk of beggar thy neighbors' strategies (i.e., further downward pressures on contract prices). For example, Bangladesh RMG sector is facing huge competition to the USA market due to the policies of the US government. In particular, the cancellation of GSP facilities after Rana Plaza disaster by pointing to lack of safety- compliances put the RMG industry in a more vulnerable situation. Vietnam, India and Cambodia, the three competitors of Bangladesh are enjoying some form of rebate due to their bilateral trade arrangement. Countries like Mexico, Honduras, Nicaragua and El Salvador are also getting preferential treatment due to the regional and bilateral treaties.

However, while Bangladesh is doing well in the EU market, there is risk of having to deal with conditionality of compliances. Buyers are more sensitive about compliances after the tragic Rana Plaza disaster in 2013. Moreover, Bangladesh will lose its duty-free status to the EU markets upon graduation as middle income country possibly in 2021. Brexit issue also has a direct impact on the RMG export to the EU Market. Because with this changing scenerio, Bangladesh has now to negotiate with the U.K government to maintain the duty-free access status of its RMG products. Bangladesh needs to develop new strategies to address the above-mentioned situation to ensure the sustainability of the RMG sector and its position in the country's international trade.

### **3.3.4. Range of Products and Market Dependency**

The RMG industry in Bangladesh has been producing the same mix of standardized products at the low end of the quality range year after year. With more than three decades of experience, Bangladesh RMG industry should have a greater diversity in its product line and much to offer from the product basket particularly high-end products. In fact, being the second largest RMG exporting country, Bangladesh, by this time, ought to have made progress towards supplying their own brand products. However, due to availability of low-cost labor, entrepreneurs have been expanding their production capacity with same line of products and engaging themselves with short-sighted profit maximizing business behavior. This is because low-end product-mix on a regular basis enable RMG factories to operate with an unchanged process and little or no qualitative improvements in skills is needed for expansion. Amsden (1989) calls this kind of capacity expansion as *capital widening* – that is, small, divisible additions embodying the same technology and capital/labor ratio (p.303-4). Such a short run strategy is unsustainable as wage rates are rising fast and minimum wage range has increased more than two-fold within last five years in Bangladesh. Profit margin is being squeezed as competition has increased and product prices become static or even lower due to the effects of beggar thy neighbor policies of other competing countries.

The product assortment of Bangladesh RMG factories, together woven and knitwear, has been highly concentrated with only five low cost products i.e. Trousers, T-Shirt, Jackets, Sweater and Shirt. The dominance of these five categories of products has seen since the inception of the RMG business in Bangladesh. In the FY2015-16, these five categories consist of 77.28 percent of

total RMG exports of where trouser 23 percent, T-Shirt 22 percent, Jackets 13 percent, Sweater 11 percent and Shirts 8 percent (figure- 3.12). A time series data analysis shows that the above mentioned five products have been contributed around 80 percent of total RMG export of Bangladesh for more than last ten years (BGMEA 2017). More detailed information about these five products for the FY 1993-94 to 2017-18 is available at appendix -E.

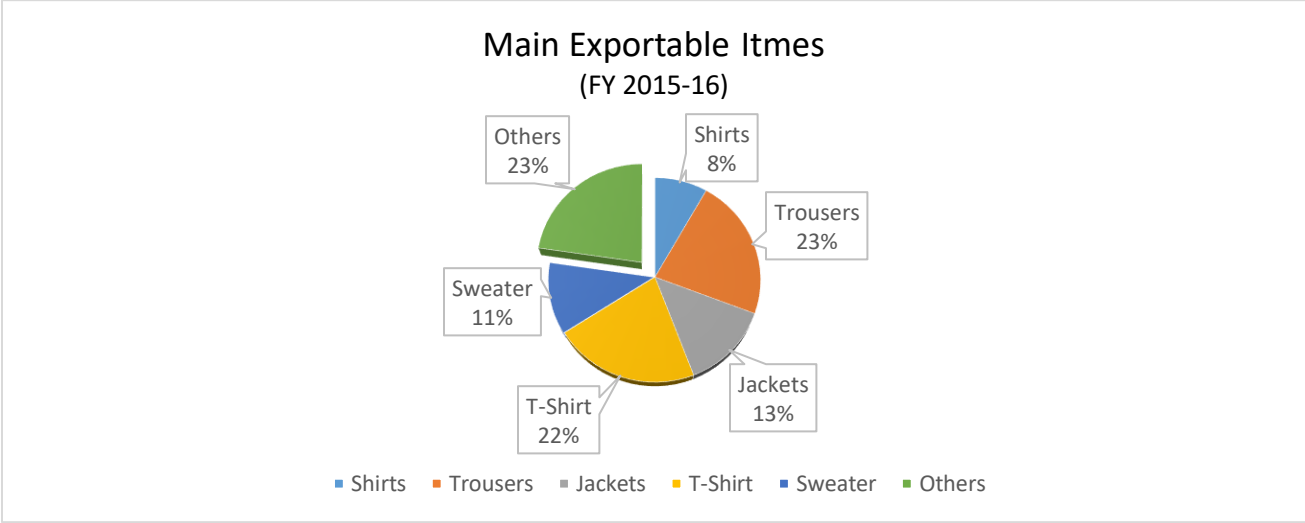


Figure 3.12: Major RMG exportable products of Bangladesh (EPB 2018 and BGMEA 2018)

**3.4. Broader Macro-economic Indicators of Bangladesh and their Effects on the RMG Sector**

Besides the above-described areas of concern, Bangladesh’s RMG sector is also affected by several systemic issues that have an impact on the sector’s current state of competitiveness and are likely to affect the sector’s ability to address concerns regarding its future competitiveness. The following appraisal of some of the key factors affecting Bangladesh’s economic performance is presented to provide an understanding of the extent to which the RMG sector, by itself, would be able to address its long-term competitiveness issues.

### **3.4.1. Ease of Doing Business – Where Bangladesh Stands!**

The World Bank report on “Doing Business 2017” indicates that the overall business environment of Bangladesh is not a healthy one. Bangladesh’s position in that report is at the bottom of the list and it ranked 176 out of 190 countries in the world (World Bank 2017). World Bank developed this ease of doing business report based on ten indicators using a similar scale for all 190 countries. Bangladesh ranked very poorly in enforcing the contract, getting access to electricity, registering property, trading across the borders, getting credit, paying taxes and positioned as 189, 187, 185, 173, 157 and 151 respectively (World Bank 2017).

In fact out of ten indicators, Bangladesh was ranked lower than 100 countries only in protecting minority investment (70<sup>th</sup> position) and for the remaining nine indicators, the country’s position was at above 120 (World Bank 2017). All these demonstrate huge institutional and infrastructural weaknesses of the country. Comparison of Bangladesh context of ease of doing business with other competitors also indicates the risk for the RMG industry of the country. Bangladesh’s position is far below compared to any other RMG manufacturing competitive countries; for example, China -78, India -130, Indonesia -91, Vietnam -82, Sri Lanka – 110, Cambodia -132 and Pakistan -144 (World Bank 2017). Moreover, comparison based on different indicators depicts poor performance of Bangladesh. For example, Bangladesh positioned at the lowest among all eight countries in getting electricity, registering property, getting credit, trading across borders, enforcing contract and resolving insolvency. As Bangladesh RMG contributes more than 80 percent of its total export, the country’s ranking on the overall business environment will have direct impact on the RMG export of Bangladesh. The following table provides the positions of ease of doing business of eight selective RMG manufacturing countries including Bangladesh.

Table 3.9: Comparison of easy of doing business for eight selective RMG manufacturing countries including Bangladesh

Out of 190 Countries	Bangladesh	China	India	Indonesia	Vietnam	Sri - Lanka	Pakistan	Cambodia
Overall Ranking	176	78	130	91	82	110	144	131
Starting a Business	122	127	155	151	121	74	141	180
Dealing with construction permits	138	177	185	116	24	88	150	183
Getting electricity	187	97	26	49	96	86	170	136
Registering property	185	42	138	118	59	155	169	120
Getting credit	157	62	44	62	32	118	82	7
Protecting minority investors	70	123	13	70	87	42	27	114
Paying taxes	151	131	172	104	167	158	156	124
Trading across borders	173	96	143	108	93	90	172	102
Enforcing contracts	189	5	172	166	69	163	157	178
Resolving insolvency	151	53	136	76	125	75	85	72

(Source: World Bank (2017): Compiled from the World Bank Doing Business Report 2017)

Bangladesh needs to improve its overall business environment and secure its position in a way more positive manner in the coming years. However, if we analyze the trend of doing business ranking of Bangladesh for the last five years, it shows a bleak picture. Bangladesh's position in both overall ranking and most of the individual indicators' category has deteriorated systematically. For example, Bangladesh overall ranking in easy of doing business reports was 129 in the year 2013, 130 in 2014, 173 in 2015, 174 in 2016 and 176 in 2017 (World Bank 2017). In a similar manner, positions of most of the indicators out of ten have not improved in the last

five years period and many of those positions deteriorated. A comparative picture of doing business context of Bangladesh for the last five years is available at the table bellow (Table-3.10)

Table 3.10: Doing Business Ranking Analyses for Bangladesh (2013 – 2017)

Doing Business Ranking – Bangladesh Out of 189 countries (190 for the year 2017)	2017	2016	2015	2014	2013
Overall Ranking	176	174	173	130	129
Starting a Business	122	117	115	74	95
Dealing with construction permits	138	118	144	93	83
Getting electricity	187	189	188	189	185
Registering property	185	185	184	177	175
Getting credit	157	133	131	86	83
Protecting minority investors	70	88	43	22	25
Paying taxes	151	86	83	100	97
Trading across borders	173	188	140	130	119
Enforcing contracts	189	172	188	85	182
Resolving insolvency	151	155	147	119	119

(Source: World Bank (2017): Data compiled from the various relevant years World Bank Doing Business Report)

### 3.4.2. Logistics Performance Index (LPI) of Bangladesh

World Bank has developed an interactive benchmarking tool called “Logistics Performance Index” to assess the performance of trade logistics for different countries all over the world. LPI consists of six separate indicators and rates them on a scale of 1 to 5, where 1 indicates the lowest and 5 the highest score. Bangladesh’s position in LPI is not encouraging enough compared to other comparators. In the year 2016, Bangladesh scored poorly in all six indicators with an average LPI score of 2.66 and ranked at 87 out of 160 countries in the world. Moreover, all the comparable countries outperformed Bangladesh and secured better position both in LPI score and ranking. For example, China’s average LPI score was 3.66 and overall ranking was 27, India’s score 3.42 and ranking 35, Indonesia’s score 2.98 and ranking 63, Vietnam’s score 2.98 and ranked 64, Pakistan’s score 2.92 and ranking 68, Cambodia’s score 2.80 and overall country ranking 73 (World Bank 2016).

Scores of six different indicators of LPI demonstrate the poor infrastructural and institutional capacity of Bangladesh. In quality of trade and transport related infrastructure, Bangladesh scored only 2.48 out of 5 which is lower than China (3.75), India (3.34), Indonesia (2.65), Vietnam (2.70) and Pakistan (2.70), and thus it indicates the poor infrastructure of the country. Again, together with the efficiency of the customs clearance process (2.57), timeliness of shipments reaching consignee on schedule (2.90) and track and trace consignments (2.59) indicate weak institutional arrangement and poor port performance of Bangladesh (World Bank 2016). All these information demonstrate that the weak trade logistics context of Bangladesh are not at par compared to other major RMG manufacturing countries in the region. Table F-1 in appendix - F shows the overall ranking and score of LPI indicators for seven selected RMG manufacturing countries in Asia including Bangladesh (See appendix -F)

### **3.4.3. Global Competitiveness Report and Performance of Bangladesh**

World Economic Forum publishes a report each year through a cross-country benchmarking analysis of the factors and institutions that determine long-term growth and success. In the ‘Global Competitiveness Report 2016-17’, Bangladesh ranked 106<sup>th</sup> out of 138 countries and achieved an average score of 3.8 out of 7 (WEF 2017:111). According to the report, out of 12 pillars, Bangladesh performed reasonably well only in macro-economic context (scored 4.8 and ranked 65<sup>th</sup> position) and did poorly with respect to the pillars of institutions (scored 3.1 and ranked 125<sup>th</sup>), infrastructure (scored 2.8 and ranked 114<sup>th</sup>), technological readiness (scored 2.7 and ranked 122<sup>nd</sup>) and innovation (scored 2.8 and ranked 121<sup>st</sup>).

Bangladesh performance in some other pillars like higher education and training (118<sup>th</sup>), labor market efficiency (120<sup>th</sup>) are also poor. All these information indicate the overall infrastructural and institutional weaknesses of the country. Moreover, Bangladesh scored one of the lowest (2.1 out of 7) and ranked 136<sup>th</sup> out of 138 on ‘nature of competitive advantage’ sub-indicator under the pillar of business sophistication. Its poor performance also evident on ‘local availability of specialized training services’ (scored 3.4 ranked 127<sup>th</sup>) and ‘extend of staff training (scored 3.3 ranked 124<sup>th</sup>) under the pillar of higher education and training.

Bangladesh’s position in company spending on research and development (scored 2.7 and ranked 118<sup>th</sup>), quality of scientific research institutions (scored 2.9 and ranked 120<sup>th</sup>) and university – industry collaboration in R & D (scored 2.5 ranked 132<sup>nd</sup>) under the pillar of innovation are

frustrating (Global Competitiveness Report 2016-17:111). Moreover, Bangladesh's overall performance in global competitiveness is not promising enough compare to other RMG manufacturing countries. For example, in the global competitiveness report 2016-17, China ranked 28<sup>th</sup>, India 39<sup>th</sup>, Indonesia 41<sup>th</sup>, Vietnam 60<sup>th</sup> and Cambodia 89<sup>th</sup> compare to Bangladesh 106<sup>th</sup>. Bangladesh must address these challenges for sustainable economic growth and long-term prosperity of the RMG sector (WEF 2017). The selected seven countries comparisons for specific pillars based on Global Competitiveness Report 2016-17 is available in Appendix-G.

#### **3.4.4. The Economic Freedom index and Bangladesh**

The Heritage Foundation has been publishing the Economic Freedom Index to measure the degree of economic freedom in the world's nations since 1995. They measure economic freedom based on 12 factors, broadly grouped into four categories i.e. rule of law, government size, regulatory efficiency, and open markets, and graded them on a scale of 0 to 100. They also grouped the country's economic freedom into four categories based on the score of individual country i.e. 0 – 50 repressed, 50 plus to 60 mostly unfree, 60 plus to 70 moderately free and 70 plus – 100 mostly free (Economic Freedom Index. 2019).

According to the Economic Freedom Index 2019, Bangladesh's overall score is 56.5 and it ranked at 121<sup>th</sup> out of 183 countries in the world which indicate that the economy of the country can be stated to be in 'mostly unfree' category. However, Bangladesh performed well in government size with an average score of 81.6 and did moderately good in regulatory efficiency with an average score of 63. On the other hand, Bangladesh's performance in all three factors of rule of law category was significantly poor. For example, it scored 36.1 in property rights, 24.4 in government integrity and 34.5 in judicial effectiveness. Apart from these, Bangladesh scored 30.0 in financial freedom under open markets category (Economic Freedom Index. 2019).

The report identifies the weak institution and regulatory regime as the root cause of the economic captivity of Bangladesh and states that entrepreneurial activities of the country are hampered due to uncertain regulatory environment, corruption and weak enforcement of property rights (Economic Freedom Index 2019:98). However, the average score of other RMG manufacturing competitors of Bangladesh are laid in 'unfree category' (50 plus to 60) of economy. For example, Cambodia scored 57.8 and ranked 105<sup>th</sup>, China scored 58.4 and ranked 100<sup>th</sup>, Pakistan scored 55.0



and ranked 131<sup>st</sup>, India scored 55.2 and ranked 129<sup>rd</sup>, and Vietnam scored 55.3 and ranked 128<sup>th</sup> (Economic Freedom Index. 2019).

#### **3.4.5. Global Corruption Perception Index and Bangladesh**

According to the Corruption Perception Index reported by Transparency International for the year 2018, Bangladesh ranked 149<sup>th</sup> out of 183 countries and scored 26 out of 100 (TIB 2018). The average corruption rank for the last 10 years (2007 – 2016) is 141.1, reaching an all-time high of 162 in 2007 and a record low of 51 in 1996 (Trading Economics 2016). The poor score and rank in corruption index indicate the existence of weak institutions and regulatory regime in Bangladesh. The local Transparency International office of Bangladesh states that the perceived factor behind the low ranking in this index are lack of good governance, weakness in rule of law and deficit in effectiveness, independence and promises of Anti-Corruption Commission of the country (Daily Star 2016a). In this particular index, Bangladesh lags behind other RMG manufacturing countries, for example: the score of China is 39 and ranks 87, India's score is 41 and ranks 78, score of Indonesia is 38 and ranks 89, score of Vietnam 33 and ranks 117, score of Pakistan 33 and ranks 117, and score of Cambodia 20 and ranks 161 (TIB 2018).

#### **3.4.6. The Global Innovation Index (GII) and Bangladesh.**

The Global Innovation Index (GII) ranks world economies according to their innovation capabilities using a host of parameters such as human capital development and research, development funding, university performance, and international dimensions of patent applications. GII reflects the innovation capacity of a country along with how it does locally (regionally) and its impacts internationally (WIPO 2019). The score Bangladesh receives in GII 2019 is poor which places it at the lower end of the ranking. Bangladesh scores only 15.55 out of 100 and ranks 108 out of 129 countries. Almost all other RMG manufacturing countries are in better position compare to Bangladesh. For example, in the year 2019 GII, China scores 52.75 and ranks 5, India scores 28.49 and ranks 51, Vietnam scores 33.93 and ranks 37, and Cambodia scores 19.68 and ranks 84 (WIPO 2019).

### **3.5. Conclusion**

Bangladesh has achieved rapid economic growth and significant progress in social development indicators despite many obstacles. The socio-economic development of Bangladesh has attracted the attention of many and now considered as a role model for the developing nations. However, the journey of Bangladesh was not smooth and still the country has issues and concerns. Immediately after independence, Bangladesh has followed an import substitution model of economic policy and export was not a priority to the government. The major exportable products were jute and jute goods that also faced huge decline of demand in the world market due to the popularity of plastic products. These bleak scenarios placed Bangladesh in deep vulnerability and the country became highly dependent on foreign aid. Bangladesh has started to adopt export-led growth model since 1980 and gradually opened its economy. However, the country has made extensive economic reforms and started to follow aggressive export-led economic development path while the democratic rule was reinstated in 1990. RMG became prominent export sector and flow of remittance received momentum. Most of the socio-economic indicators including GDP, per capita GDP, export growth, trade-GDP ratio and various human development indicators have increased significantly and dependency on foreign aid has decreased in a parallel basis. All these indicators demonstrate the positive impact of the export-led economic growth policy of Bangladesh. Besides these, the country also has concerns in various systemic issues which have direct and indirect impact on competitiveness. Poor achievements in different international socio-economic indicators discussed above indicate the challenge of long-term competitiveness of the country.

The discussion in this chapter regarding the RMG industry of Bangladesh reflects various problems and issues that reflects the current state of competitiveness in global market. However, despite various problems, the sector has potentials to maintain its current position to the world market and its contribution to the Bangladesh economy. These problems and issues will be explored further in this study by gathering inputs from different stakeholders of the RMG sector. The following chapter will discuss the methodology being used in this research.

## Chapter 4: Research Methodology

This chapter starts with the discussion of the philosophical assumptions and the theoretical framework that the research is based on. It goes on to explain the data collection process starting from, questionnaire and interview schedule development, selection of interviewees and survey respondents followed by how the data was analyzed with a conclusion.

### 4.1. Philosophical Perspectives of the Study

Philosophical world view or research paradigm is the basic set of beliefs that guide action to achieve research objectives (Denzin and Lincoln 2000). It helps researcher to choose the research design and methods. What philosophical assumption or belief one researcher should bring for an inquiry is a debatable issue. However, there are four suppositions widely discussed in the literature: post positivism, constructivism, transformative, and pragmatism (Creswell 2014). Each position has its own characteristics and the major elements of each position are as follows:

Table 4.1 Major elements of philosophical assumptions

Postpositivism	Constructivism
<ul style="list-style-type: none"><li>• Determination</li><li>• Reductionism</li><li>• Empirical observation and measurement</li><li>• Theory verification</li></ul>	<ul style="list-style-type: none"><li>• Understanding</li><li>• Multiple participant meanings</li><li>• Social and historical construction</li><li>• Theory generation</li></ul>
Transformative	Pragmatism
<ul style="list-style-type: none"><li>• Political</li><li>• Power and justice oriented</li><li>• Collaborative</li><li>• Change-oriented</li></ul>	<ul style="list-style-type: none"><li>• Consequences of actions</li><li>• Problem-centered</li><li>• Pluralistic</li><li>• Real-world practice oriented</li></ul>

[Source: Creswell (2014), p. 6]

This research is focused on competitiveness of the RMG industry of Bangladesh which can be considered as a problem-centered real-world pluralistic issue. To achieve the objectives, the study will analyze the consequences of actions related to the RMG sector. Considering the ingredients and nature of the project, pragmatism has been chosen as the research paradigm or philosophical assumption in this study.

## **4.2. Research approach**

Research approach also called as ‘strategies of inquiry’ (Denzin and Lincoln 2011) provide specific direction for procedures in a research design (Creswell 2014: 12). There are three alternative research designs available to conduct research: quantitative, qualitative and mixed methods. The selection of an appropriate approach for a research depends on the type of inquiry. For example: quantitative approach uses experimental or survey type of inquiry, qualitative approach for narrative, case study etc., and mixed methods approach for convergent, exploratory sequential, transformative or multiphase type of inquiry (Creswell 2014).

This research followed the mixed method approach to fulfil the objectives of the study. Mixed method research is an approach that collect and analyze both quantitative and qualitative data and integrate them to achieve the objectives. Mixed method approach can provide a more complete understanding of a research problem than quantitative or qualitative alone. Greene, Caracelli, and Graham (1989) claim that the combination of qualitative and quantitative methods would compensate for their mutual and overlapping weaknesses. They further argue that the quantitative method provides a strong foundation for the theoretical background and the qualitative method provides real insights into real issues. Mixed method approach is dominantly used in “pragmatism” philosophical assumption (Howe 1988; Tashakkorri and Teddlie 1998) and scholars such as Morgan (2013) argued that it is a useful approach to social science research.

## **4.3. Research methods**

There are three major components generally involved in a standard research. These are (a) philosophical assumptions or standing, (b) research approach of methods and (c) research design. Creswell (2014) developed the following framework showing the interconnection of three components:

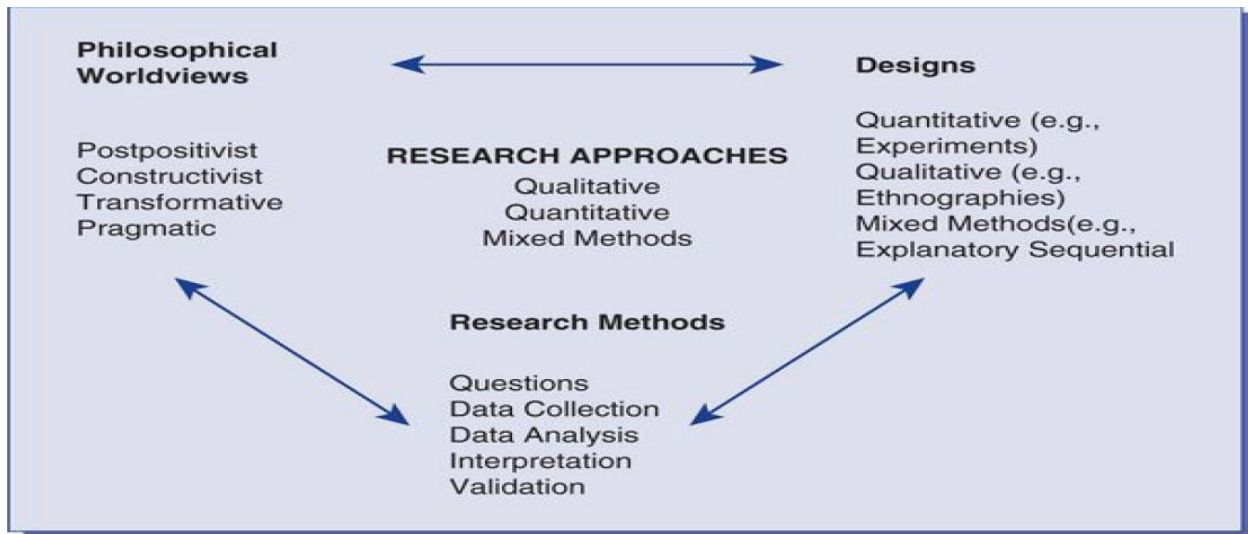


Figure -4.1 Three major components of research (Adopted from Creswell (2014): p-5)

Research methods include the procedures of data collection, analysis, and interpretation of the researchers' studies. There is a range of options for data collection and researchers collect data on an instrument or test (e.g. questionnaire) or gather information on a behavioral checklist (e.g. observation) (Creswell 2014). In this study, both open and closed ended questionnaire are used following the mixed method approach. Face to face interviews provide the qualitative data to verify and triangulate the quantitative data from the survey. Statistical and text analysis tools are used for data interpretation to address the research objectives.

#### 4.4. Data Collection Process

I applied various techniques and procedures including triangulation under the umbrella of mixed method approach. Cohen (2006) argues that a single method can never adequately shed light on a phenomenon and using multiple methods can help facilitate deeper understanding. Gaskell (2002) states that triangulation produces a better understanding as it involves using multiple data sources in an investigation. Yin (2009) argues that by combining multiple data collection methods and materials, researchers attempt to "cross check" their findings so that their empirical findings do not have intrinsic biases and the problems that come from single method, especially case studies.

Patton (1999) maintains that "it is possible to achieve triangulation within a qualitative inquiry strategy by combining different kinds of qualitative methods, mixing purposeful samples, and including multiple perspectives" (p. 1193). There are different kinds of triangulation, but I have

used the mixed method triangulation in this research. For example, I used multiple data sources (both from primary and secondary data), quantitative (survey results) and qualitative (i.e. face to face interviews) techniques to measure some of the same variables and collect data from a diverse range of respondent groups.

#### **4.5. Data sources**

Both secondary and primary data were used in this research to achieve the goals of the study.

##### **4.5.1. Secondary Data**

To get a solid understanding about the topic and to identify my position and to address the questions regarding the competitiveness of the RMG industry of Bangladesh, I have done an extensive study and research in relevant fields. In this context, I heavily relied on document analysis based on secondary sources. These are largely academic researches such as journals and books, policy papers, concept papers, documents, reports, data bank, consultative paper of different national, international and multinational organizations (i.e. CPD, WB, UNDP, ADB, WTO, IFC); and newspaper articles. The wide-ranging enquiry helped me to understand and conceptualize the issues related to this study. It also provided a better picture and supplemented the first-hand experiences that I have learned from collecting primary data (i.e. interviews and survey).

##### **4.5.2. Primary Data**

Primary data is the main source of achieving the objectives of this study. Primary data was collected from two major sources i.e. interviews and survey results. Interviews have two respondent groups – one is buyer representatives based in Canada and another is RMG related stakeholders based in Bangladesh. Two set of questionnaires (questionnaire- A and questionnaire -B) have been used for two different types of interviews (Appendix- A & C). The first and second part of the questionnaire- A was used as “survey questionnaire” to run the survey (Appendix-B).

First, questionnaire-B (appendix -C) was used for interviewing six buyer representatives based in Canada and it consisted of 11 topic guide questions. I used these findings to develop the questionnaire -A and apply the feedback received from the interviewees wherever applicable in data analysis.

Second, I interviewed (face to face) 24 people representing RMG industry, association, policy makers and professionals. In these interviews, I used questionnaire-A (appendix -A) which has three major parts. First part intends to get some basic information about the interviewees and their organization, second part is a set of closed-ended survey type question statements and third part has semi-structured topic related questions. With this questionnaire, I asked the interviewees to respond to 41 RMG related closed-ended survey type question statements and evaluate them in a five-points Likert scale with the value of -2 (strongly disagree) to +2 (strongly agree) and 0 for a neutral position. Out of the 41 question statements, 16 statements are related to the strengths and opportunities and rest 25 statements are related to the weaknesses and threats of the RMG industry of Bangladesh. This questionnaire also included 7 semi-structured open-ended questions where respondents shared their ideas and thoughts.

Third, I used questionnaire – C as a survey questionnaire to run the survey and received 175 valid responses out of 270 distributed questionnaires. This survey questionnaire consists of the same 41 closed-ended question statements which was used as second part of the questionnaire-A. Data was thus analyzed from 175 survey responses (Questionnaire -C) and 24 face to face interviews (Questionnaire-A). It needs to mention that I counted all the survey responses received from different categories (industry owners, association, policy makers and professionals) together and weighted them equally. However, various comments or reaction received from 24 interviewees are also reflected proper and orderly manner at the time of discussion of each factor as a qualitative approach in chapter five.

I identified 41 indicators that are related to the RMG industry of Bangladesh based on the literature review and field testing of questionnaire. In order to provide scope for additional outcomes, I incorporated open-ended semi-structured questions in the questionnaires through face to face interviews. Prior to start full-scale face to face interview, I conducted a field testing on a small group (5 person) of respondents. This allowed for incorporation of indicators or important issues that I may have otherwise ignored. In addition, the field testing allowed refinement in questionnaire, clarity of questions which helped to finalize the questionnaire -A, used for final data collection.

The reasons for using same questionnaires for different groups are to compare and contrast the respondent's ideas and thoughts as well as develop a conclusion based on the information

gathered from them. This method encourages respondents to share experiences, attitudes, needs and ideas and provide an opportunity to concentrate on areas described important by the respondents.

#### **4.5.3. Reasons for using interview method**

For qualitative inquiry, I followed the interview method as it seems more appropriate compared to other qualitative methods such as case study, narrative, ethnographic and phenomenology to investigate the research objective of identifying factors that influence competitiveness of RMG sector in Bangladesh.

Modality of the interviews in social science varies depending on the nature of topic, respondent, time and other resources (i.e., face- to- face, video conferencing, Skypes, telephonic, mail). In this research, out of 30 interviews only three buyers' representatives' interview were conducted over telephone and the rest were face to face interviews. Kvale (1996) states that face to face interviews can be narrative (where the subject narrates his/her experiences) or episodic (where the respondents are interviewed about a specific event). Considering the cultural mindsets and busyness of the interviewees as well as appropriateness, I chose face – to –face episodic interview for this project. Furthermore, a face-to-face method was chosen in order to eliminate the problems of inflexibility, misunderstanding of the questions and for a qualitative point of view.

#### **4.5.4. Group of Interviewees**

In this research, I selected five groups of respondents with an expectation of getting rich, diverse and comprehensive feedback. They are as follows:

1. Representatives of the garments manufacturing companies of Bangladesh;
2. Garments associations / chamber representatives;
3. Related government officials/policy makers;
4. Professionals/think-tank;
5. Representatives of leading garments sourcing companies or buyers in Canada.



The following table shows the number of interviewees, reasons for their selection and targeted outcomes for each of the groups:

Table 4.2. Selection of interview groups and outcomes

<b>Serial No</b>	<b>Target group</b>	<b>Number of participants</b>	<b>Reasons for selection</b>	<b>Targeted outcomes</b>
1.	Representatives of the garments manufacturing companies	10	To identify their feeling about overall context of business and awareness of potential challenges of this sector.	Learn about the strength and challenges of the RMG sector of Bangladesh. Also to know their views about competitiveness and policy recommendations.
2.	Garments associations /chamber representatives	5	To understand the current state of affairs of the RMG industry and to learn the role of associations in the overall development of this sector.	Their views on how the garment sector should be dealt with potential challenges to maintain its competitiveness.
3.	Related government officials/policy makers	6	To recognize the government position, commitment and planning for the RMG industry of Bangladesh.	Learn about the initiatives of the government and comprehend the future plan of action
4.	Professionals / think-tanks	3	To get expert opinion about the related issues, concern, and challenges of the RMG industry in Bangladesh.	Received thoughtful insights about the prospects of the garments sector and options for Bangladesh
5.	Representatives of leading garments sourcing companies or buyers in Canada	6	There is no internal market for the RMG industry of Bangladesh. Therefore, to understand the market context, I interviewed some of the leading RMG sourcing companies in Canada. It gives an opportunity to learn about buyers' expectations and thinking regarding RMG sector of Bangladesh and their motivations for alternative sourcing.	Have an idea about the buyers' perception, concern, motivations and future potentiality in doing business from Bangladesh as a sourcing destination.

#### **4.5.5. Interviewee Selection Criteria**

I followed purposeful selection criteria to identify the potential participants of this research. Creswell (2014: 189) argues that the purposefully selected participants “will best help the researcher [to] understand the problem and the research question”. Miles and Huberman (1994) have recommended to consider four aspects in case of purposeful selection: (a) the actors or persons who will be interviewed (b) place of interview or the setting (c) what will be observed or the events, and (d) the evolving nature of events or the process.

In selecting interview participants for this research, I particularly targeted professionally experienced senior management to get a robust and comprehensive feedback from each of the interviewees. I also considered the above mentioned four recommended aspects of Mile and Huberman (1994) for the purposeful selection of the interviewees. I purposefully selected medium and large companies instead of small companies to get better understanding about the research questions from diverse participants. Similarly, selection of the business associations /chambers were purposefully made. The selected associations i.e. Bangladesh Garment Manufacturers and Exporters Association (BGMEA) and Bangladesh Knitwear Manufacturers and Exporters Association (BKMEA) are the two leading associations related to the RMG industry in Bangladesh. One representative from the national exporters association of Bangladesh is included who has also been actively involved in RMG business and former vice-president of the BKMEA. Government representatives were selected based on their relevancy with the RMG sector.

My personal connections as a career civil servant and working as head of the commercial wing of the Bangladesh High Commission, Ottawa helped to reach such high-profile participants. For the sake of anonymity, I maintained the confidentiality of the name of the interviewees and the detail of the companies. However, all the information will make available if needed.

The following is the summary of the representatives selected for interviews from five different categories in this research.

##### **A. The representatives of the garments manufacturing companies of Bangladesh**

In this category, ten companies are selected of which two are medium size and rest are large. In the context of Bangladesh RMG industry, factories those have employed less than 500 workers can be considered as small, 500 – 2000 workers medium and more than 2000 workers are large size factories.

The total number of employees working in these ten companies are more than 29,000 with a mean of 2910 and it represents more than six percent of the total RMG employment. The yearly turnover of these ten companies is more than US\$ 650 million. Among the ten interviewees of this category, eight are the Managing Director and CEOs of their companies and one is holding the position of the Executive Director and another is the Group Director. All of them have minimum 20 years of working experiences in RMG trade with an average of 24.2 years of experience and eight of them have master's degree, one has bachelor's in business, and another has bachelor in Textile Engineering degree. Out of the ten factories, five are in Gazipur, four are in Narayanganj and one is in Dhaka. These are the three highly concentrated area in Bangladesh where more than 70 percent RMG factories are located.

#### **B. The garments associations / chamber representatives**

In association category, I interviewed five representatives from three different associations i.e. one from the Exporters Association of Bangladesh (EAB) and two of each from the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) and Bangladesh Knitwear Manufacturers and Exporters Association (BKMEA). BGMEA and BKMEA are the two leading associations that represent more than 95 percent of the total RMG manufacturers of Bangladesh. The following are the brief profiles of these five representatives:

- 1<sup>st</sup> Vice President of the EAB who is also in the RMG business for more than 25 years with a master's level of education and an employer (CEO) of more than 1500 people. He is an Advisor of ALLIANCE (a buyer's forum for compliance), immediate past Vice President of the BKMEA and Chairperson of the RMG related Industry Skill Council (ISC).
- Director and founder President of the BKMEA. He has been in the RMG business for more than 25 years with a master's level of education. He is the CEO of a large RMG companies where he employed more than 5000 people. He is also holding the position of the Acting President, Narayanganj Chamber of Commerce.
- Vice President (Finance), BKMEA and CEO of one mid-level RMG industry located in the Narayanganj district. He has been in the RMG business for about 20 years and have his master's degree.

- Director, BGMEA and Director, Bangladesh Thai Chamber of Commerce & Industry. He is also the Director of one reputed RMG industry with more than 15 years of exposure in this trade and have his master's level of education.
- Joint Secretary (Trade Promotion) of the BGMEA. He is holding a senior management position at BGMEA and have acquired vast knowledge and research experiences in RMG sector. He has been in this trade for more than 16 years with a master's degree.

### **C. The list of the government officials/policy makers**

In this category, six different senior level related government officials are interviewed from three different ministries. I interviewed the Chief of Export Division who is holding the rank of Additional Secretary, one Joint Secretary of export wing, Deputy Chief of Textile in the Ministry of Commerce, Director (textile) of the Export Promotion Bureau which is also under the Ministry of Commerce, one Joint Secretary who is responsible for the Export oriented industries from the Ministry of Labor and Employment, and Joint secretary (textile) of the Ministry of Jute and Textiles. All the six interviewees have master's level of education and five of them have been working in the government for more than 25 years and one for 15 years.

### **D. The list of think-tank/professionals**

I interviewed three professionals those have knowledge and expertise in international trade and interest in the RMG industry of Bangladesh. All these distinguished think-tanks have PhD with outstanding performance in their profession with an average 28 years of working experiences. One of them is a retired secretary to the government who worked as the chief executive officer (CEO) of Bangladesh Foreign Trade Institute and chairman of the Tariff Commission of Bangladesh. Another is a professor of the business and economics school of Monash University, Australia and one is the deputy chief of the USAID Trade Facilitation Program, Bangladesh.

### **E. The list of the RMG sourcing companies or buyers in Canada**

The market of the RMG products of Bangladesh is external and mostly based on North America and EU market. Canada is one of the top ten export destination for the RMG products of Bangladesh. To understand the market and receive direct feedback from the market, I interviewed representatives from five leading Canadian companies that import RMG products from Bangladesh and one consultant of Trade Facilitation Office, Canada who also sources RMG products from Bangladesh. The head-office of four companies out of six are in Toronto and two of the companies' head-office are based in Montreal. The companies are: Walmart Canada Corp,

JoeFresh, Canada Sportswear Corp., Haggar Canada Co., Dizaro Inc and Intelcom. Out of the six interviewees, four have more than 25 years and two have 20 years of working experiences with a minimum education of bachelor's degree. Two are the CEOs of the company, one director of sourcing and production, and three are the senior sourcing manager of their respected companies. The total turnover of these six companies is about US\$ 480 million which represent more than 45 percent of entire Canadian RMG import from Bangladesh.

#### **4.5.6. Formalities of Interviewing**

As discussed earlier, I interviewed 30 people from five different categories for this research. I contacted all the interviewees beforehand, directly or with the help of some referees, over telephone or by e-mails. Upon receiving confirmation of the time and place of the interviews, I conducted each interview (except three telephonic interviews) in-person face- to-face episodic manner.

Each interview generally took one to two hours and all the interviewees were assured that the data would to be used exclusively for the research purpose. Klevé (1996) recommends that the respondent be briefed and debriefed at the beginning and the ending of the interview. Accordingly, I provided the questionnaire to the interviewees at the beginning with a cover letter explaining the broad research aims and briefed them about the context of the interview. Interviews were not recorded for cultural reasons and to get the free and open feedback from the participants. It needs to be mentioned that people in Bangladesh in general feel more comfortable in a non-recorded atmosphere at the time of their interviews. However, I carefully took maximum notes of all-important aspects in each interview and stopped the interviewees to get more clarification or detail discussion when necessary. I also addressed ambiguities (if any) at the session of debriefing at the end of each interview. Bell (1993) suggests that researchers carefully verify interview statements, especially quotes, with the respondent wherever needed even after the interviews were over. I used this idea in three cases to get more clarification as there were some ambiguity and it was possible as I had access to almost all the interviewees through my personal network.

Out of six Canadian buyers, interviews of the representatives of Walmart Canada Corp and Haggar Canada Co. were taken place at their head office in Toronto, Canada. I interviewed the representative of the DizaroInc at the time of her visit to Bangladesh. The remaining three interviews of buyers' representatives were conducted over phone. I sent the questionnaire to all

the persons concerned beforehand and conducted the interviews over phone at their prescheduled time. One of the telephonic interviews was rescheduled due to the unavoidable business of the interviewee.

#### **4.6. Sample selection and quantitative (survey) data collection**

In this study, the survey was conducted among 150 RMG factories in Bangladesh with a target to get 2 (two) respondents' feedback from each factory. The companies were selected based on their geographical location particularly those that located in Gazipur, Narayanganj and Savar. All the surveyed factories were either member of the BGMEA or BKMEA and they were 100 percent export-oriented factories. The survey questionnaires were distributed to 270 top management of 150 factories and they were the Managing Director/Executive Director/Director/General Manager of the respected factories. Among the 150 factories, I contacted 90 factory head offices located in Dhaka city and distributed 140 survey questionnaires there. The rest of 130 questionnaires were distributed among 60 factories located in selected areas. The selection of the factories was done in consultation with the BGMEA and BKMEA officials as well as personal connections. The survey instrument (i.e questionnaires) along with a cover letter explaining the purpose of and instructions for the survey were sent to the respected contacted persons. The first communication with most of the factories (about 80 percent) was established by me directly in person or over phone with some references. I sent questionnaires to rest of the factories with the help of three research assistants whom I deployed for collecting data. Among the distributed 270 questionnaires, a total of 187 questionnaires were returned after follow-up communication by me. A good number of questionnaires (89) were collected in the same day as I asked the respondents (wherever applicable) to fill in the questionnaires at the time of their meeting. It took almost five months in the year 2018 to collect these data.

#### **4.7. Ethics Approval**

As the interviewees were not the focus of the research and they were being approached solely in their professional or institutional capacities, I applied to have the research exempted from the University of Saskatchewan ethics review process. I subsequently received an exemption letter from the Behavioural Research Ethics Board of the University of Saskatchewan as per the rules of the Tri-Council Policy Statement (TCPS): Ethical Conduct for Research Involving Humans,

December 2014, Exemption Article 2.1. A scan copy of the exemption letter is attached in the Appendix- H.

#### 4.8. Survey and Interview Questionnaire Development

I developed survey questionnaire which consists 41 close ended RMG related question statements of which 16 variables considered as strengths/opportunities and 25 considered as weaknesses/threats. It was assumed that variables those were considered as strengths/opportunities have had positive impact and those were considered as weaknesses/threats have had negative impact on the competitiveness. I grouped all the 41 question statements under the six major heads based on the Porter’s diamond model i.e. *factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry, government and chance*. Among the six, Porter (1990) identified five broad perspectives of factor condition i.e. *Human Resources, Physical Resources, Knowledge Resources, Capital Resources and Infrastructure*. All these statements were structured based on the Porter’s six factors of competitiveness of the nation and stated them in a shorter topic statement which were considered as variables for data analysis and easy understanding. I also categorized factor condition issues in five broad perspectives based on Porter. The following theoretical frameworks were used for data analysis of this research:

#### Factor Condition

Under the factor Condition five broad perspectives were considered. The detail discussion of each of them are as follows:

**Table: 4.3. Human Resources**

Seri al No	Ques tion No	Question Statement	Shorter Topic Statement
1	2.2	Availability of a large pool of unskilled and semi-skilled workforce with continued capacity and competitive price have been the key factor for the success of the RMG industry of Bangladesh	Abundance of unskilled and semi-skilled workforce
2	2.3	Production capacity or volume of products (supplied by large number of factories) is one of the	Large number of factories

		biggest advantages for the RMG sector of Bangladesh to be competitive in the world market	
3	2.12	Huge young population (60% of total population are below 35) of Bangladesh could be yielded as a demographic dividend if the country able to train and educate them with the demand and need of the RMG sector.	Demographic dividend
4	3.14	Huge young population (60% of total population are below 35) of Bangladesh could be yielded as a demographic dividend if the country able to train and educate them with the demand and need of the RMG sector.	Scarcity of skilled workforce
5	3.15	Weak mid-level management and lack of professionalism are major impediments to the overall development of the garment sector of Bangladesh	Weak mid-level management
6	3.16	Huge dependency on buying houses, middlemen and third-party marketing are major impediments to the overall development of the garment sector of Bangladesh	Dependency on third party marketing
7	3.10	Government Officials responsible directly or indirectly for the RMG sector do not have adequate understanding of the RMG sector's value to the economy and thus are less motivated in initiating or recommending changes that has direct impact on the competitiveness of the sector.	Bureaucratic inertia



**Table 4.4. Physical Resources**

Seri al No	Ques tion No	Question Statement	Shorter Topic Statement
8	2.13	Due to the strategic location and available capacity, the RMG industry of Bangladesh has potentials to get more access into the regional markets particularly to the BIMSTEC and BRICS countries.	Strategic location of the country
9	3.1	Shortage of gas and electricity is a major impediment for the RMG sector development and for it to be more competitive	Huge deficiency in gas and electricity
10	3.2	Scarcity of industrial land and unplanned industrialization hinder the expansion of RMG sector and discourage steps towards developing an industry cluster	Scarcity of industrial land and unplanned industrialization

**Table 4.5. Knowledge Resources**

Seri al No	Ques tion No	Question Statement	Shorter Topic Statement
11	3.5	Bangladesh has huge deficiency in R &D, and it has direct impact on competitiveness as both product specialisation and market diversification needed in-depth research	Huge deficiency in R & D
12	3.4	Insufficient soft infrastructure i.e. lack of quality education and training, IT, specialized institutions, skills development, fashion and design institutes, etc., adversely affects growth and sustainability of the RMG sector of Bangladesh	Lack of quality education and training

**Table 4.6. Capital Resources**

Serial No	Question No	Question Statement	Shorter Topic Statement
13	3.9	Limited access to finance and high bank interest rate are two major hindrances for the development of the RMG sector of Bangladesh	Limited access to finance and high bank interest rate

**Table 4.7. Infrastructure**

Serial No	Question No	Question Statement	Shorter Topic Statement
14	2.1	Bangladesh RMG sector has reasonably solid industrial base and its products are very competitively priced, positioning it as world leader in apparel sector	Reasonably solid industrial foundation on RMG related infrastructure
15	3.3	Transportation system (highway link, railroad, inland waterways, air transport and port) of Bangladesh is very poor and hinders RMG export competitiveness significantly	Poor condition of roads, ports, rail, and airports for moving goods into and out of the country

**Table 4.8. Demand Condition**

Seri al No	Ques tion No	Question Statement	Shorter Topic Statement
16	2.9	Bangladesh RMG sector has opportunities to expand its export destinations beyond the traditional (North American and Europe) markets	Potentials to extend markets beyond the traditional destinations
17	2.15	Rapidly growing large number of middle-class population of Bangladesh create a potentials for huge domestic demand of the RMG products	Potentials of Bangladesh domestic demand market
18	3.23	Bangladesh RMG sector faces increasing threats and challenges due to the rise of competitiveness in export markets particularly from Vietnam, India, Cambodia and China.	Competitiveness from other RMG exporting countries
19	3.19	Bangladesh RMG sector faces significant pressures from different stakeholders such as international buyer alliance (e.g. Accord, Alliance etc.) and multinational organizations such as World Bank, International Labor Organization, World Trade Organization to remedy major structural, environmental and social compliances in the RMG factories. The absence of a coordinated response to remedy these shortcomings creates major threats to the sustainability of Bangladesh RMG exports to the world markets	Compliance weaknesses and external pressure
20	3.24	Bangladesh RMG sector will be at huge risk if country is not ready for alternative arrangement (e.g. GSP plus or duty-free access) after GSP facilities withdrawal as it will move up to a middle-income country in 2021.	GSP issue after 2021 and changing import policies of destination countries

**Table 4.9. Related and Support Industries**

Ser ial No	Ques tion No	Question Statement	Shorter Topic Statement
21	2.10	Bangladesh RMG sector has developed a strong backward linkage in knitwear garments that help in value addition of the products, lower the lead time and become more competitive in the world market.	Strong knitwear related backward linkages
22	2.14	Large number of support industries is a great strength for the RMG industry of Bangladesh to become competitive to the World market.	Large number of support industries
23	2.11	Bangladesh has opportunities to attract the RMG related FDI from different countries (i.e. China, South Korea) to meet the gap of support industries and increase the competitiveness of the sector.	RMG related FDI potentials
24	3.13	Shortage of raw materials and weak backward linkages for woven garments are major impediments to the development of a strong and vibrant RMG sector of Bangladesh	Shortage of raw materials and weak backward linkage for woven garments
25	3.6	Traditional roles of trade facilitation institutions e.g. Export Promotion Bureau (EPB), Board of Investment, Export Processing Zones Authority are not sufficiently responsive to the evolving nature of global trade and thus do not contribute to accelerated development and sustainable growth of the RMG sector of Bangladesh	Weak trade promotional institutions
26	3.17	Absence of a comprehensive policy and action plan to develop clusters for RMG related industries hinder rapid expansion of the sector of Bangladesh	Lack of well-planned cluster development

**Table 4.10. Firm Strategy, Structure and Rivalry**

Seri al No	Ques tion No	Question Statement	Shorter Topic Statement
27	2.7	Bangladesh RMG sector is responsive to buyer's need and adjust its production plan accordingly.	Willingness to response to buyer's need
28	2.7	Bangladesh RMG sector is working collaboratively with global stakeholders in responding to concerns of compliance issues after the Rana Plaza disaster.	Collaborative actions in compliance issue
29	2.8	Some firms in the Bangladesh RMG sector have established direct offices and/or have representatives in their destination markets, making it easier for understanding global market trends and specific needs of buyers.	Some RMG firms established offices abroad
30	3.21	Bangladesh RMG sector demonstrates little commitment for product upgradation (high value-added products) and specialisation on process (sophisticated machineries) and functional upgradation (total quality management) that may consider as major threats for the competitiveness of the industry	Lack of specialization and upgradation
31	3.22	RMG industry of Bangladesh except a few do not take systematic R & D as their firm strategy and that considered as a major drawback for further development of the industry	Lack of systematic R & D programs as firm's strategy
32	3.20	As the Bangladesh RMG sector lacks commitment to improve production technologies and move aggressively towards digitalization through e-commerce, e-business and virtual business in a rapidly evolving world market that expects digital presence, there is increasing likelihood of	Less commitment to improve production technologies and use of e-platform (e-commerce, e-business and virtual business)

		considerable slowdown and possibly decline in the export opportunities for the sector in near future	
33	3.18	Because of the continuing practice of subcontracting to non-compliance factories as well as a lack of commitment to re-strengthening and/or relocating small or medium sized factories that have regulatory compliance issues, competitiveness of the Bangladesh RMG sector will be significantly reduced in near future	Subcontracting practices to non-compliant factories

**Table 4.11. Government**

Seri al No	Ques tion No	Question Statement	Shorter Topic Statement
34	2.5	Favorable government policies (e.g. back to back LC, bonded warehouse, special incentives) placed Bangladesh apparel sector in an advantageous position to be competitive in the world market	Favorable policy support
35	2.4	Favorable trade agreements / GSP facilities provide special privileges (e.g. duty free) for Bangladeshi RMG products in entering foreign markets thus making it more attractive to international buyers	Favorable trade agreement and GSP facilities
36	3.7	Macro-economic contexts e.g. exchange rate, inflation rate, fiscal policy and monetary policy are not always responsive to the need for promoting increased competitiveness of RMG sector	Macroeconomic context
37	3.8	Lack of strong connectivity and complementarity among different government policies and plans e.g. trade (import-export) policy, industrial policy,	Absence of connection and complimentary in government policies

		labor policy, five-year plans etc hinder the overall development of the RMG sector of Bangladesh	
38	3.25	A demonstrated lack of strong commitment and consensus among all political parties, combined with political unrests and safety issues adversely affects the future prospect of Bangladesh RMG sector	Political unrest, safety and security
39	3.11	Government policies relating to the RMG sector are often ad hoc in nature and there is a deficiency in “transparent and predictable” legal, commercial, and regulatory system (e.g. gas and electricity cost, wages) that hinder the overall development of the RMG industry of Bangladesh	Deficiency in “transparent and predictable” legal, commercial, and regulatory system
40	3.12	Reputational issues (e.g. nation branding and country positioning) are important to ensure competitiveness of the RMG sector of Bangladesh	Nation branding and country positioning

**Table 4.12. Chance**

Seri al No	Ques tion No	Question Statement	Shorter Topic Statement
41	2.16	Collaborative action on compliance issues after Rana Plaza incident will bring enormous potentials for Bangladesh RMG industry as no other comparator countries have taken massive compliance initiatives like Bangladesh	Compliance issues after Rana Plaza incident will bring enormous potentials for Bangladesh

#### **4.9. Survey data analysis**

As discussed earlier, a total 187 out of 270 distributed questionnaires were returned at the end of the survey of this study. I evaluated all 187 questionnaires and found 175 valid for data analysis. A total valid 199 survey results received from two initiatives (175 from survey and 24 from face to face interviews) is being analyzed. In the analysis, I draw tables based on the theoretical framework developed for this research on the basis of Porter's six factors in this chapter. From the table, one can easily understand respondents' position on each variable and weighted average value as well as the impact (positive or negative) of those variables on the competitiveness of the RMG industry of Bangladesh. Feedback received from buyers and face to face interviewees as well as secondary sources - all relevant information are triangulated at the time of discussion.

The general objective of this study is to assess the competitiveness of Bangladesh RMG sector following Porter Diamond Model. To achieve this goal, I used Porter diamond model as theoretical framework of this study. In his theory Porter identified four major attributes of the home environment—namely factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry—play a critical role in shaping the context that allows domestic industry to gain and sustain competitive advantage. Porter also includes the roles played by the 'government' and 'chance' as factors influencing the functioning of these four major determinants.

I took detail notes of all the interviewees' comments, particularly on the questions related to the Porter Diamond framework. I also prepared semi structured questions focused on the research objectives of the study. I wrote their comments in Bangla and then translated them into in English. The quotes were written while I completed the 41 questionnaires. I selected the most relevant quotes in my analysis (chapter 5). The questions were designed (and delivered) to avoid the inclusion of unconscious selectivity on my part. I was determined to get their sense of the evolution of the industry and did not approach the project with assumptions about the analysis and conclusions.



## 4.10. Survey data analysis technique

### 4.10.1. Weighted average of responses

Responses were gathered in five-point Likert scale. The responses are classified into five groups:

- Strongly disagree (Likert scale -2),
- Disagree (Likert scale -1)
- Neutral (Likert scale 0)
- Agree (Likert scale +1)
- Strongly Agree (Likert scale +2)

The weighted frequency analysis method was employed, -2 to -1 were assigned to the two different levels of the negative side responses and the scores 1 to 2 were assigned to the two levels of positive side response while the score 0 represented the indifference (neutral) level. The weighted approach could facilitate readers to understand at a glance the trend of perception by the business people and other interviewees on certain given issues related to the RMG industry of Bangladesh. To estimate the weighted average of responses, let us define:

$f_i$  = frequency of response belonging to the  $i^{\text{th}}$  response level ( $i = 1, 2, 3, \dots, 199$ )

Scores,  $X_i =$

{-2, if strongly disagree with negative side response

{-1, if disagree with negative side response

{0, if indifferent between the two answers

{1, if agree with positive side response

{2, if strongly agree with positive side response

Then, the weighted response ( $R_w$ ) will be defined as

$$R_w = \frac{\sum f_i x_i}{\sum f_i} ; (i = 1, 2, \dots, 5)$$

The value zero of  $R_w$  were considered as the demarcation value between the average positive and negative side response. If  $R_w > 0$ , the response would be overall positive and if  $R_w < 0$ , the response would be considered as negative. The distance of the score of the response from zero

shows relatively stronger opinion on a particular issue. This method would provide a better reflection of results to the readers.

#### 4.10.2. Frequency distribution of weighted average responses

After calculating the weighted average of each of the 41 variables, a frequency distribution will be obtained of all the 41 variables, to determine mean, mode, median, range and standard deviation. It is assumed that the frequency distribution will be a normal bell-shaped curve, with mean, mode and median close to one another, as shown in figure 4.2.

Variables with weighted average equal or more than median value will be taken to have a significant impact or correlation with competitiveness of RMG sector of Bangladesh.

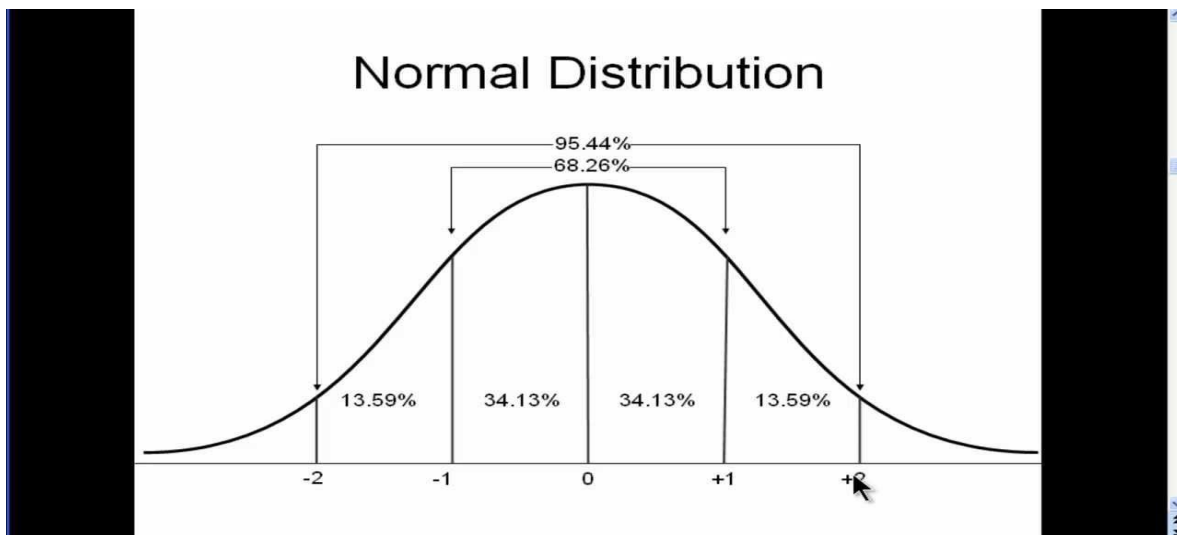


Figure:4.2. Normal Distribution Model

The variables with weighted average equal or above median will then be re-categorized into respective components for easier qualitative analysis.

#### **4.11. Conclusion**

This chapter presented the methodology and justification of the research design. It also described the survey method, selection process of the interviewees, explained why and how interviews were undertaken, questionnaire development, formalities of interviews and data analysis process. The next chapter will analyze in detail the primary data received from the interviews to understand the overall context of competitiveness of the RMG industry of Bangladesh using the Porter's diamond model.

## **Chapter-5: Findings, Analysis, and Discussion of the Results**

This is a problem-driven research related to the competitiveness of the RMG industry of Bangladesh. I addressed the research problem through the lens of Porter's competitive theory of nations. The major objectives of this study are to evaluate the competitiveness of the RMG industry of Bangladesh using Porter's Diamond model and to identify the key challenges that are currently faced by the industry as well as those expected to be brought out as the competitive environment evolves. In the analysis, tables are prepared based on the conceptual framework developed for this research on the basis of Porter's six factors discussed in the theoretical background section and collected through the survey instrument. From the table, one can easily understand respondents' position on each variable and weighted average value as well as the impact (positive or negative) of those variables on the competitiveness of the RMG industry of Bangladesh. Interviews were conducted among different stakeholders to collect information of gradual development of RMG sector and to know the role of those 'diamond' factors from a retrospective perspective. Information obtained from the interviews are presented in narratives forms, i.e., quotations of the individual interviews related to those specific themes of the study, i.e., Porter Diamond model components. Critical factors for sustainable growth of RMG industry of Bangladesh are also discussed based on the results of the data analysis at the end of this chapter.

Thematic findings are analyzed in this chapter based on Porter's six components. For each of the six components of Porter's Diamond model, there are respective groups of variables. For each variable, responses were collected based on a five-point Likert scale of -2 (strongly disagree) to +2 (strongly agree) and 0 for a neutral position. The weighted average for the responses for each variable was then calculated. In the broader analysis, all components of Porter's Diamond model are discussed in relation to the weighted average of the variables belonging to respective components. The analysis is based on the assumption that variables with higher weighted average have a stronger relevance to the state of competitiveness. This is followed by a more focused analysis, analyzing the frequency distribution of the weighted average of all variables to determine median. All variables with weighted average above median are taken to be significant for Bangladesh's RMG sector and develop a SWOT model of competitiveness based on those variables. A total 199 survey results received from two initiatives (175 from survey and 24 from face to face interviews) were analyzed using the frequency analysis of the responses and weighted average response value index techniques.

## **5.1. Findings Related to Different Aspects of Diamond Model**

### **5.1.1. Findings Related to ‘Factor Conditions’**

Porter identified five broad perspectives of Factor Condition i.e. Human Resources, Physical Resources, Knowledge Resources, Capital Resources and Infrastructure. The detail discussion of each of them are as follows:

#### **5.1.1.a. Human Resources factors**

Human resource is a vital issue for the RMG sector development of Bangladesh. In response to the structured questions related to the abundance of unskilled and semi-skilled workforces, 88 percent respondents agreed positively with a weighted average response value of 1.33 out of 2. One of the respondents from the “manufacturer group” at the time of his interview specified that worker’s dependability and dedication is an asset for the industry and reasoned that “workers in general in Bangladesh are loyal and ready to face challenges”. The respondent also stated that due to the lower level of education, workers can be influenced and misguided by the outsider that sometimes create tensions in the industry. However, another respondent argued that if the authority can motivate and approach them properly, workers generally co-operate which can be a big strength for the RMG sector. The table 5.1 indicates that the RMG industry of Bangladesh has strengths and weaknesses in the human resource context that impact on the competitiveness both positively and negatively. Bangladesh has plenty of low-cost unskilled and semi-skilled workforce of which a large portion are relatively young.

**Table 5.1: Responses related to human resource factors**

Human Resources	Strongly Disagree (-2)	Disagree (-1)	Neutral (0)	Agree (+1)	Strongly Agree (+2)	Weighted average value (-2 to +2)	Impact on competitiveness
Abundance of unskilled and semi-skilled workforce		5	19	80	95	1.33	Positive
Large number of factories		2	9	81	107	1.47	
Demographic dividend		3	6	71	119	1.54	
Scarcity of skilled workforce		2	10	73	114	1.50	Negative
Weak mid-level management		8	21	69	101	1.32	
Dependency on third party marketing			15	63	121	1.53	
Bureaucratic inertia	3	19	31	74	72	0.97	

Research identified that the large number of RMG factories in Bangladesh is a big strength for the sector. A total 188 respondents (more than 94 percent) have acknowledged this as a positive strength for the industry which indicates strong positive correlation with the competitiveness. Buyers feel comfortable to place their order because of the capacity of the industry. At the time of the interview, one respondent from the buyers stated that “buyer’s confidence about the strengths of the RMG sector of Bangladesh mainly developed because of its large number of makers (factories,) and a mature RMG related infrastructure including the enthusiastic entrepreneurs”.

Bangladesh has a good number of entrepreneurs in the RMG business and they have developed factories with huge production capacities. Currently more than four million workers and nearly 4,500 factories are directly involved in the RMG industry of Bangladesh. In their interviews, all the six participants from the group of buyers mentioned that huge number of workers along with low wage was the major strength for the development of the RMG industry in Bangladesh. For example, one buyer’s representative stated that “Bangladesh is likely to remain one of the most preferred sourcing destinations for buyers due to its large number of workers at competitive price”.

When asked about the demographic dividend of Bangladesh where a large portion (about 65 percent) of the population of the country are under the age of 35, almost all the respondents (190 out of 199) answered positively with a weighted average value of 1.54 out of 2. Among the respondents, 119 chose “strongly agree” and 71 chose “agree”. In his interview, one representative of an association stated that “our most favorable country specific advantage is the demographic dividend”. However, another respondent from the professional group commented that “Bangladesh needs to enhance the skills and excellence of its people through quality education and appropriate training to get the maximum benefit from this treasure”. Data analysis from the above table shows that the three endowments i.e. abundance of labour, large number of entrepreneurs and demographic dividend have received strong positive feedback from the respondents. The very high weighted average response values (1.33, 1.47 and 1.54 out of 2) indicate the strengths of these human resource endowments of Bangladesh.

However, Bangladesh seriously lacks skilled human resources and that hinders the overall productivity and may adversely impact future competitiveness of the RMG industry. The scarcity of skilled workforces and qualified mid-level management have increased the dependency on foreign personnel in Bangladesh. Merchandizing sections of most of the RMG factories in Bangladesh are not strong enough and thus RMG industry is heavily dependent on buying houses or third-party marketing. Survey results identified these as huge deficiency in the development of the RMG industry of Bangladesh. Almost 94 percent of respondents with a weighted average response value of 1.50 (out of 2) identified scarcity of skilled personnel as one of the major hindrances for the overall development of the RMG sector. In response to the weak midlevel management, 170 (85.43 percent) out of 199 respondents expressed their concern in this issue with a weighted average value of 1.32. While asked to give their feedback on dependency on buying houses or third-party marketing, 184 respondents (92.46 percent) identified these issues as a big challenge for the RMG sector development with a weighted average value of 1.53. Among 199 respondents, 121 selected “strongly agree”, 63 selected “agree” and rest 15 selected “neutral” in this regard.

In case of face to face interviews, all the 24 interviewees from the manufacturer, association, policymaker and professional groups also expressed their concerns about the scarcity of skilled workforces, qualified mid-level management and dependency on third party marketing in Bangladesh. Many of them identified these issues as important drawbacks for the RMG sector

development. One of the representatives from the professional group who used to work as the CEO of the “Bangladesh Foreign Trade Institute” stated that:

*Although Bangladesh is in a huge advantageous position in terms of the number of working age population, it simultaneously faces an acute shortage of skilled, trained and educated workforce including the mid-level management. Thus, many factories are dependent on foreign skilled personnel and the country incurred huge loss of foreign currency. Bangladesh also missed the opportunities to avail these quality job positions and potentiality in generating future entrepreneurs as foreign employees are not motivated to develop their own businesses abroad.*

To realize the gain from demographic dividend and fill the gaps of skilled workforces, one of the manufacturer representatives commented that:

*Bangladesh needs to develop a plan to substitute the foreign people in a reasonably short span of time by enhancing and ensuring the standard of education and training system based on the need and demand of the sector.*

One of the interviewees who represented the association emphasized on the collaborative actions to enhance the skills and motivation of the workforce and fill the gaps in middle management. He contended that:

*Concerted efforts from various stakeholders particularly from the association and government in collaboration with reputed international organizations/institutions is much needed to develop a strong human resource pool in Bangladesh.*

At the time of the interviews, some of the buyers were concerned about the competency of the workforce of the RMG industry of Bangladesh. One of the representatives among the buyers group mentioned that “Bangladesh needs to improve the human resource skills and capacity along with infrastructure if the country wants to seize the markets for high quality brand products and continue to grow the sector”.

It is evident from the research that dependency on buying houses or third-party marketing limits the product diversifications. Non-availability of skilled workforces often makes the factories dependent on the third-party marketing. One of the representatives from the “manufacturer groups” stated that



*As we are dependent on the middlemen for our marketing, we have limited direct connections with the buyers, and it reduces the scope of product diversification. Moreover, many of us are unable to develop the forward linkages (e.g. marketing, product development) compare to our backward linkages (e.g. textile) due to the shortage of qualified mid-level management and staffs.*

The role of the government officials is important in the RMG sector development and to ensure competitiveness. Survey results analysis provides a mixed feedback about the contribution of the bureaucrats with a weighted average value of 0.97. A total of 146 out of 199 (73.36 percent) expressed their concern about the motivation and understanding the complex context of the business of the government officials that have directly or indirectly played a role in the development of the RMG business in Bangladesh.

In their face to face interviews, many respondents argued that the officials who are directly or indirectly responsible for the RMG sector in the government are not adequately trained and properly aware about the industry. One representative from the “professionals’ group” stated that “government should develop a “pool of professionals in civil service” those who have enough knowledge about the sector and invest in the R& D to ensure the competitiveness of the RMG industry of Bangladesh”.

The above-mentioned findings regarding the ‘human resource’ endowment of Bangladesh corroborate with the “Global Competitiveness Report 2016-17” published by the World Economic Forum. As per the data of the report, Bangladesh scored 3.6 out of 7 and ranked 120 out of 138 countries in the ‘labour market efficiency’ category. The ranking position of Bangladesh is the lowest compared to other RMG manufacturing countries e.g. Vietnam ranked 63, Cambodia 58, India 84 and China 39 (WEF 2017).

#### **5.1.1.b. Physical Resources factors**

Strategic location of Bangladesh is considered as a strength for the RMG industry. It provides the opportunities for the RMG industry to develop markets to India, China and other neighboring countries. Survey results revealed that respondents identified strategic location of Bangladesh as a potential strength for the RMG sector development. Among the 199 respondents, 78 chose “strongly agree”, 86 chose “agree”, 29 chose “neutral” position and only 5 “disagree” on this issue with a weighted average response value of 1.20.

**Table 5.2: Responses related to physical resource factors**

<b>Physical Resources</b>	<b>Strongly Disagree (-2)</b>	<b>Disagree (-1)</b>	<b>Neutral (0)</b>	<b>Agree (+1)</b>	<b>Strongly Agree (+2)</b>	<b>Weighted average value (-2 to +2)</b>	<b>Impact on competitiveness</b>
Strategic location of the country		5	29	86	79	1.20	Positive
Huge deficiency in gas and electricity			6	72	121	1.58	Negative
Scarcities of industrial land and unplanned industrialization		11	18	73	97	1.29	

At the time of face to face interviews, almost all the participants expressed their positive views about the strategic location of Bangladesh. One of the respondents from the government category, who was the head of the “Export Wing” of the Ministry of Commerce, stated that:

*geographical location of Bangladesh and competitive price along with duty free access have been created opportunities for the RMG industry of Bangladesh to capture the part of Chinese and Indian markets share. Although the volume of exports to China and India are not big yet but there are potentials as these two countries are going to be the world’s first and third largest markets for manufacturing products by 2025. Negotiations are in progress to get duty free access to the BIMSTEC and BRICS countries other than China and India. If successful, a huge accelerated growth of the RMG sector of Bangladesh is possible. However, the RMG exporters of Bangladesh need to be proactive and strategic to exploit these market opportunities.*

Although Bangladesh has potential competitive advantage due to its location, the country lacks other physical resources. For example, there is huge deficiency in electricity and gas, and shortage of land. Moreover, the RMG sector along with its support industries did not develop in a planned manner and the sector is highly dependent on imported raw materials. Respondents from interviews and survey expressed concerns about the constraint of “physical resources” in

Bangladesh. They claimed that the acute shortage of gas and electricity caused underproduction and increased the cost significantly. For example, export oriented RMG industries do not have any option but to use generators and alternative sources of gas (e.g. CNG) to run the factories. The cost of alternative sources of energies are 2 to 4 times higher than that of the normal supply, and thus it increased the cost of production significantly.

Almost all the respondents of the survey, 193 out of 199 (96.98 percent) identified the shortage of gas and electricity as a major challenge for further expansion and growth of the RMG sector as well as to make it more competitive. Among the 199 respondents, 121 chose “strongly agree”, 72 “agree” and rest 6 chose “Neutral” with an average weighted response value of 1.59 out of 2. In case of face to face interviews, all the 24 participants identified the gap between the demand and supply of the gas and electricity as major stumbling blocks for the RMG sector development and all of them chose ‘strongly agree’ in this aspect. One of the representatives from the associations stated that:

*Ensuring a consistent, uninterrupted and adequate gas and electricity supply along with other infrastructure (e.g. better roads and efficient ports) development should be the top priority agenda of the government. Entrepreneurs do not feel confident in large investment for diversifying and upgrading products due to huge shortage of gas and electricity.*

In a similar fashion, one respondent from the “professionals’ group” specified that “without ensuring reliable and adequate supply of energy, it would be unrealistic to expect further substantial expansion in the RMG industry of Bangladesh”. He added that “entrepreneurs in the RMG business hesitate to invest large capital due to the shortage of energy”. He further explained that “manufacturers do not feel motivated to invest in sophisticated machineries to produce high-end products or to develop modern composite factories as energy is considered one of the major determinants for that decision”.

In response to the concern of power shortage, one government representative in his interview mentioned that:

*government has been working to mitigate the problem and achieve a significant progress in electricity generation. Construction of one 2,400 MW nuclear power plant with a cost of about US\$13 billion and some other coal-based power plants is underway. We are hoping that electricity problems will be mitigated upon completion of these projects.*

Regarding gas issue, he specified the limited reserve of natural gas and stated that “government is now considering to importing liquefied natural gas (LNG) as an alternative. However, it needs huge infrastructure development and cost of LNG would be much higher than that of natural gas”. Research identified the shortage of land and unplanned industrialization as important “physical resource” constraint for the development of the RMG industry of Bangladesh. Majority of the respondents (170 out of 199 - 85.43 percent) of which 97 chose “strongly agree” in this issue with an average weighted response value of 1.29 out of 2. At the time of interviews, one respondent from the professional groups stated that:

*due to unregulated and unplanned industrialization and scarcity of industrial land, the RMG sector is facing severe problems in cluster development, to attract FDI and relocate the plants to ensure compliance.*

He suggested government to develop several industrial parks exclusively for the RMG sector with necessary infrastructure facilities and allocate them on priority basis based on compliance issues. The above-mentioned weaknesses of physical resources i.e. electricity and land related issues was also highlighted in the “Doing Business 2017” report published by the World Bank. As per that report, Bangladesh ranked 187 in “getting electricity” and 185 in “registering property” out of 190 countries in the world. All these primary and secondary data indicate the severity of the weak physical resources of Bangladesh.

#### **5.1.1.c. Knowledge Resources Factors**

Study pointed out that Bangladesh is falling behind in scientific, technical and market knowledge related research, reputed universities and institutions, government and private research initiatives etc. which Porter calls ‘knowledge resource’ factor endowments. A large majority (187 out of 199 or 93.97 percent) of the respondents expressed concern about the lack of research and development (R & D) of Bangladesh. Among them 106 chose “strongly agree”, 81 chose “agree”, 11 chose “neutral” and only one chose “disagree” with a weighted average response value of 1.49 out of 2. Respondents’ feedback from survey and interviews also indicate the weaknesses of the quality education and training in Bangladesh. 190 out of 199 respondents (95.48 percent) chose either “strongly agree” (56.78 percent) or “agree” (38.69 percent) and rest (4.52 percent) chose “neutral” in this regard with an average weighted response value of 1.52 out of 2.

**Table 5.3: Responses related to knowledge resource factors**

<b>Knowledge Resources</b>	<b>Strongly Disagree (-2)</b>	<b>Disagree (-1)</b>	<b>Neutral (0)</b>	<b>Agree (+1)</b>	<b>Strongly Agree (+2)</b>	<b>Weighted average value (-2 to +2)</b>	<b>Impact on competitiveness</b>
Huge deficiency in R & D		<b>1</b>	<b>11</b>	<b>81</b>	<b>106</b>	<b>1.49</b>	<b>Negative</b>
Lack of quality education and training			<b>9</b>	<b>77</b>	<b>113</b>	<b>1.52</b>	

In this regard, one of the respondents from the ‘professional’ group commented that

*Bangladesh is far behind on research and development (R & D) considering the other comparable countries. Without in-depth research on the demand of various markets, internal strengths and weaknesses, and competitor’s contexts, Bangladesh RMG sector will not be able to diversify its products and expand markets.*

He specified the government offices (e.g. the EPB and the missions abroad), and business associations to play vital role in this regard. He further gave emphasis on doing research with partnership basis and stated that

*EPB, trade associations and reputed local or international institutions may work together to do research on the competitiveness of the RMG industry. All the related stakeholders including the government should take necessary policy and strategic action plan based on the results of the research aimed at diversifying the products and markets of the RMG industry of Bangladesh.*

Almost all the interviewees expressed concern about the deficiency of standard training and absence of reputed educational institutions in Bangladesh and identified it as a hindrance for the RMG sector development. One respondent from the ‘association’ groups stated that

*lack of skilled and quality human resource is a recognized obstacle for further development of the RMG industry of Bangladesh. Diversification of the RMG products particularly high-end fashion products, improving forward linkages such as marketing and fashion-designing, technological upgradation etc. require well-trained educated workforces.*

*Bangladesh has acute shortage of such skilled manpower and the RMG sector mostly depends on the foreign nationals to meet these demands.*

One representative from the ‘professional’ group commented on this and stated that

*Bangladesh has been in the RMG business for more than three decades. However, the country is yet to develop a single international-standard RMG related training or educational institutions that can meet the exclusive demand of the sector. Business associations and government should work together to address this issue.*

The weak ‘knowledge resources’ context of Bangladesh is acknowledged in the reports of various international organizations. For example, the Global Competitiveness Report 2016-17, published by the World Economic Forum ranked Bangladesh 118<sup>th</sup> in higher education and training, 122<sup>nd</sup> in technological readiness out of 138 countries in the world (WEF 2017). Bangladesh placed at the bottom end of the “Global Innovation Index 2016” and scored 22.86 out of 100 and ranked 117<sup>th</sup> out of 128 countries in the world. All these reports indicate the acute shortage of skilled workforce and weak university performance in Bangladesh.

#### **5.1.1. d. Capital Resources factors**

Availability of capital to finance the industry and lower cost of capital are two important aspects that help industry to grow and to become more competitive to the world market. Porter termed it as “capital resources” and gave emphasis on this aspect. A total of 190 respondents (95.48 percent) of which 67.34 percent chose “strongly agree” about the high bank interest and limited access to alternative financing sources in Bangladesh with an average weighted response value of 1.62 out of 2. Survey results indicate huge deficiency in capital resources of the country and that needs to address properly for the overall development of the RMG industry of Bangladesh.

**Table 5.4: Responses related to capital resource factors**

<b>Capital Resources</b>	<b>Strongly Disagree (-2)</b>	<b>Disagree (-1)</b>	<b>Neutral (0)</b>	<b>Agree (+1)</b>	<b>Strongly Agree (+2)</b>	<b>Weighted average value (-2 to +2)</b>	<b>Impact on competitiveness</b>
Limited access to finance and high bank interest rate		2	7	56	134	1.62	Negative

Several interview participants specifically raised this issue and commented that the cost of capital is very high in Bangladesh. They also claimed that high bank interest rate and difficulties in access to finance have huge impact on the business development of the country. One of the interviewees represented the associations, raised the issue of troublesome lending system of the commercial banks of Bangladesh and stated it as a major impediment for the RMG sector development. He added that

*many of the factories become sick due to high bank interest rate and it is a challenge for new industries to grow and survive. Bangladesh needs to bring down the commercial loan interest rate to a single digit parallel to other competitors to ensure a level playing field in the business. Banks should develop a system to provide hassle-free loan and recognize the RMG sector as a priority.*

One respondent from the ‘professional’ group stated that

*government should immediately raise a special fund with low interest rate exclusively for the development of the RMG sector. Bangladesh bank can use part of the idle foreign reserve in this purpose. Alternatively, central bank could raise funds through issuing bonds. This loan would be used in ensuring compliance, technological upgradation and establishing support industries related to the RMG sector.*

Another respondent from the ‘professional’ group raised an issue related to the anomalies and policy inconsistency of rescheduling bank loans. He stated that

*banks have the authority to use discretionary power in rescheduling loans which sometimes create ambiguities and encourage corruptions as well as misuse of authorities. Factories that are in real need for rescheduling sometimes do not enjoy this facility due to inconsistent policies.*

The weakness of the ‘capital resources’ of Bangladesh is highlighted in various reports published by the international organizations. As per the “Doing Business 2017” report published by the World Bank, Bangladesh ranked 157 out of 190 countries in ‘getting credit’ category which is far below from any other RMG manufacturing competitor countries e.g. China ranked 62, India 44, Vietnam 32 and Cambodia 7 (World Bank 2017). Bangladesh also scored only 30 out of 100 in ‘financial freedom’ under the ‘open markets category’ in “2019 Index of Economic Freedom”

published by the Heritage Foundation and ranked 121<sup>th</sup> out of 183 countries in the world (Economic Freedom Index 2019).

#### 5.1.1.e. Infrastructure Resource factors

Porter (1990:75) considers the type, quality and user cost of infrastructure that affects competition which includes logistics, transportation, ports, communications etc. Based on the theme, I identified two types of infrastructure here i.e. one is sector specific and another is country specific. Survey results, in-depth interviews and secondary sources revealed that Bangladesh has developed a reasonably strong RMG industry related infrastructure (about 4,500 RMG factories and many other backward and support industries) that helped the sector to grow in a much faster pace. An estimated 1,476 textile-related factories and 1,683 trims and accessories-producing firms have been created a strong base of this sector (BTMA 2019 and BGAPMEA 2017). Respondents identified the growth of backward linkages as one of the major strengths and expressed optimism about the potentiality of the RMG industry of Bangladesh.

**Table 5.5: Responses related to infrastructure resource factors**

<b>Infrastructure</b>	<b>Strongly Disagree (-2)</b>	<b>Disagree (-1)</b>	<b>Neutral (0)</b>	<b>Agree (+1)</b>	<b>Strongly Agree (+2)</b>	<b>Weighted average value (-2 to +2)</b>	<b>Impact on competitiveness</b>
Reasonably solid industrial foundation on RMG related infrastructure		2	13	85	99	1.41	Positive
Poor condition of roads, ports, rail, and airports for moving goods into and out of the country		1	9	73	116	1.53	Negative

Out of 199 respondents, 184 (92.46 percent) agreed in this issue of which 99 chose “strongly agree” with a weighted average response 1.40. All six respondents from buyer’s representatives also identified the large number of factories as one of their main motivation to select Bangladesh as a sourcing destination. In this regard, one of the representatives from association stated that



*Bangladesh has achieved phenomenal progress in backward linkages of the knitwear sector, and more than 80 percent raw materials are now produced in Bangladesh. It helps significantly in reducing the production lead-time and provide opportunities for more value additions as well as price competitiveness. This strength would enormously help knitwear sector to proceed further towards high-end products and diversification.*

At the time of interviews, some of the interviewees stated that a good number of RMG factories (e.g. composite factories) with huge capacity of production become model for development. Seven out of top ten most environment friendly LEED certified garments factories of the world are in Bangladesh. However, Bangladesh lags in country specific infrastructures such as transportation and logistics, ports, communications. Many of the respondents including the buyers' representatives stated that the infrastructural deficiencies enhance the cost of production and increase the lead-time thus hindering their products to become competitive. Manufacturers feel discouraged in investing high-end value-added products due to the weak infrastructure of the country. A total of 189 respondents (94.97 percent) of which 116 chose "strongly agree" with an average weighted response value of 1.53 in this regard.

One of the respondents from the manufacturer group stated that "our products would be more cost competitive and diversified if Bangladesh could overcome the bottleneck of transport related issues such as roads, rail, airports and ports". He argued that Bangladeshi RMG products need longer lead-time due to weak infrastructure and transportation system, and buyers always account this limitation before placing an order. However, he further stated that

*we don't collect order of time bound fashion and high-end products due to infrastructural constraints. Because in many cases, we need to use twice the road, port and customs services to export final products (i.e. first to import raw materials and then to export) to the end-buyers. Weak infrastructure is one important reason for limited exportable Bangladeshi RMG products.*

Another representative of the Walmart Canada Corp from the buyers group stated that

*we usually source bulk value (low-end) products from Bangladesh on seasonal basis due to lead-time constraint. Bangladesh could get more order of higher-end (mid-level) products if minimized lead-time through improving the infrastructure.*

The picture of the weak infrastructural context of Bangladesh also reflected in various international organization's research and reports. For example, Bangladesh scored 2.8 out of 7 in infrastructure and ranked 114th out of 138 countries in the world as per 'the Global Competitiveness Report 2016-17' (WEF 2017). According to 'the Logistic Performance Index 2016', Bangladesh scored 2.48 out of 5 and ranked 87th out of 160 countries in the world. Bangladesh position's is far below the other comparators i.e. China 27, India 35, Vietnam 64, Pakistan 68 and Cambodia 73. McKinsey and Company (2011), an internationally reputed research organization also identified the lack of infrastructure as the single largest obstacles for the growth of the RMG industry of Bangladesh. The report stated,

*For all business stakeholders, infrastructure (transport and utility supply) is the single largest issue hampering Bangladesh's RMG industry. Buyers today are forced to carefully select the type of products to source from Bangladesh, since congested roads, limited inland transport alternatives, and the lack of deep-sea harbor add inefficiencies to garment lead time. With the aim to move toward sourcing more fashionable, shorter lead time items in Bangladesh, reliable and fast transport is becoming extremely important. (McKinsey and Company 2011:10)*

The above evidence and analyses of the "factor conditions" of the RMG industry of Bangladesh based on the Porter's suggested five broad categories i.e. human resources, physical resources, knowledge resources, capital resources, and infrastructure recognized that out of the five factor endowments, Bangladesh RMG industry has both strengths and weaknesses in human resources, physical resources and infrastructure related endowments and no apparent strengths identified for the knowledge and capital resources.

If we analyze the above mentioned RMG factor conditions based on the basic factors and advanced factors category, it is evident from the discussion that Bangladesh possesses *some basic factors* such as unskilled and semi-skilled labour, a large young population, good number of entrepreneurs related to RMG business, geographical proximity to big markets, and a reasonably mature RMG industry related infrastructure. However, the country is in huge lack of *advanced factors* such as developed infrastructure including ICT, highly skilled and educated personnel, sophisticated research initiatives, quality educational and training institutes. Study showed that Bangladesh

RMG industry is facing difficulties to continue to grow and to be competitive due to lack of these advanced factors.

If we evaluate the RMG industry of Bangladesh based on the Porter's *generalized factors* and *specialized factors*, it is also evident that Bangladesh is not sufficiently developed in either of these factors. Porter (1990:78) says that *Generalized factors* include the highway transport system, a supply of capital, or a pool of enthusiastic workforces with college educations and they can be deployed in various sectors. On the other hand, *Specialized factors* involve narrowly skilled personnel, infrastructure related to specific industries, knowledge bases in specific fields, and any other factors development for a limited range or even for a single industry. The RMG sector related study revealed that Bangladesh is yet to develop necessary generalized factors or appropriate specialized factors connected to the RMG industry as evident from the responses and indicated that Bangladesh has huge gap on infrastructure, skilled workforce, R & D, supply of capital with low interest rate, sector specific specialization such as marketing, fashion and design etc.

Porter (1990:72) stated that natural resource-dependent industries based on “one or two determinants” with less sophisticated skills or technology can remain competitive only for a short period. He further mentions that this kind of advantage generally proves unmaintainable due to its rapid changes in the competitive tactics and attempts at easy circumventing by other global competitors. Porter (1990) also suggests that nations need to possess the sector related important advanced and specialized factors to get the most sustainable and significant competitive advantage from any specific industry. The RMG industry of Bangladesh is almost in similar situation as its current factor-related competitiveness is drawn primarily from its unskilled workforce and a reasonable (but not necessarily ideal) industry related infrastructure. Bangladesh needs to improve its advanced and specialized factors to maintain the competitiveness of its RMG industry in the long run.

### **5.1.2. Findings Related to ‘Demand Conditions’**

Porter identified home demand as a necessary condition for the competitiveness of an industry of a nation. He suggests that the presence of sophisticated and demanding local buyers, nature of home demand and pattern of growth in home demand are vital for the competitiveness of an industry (Porter 1990:86). However, presently there is little relationship between the state of domestic demand and RMG sector development in Bangladesh, as it is fully based on external

market demand. Local demand of RMG products very low earlier in Bangladesh as people used to buy low-cost fabrics and prefer to use tailored made clothes over the ready-made garment clothing (Nuruzzaman, 2015). In the 2010s, the incomes of the Bangladesh middle-class population increased substantially. The present domestic market of apparel products is estimated to be around Tk. 250 billion (i.e., approx. \$3 billion USD). However, middle class people still used to wear traditional clothing. These are mostly individualized tailor-made rather than produced in standard ready-made garments factories in large production batches (Apparel News, 2018). Therefore, the RMG industry of Bangladesh still relies on foreign buyers for market expansion and sustainable industry growth. In recent years, a small section of new generation middle class people are now buying western designed RMG products and a few RMG exporters such as Beximco, Standard Group, Sonotex Group etc. are targeting the local market (Textile Focus, 2019). As Bangladesh has the potential to grow domestic demand, the RMG industry should target this market and seek to boost meet the demand from the local people. They should also develop local brands, ensuring a supply of clothes that are culturally appropriate and suitable for the home market.

However, to understand the dynamics of the demand context of the RMG sector of Bangladesh, I explored some issues that would have positive and negative impact on the competitiveness and received respondents' feedback about them. The following are the details of those based on survey results and face to face interviews.

It is identified from this study that Bangladesh has potentials to expand the RMG export beyond the two major traditional markets (i.e. EU and North America). The export volumes of Bangladeshi products have been increasing remarkably to the market of Japan, Turkey, Australia and Russia (BMGEA 2019). Bangladesh also has opportunities to capture some of the Chinese RMG export markets as their cost of production is gradually increasing and becoming less competitive. This is because of increased labour cost in China and their government's policy to gradually phase out from low to medium-end RMG products. Survey results show that a large number (95.48 percent) of respondents with a weighted average response value of 1.47 agreed on the potentiality of market expansion beyond the traditional destinations.

**Table 5.6: Responses related to demand conditions**

<b>Demand Condition</b>	<b>Strongly Disagree (-2)</b>	<b>Disagree (-1)</b>	<b>Neutral (0)</b>	<b>Agree (+1)</b>	<b>Strongly Agree (+2)</b>	<b>Weighted average value (-2 to +2)</b>	<b>Impact on competitiveness</b>
Potentials to extend markets beyond the traditional destinations			9	87	103	1.47	<b>Positive</b>
Potentials of Bangladesh domestic demand market		2	7	81	109	1.49	
Competitiveness from other RMG exporting countries	1	3	12	72	111	1.45	<b>Negative</b>
Compliance weaknesses and external pressure			4	79	116	1.56	
GSP issue after 2021 and changing import policies of destination countries	2	6	11	92	88	1.30	

Several buyer representatives at their interviews shared their concerns regarding the increased cost of Chinese products and mentioned Bangladesh as one of their alternative preferred sourcing destinations. For example, in response to the question of how he foresaw the future prospect of the Bangladesh RMG sector considering the overall global context, one respondent from the buyers group stated that:

*Bangladesh will remain buyer's preferred sourcing destination at least for a foreseeable future as China continues to be more expensive. Moreover, unlike previous RMG hotspots (e.g. South Korea, China), there are few places left where there is a large low wage population that can replace Bangladesh.*

Respondents shared their views about the market potentials to China, India and other BIMSTEC and BRICS member countries. One of the respondents from the government groups who represented the Export Promotion Bureau (EPB) mentioned that

*China and India are going to be the number one and third largest consumer markets in the world by the year 2025. RMG industry of Bangladesh has potentials to capture a good portion of their low and mid-level RMG product markets due to competitive price and duty-free access privileges.*

Research identified that there is a huge potentials of domestic market demand due to fastest growing middle-class population in Bangladesh. Most of the respondents (95.48 percent) expressed their positive views in this regard with an average weighted value of 1.49. World Bank (2016) data shows that the middle-income population of Bangladesh rose to 20 percent in 2015 compared to only 9 percent in 1992. As per the report, there are more than 32 million people of Bangladesh now enjoying the middle-income status which is almost equal to the total population of Canada. One of the respondents from the professional group stated that

*RMG industry should consider the local market targeting the large number of middle-income populations of Bangladesh as part of their business strategy. This initiative will help to expand the RMG industry and develop Bangladeshi own “brands”. It is unfortunate that being the second largest RMG exporters in the world, Bangladesh yet enable to develop a single “brand” product of its own. If Bangladesh could develop its own “brand” products based on the demand of the local market, it would greatly help in accelerating exports particularly to the two largest neighboring markets i.e. China and India.*

The above discussion explained the prospect of the demand conditions related to the RMG industry of Bangladesh. However, the following are some potential challenges linked to the demand factors of the RMG industry identified from the research. Respondents in their interviews apprehended the risk of declining demand of the RMG products of Bangladesh due to the rise of competitiveness and increased threats and challenges from other rival export markets i.e. Vietnam, India, China and Cambodia. According to survey results, 183 respondents (91.96 percent) out of 199 have shown apprehension about the declining demand with a weighted average response value of 1.45. One of the respondents from the manufacturer group in his interview stated that:

*Bangladesh RMG industry products are price competitive compared to that of other countries. However, any major change in policies or government decision in the destination countries may increase the vulnerability of our RMG industry.*

To minimize this apprehension, one representative from the association stressed the need for necessary corrective and collaborative actions from related stakeholders including the government. He stated that:

*RMG industry related stakeholders need to be aware of any major shifts (e.g. special treaty with the 'common export destination countries' governments, changes in exchange rate or interest rate, use of innovative technology etc.) and business strategies of the competitors that affects the demand conditions of the industry.*

Compliance is another important aspect that has direct impact on the exports of the RMG products. Particularly after the catastrophic incident of Rana Plaza in 2013, it came to the forefront and the RMG sector faced criticism, and conditionality from big buyers, brands as well as exporting countries' government. There is a high risk of declining demand if compliance related matters are not handled properly. Both survey and interview results indicate that compliance is a big issue for the RMG industry of Bangladesh. A total 195 out of 199 respondents (97.99 percent) with a weighted average response value of 1.56 assented that to continue to grow and be competitive, Bangladesh RMG sector needs to address the compliance issues. One respondent from the association group in his interview mentioned that:

*compliance is vital for the RMG sector development and no small or mid-level factory will survive in near future without ensuring compliance. Everybody in this sector now realised that compliance is a must to continue business and this awareness is mainly developed after the tragic incident of Rana Plaza.*

Another respondent from the professional group argued that:

*the RMG sector has progressed significantly in environmental/infrastructural related compliances but lag in social and ethical issues. Special attention needs to be drawn to address these issues. Unified coordinated response to remedy major structural, environmental and social shortcomings of the RMG factories is essential for the overall development of the RMG sector of Bangladesh.*

Bangladesh aspires to move up to a middle-income country by the year 2021. The country will not be eligible to enjoy the benefit of the GSP<sup>10</sup> facilities after graduating as a middle-income country. Most of the RMG products of Bangladesh are currently enjoying duty free access to the E.U. market, Canada, Australia, China, New-Zealand and many other destinations which helped the RMG products to be competitive to the world market. The demand for products of the Bangladesh RMG industry in the current markets will be negatively affected if the country fails to get preferential market access (e.g. GSP plus<sup>11</sup> for EU). Government import policies of the destination country also have direct or indirect impact on export of Bangladesh RMG products. Study from this research found that favorable trade agreements and generalized system of preference (GSP) have huge impact on the RMG sector development of Bangladesh. Survey result analysis shows that 180 respondents (90.45 percent) agreed on this issue of which 88 persons “strongly agreed” with an average weighted response value of 1.30.

Buyers in their interviews also indicated that the duty-free access of the RMG products is an added attraction for them to purchase from Bangladesh. One of the respondents from the buyers group stated that “GSP allows Bangladeshi manufacturers to offer their products at 12- 18 percent lower price compare to other competitors those are not eligible for GSP in Canada”. In a similar fashion, majority of the respondents from the manufacturer, association, policy maker and professional groups acknowledged the positive contribution of GSP facilities for the RMG industry growth in Bangladesh at the time of their interviews.

### **5.1.3. Findings Related to ‘Related and Support Industries’**

The presence of related and support industries of international standard plays a vital role in ensuring competitiveness of an industry. Porter (1990:105) states that “related and support industries are those in which firms can coordinate or share their activities in the value chain when competing, or those which involve products that are complementary”. He argues that related industries help the main industry to get inputs in an efficient, early and preferential manner with

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<sup>10</sup> Generalized Scheme of Preferences (GSP) arrangement offers duty-free access of products from the developing countries.

<sup>11</sup>Generalized Scheme of Preferences Plus (GSP+): Countries those ratify and implement the core international conventions relating to the human and labour rights, good governance, and environment are eligible for duty free access of their products in this category (Source: EC website).



competitive price. Specialization with related and support industries leads to the sticky (not easily moveable) location advantages that are the true sources of sustainable competitive advantage of nations. Porter (1998) further claims that highly competitive clustering will drive the focal industry to be more competitive through innovation, upgrading, information flow, and shared technology development.

**Table: 5.7. Related and Support Industries**

<b>Related and Support Industries</b>	<b>Strongly Disagree (-2)</b>	<b>Disagree (-1)</b>	<b>Neutral (0)</b>	<b>Agree (+1)</b>	<b>Strongly Agree (+2)</b>	<b>Weighted average value (-2 to +2)</b>	<b>Impact on competitiveness</b>
Strong knitwear related backward linkages			3	77	119	1.58	<b>Positive</b>
Large number of support industries	1	6	15	87	91	1.31	
RMG related FDI potentials	2	11	23	90	73	1.11	
Shortage of raw materials and weak backward linkage for woven garments		2	10	75	112	1.49	<b>Negative</b>
Weak trade promotional institutions		1	13	86	99	1.42	
Lack of well-planned cluster development	3	6	25	87	78	1.16	

The RMG industry of Bangladesh has developed a strong backward linkage in the knitwear sector. Local textile factories have the capacity to meet (about) 90 percent demand of the yarn of knitted

garments (BTMA 2019). An estimated 1,476 textile-related factories and 1,683 trims and accessories-producing firms have been created a strong base of this sector (BTMA 2019; BGAPMEA 2017). Research identified the growth of backward linkages as major strength for the knitwear sector development. All the respondents of the survey except 3 (196 out of 199) recognized this as a strength of which 119 chose “strongly agree” with an average weighted response of 1.58 out of 2. At the time of face to face interviews, one participant from the association stated that

*Bangladesh has achieved phenomenon progress in backward linkages of the knitwear sector, and more than 80 percent raw materials are now produced in Bangladesh. It helps significantly in reducing the production lead-time and provides opportunities for more value additions as well as price competitiveness.*

The production locations of most of the RMG related industries are situated in four major places i.e. Dhaka, Gazipur, Narayanganj and Chittagong. These locational concentrations have created spillover benefits (e.g. availability of labour) to the RMG industry of Bangladesh. Survey result shows that 89.45 percent respondents agreed in this aspect with a weighted average response value of 1.31. Research analyses revealed that Bangladesh has potentials to attract inbound RMG-related FDI to further develop the industry, although survey result provides mixed feedback in this regard. A total of 163 agreed (81.91 percent) on FDI potentials with an average weighted response value of 1.11 out of 2. In his interview, one respondent from the ‘professional’ groups stressed the need of government initiatives in this regard and stated that:

*government should provide all necessary infrastructural facilities and offer special incentives to attract FDI related to the RMG support industries and high-end products. Bangladesh has prospects to meet the gap of the industry through FDI as countries like China and Korea are relocating their RMG industries in abroad.*

Although Bangladesh has achieved remarkable progress in developing strong backward linkages in the knitted garments subsector, it is lagging in supporting woven industries. Moreover, Bangladesh RMG sector is dependent on importing almost all the raw cotton from abroad. Respondents in their interviews acknowledged these dependencies on imported raw materials particularly for woven products are an important drawback for the overall development of the industry. A large majority (93.97 percent) of the respondents of the survey agreed on this

shortcoming of the sector of which 112 chose “strongly agreed” with a weighted average response value of 1.49 out of 2. One of the manufacturer representatives in his interview stated that

*Bangladesh has developed strong backward linkages in knitwear garment products. For that reason, the value addition is much higher and manufacturing lead time is lower in knitwear products than that of woven products. Establishing enough backward linkages for the woven industries required huge financial investment as well as infrastructural facilities such as gas, electricity, transportation and communication. Government support both in financial and policy level (e.g. various incentives and infrastructure facilities) are important to improve the situation.*

Another respondent from the ‘professional’ group suggested to take special initiatives to attract FDI to address this issue and stated that

*Government should take decisive measures to invite foreign investment on woven related support industries particularly to invest on manmade fabrics, and accessories and raw materials related to high-end products.*

It is revealed from the research that the current activities of the trade promotional institutions (e.g. export promotion bureau, investment development authority, commercial wings of the foreign mission of Bangladesh) are not enough for the development of the RMG industry of Bangladesh. Among the 199 valid survey respondents, 99 chose “strongly agree”, 86 chose “agree”, 13 “neutral” and 1 (one) chose “disagree” in this aspect with a weighted average response value of 1.42. Majority of the respondents at the time of their face to face interviews expressed their dissatisfaction and suggest more pro-active role from the trade promotion organizations. One respondent from the ‘professional’ group claimed that “trade facilitation institutions of Bangladesh are not adequately responsive to the evolving nature of the global trade and thus unable to contribute in accelerating growth of the industry”. Another respondent from the ‘association’ group stated that

*EPB mostly limits their work in arranging few traditional types of trade shows and some ineffective business trips abroad. No market specific research and target based aggressive promotional initiatives is prevalent in EPB’s activities.*

This study identified that Bangladesh RMG sector is lacking in well-planned cluster development particularly the expansion of related industries. Although the production locations of the RMG related industries are concentrated in a few areas of the country but that development occurred more on an unstructured and incremental manner. Almost 83 percent respondents of survey agreed where 13 percent remain neutral and 4 percent disagreed about the unplanned cluster development with a weighted average response value of 1.16 (please see the detail in table 5.7).

Respondents including buyer's representatives expressed concerns in this regard at the time of their interviews. One of the buyer's representatives who is also a consultant for the "Trade Facilitation Office, Canada (TFO)" recognizes unplanned and under-developed cluster of related and support industries as major stumble blocks for the growth of the RMG industry. He stated that

*For higher value-addition, diversification, high-end products and market development, Bangladesh RMG industry needs to ensure the availability of all necessary related and support industries. The country needs to be strong in backward and forward linkage industries including manmade fabrics, equipment and accessories, internationally standard academic and training institutions, R & D, fashion designing, fashion magazines etc.*

One of the interviewees from the 'professional' group commented that

*Bangladesh failed to attract FDI in the RMG sector especially where country has lacked e.g. high ends products, equipment, machineries, manmade fabrics and other related raw materials. Foreign investment can play complementary role in developing strong cluster on RMG related industries which may bring synergic benefit for the sector.*

The above discussion proves that Bangladesh RMG industry has both strengths and weaknesses in "Related and Support Industries" endowment. Bangladesh has developed strong backward linkage industries in knitwear sector and large number of support (i.e. textiles and accessories) industries. However, the sector has huge deficiency in fabrics, backward linkage industries for woven products, industries related to machineries and equipment, R & D, trade promotion, standard academic and training institutions, fashion and design etc. Also, the RMG sector requires support and improvements from forward linkage companies. These include sufficient air cargo facilities

to deliver the products to the international buyers on an urgent and emergency basis, develop international standard third party marketing agencies, undertake potential market research, open new trade facilitation centres in major markets, strengthen trade promotion institutions, accelerate post-export banking transactions, provide better insurance and damage compensation coverage, and maintain strong economic diplomacy.

#### **5.1.4. Findings Related to ‘Firm Strategy, Structure and Rivalry’**

National business environment has strong influence on business sectors and the strategies and structures of firms differ based on the context of a country. Smit (2010) argues that the systematic differences in the business sectors determine how firms compete in each country and thus their competitiveness (Smit 2010). The pattern of domestic rivalry can play an important role in the process of internalization and creates pressure on firms to upgrade and innovate (Porter 1990). This study found that firms’ strategy to respond to the issues related to the concern of buyers is a strength for the RMG industry of Bangladesh. One respondent who represented the BKMEA stated that “RMG industry business of Bangladesh is buyer driven and thus manufacturers always try to meet the demand and expectation of the buyers”. Out of 199 survey respondents, 75 chose “strongly agree”, 89 chose “agree”, 5 chose “disagree”, 2 “strongly disagree” and 28 remain “neural” with an average weighted response value of 1.16 in this regard.

**Table: 5.8. Firm Strategy, Structure and Rivalry**

<b>Firm Strategy, Structure and Rivalry</b>	<b>Strongly Disagree (-2)</b>	<b>Disagree (-1)</b>	<b>Neutral (0)</b>	<b>Agree (+1)</b>	<b>Strongly Agree (+2)</b>	<b>Weighted average value (-2 to +2)</b>	<b>Impact on competitiveness</b>
Willingness to response to buyer's need	2	5	28	89	75	1.16	<b>Positive</b>
Collaborative actions in compliance issue		1	7	77	114	1.53	
Some RMG firms established offices abroad	7	17	28	87	60	0.88	
Lack of specialization and upgradation		2	10	78	109	1.48	<b>Negative</b>
Lack of systematic R & D programs as firm's strategy			6	55	138	1.66	
Less commitment to improve production technologies and use of e-platform (e-commerce, e-business and virtual business)		2	20	71	106	1.41	
Subcontracting practices to non-compliant factories	2	5	7	73	112	1.45	

Stakeholders' collaborative actions to address the 'compliance' issues after the Rana Plaza disaster is identified as a favorable national business environment for the RMG industry of Bangladesh. An absolute majority (191 out of 199) of the respondents which is 95.98 percent agreed in this aspect with a weighted average response value of 1.53 out of 2. At the time of face to face interviews, all the 24 respondents from the four groups (manufacturers, associations, policymakers and professionals) selected "strongly agree" about the stakeholders' collaborative actions in compliance issues. They also anticipate that these collaborative actions would carry positive results for the sector in near future. One business leader who represents the BGMEA asserted that:

*Immediately after the Rana plaza disaster, a unique compliance related corrective action has been initiated involving all relevant stakeholders. Under this initiative, the remediation works in different factories are now in progress and we are committed to ensure it. We also believe that the remediation initiatives will increase the confidence of the buyers and bring enormous potentials for the RMG industry.*

Some of the firms of Bangladesh RMG sector have established their direct offices or appointed representatives in destination markets as part of their business strategy. These firms gain enough experiences in supplying higher quality or value-added products. Respondents identified “firm’s foreign exposures” as positive strength for the industry. One of the respondents from the ‘professional’ group commented that:

*Bangladesh RMG industry has some international-standard factories that are exporting high-end products through their own channels, but that number is few. They have undertaken process upgradation and produced specialized products by using latest technology. More factories need to follow them, and government should extend special support to address the challenges that these leading factories are facing to motivate others.*

Another respondent from association stated that “seven out of top ten most environment friendly LEED certified RMG factories are located in Bangladesh. Entrepreneurs do not need to go abroad to learn lessons for their business development as there are number of factories those have already achieved high reputation in their businesses”. However, this study found that the firms of the RMG industry are not committed enough in product specialization, upgradation and diversification as well as process and functional upgradations.

Survey results show that 187 out of 199 chose ‘agree’ of which 109 chose “strongly agree” with an average weighted response value of 1.48 regarding the lack of specialization and upgradation strategy of the RMG industry of Bangladesh. One interviewee from the “professional” group stated that “many of the RMG firms of Bangladesh with a few exceptions are producing low-end same line of products and they do not have ambitions for product upgradation or market diversification”. At the time of the interview, I asked a follow-up question to this respondent and requested him to share his personal thoughts about the unwillingness of the entrepreneurs to invest in specialized products and process upgradation. In response to the question, he identified several reasons behind this bleak scenario:

*First, manufacturers are generally dependent on the middleman marketing system and have limited capacity to establish forward linkages. Second, due to available low-cost labor and high bank interest, they feel uncomfortable in investing extra money in the process-upgradation. Third, there are acute shortages of skilled manpower and necessary raw materials at a competitive price to produce high-end products in Bangladesh. Moreover, the corporate governance culture and mindset of most of the first-generation entrepreneurs is yet to be developed to run their businesses in an international standard.*

This study identified that the RMG firms in Bangladesh lack systematic research and development (R & D) activities. Many firms do not consider R & D as part of their strategy and run the business as usual. Respondents identified ‘lack of R & D’ as one of the major weaknesses of the RMG industry market development and 193 out of 199 respondents agreed in this with a weighted average value of 1.66 out of 2.

Lack of commitment to improve production technologies and use of e-platform (e-commerce, e-business and virtual business) is considered as a potential obstacle for the RMG sector competitiveness and accelerated growth of Bangladesh. Survey results corroborate this statement as a total of 185 respondents (93 percent) agreed with an average weighted value of 1.45.

Subcontracting practices to non-compliant factories have adverse impact on the competitiveness of the RMG sector of Bangladesh. Study found that RMG firms sometimes subcontract their buyer’s orders to other firms as full package or part of the manufacturing process. Firms generally do it for two strategic reasons i.e. to minimize cost or making more profit, and to meet the delivery deadlines. Respondents provided a varied feedback about subcontracting issue at the time of their interviews. Among the 199 survey respondents 112 chose “strongly agree”, 73 chose “agree”, 7 chose “neutral”, 5 chose “disagree” and 2 chose “strongly disagree” with a weighted average response value of 1.45 out of 2 in this regard.

One of the respondents from the ‘manufacturer’ group stated that “the concept of subcontracting is not a bad idea if the factories are compliant and manufacturers place the subcontract orders with the consent of the respective buyers”. However, one respondent from the ‘professional’ group stated that:

*there are number of non-compliant unauthorized factories that neither have the registrations under the companies act nor the membership of the BGMEA and BKMEA.*



*The Department of Inspection for Factories and Establishment (DIFE) of the government and the BGMEA and BKMEA must identify these firms immediately and bring them under strong compliant regulations.*

Another respondent from the ‘manufacturer’ group proposed to develop a consensus among the members of the associations not to place any subcontract order to the non-compliant factories and stated that “those who violate will be penalized and their membership will be suspended”. In his interview, one respondent from the ‘government’ representative category commented that subcontracting should not be a problem for the RMG sector development as buyers, manufacturers, business associations and government are aware about the compliance issues and things has been changed a lot after Rana Plaza incident. However, he further maintained that:

*it will remain a threat if we could not regulate the system properly. Because one more incident similar to Rana Plaza will simply damage the achievements of the sector and the country will be in deep troubles. So, we all need to work together and should be very careful in this regard.*

The study found that some of the RMG factories have been very successful in their businesses in Bangladesh. They do use their own marketing channels and sell higher quality or value-added products as part of their business strategy and structure their firms accordingly. RMG markets are mostly buyer-driven and firms use the strategy to adapt with the buyers and meet their demand. After Rana Plaza disaster, compliance became a big issue for the RMG business in Bangladesh. Manufacturers are now willing to ensure compliance as part of the business strategy and a good progress has been made in this regard since the Rana Plaza tragedy. However, research identified that most the RMG firms are not committed to product specialization, R & D and functional upgradation. Many of them have short run strategy to produce low cost same line products and practiced the basic functions i.e. cut and make (CM) and cut-make-trim (CMT).

#### **5.1.5. Findings Related to ‘Government’**

The role of the government is significant in creating and sustaining national competitive advantage. Porter (1990) argues that government should not control rather influence the national competitive advantage of any industry. Government needs to play the role as a catalyst and challenger of an industry. Research analysis shows that government policy support has played significant role in the development of the RMG industry in Bangladesh. In the survey, 178 (89.45

percent) out of 199 respondents chose “agree” of which 105 chose “strongly agree” with an average weighted response value of 1.37 regarding the positive impact of the government support for the RMG industry (see table 5.9). Government extended these supports through various policy initiatives, financial incentives, favorable macro-economic contexts, favorable trade agreements and getting GSP facilities. Although these governmental supports helped the RMG industry to grow to this stage, there are other issues and concerns that hinder the development and diversification of the industry where the government has vital role to play. Survey results and data analysis of the interviews revealed that “political stability, safety and security” of the country are important for the development of the RMG industry of Bangladesh. Among the 199 survey respondents 101 chose “strongly agree”, 89 chose “agree”, 6 chose “neutral” and 3 chose “disagree” with a weighted average response value of 1.45 out of 2 in this regard.

**Table: 5.9. Government**

<b>Government</b>	<b>Strongly Disagree (-2)</b>	<b>Disagree (-1)</b>	<b>Neutral (0)</b>	<b>Agree (+1)</b>	<b>Strongly Agree (+2)</b>	<b>Weighted average value (-2 to +2)</b>	<b>Impact on competitiveness</b>
Favorable policy support	2	6	13	73	105	1.37	<b>Positive</b>
Favorable trade agreement and GSP facilities		1	17	82	99	1.40	
Macroeconomic context		4	16	102	77	1.32	<b>Negative</b>
Absence of connection and complimentary in government policies		2	14	85	98	1.40	
Political unrest, safety and security		3	6	89	101	1.45	
Deficiency in “transparent and predictable” legal, commercial, and regulatory system	1	3	7	85	103	1.44	
Nation branding and country positioning		2	9	87	101	1.44	

At the time of face to face interviews, respondents from the four groups (manufacturers, associations, policy makers and professionals) recognized the government supports as important catalyst for the development of the RMG industry in Bangladesh. Although business community recognized government's positive role in the development of the RMG industry of Bangladesh, they contended that it lacked proactiveness. For example, at the time of interview, one respondent from the association category mentioned that:

*The bonded warehouse and back to back letter of credit (LC) facilities<sup>12</sup> of the government have contributed immensely in flourishing the RMG industry of Bangladesh. There are other government policies such as duty-free access to imported machineries and raw materials, special incentives for non-traditional markets and products etc. helped to develop the sector. However, government needs to act more prudently and develop an integrated perspective plan based on the need and demand of the sector to continue to grow.*

This study found that favorable trade agreements and generalized system of preference (GSP) have had huge impact on the RMG sector development of Bangladesh. Among the 199 survey respondents 99 chose "strongly agree", 82 chose "agree", 17 chose "neutral" and only 1 chose "disagree" with a weighted average response value of 1.40 in this regard. Government negotiates with destination countries governments to get this benefit. Most of the RMG products of Bangladesh are currently enjoying duty free access to the E.U. market, Canada, Australia, China, New-Zealand and many other destinations which helped the country to be competitive to the world market. Buyers' representatives in their interviews indicated that the duty-free access of the RMG products is an added attraction for them to purchase from Bangladesh. One of the respondents from the buyers group stated that "GSP allows Bangladeshi manufacturers to offer their products at 12- 18 percent lower price compare to other competitors that are not eligible for GSP in Canada". In a similar fashion, all the respondents from the manufacturer, association, policy maker and professional groups in their interviews acknowledged the positive contribution of GSP facilities for the RMG industry growth in Bangladesh.

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<sup>12</sup> Detail is in chapter -3, Page -59-60.

Earlier in this chapter, it was observed that respondents in their interviews identified various issues and facts that hinder the development of the RMG industry of Bangladesh. Government has important role to play to address many of these issues, such as to ensure uninterrupted electricity and gas supply, access to finance with low interest rate, infrastructure (e.g. ports, transports and communication) and logistic supports, quality educational and training institutions, R&D, compliance, cluster development, attract RMG related FDI etc. Evidence was presented earlier on the respondent's comments and thoughts about the above-mentioned issues at the time of discussing various factors (i.e. factor conditions, demand conditions, related and support industries, firm strategy, structure and rivalry) in this chapter. Apart from these, there are other issues that have direct impact on the RMG sector development and government needs to take necessary initiatives to address them.

Macroeconomic context is not always favorable for the overall development of the RMG industry of Bangladesh. Monetary policy and fiscal policy, particularly exchange rate, inflation and interest rate, if not properly managed, can have adverse effects on the health of the business environment of the country. Survey result shows that 179 (89.95 percent) out of 199 chose "agree" of which 102 chose "strongly agree" and 16 chose "neutral" and 4 "disagree" with an average weighted response value of 1.32 regarding the negative impact of the macroeconomic context on the RMG industry competitiveness of Bangladesh. One of the respondents from the association group mentioned that, "inflation and exchange rate have obvious impact but high bank interest rate and difficulty with access to finance are more problematic for the RMG sector development". He argued that the exchange rate has generally impacted the sector while the currency's comparative position became weak and inflation in Bangladesh has increased. To make the business more competitive, he suggests the government to introduce hedging exchange rate<sup>13</sup> or other advanced macro-economic policy tools (i.e. duty draw back) and strategic adjustment of planning in line with comparators policies.

Another weakness of the RMG industry development of Bangladesh is the absence of strong inter-departmental/ministerial cooperation and integrated approach. Survey results show that 91.96 percent (183 out of 190) respondents expressed their concern in this issue with an average weighted

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<sup>13</sup> Hedging exchange rate is a government's promise to maintain a fixed exchange rate that provide an implicit guarantee to banks' creditors against the effects of a possible devaluation (Mishkin 1996; Obstfeld 1998).

value of 1.40. During the interview, one of the respondents from the association shared his views about the co-ordination deficiencies in the government offices and stated that:

*the RMG sector has developed without proper planning and no organized development has occurred so far. Lack of coordination is prevalent among the RMG related government offices, and connections among ministries (e.g. ministry of commerce, industry, labor and employment, jute and textile, environment, education, home, foreign affairs, planning, finance) are much needed.*

At the time of face to face interviews all the respondents from the manufacturer, association, policy maker and professional groups underscored the need to ensure a congenial political atmosphere for sustainable growth and competitiveness of the RMG sector. One of the respondents from the manufacturer group stated that

*There is a reasonable political consensus prevailing among the leading political parties about the development of the RMG sector. However, problem lies with the political rivalry, strikes and deterioration of the law and order situation due to political unrest. Several incidents of killing foreign nationals in recent past affect adversely, dampen the image of the country and buyers feel insecure to visit Bangladesh. This could be a huge concern for the development of the sector and government should act seriously to ensure the political tranquility of the country. Otherwise, there are possibilities to lose our long- time good buyers and friends of Bangladesh.*

Respondents from the buyers group also specified the political instability as their concern while asked how Bangladesh could increase the confidence level of the buyers and develop their business relations. In this regard, one of the buyers at the time of interview stated that

*political unrest in Bangladesh often create tensions, and sourcing companies feel insecure to send their representatives to visit Bangladesh. Law and order situation of a country has direct impact on business and there are possibilities of losing markets if political instability continue.*

Almost in a similar vein, one respondent from the business association stated that

*we must need to create an environment where buyers feel safe and comfortable to visit Bangladesh to do their businesses. We should not think in a way that buyers will come to*

*us under compulsion as they don't have better options at this moment. If we fail to earn the confidence of our buyers, Bangladesh will soon lose its attraction as a sourcing destination. On the other hand, if we could gain the buyers trust, Bangladesh has potentials to make dependent the whole world for sourcing its RMG products.*

Research found that the deficiency in “transparent and predictable” legal, commercial, and regulatory system dampen the growth of the RMG industry of Bangladesh. Respondents in the interviews recognized these institutional limitations as obstacles for the RMG sector development in Bangladesh. Among the 199 survey respondents 103 chose “strongly agree”, 85 chose “agree”, 7 chose “neutral”, 3 chose “disagree” and 1 (one) chose “strongly disagree” with a weighted average response value of 1.44 in this regard. One of the respondents from the manufacturer group at the time of his interview stated that

*as Bangladesh RMG factories should compete with many competitors in the world, entrepreneurs need to have some predictions on certain industry related issues such as gas and electricity supply and their forecasted cost, minimum wage increase etc. Government set policies and guidance in these issues would help immensely in developing strategic business plan to become competitive in the business.*

In this aspect, one respondent from association group stressed the need to eliminate the incongruity on various policies of the government. He mentioned that

*government should take necessary steps to abolish contradictory policies and harmonize all the relevant rules and regulations to create a congenial business environment for the RMG industry of Bangladesh. For example, there are conflicting rules between Customs Act 1969, section – 22 and Import Policy Order 2016, section -13. As per the section -22 of the customs act 1969, all the exempted duties and taxes are subject to charge at the time of return of any exported products for any reasons. Whereas, in import policy order 2016, section -13 has provisions to allow the exporters to bring back the products without paying duties and taxes with a condition of re-exporting them.*

‘Nation branding and country positioning’ is another aspect where government has important role to play for the development of the RMG industry of Bangladesh and to make it more competitive to the World market. A total 188 (94.47 percent) out of 199 chose “agree” of which 101 chose “strongly agree” and 9 chose “neutral” and 2 “disagree” with an average weighted response value

of 1.44 in this regard. At the time of interview, one participant from the professional group stated that,

*Bangladesh RMG industry is the second largest in the world and its contribution to the national export is more than 80 percent. However, Bangladesh is yet to become a brand of the RMG sector as Germany well-known for their motor industry.*

#### **5.1.6. Findings Related to ‘Chance’**

Porter (1990) identifies ‘chance’ as an important determinant that may shape the environment of national competitive advantage of an industry. Chance events are beyond the control of firms but can create forces that reshape the industry structure, allowing shifts in competitive position.

The tragic Rana Plaza disaster on 24<sup>th</sup> April 2013 that caused the loss of more than 1,100 life of the garment workers severely dampened the image of the RMG industry of Bangladesh. This incident brought into light compliance and other regulatory failures of the RMG industry of Bangladesh. The future of the RMG industry was at stake at that point. However, this unexpected disaster created an exceptional opportunity for the industry. All related stakeholders came forward and work together to address ‘compliance’ and other related issues for the betterment of the RMG industry of Bangladesh.

In this regard, one respondent from the government who represented the Ministry of Labour and Employment informed that:

*the government has taken several initiatives to address the compliance issues in the RMG sector since the tragic Rana Plaza incident. For example, government upgraded the Department of Inspection for Factories and Establishments (DIFE) from directorate, doubled the strength of manpower of the DIFE, amended the labor laws and declared the labor policy. Government also exempted the duties and taxes from importing fire and safety related instruments to encourage compliance.*

**Table: 5.10. Chance**

<b>Chance</b>	<b>Strongly Disagree (-2)</b>	<b>Disagree (-1)</b>	<b>Neutral (0)</b>	<b>Agree (+1)</b>	<b>Strongly Agree (+2)</b>	<b>Weighted average value (-2 to +2)</b>	<b>Impact on competitiveness</b>
Compliance issues after Rana Plaza incident will bring enormous potentials for Bangladesh			<b>2</b>	<b>41</b>	<b>156</b>	<b>1.77</b>	<b>Positive</b>

Study found that the RMG industry development in Bangladesh is a coincidence and several ‘chance’ events occurred that bring the industry at its present shape. However, there was one “chance” related question statement as follows:

Collaborative action on compliance issues after Rana Plaza incident will bring enormous potentials for Bangladesh RMG industry as no other comparator countries have taken massive compliance initiatives like Bangladesh.

It is believed that the remediation initiatives of compliance will increase the confidence of the buyers and bring enormous potentials for the industry. Bangladesh RMG sector will be in better position in terms of compliance compared to that of other competitors. Because no other RMG exporting countries have confronted such challenges and thus have not done massive compliance initiatives in their RMG industry like Bangladesh. Survey results also corroborate this observation. Almost all the respondents (197 out of 199) chose “agree” of which 156 chose “strongly agree” and only 2 chose “neutral” with an average weighted response value of 1.77 out of 2 in this regard (see table 5.10).

Apart from this chance event as addressed in the questionnaire, the following two other historical events can be considered as major “chance” events for the RMG industry of Bangladesh. The quota system levied against traditional RMG exporters (e.g. Hong Kong, Singapore, South Korea, Taiwan) in late 1970s became a blessing for the Bangladesh’s RMG sector. Political unrest and



civil war in Sri Lanka during the 1970s also diverted buyers to Bangladesh.<sup>14</sup> During this time Bangladesh had started to follow the export-led growth strategy, while India still had a closed economy, which gave Bangladesh a competitive edge in FDI. These events created a favourable environment for the development of the RMG industry of Bangladesh. The decision of the Multi Fibre Arrangement (MFA) phase-out and the elimination of quota from 1<sup>st</sup> January 2005 was a huge threat for many low-income RMG producer countries including Bangladesh. However, MFA phase-out and quota withdrawal were a blessing in disguise for the RMG industry of Bangladesh. The RMG export of Bangladesh has increased in many folds since the MFA phase-out. It happened because Bangladesh was ready to face this challenge with reasonably strong RMG related infrastructure. This context of the RMG industry of Bangladesh corroborates with Porter's ideas as he stated that "the nation with the most favorable "diamond" will be most likely to convert chance events into competitive advantage (Porter 1990:125)".

From the above discussion, it is recognized that several "chance events" have greatly influenced the development of the RMG industry of Bangladesh. The quota system levied against traditional RMG exporters (e.g. South Korea, Hong Kong), the decision of the Multi Fibre Arrangement (MFA) phase-out and the elimination of quota, and the compliance issue raised after Rana Plaza disaster – are three major "chance events" occurred in the RMG history of Bangladesh and all these impacted positively to the growth of the sector.

## **5.2. Identifying Critical Factors: Quantitative Assessment of Factors Related to Porter's Model**

The next segment attempts to identify variables within each respective component of Porter's "Diamond Model" that have significant impact on RMG competitiveness in Bangladesh. In total there were 41 variables that were analyzed to calculate their weighted average. The following table (table: 5.11) shows the 41 variables and their respective weighted averages.

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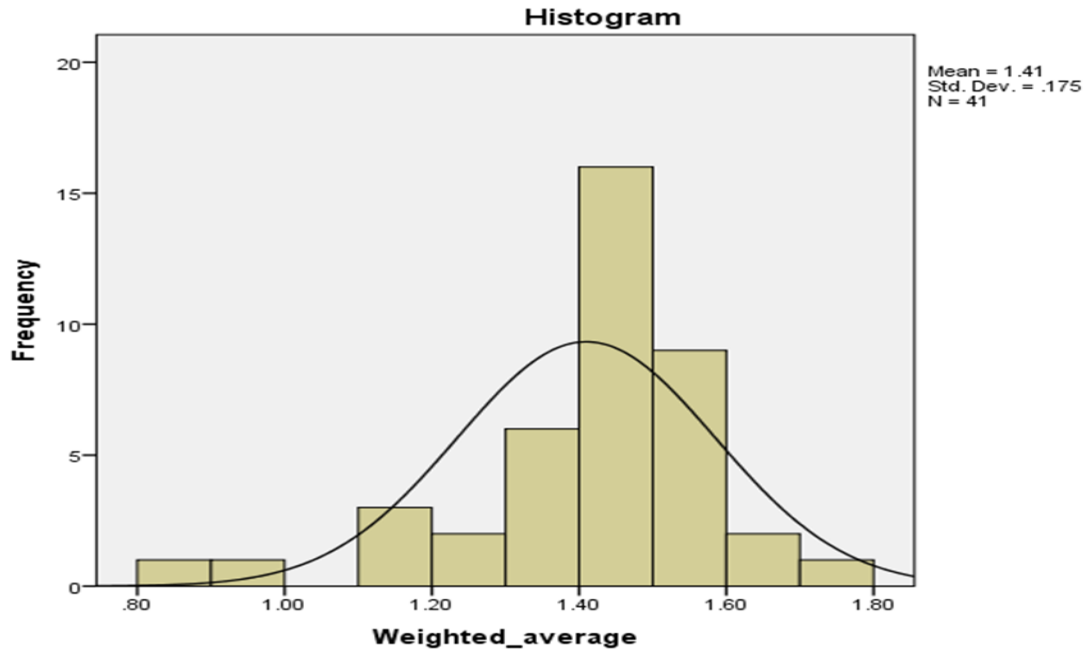
<sup>14</sup> Detailed discussion of the quota restriction and A phase-out, and their impacts on the RMG industry of Bangladesh is available in Chapter 3 (page: 62-3)

**Table: 5. 11. Variables with related weighted averages**

Rank	Factors	Weighted Average Response Value
1	Quota system, MFA phase out and compliance issues after Rana Plaza incident	1.77
2	Lack of systematic R & D programs as firm's strategy	1.66
3	Limited access to finance and high bank interest rate	1.62
4	Huge deficiency in gas and electricity	1.58
5	Strong knitwear related backward linkages	1.58
6	Compliance weaknesses and external pressure	1.56
7	Demographic dividend	1.54
8	Dependency on third party marketing	1.53
9	Poor condition of roads, ports, rail, and airports	1.53
10	Collaborative actions in compliance issue	1.53
11	Lack of quality education and training	1.52
12	Scarcity of skilled workforce	1.5
13	Potentials of Bangladesh domestic demand market	1.49
14	Shortage of raw materials and weak backward linkage for woven garments	1.49
15	Huge deficiency in R & D	1.49
16	Lack of specialization and upgradation	1.48
17	Large number of factories	1.47
18	Potentials to extend markets beyond the traditional destinations	1.47
19	Competitiveness from other RMG exporting countries	1.45
20	Subcontracting practices to non-compliant factories	1.45
21	Political unrest, safety and security	1.45
22	Deficiency in "transparent and predictable" legal, commercial, and regulatory system	1.44
23	Nation branding and country positioning	1.44
24	Weak trade promotional institutions	1.42
25	Reasonably solid industrial foundation on RMG related infrastructure	1.41

26	Less commitment to improve production technologies and use of e-platform (e-commerce, e-business and virtual business)	1.41
26	Absence of connection and complimentary in government policies	1.4
28	Favorable trade agreement and GSP facilities	1.4
29	Favorable policy support	1.37
30	Abundance of unskilled and semi-skilled workforce	1.33
31	Macroeconomic context	1.32
32	Weak mid-level management	1.32
33	Large number of support industries	1.31
34	GSP issue after 2021 and changing import policies of destination countries	1.3
35	Scares of industrial land and unplanned industrialization	1.29
36	Strategic location of the country	1.2
37	Lack of well-planned cluster development	1.16
38	Willingness to response to buyer's need	1.16
39	RMG related FDI potentials	1.11
40	Bureaucratic inertia	0.97
41	Some RMG firms established offices abroad	0.88

The next step is to analyze the frequency distribution of the 41 variables. The distribution is a normal bell curve as shown in graph (figure 5.1) with a minimum value of 0.88 and maximum of 1.77. The distribution had a mean of 1.41 and median and mode of 1.45 as summarized in table 5.12. As the relationship between the variables is not continuous, the median was taken to establish significance.



**Figure: 5.1. Frequency distribution of 41 variables**

**Table 5.12: Mean, Median, Mode and Standard Deviation**

Number of Variables	41
Mean	1.4098
Median	1.4500
Mode	1.45 <sup>a</sup>
Std. Deviation	.17531
Variance	.031
Range	.89
Minimum	.88
Maximum	1.77

Hence, all variables with a weighted average value of equal or more than the median 1.45 was taken as significant. The first 21 variables weighted value of table 5.11 are 1.45 or more, and thus considered that these variables have significant effect on competitiveness of RMG sector in Bangladesh.

### 5.3. Findings Related to SWOT Analysis of RMG Industry in Bangladesh

The empirical survey found that all the 41 factors have somewhat influence on the competitiveness of RMG industry of Bangladesh. However, considering the median value, 21 variables have significant positive or negative impact on the competitiveness of the RMG industry of Bangladesh. For further critical assessment of these 21 factors, a SWOT (i.e., strengths, weaknesses, opportunities and threats) table has been developed to precisely understand those factors which could help to formulate necessary policy recommendations for sustaining competitive advantage of the RMG industry in future.

Table: 5.13. SWOT Analysis of RMG Industry in Bangladesh

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Large number of factories</li> <li>• Strong knitwear related backward linkages</li> <li>• Collaborative actions in compliance issue</li> <li>• Chance events -quota system, MFA phase out and compliance initiatives after Rana Plaza incident</li> </ul>	<ul style="list-style-type: none"> <li>• Scarcity of skilled workforce</li> <li>• Dependency on third party marketing</li> <li>• Huge deficiency in gas and electricity</li> <li>• Lack of R &amp; D</li> <li>• Lack of quality education and training</li> <li>• Limited access to finance and high bank interest rate</li> <li>• Poor condition of roads, ports, rail, and airports for moving goods into and out of the country</li> <li>• Shortage of raw materials and weak backward linkage for woven garments</li> <li>• Lack of specialization and up-gradation</li> <li>• Lack of systematic R &amp; D programs as firm's strategy</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• Demographic dividend</li> <li>• Potentials to extend markets beyond the traditional destinations</li> <li>• Potentials of Bangladesh domestic demand market</li> </ul>	<ul style="list-style-type: none"> <li>• Competitiveness from other RMG exporting countries</li> <li>• Compliance weaknesses and external pressure</li> <li>• Subcontracting practices to non-compliant factories</li> <li>• Political unrest, safety and security</li> </ul>

The above 21 variables carry more weight and have wide-ranging impact on competitiveness of the RMG industry of Bangladesh. Among the 21 variables, 4 variables are identified as strengths, 10 identified as weaknesses, 3 as opportunities and 4 identified as threats. To ensure competitiveness, Bangladesh needs to capitalize its strengths and utilize its opportunities in order to address its weaknesses and take necessary policy initiatives to minimize and transform threats to strengths.

#### **5.4. A Proposed Framework for Future Competitiveness of RMG Industry of Bangladesh**

The above presentation of the findings from this study can now be structured within the Porter model of industry competitiveness. I identified 21 variables<sup>15</sup> those have higher weighted average value and stronger association with the present state of competitiveness of the RMG industry in Bangladesh. Using the survey data, interview responses and SWOT analysis, the 21 variables have been used in identifying the competitiveness of the RMG sector. Six key components have been listed and placed the relevant variables under each component apart from government and chance issues, which were taken to have broader implication for all the components identified. The six components are human resources, infrastructure, knowledge resources, finance, compliance and demand conditions. Among the 21 variables, “Political unrest, safety and security” lies exclusively under the Government while “Quota system, MFA phaseout and compliance initiatives after Rana Plaza incident” is considered as Chance event. The following diagram summarizes the findings of this study and provides a contextualized framework of the competitiveness of the RMG industry of Bangladesh.

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<sup>15</sup> See table 5.11: Top 21 variables those are significant at or above median value of 1.45

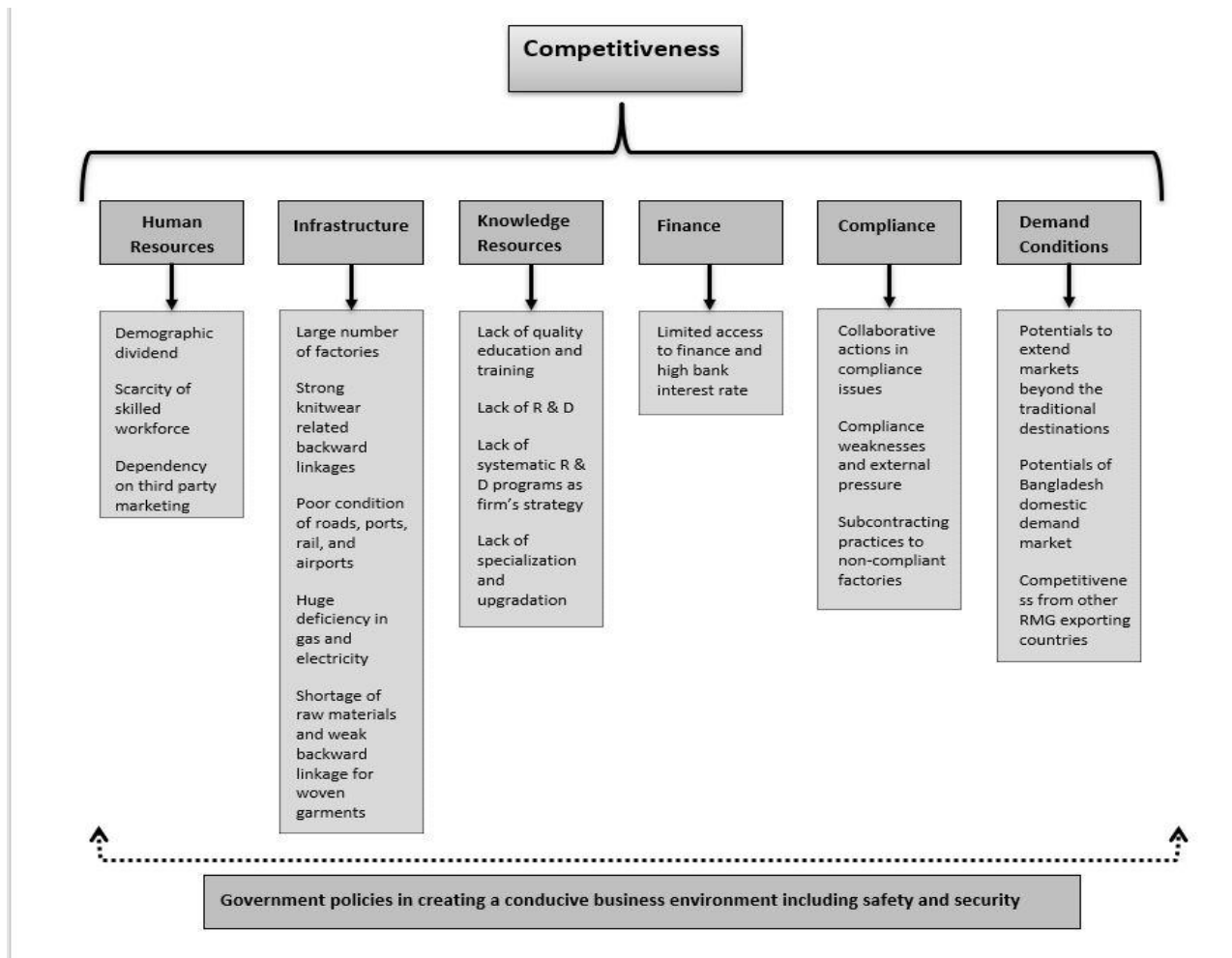


Figure 5.2: Proposed competitiveness framework of RMG industry of Bangladesh.

The following are the critical factors that have been identified from the above framework for future competitiveness and sustainability of the RMG industry of Bangladesh.

**5.4.1. Human Resources:** An important factor that has helped drive the growth of the RMG sector in Bangladesh has been the availability of a very large pool of workers with a competitive price who are able to perform the required tasks, principally related to cutting and sewing activities. However, as the sector has grown, it has had to encounter significant shortages of skilled human resources. This absence of skills has resulted in Bangladesh not realize its full potential of demographic dividend from its large base of human resources. The RMG sector is facing challenges in shortage of skilled manpower with low labour productivity and heavily dependent on skilled labour and managerial professionals from outside the country. Although there are plenty

of unskilled labor available but many of them have only basic education and very little training of sector specific on garment production process. One RMG related labor force survey identifies that there are some 40 percent of the workforce lack basic literacy and 23 percent have only primary level education (GOB 2015:247). In particular, the country faces acute shortage of skilled workforces and qualified mid-level management. According to the 7<sup>th</sup> Five Years Plan of Bangladesh, 88 percent labor force of the country requires a long-term massive enhancement effort in education and skills training to be converted into quality labor for manufacturing and formal services (GOB2015: 247). This is important as the advantage of cheap labour does not last for long and on top of that, “the apparel industry has high-value added segments where design research and development are important competitive factors” (Zeller 2012, 77).

Due to the local skill gaps, a good number of RMG factories in Bangladesh are dependent on foreign qualified personnel particularly from China, India, Sri Lanka and Pakistan for their product development, management and technical know-how. Approximately, 200,000 foreign nationals are working in different industries and entities in Bangladesh to fill the gaps of competent workforces. The country loses almost US\$5 billion worth of foreign currency each year of which a majority are from the RMG sector (Rokonuzzaman 2016). It is argued that due to the huge shortage of skilled workforce particularly in top management and marketing, Bangladesh RMG sector is unable to move rapidly enough toward product diversification, high value-added products, fashion-designing and technological upgradation. On top of huge foreign currency loss, Bangladesh is also missing the opportunities to generate quality job positions and potentiality in generating future entrepreneurs as foreign employees cannot be expected to commit to such business growth objectives. The CEO of an USA-based reputed fashion marketing and consulting firm in his interview urges the need to focus on design and product development in Bangladesh. He stated that

*if the country fails to deal with the value chain issue sooner, Bangladesh will lose markets to its competitors and face further pressure from the buyers. Value addition through design and product development should be a survival strategy for Bangladesh's garment sector and collective initiatives from entrepreneurs, universities and the government are needed in this regard” (The Daily Star 2017b).*



The marketing of the RMG industry of Bangladesh is carried out mostly based on third party middlemen or buying houses and no strong forward linkages exist. Majority of such buying houses own and operate by the foreign nationals and companies due to lack of skilled human resources and qualified professionals. As a result, most of the factories do not have any direct connections with the brands and buyers. This limits the scope of product diversification as well as further expansion of the market. This dependence of middleman culture increases the cost of products and makes it less competitive. Kathuria and Malouche (2016) also state that the RMG sector of Bangladesh lags behind in marketing compared to its development in backward linkages.

**5.4.2. Infrastructure:** Availability of industry-supportive infrastructure is a key determinant of sustainability and Bangladesh's RMG sector faces significant gaps in this aspect. According to McKinsey and Company (2011), "infrastructure is the single largest issue hampering Bangladesh's RMG industry." In the World Bank Doing Business Report 2017, Bangladesh ranked 176 in general out of 190 countries and placed at the bottom in getting electricity i.e. 187 (World Bank 2017). Specifically, infrastructural gaps faced by the sector relate to adequate and dependable supply of power (to ensure uninterrupted operation of factories), inefficient transport system due to the routinely clogged state of the highway system to the port, and the process of cargo handling for shipments abroad.

Adequate and uninterrupted supply of gas and electricity as a source of energy are vital for the RMG sector development of Bangladesh. Without enough allocation of gas, it would be almost impossible to expand RMG industry to meet the global demand and attract FDI in a competitive manner. Integrated infrastructure development initiatives at the border and beyond the border are important for future development of the RMG sector and its export performance. The country needs to ensure more efficient port including a deep-sea port and better roads and railway infrastructures in this regard. Bangladesh is also weak in RMG industry specific infrastructure and particularly weak backward linkage for woven garments and shortage of raw materials.

**5.4.3. Knowledge Resources:** Most of the Bangladeshi RMG factories are practicing the very basic cutting and making (CM)/ cut make and trim (CMT) process and only a very few do original equipment manufacturing (OEM)/ free on board (FOB)<sup>16</sup> process. There is a general lack of more functional upgradation such as original design manufacturing (ODM)/Full Package<sup>17</sup> and original brand manufacturing (OBM)<sup>18</sup>. Bangladesh RMG industry is also lagging in process upgradation and manufacturers are not interested enough to invest in modern technology and management. Process upgrading relates to continuous chain improvement of production process investing in skill development thorough using new technology (machines) or change the line operations implementing lean manufacturing management<sup>19</sup> (Rossi et al. 2014:5) and this is an activity that is visibly absent in the operation of the RMG sector in Bangladesh.

Expansion of new firms in RMG sector with usual low-end products may generate temporary growth for Bangladesh but does little to increase productivity and achieve sustainable growth through the adoption of improved technology with high ends products. Amsden (1989: 110) argues that “growth (by itself) does not generate high productivity or technological change rather technological change generates high productivity and growth”. He further adds that higher growth without higher productivity may generate gross inefficiency. This represents a key area of gap in the knowledge resources to ensure competitiveness in the RMG sector. Lack of quality education, training and systemic R & D limits the development of the industry. The country has not been able to develop a single internationally reputed academic and training institution that can support in supplying quality workforce and guide the sector through proper research and development. This aversion is mirrored in the Times Higher Education rankings where a single

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<sup>16</sup> Original equipment manufacturing (OEM)/Free on Board (FOB) is a common term used in industry to describe this type of contract manufacturer. However, it is technically an international trade term in which, for the quoted price, goods are delivered on-board a ship or to another carrier at no cost to the buyer (Gereffi and Frederick 2010:12)

<sup>17</sup> Original Design Manufacturing (ODM)/Full Package is a business model that focuses on design rather than on branding or manufacturing. A full package garment supplier carries out all steps involved in the production of a finished garment—including design, fabric purchasing, cutting, sewing, trimming, packaging, and distribution. buyer (Gereffi and Frederick 2010:12).

<sup>18</sup> Original Brand Manufacturing (OBM): A business model that focuses on branding rather than on design or manufacturing; this is a form of upgrading to move into the sale of own brand products (Gereffi and Frederick 2010:13).

<sup>19</sup>Lean manufacturing management is a system that focuses on minimizing waste within manufacturing processes and maximize productivity.

university from Bangladesh could not show up in the Emerging Economies University Rankings 2019!<sup>20</sup> This indicates that none of them is deemed world class.

Severe deficiency in R & D capability is considered as a major weakness of the Bangladesh RMG sector development. The country is far behind on research and development considering the other comparable countries. According to the Global Competitiveness Report 2016-17, Bangladesh scored only 2.5 out of 7 and positioned 132nd out of 138 countries in the world in R & D (WEF 2017). Without in-depth research on the demand of various markets, it would be difficult for Bangladesh RMG sector to continue to grow, diversify its products and expand markets.

**5.4.4. Access to Finance:** One key weak area of Bangladesh's overall business development is the high bank interest rate and difficulties in access to finance. High bank interest rate, policy inconsistency and difficulties in access to finance have huge negative impact on the RMG sector development of Bangladesh. The country's inability to bring down the commercial loan interest to a single digit, make loan available on buyer's guarantee, develop systems to get easy access and hassle-less loan continues to hamper the achievement of the full potential of the RMG sector's contribution to the national economy. Moreover, to become compliant and competitive, most of the factories of the RMG sector of Bangladesh need easy access to low cost capital, otherwise many of them will soon face difficulty to survive.

**5.4.5. Compliance:** Compliance issues (both structural and social) have become vital for the competitiveness of the RMG industry of Bangladesh. Two tragic industrial disasters in recent past put the RMG sector of Bangladesh in deep vulnerability and the country is facing huge image crisis. One mishap was the collapse of the Rana Plaza on 24<sup>th</sup> April 2013, eight-story multiplex housing clothing factories which triggered the loss of 1134 garment workers (ILO 2015). Another was the fire incident in the Tazreen Fashions factory that killed an estimated 112 workers on 24<sup>th</sup> November 2012 (Manik and Yardley 2012). These two unfortunate tragedies received enormous media attention all over the world and thus exposed the profound flaws within the industry. Particularly it brought into the light some of the multiple regulatory, structural, and management failures of the RMG sector of Bangladesh. Saxena (2014, pp. 7-8) states that after Rana Plaza

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<sup>20</sup> Source: [https://www.timeshighereducation.com/world-university-rankings/2019/emerging-economies-university-rankings#!/page/0/length/25/sort\\_by/rank/sort\\_order/asc/cols/stats](https://www.timeshighereducation.com/world-university-rankings/2019/emerging-economies-university-rankings#!/page/0/length/25/sort_by/rank/sort_order/asc/cols/stats)

incident, images in the media of female garment workers of Bangladesh now symbolize the repressive labor system in the global south, similar to the image of a starving African child that became the symbol of world hunger. It is an established fact that there is a high risk of declining demand of RMG products if compliance related matters are not handled properly. This is because concern with compliance has come mostly from countries and stakeholders where Bangladesh RMG has most of its market.

Although an environmental/infrastructural compliance related corrective actions are in progress involving relevant stakeholders immediate after Rana Plaza catastrophe, the country is lagging in social and ethical compliance issues. Baumann-Pauly et al. (2015) claim that social compliances related to the workers welfare e.g. wages and benefits, trade union etc. remain an incomplete agenda for the RMG industry of Bangladesh and is an area that can generate new industrial complexity at any time.

Moreover, a good number of small factories are still out of any kind of compliance initiatives. There are number of non-compliant unauthorized factories that neither have the registrations under the companies act nor the membership of the BGMEA and BKMEA. This kind of unregistered and non-compliant factories act as subcontractors to individual RMG factories that are committed to supply specific quantity of merchandise to the overseas buyers at the contracted low price and within the contracted time frame. The Department of Inspection for Factories and Establishment (DIFE) of the government and the BGMEA and BKMEA need to identify these firms and bring them under strong compliant regulations.

The post Rana Plaza compliance consisted of collaborative remediation initiatives along with possible industrial upgradation is ongoing but remain incomplete. A unified coordinated response to remedy on major structural, environmental and social shortcomings of the RMG factories is essential. Continuing practice of subcontracting at non-compliant factories remain a challenge that could threaten the future of the sector as a whole. One more catastrophe like Rana Plaza will simply damage all achievements of the sector and the country will be in deep troubles.

**5.4.6. Demand Condition:** Bangladesh RMG industry is driven by foreign markets since the beginning and these markets are heavily concentrated into two major markets i.e. North America and Europe. An important reality facing the sector is the need to increase its market demand particularly to the non-traditional markets. This is because the major export markets are reaching

almost in saturation for Bangladesh due to its current product mix i.e. limited number of low-end products. Research findings and export trend indicate that the country has ample potentials to increase market demand to non-traditional markets. Apart from this there is a huge potential of domestic market demand due to fastest growing middle-class population in Bangladesh. The present structural and operating strategies of the industry has resulted in virtual ignorance of this potential as well as possible development of Bangladeshi brands to cater to the demand of this rapidly expanding domestic market.

The rise of competitiveness and various strategic initiatives from other rival export markets (e.g. Vietnam, India, China, Cambodia and Ethiopia) would have adverse impact on the RMG sector development of Bangladesh. Some of the existing competitors are progressing more compared to Bangladesh. For example, the growth rates of Vietnam and Cambodia were 10 percent and 8 percent respectively whereas Bangladesh was 6 percent in the year 2018 (World Bank 2019). Moreover, Vietnam, Cambodia and India's products are enjoying special preferences in the USA market. Vietnam also have free trade agreement with European Union. African countries have duty free access privilege to the USA market due to the African Growth and Opportunity Act (AGOA) and to the EU market for the Least Developed country status (UNCTAD 2017:7). Any major changes in business policies or government decision in the destination countries may also increase the vulnerability of the RMG industry of Bangladesh.

Another element of demand condition facing Bangladesh is its own emergence as a middle-income country by the year 2021. This could affect the RMG sector significantly as there would be the possibility that one of the important demand variables – duty-free or reduced-duty access to certain key markets such as the EU – could no longer exist. Should alternative policy measures to secure such market advantage not succeed, the pressure on the industry to maintain its competitive position will fall on initiatives towards improving productivity through upgrading products, processes, and functions in the whole value chain.

## **5.5. Conclusion**

Bangladesh has been in the RMG business since 1980s and demonstrated a strong presence in the world market positioning itself as the second largest RMG exporters after China. RMG is the single largest exportable sector of Bangladesh since 1990s and currently accounted for more than 80

percent of its total export volume. However, the primary data collected from various stakeholders in this research and other relevant secondary studies endorse the fact that the way the sector has developed (and nurtured by public policies and practices) has helped its expansion but in the process has created a situation of multiple weaknesses and serious threats and if not addressed, these can thwart the attainment of future growth and realization of new market opportunities. From the above discussion, it is identified that the sector has been facing various challenges and need immediate attention and concerted efforts from all related stake holders for sustainability and accelerated growth of the industry. In the SWOT analysis based on empirical and interviews data, I identified several weaknesses, threats and potential opportunities of the RMG sector of Bangladesh. If Bangladesh fails to address the weaknesses and threats of this sector in a coherent and realistic manner and seize the potential opportunities as strengths, the country will soon lose its potentials and the RMG industry will be in deep vulnerability. The next chapter will discuss the conclusion, policy implications and limitations of the study.

## **Chapter- 6: Conclusions, Policy Implications and Limitations**

To assess the competitiveness of Bangladesh RMG sector following Porter Diamond Model, this research was conducted using mixed-method approach with the aim of identifying the critical factors to sustain and accelerate export-led growth of Bangladesh. This chapter starts with summary of the findings and presents the factors that bear upon the competitiveness of the RMG industry in Bangladesh. It then positions these findings within the context of Porter's Diamond as measures of competitiveness and extends into other analytical frameworks beyond the Porter's model in order to address elements that are not fully explainable through the Porter's framework. This positioning of findings within the Porter model and beyond is followed by focusing on policy implications of the findings with a view to drawing attention to specific policies and possible policy action points whereby the sustainability of the competitive advantages of Bangladesh RMG sector can be maintained and enhanced. This chapter also briefly discusses the potential impact of the ongoing COVID-19 (Coronavirus) on the RMG industry of Bangladesh along with some probable policy guidelines to face the challenges. Finally, this chapter addresses limitations to the study and suggests possible areas for future research.

### **6.1. Explaining Competitiveness of the RMG industry of Bangladesh- Porter's Diamond Model Lens**

Porter's Diamond framework's empirical base originated from studies of firm behavior. Subsequently, its framework was found to be applicable to industry behavior and from that it became an important tool in explaining the state of industry competitiveness. Both these application typologies were focused on drawing strategic implications that could be considered at the firm level or industry level. Also, the empirical base for both firm-level competitiveness and industry-level competitiveness came from studying the structure, behavior and outcome from primarily industrialized economies. The applicability of the Porter's Diamond framework to firm-level and industry-level performance was extended into industrializing economies. In all of these, there were certain inherent characteristics. These included strong domestic market base with potential for product adaptations to suit the market's needs, presence of a supporting industry, scope of innovation (R&D) activities, a human resources base whose skills could be upgraded to meet the evolving nature of competition and a regulatory framework that was facilitative of

working of the private market system. In applying the framework to explain the state of competitiveness of the Bangladesh RMG sector, some of the key elements have been found to be useful.

With respect to the factor of *human resource*, the RMG sector owes much of its successes to the abundance of low-cost labour. As confirmed through survey results and interviews, even though this has served as a key variable in the sector's position in supplying to the world market, it is also one of the sources of weaknesses of the sector due to the limitations of the skills of such a labour force. As a result, there has been only limited demographic dividend from the sector, raising an important question on its sustainability. With respect to the factor of *infrastructure*, the sector has helped the growth of a supporting industry (knitwear), thus contributing to backward linkage. However, the sector remains heavily dependent on imported supplies for much of its product line – another of the weaknesses. Another element of infrastructure – large base of factories with capability to meet world demand – although helpful in the early development and expansion of the sector – also signals considerable weaknesses. Many of the factories depend on subcontractors that are unregistered (thus outside the enabling regulatory framework) and structurally unsafe. In the context of the two well-publicized accidents in factories, a strong external threat has emerged – that of potential “boycotting” of Bangladeshi products in some of the key market destinations of the RMG sector for non-compliances. The Porter framework has also helped put focus on some infrastructural elements that are key to the securing of competitive advantage such as reliable supply of power and an efficient network of transportation and shipping. With primary destination of the RMG sector's output is outside the country, bottlenecks in production, transportation and shipping remain key weaknesses for the sector and if not addressed promptly, can become a serious threat to the sustainability of the sector's competitiveness. *Knowledge resources* consists of four variables i.e. “lack of quality education and training”, “lack of R & D”, “lack of systematic R & D programs as firm's strategy” and “lack of specialization and upgradation”. All these four variables appeared as limitations on the competitiveness of the RMG industry of Bangladesh. Under *finance*, “Limited access to finance and high bank interest rate” are indicators of weaknesses in the overall development of the RMG sector.

In the Porter model of competitiveness, *demand conditions* variable requires that there should be a sophisticated domestic market demand to ensure competitiveness and improve the quality of products. Bangladesh's RMG sector is unique in that it got started and subsequently



thrived by being suppliers to foreign markets only. In addition, the sector has no independent capability of seeking out new markets – it is primarily buyer-driven, and marketing is primarily order-taking, orders ensuing from third-party agents of overseas buyers. Thus, the RMG sector has very little acquaintance with the needs of its customers and factors that influence such buyer needs. The primary variable they control is their ability to supply at the price expected by the buyers' agents. Becoming recognized as a supplier to the world markets has placed the RMG sector in two areas of opportunities that would not have been present otherwise. Even without having significant experience in developing world markets, the sector has developed some credibility in the world market, even though in a limited range of low-end garment products. This can enable the sector to seek out new overseas markets that are beyond the traditional markets where entry and continued success has been facilitated by favourable tariff provisions. Even under the present state of marketing capability, newer markets can be sought within the existing system of third-party marketing. However, the focus on existing markets and heavy reliance on third-party marketing has also meant that Bangladesh's RMG sector has not paid attention to the growing number of countries that could pose a threat to Bangladesh's continuing ability to satisfy its existing suppliers. Newer RMG factories in countries like Vietnam, Cambodia and Myanmar are rapidly developing capability in meeting the requirements of foreign buyers at prices potentially lower than Bangladeshi suppliers.

In case of *related and support industries*, two different scenarios were observed for the knitwear and the woven garments subsectors. Bangladesh garment factories, mainly the knitwear factories have benefitted from the growth of “backward linkage” sectors such as textile and accessories industries whereas benefits to the woven garments subsector were quite limited as similar support industries have not emerged in a significant way. Most importantly, the relative absence of enterprises related to machinery and equipment, R & D, trade promotion, training institutions, fashion and design, manmade fabrics etc., continue to create difficulties for the RMG sector to compete in the international level. However, the large number and high concentration of garment factories near the big cities in Bangladesh allow some advantages with regard to the RMG sector as a whole as services closely related to the sector (e.g. development of roads, access to highways, availability of worker etc.) have emerged.

The evidence on *firm strategies, structure and rivalry* related to RMG industry of Bangladesh is mixed. Willingness to respond to buyer's need and collaborative actions in

compliance issues after Rana Plaza incident could have positive impact on the competitiveness of the RMG industry. However, most of the factories have low level of commitment to improve production technologies, lack of specialization and upgradation as well as systematic R & D programs as firm's strategies. Very few of Bangladeshi RMG factories have been able to focus on innovative business strategies to establish their own competitive advantage. Most of the garment factories follow short run strategy to produce low cost standard line products and practice only basic functions i.e. cut and make (CM) and cut-make-trim (CMT) rather than focusing on product specialization, R & D and functional upgradation ( e.g. Original Equipment Manufacturing (OEM)/ Free on Board (FOB) and Original Design Manufacturing (ODM)/Full Package) to achieve sustainable competitive advantage. There is however some evidence of firms developing their own strategic tools in assessing demand varieties from their buyers and in the process, adapting their own marketing approach to the interests of such buyers. The study found that although limited, successes of some of the RMG factories can be traced to their use of own marketing channels and in the process, sell higher quality or value-added products as part of their business strategy.

One major pitfall identified from the research that some factories continuing practices of subcontracting to non-compliance factories to gain more profit margin and ensure delivery date which have negative impact on competitiveness. This kind of strategies also lead to lack of commitment to re-strengthening and/or relocating small or medium sized factories that have regulatory compliance issues.

Other than the four main factors, the study found that government support has played significant role in the development of the RMG industry in Bangladesh. Government extended these supports through various policy initiatives, financial incentives, favorable macro-economic contexts, favorable trade agreements and getting GSP facilities. Although these governmental supports helped the RMG industry to grow to the current stage, there are some weaknesses such as macro-economic uncertainties, limited access to finance, political unrest, safety & security and bureaucratic inertia that hindered the development and diversification of the industry. Porter (1990) asserts that the government has a major role to play as a catalyst and challenger of an industry and encourage companies to achieve higher levels of competitive performance. In the case of Bangladesh RMG sector, the government has been an enabler in a number of areas but has not been forthcoming in a similar manner in dealing with issues that could have adverse

consequences for the industry (e.g. oversight of workplace safety, safeguard of worker rights, lending practices of the financial sector etc.).

The study also recognized that several “chance events” have greatly influenced the development of the RMG industry of Bangladesh. The quota system levied against traditional RMG exporters (e.g. South Korea, Hong Kong) in early age, the decision of the Multi Fibre Arrangement (MFA) phase-out and the elimination of quota, and collaborative actions in compliance issue after Rana Plaza incident – are three major “chance events” occurred in the RMG history of Bangladesh and all these impacted positively to the growth of the sector. At the same time, as the overall state of Bangladesh economy improves (e.g. emergence as a middle-income economy upon graduation from a developing economy), products of Bangladesh RMG sector may lose some of these advantages.

From the above discussion, it can be concluded that the integrated effects of different factors of Porter’s ‘National Diamond’ provides an useful framework in explaining the emergence and growth of the RMG industry of Bangladesh. However, not all of the factors in its emergence or current challenges of the industry can be fully explained through the Porter Diamond model. First, there is no internal market demand and sophisticated groups of domestic buyers that are seeking out specific categories of products from the Bangladesh RMG suppliers. Second, RMG industry is mostly buyer-driven and based on third-party marketing. Third, weaknesses in regulatory compliance, growing list of conditionality of continued sourcing from Bangladesh, and pressures from external stakeholders, and the sector’s tolerance for subcontracting to unregistered and/or non-compliant factories are elements not explainable through the Porter framework. Apart from these, political unrest, safety and security were not concerns for countries from which the evidence for the Porter competitiveness model was generated.

## **6.2 Sustaining Bangladesh RMG's Competitiveness - Lens of Double Diamond, Multiple Diamond and Beyond**

Despite some apparent weaknesses of some factors as proposed in Porter’s diamond model, RMG industry of Bangladesh has shown a strong evidence of competitiveness for a long period and emerged as a leading contender in the global market. Porter (1990) argued that factor conditions, demand conditions, related and support industries, firm strategy, structure and rivalry are the four broad attributes along with chance and government shape a nation’s business environment in

which local firms compete and these factors altogether promote or impede the creation of competitive advantage for any particular industry. From the findings of the study, it is evident that although the ‘factor conditions’ of Porter’s diamond model played the most significant role for the development of Bangladesh RMG industry, whereas the ‘demand conditions’ of the RMG industry of Bangladesh differs substantially from the features that Porter discussed in his diamond model. Porter (1990) argued that home demand, particularly a sophisticated and demanding internal buyer’s group is necessary precondition for a nation to be competitive in an industry. But Bangladesh RMG industry has developed without any internal market demand and 100 percent of its products were exported in the early stage. In addition, this sector has been able to secure an important place in the global market for RMG while contributing significantly to the country’s economy in multiple aspects. Interestingly, in the development process of RMG industry of Bangladesh, it seems that *demand conditions in the foreign markets* are contributed to achieve industry competitiveness. However, the demand condition of the local market has been gradually developing over time. After having strong presence in the world market<sup>21</sup>, Bangladesh RMG industry is now gradually focusing to serve local middle-income class population and develop its own ‘local market’ as a part of business strategy. This scenario of Bangladesh RMG industry would appear to be the opposite directional position to what was expected in the ‘demand condition’ of Porter model.

The development of RMG industry without the domestic demand factor could be explained by positioning such evidence within the framework of Double Diamond suggested by critics of the Porter’s model such as Rugman and D’ Cruz (1993). They suggested the use of ‘Double Diamond’ for explaining competitiveness of industries emerging from smaller economies and in limited market contexts after examining the competitiveness of Canadian auto industry. Rugman (1990), in the proposition of ‘Double Diamond’ considered the centrality of the domestic market in determining the demand conditions but argued to consider the markets of the trading partners of the home country. As the demand of RMG products of Bangladesh originated out of demands of the buyers from the destination countries, such demands from the foreign market combined with destination countries’ trade policies favouring products from developing countries such as Bangladesh compensated for the absence of domestic market demand at the early stage of

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<sup>21</sup> Being the second largest RMG exporter to the world with a mature RMG industry related infrastructure

developments of the RMG industry of Bangladesh. The RMG owners in Bangladesh were able to explore and identify the emerging nature of demand of garments products considering only the external markets and develop the competitiveness over the time. The findings supported the Rugman's (1990) argument that sometimes competitiveness depends on both domestic and foreign diamonds, and the focal industry should understand and exploit both diamonds if they wish to become or remain globally competitive (Rugman, 1990; Rugman and D' Cruz, 1993; Smit 2010). In the case of Bangladesh RMG sector, its emergence, growth and subsequent impact on the Bangladesh economy, all of these were achieved by being able to respond to external demand only. Therefore, the early competitiveness of RMG industry of Bangladesh was enabled by the then existing level of the Bangladesh economy (a less developed economy) and subsequent tariff policies of important trading and development partners of Bangladesh (e.g. U.S.A. and EU countries) could be better explained as 'Double Diamond' than the 'Porter Diamond' of the industry competitiveness frameworks.

In addition, the increasingly active role of some of the international stakeholders of social justice in the business practices of multinational companies also created a new group of industry stakeholders not represented in the frameworks of Porter and Rugman. Primarily through the initiatives of these stakeholders, RMG industry of Bangladesh encountered intense scrutiny from large trading partners as well as from other international civil society organizations. This attention was also generated because of the rising concern for workplace safety and other employment conditions. The Rana Plaza disaster brought such concerns to the forefront, and thus regulatory environment and regulatory compliance became important determinants in maintaining and securing industry competitiveness. Such role of multinational buyers and other international stakeholders resembled Dunning's (1990) idea of 'Multiple Diamond' for industries based in small nations in preserving the competitiveness in the long run. Dunning (1990) stated that competitive advantage should be analyzed by using a multiple diamond that could include the determinants of several related countries and the potential involvement of the MNEs in the diamond (Rugman and D'Cruz, 1993; Dunning, 1992; Rugman, 1991). It is believed that the remediation initiatives and active participation of large buying companies, i.e., multinational corporations in compliance issues, increased the confidence of the buyers and brought enormous potentials for the industry. Bangladesh RMG sector is now considered to be in better competitive position in terms of compliance compared to that of other competitors of the global market. The role of large buyers

of RMG industry, i.e., multinational clothing brands in the formation of ‘Alliance’ and ‘Accord’<sup>22</sup> to oversee the fire safety, security, labor rights and sustainable activities of garment factories is similar to Dunning (1990) conceptualization of ‘Multiple Diamond’ to maintain competitiveness in the new era of globalization. During 15<sup>th</sup> May 2013 to 31<sup>st</sup> May 2018, ‘Accord’ inspected 1649 garment factories with 37000 remedial recommendations in different areas related to health, safety and fire control issues, and 91% of those recommendations were implemented by the stakeholders (Accord, 2019). During the same period, the ‘Alliance’ team visited 714 RMG factories and assured implementation of corrective action plans in those factories (Alliance, 2019). The role of ‘Alliance’ and ‘Accord’ is visible with the formation of ‘National Tripartite Plan of Action (NTPA)’ to ensure the fire safety and structural integrity standard of the RMG factories in future (Donaghey and Reinecke, 2018). Therefore, the continuance of competitiveness of RMG industry of Bangladesh could be somehow better explained as ‘Multiple Diamond’ concepts of competitiveness analysis where the influence of additional diamonds such as foreign multinationals and international civil society organizations are explicitly visible.

Another interesting finding of the study is the gap between the top and lower end of the industry players as some of the RMG factories/companies are developing better reputation (and therefore, becoming globally competitive) and becoming leaders within the country whereas many others struggle to survive despite the inherent industry competitiveness of the RMG sector of the country. Among the all global RMG manufacturers, seven out of top 10 garment factories of Bangladesh achieved the ‘LEED’ certification and became global exemplary role model for the industry. These mixed scenarios of success and failure within the same business environment could be related to the emergence of ‘Rough Diamond’ (Park et al., 2013; Park and Ungson, 2019) framework of competitiveness analysis. According to the proponents of ‘Rough Diamond Model’, achieving and sustaining international competitiveness in emerging economies are difficult as institutional contexts of the emerging countries are not well developed in all different aspects of competitiveness framework, more specifically in all dimensions of ‘Diamond’ model. Based on the interviews with different stakeholders, mainly the foreign buyer groups, it is imperative that to continue the competitiveness in the global market, the RMG industry should think about developing competitive productivity (CP) of individual companies integrating the micro, meso,

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<sup>22</sup> ‘Alliance’ is a North American and ‘Accord’ is a European origin brand buyers forum formed to improve Bangladesh RMG industry workers safety after the tragic Rana Plaza disaster in 2013.

and macro factors of competitiveness (Baumann, Cherry and Chu, 2019; Park and Ungson, (2019). The competitiveness and success of Korean and Taiwanese electronic industries (Liu and Hsu, 2009) as well as other ASEAN countries (Park and Ungson, 2019) indicate the development of such ‘Rough Diamond’ in global competitiveness scenarios. Continuous competitiveness of the electronics industries of Korea and Taiwan could be the lessons for the RMG industry of Bangladesh to sustain the competitiveness in future. Our empirical findings suggest that based on the indigenous advantages of ‘basic factors’ and some related areas of Porter’s ‘National Diamond’, leading RMG firms from Bangladesh exploited the complementary competitive factors from the international markets and improved their competitive productivity (CP) over the time to achieve and remain competitive in the global context.

### **6.3 Sustaining Bangladesh RMG's Competitiveness - Policy Implications**

This research has examined the historical and current state of the RMG sector of Bangladesh. The study identified some weaknesses and threats of the sector which, if not mediated by appropriate policy measures, can thwart future growth possibilities that could have significant adverse impact on the overall economy of Bangladesh. The emergence and growth of the industry has been facilitated by a number of domestic and public policies, some of which have been implemented with active involvement of the industry. The current state of competitiveness of Bangladesh RMG sector is the result of entrepreneurial initiatives (e.g. emergence of Desh Garments), external factors driving the sourcing of textile and related products (e.g. limits on exports of textile products from South Korea, Hong Kong and Taiwan), and international development initiatives of major developed economies (e.g. MFA, duty-free access of products from less developed economies etc.). The RMG sector is a major contributor to Bangladesh’s economic success drawing from its strengths. However, this study has shown that even an internationally competitive industry cannot maintain its position forever without considering and implementing newer policy measures. Having looked at the industry’s current state through the lens of Porter, and positioning its challenges through lens of Rugman’s Double Diamond, Dunning’s Multiple Diamond and Park’s Rough Diamond, it is evident that policy considerations for sustaining and improving the competitive position of the industry must also provide scope for actions at the enterprise level, sectoral level and governmental level. Some of these can be considered and implemented at the firm level, some at the industry level, some at the public (government) level and some jointly involving all stakeholders of the industry.

### **6.3.1. Policy Considerations at the Enterprise Level**

**6.3.1.a. Safe Work Environment:** Improvements in factory structure and workplace safety can be initiated at the enterprise level and do not need to wait government inspectors to detect noncompliance. It is crucial for factory owners to realize that the environment in the market destinations of their products has changed and buyers cannot ignore the voices of international civil society requiring that products marketed by the buyers are sourced from safe workplaces where workers are not economically and socially exploited. The practice of ensuring that their own products or product-components is also a responsibility at the enterprise level. Evidence from interviews as well as reports on the activities of ‘Alliance’ and ‘Accord’ confirms that safety-related deficiencies of subcontractors also affect the main supplier negatively with potential for loss of ultimate markets.

**6.3.1.b. Product Development and Innovation:** This study has reported that Bangladesh RMG sector faces potential competition from countries that could produce similar items at a lower cost than what can be done by Bangladeshi suppliers. While it is realized that not all RMG factories in Bangladesh can switch over to higher end products, the evidence also shows that capability now exists within a small group of firms to gradually reduce their preoccupation with supplying low-end products. Commitment to new product development and marketing such products to some of their established buyers will be a strong strategic move for this group of suppliers. This can be initiated through steps in process upgrading and commitment to employee skills upgrading. This could lead into continuous chain improvement of production process, investing in skill development through familiarization and use of new technology (machines) or change the line operations implementing lean manufacturing management. Additional steps in this realm will include commitment to brand development and quality assurance.

**6.3.1.c Market Diversification:** Bangladesh RMG sector has a good number of world class companies those are already achieved high standard both in technology and producing quality products. The evidence from this study indicates that a small group of RMG factories have been able to develop closer relationships with their buyers. Such knowledge of buyer needs can become the springboard for identifying new needs and new groups of buyers. Building such awareness can be one of the important goals of trade missions to existing destinations as well as new destinations.



Given appropriate policy support, other factories could come forward to follow the path of those successful companies.

**6.3.1.d. Focus on Domestic Market:** It is identified from the research that there is a huge potentials of domestic market demand due to fastest growing middle-class population (more than 30 million) in Bangladesh. The present structural and operating strategies of the industry has resulted in virtual ignorance of this potential as well as possible development of Bangladeshi brands to cater to the demand of this rapidly expanding domestic market. Leading members of the RMG industry can start focusing on the needs of this large market base and develop distinct Bangladeshi brands that will be known for strong product quality (as opposed to being lowest-priced) and symbol of pride. If successful, it would greatly help in accelerating exports particularly to the two largest neighboring markets i.e. China and India and also to East-Asian countries.

### **6.3.2. Policy Considerations at the Industry Level**

**6.3.2.a. Building Industry Capacity in Fashion Design:** Most of the early Asian RMG producing countries such as South Korea, Hong Kong, Taiwan and Thailand have made a successful shift from order-takers to market creation – mainly by focusing on product distinctiveness in fashion, quality etc. In all these jurisdictions, this transition has been singularly helped through the active role played by industry associations through creating industry capacity in product innovation and fashion design. Bangladesh has made a start by establishing training centres in fashion design. However, relative to the size of the industry such initiatives are very small. Industry associations e.g. BGMEA and BKMEA can commit to greater effort in promoting enterprise take up in initiatives such as this. The role of BGMEA in establishing ‘BGMEA University of Fashion and Technology’ is one of exemplary initiative in developing skilled manpower to meet the demand of RGM sector. In addition, there are opportunities for stepping into other niche capacity building activities such as promoting eco-friendly factories and eco-friendly fashions. Both these areas can generate additional collaboration with international buyers and green stakeholders.

**6.3.2.b. Supporting Domestic Market Development:** Industry stakeholders can work collaboratively with RMG enterprises in supporting national promotion of domestic brands in order to create the quality image of Bangladeshi RMG products. Special collaborative initiatives are needed to develop Bangladeshi brand and market expansion. Technological revolution, process and product development, training and educational revolution need to go hand in hand for efficient

and accelerated growth of the RMG industry of Bangladesh. To ensure a strong presence of local brands globally, ISO standards and benchmarking should be used to develop buyers trust and confidence regarding the promised quality, content and price of the brand.

**6.3.2.c. Banning of Subcontracting to Non-compliant Factories:** Subcontracting at non-compliant factories need to be strictly prohibited for the sake of the industry and all concerned must work together to ensure it. A consensus should develop to charge huge penalties and their membership (i.e. BGMEA, BKMEA) should be suspended if anyone place subcontract order to any non-compliant factories.

### **6.3.3. Policies related to the Government**

**6.3.3.a. Improvements in RMG Sector Infrastructure:** Government urgently needs to take an integrated infrastructure development programme which include roads, railways, waterways, airports, deep seaports, efficient port management, logistics and ensure availability of gas and uninterrupted electricity. The country should prioritize the area of gas allocation (e.g. RMG) depending on the strength and actual prospect of the industry in terms of value creation and contribution to national GDP. As-Sber et al (2016: 134) identified this as an opportunity cost and recommended “to reduce gas supply to other industrial usage including fertilizer factories and divert the supply to the RMG sector.” Alternative sources of power such as solar can also be used by the RMG factories wherever possible for cost effectiveness.

**6.3.3.b. Improvements in Access to Finance:** Government needs to bring down the commercial loan interest to a single digit, develop systems to get easy access and hassle-less loan recognizing RMG sector as a priority. Government may consider setting up a special fund with low interest rate exclusively for the development of the RMG sector. Bangladesh bank (central bank) can use part of the idle foreign reserve in this purpose. Alternatively, central bank could raise funds through issuing bonds. Government can also negotiate with international financial institutions (e.g. World Bank, ADB) for getting soft loan in this regard. Priority need to be given to use this kind of loan in ensuring compliance, technological upgradation and establishing support industries related to the RMG sector.

**6.3.3.c. Encourage Foreign Investment:** Government of Bangladesh should follow the strategy to welcome foreign-owned companies those are interested to invest in high-end products, man-made fabrics, backward linkage industries for woven garments, modern technology,

diversification of product, process and market to fill the gaps and make a complimentary role for synergic benefit of the industry. It is argued that Bangladesh does not encourage RMG related FDI as a measure of protecting the local entrepreneurs (Mohiuddin, 2008). This approach has its own limitation as the industry deprive from access to new technology and skills spillover which can be obtained through FDI (Ahmed, 2009).

**6.3.3.d. Focus on Continuing Market Access:** Bangladesh government need to take all kinds of initiatives for getting continuous preferential market access (e.g. GSP plus for EU) while graduated as middle-income country in 2021. Government should use all avenues including WTO and ILO to pursue the USA to grant duty-free access of the Bangladeshi RMG products.

Bangladesh should continue seeking market access under the various bilateral and regional trade and investment arrangements. The country should relentlessly pursue using all diplomatic channels to reach trading arrangements with some forthcoming mega pacts like TPP, TTIP, RCEP etc. and bilateral free trade agreements (FTAs) with key trading partners.

Bangladesh should pursue negotiations in various fora, along with other LDC graduated countries, to protect their mutual interests in view of the emerging challenges. The country's governments need to take proactive stance in the WTO and lead the effort to get necessary support in the process of sustainable graduation from LDCs. WTO may support to newly LDC graduated countries in the areas of preferences continuation, aid for trade (additional) and special and differential treatment (in selected areas of interests).

**6.3.3.e. Expand Focus of Public Institutions on the RMG Sector:** Government need to extend support in developing quality academic and training institutions in collaboration with world class international institutions to meet the demand of quality workforces. Special focus should be given on improving the efficiency of the labour through TVET to meet industry demand, strengthening lifelong learning for skills enhancement, and improving the quality of the education system for better student outcomes, R & D.

Bangladesh needs investment in quality education to produce more engineers, young entrepreneurs and different types of skilled professionals including accountants and health and safety specialist. This will help to develop a pool of skilled workforce and alleviate current skill shortage and improve productivity in the RMG sector.

**6.3.3.f. Strategic Focus on the RMG Sector:** Special focus needs to be given on RMG sector in Bangladesh's five-year plan and other longer-term plans (e.g. vision 2021, 2041, SDG 2030) to ensure a sustainable growth of the industry, which means incorporating RMG issues into every stage of the development planning cycle. This must be underpinned by strong inter-ministerial coordination and consultative processes with a wide range of stakeholders, including consumer groups. A high-level joint taskforce may also be formed in this regard.

**6.3.3.g. Factory Safety and Stability in Operating Environment:** Government should establish several new fire stations in RMG concentrated industrial areas and may consider not to give license as well as electricity and gas connections to newly established RMG factories without ensuring them fully compliant. Government also need to develop a comprehensive national logistics policy for larger and holistic improvement of the RMG industry.

**6.3.3.h. Law and Order and Peace:** Government must maintain law and order, safety and security, peaceful political coexistence, minimize political enmity and develop necessary policies for creating a conducive business environment for the RMG industry of Bangladesh.

#### **6.3.4. Collaborative Policy Considerations for Government and industry stakeholders**

**6.3.4.a. Monitoring Factory Compliance:** The government of Bangladesh in consultation with all relevant industry stakeholders should develop a medium and long-term strategy to ensure compliance for sustainable growth of the RMG industry. The post Rana Plaza compliance related collaborative remediation initiatives along with possible industrial upgradation need to be completed within a shortest possible time. A unified coordinated response to remedy on major structural, environmental and social shortcomings of the RMG factories is essential.

**6.3.4.b. Dedicated Industrial Parks, Compliances and Collaboration:** Special RMG related industrial parks need to be developed with all facilities and allocate plots on priority bases those are already in business and need to shift their plants for ensuring compliances. Small factories those are struggling for survival can make a company consortium or do business in a cooperative approach for better management and existence, and to ensure compliances. RMG related trade organizations (e.g. BGMEA, BKMEA, MTMEA) can establish an all-inclusive self-monitoring system for ensuring compliances to all its members apart from Department of Inspection for

Factories and Establishment (DIFE) and government can also create an ombudsmen office in this regard.

**6.3.4.c. Managerial Capacity Building:** The country needs to develop a perspective plan in consultation with all relevant stakeholders with a mission to change the trajectory of foreign personnel currently working in the RMG sector. Emphasis need to be given on skill development and money should be used for human resource development. Instead of giving direct cash incentives, government should introduce policies such as free training, special tax rebate for employing local people instead of foreign people, replication of successful initiatives and good practices etc.

Government also need to take necessary policy initiatives and make a plan in consultation with industry stakeholders to replace all foreign personnel from the RMG sector by local skill people within a reasonable short period of time and aim to send skill workforce to other newly emerging RMG industry countries (e.g. Ethiopia).

**6.3.4. d. Developing New Foreign Market Destinations:** A global market research particularly to each potential export destination countries should be launched in collaboration with EPB, industry associations and local Bangladesh missions abroad and need to take necessary action based on those research findings. Government may take initiatives for aggressive RMG diplomacy and can also offer scholarships or funds to encourage RMG related research. BGMEA and BKMEA as association can develop their business networking and appoint agent or lobbyist to expand markets. Each destination countries have their own products demand based on culture, weather, population and purchasing power etc. RMG industry of Bangladesh should identify the need and demand of potential countries through market exploration and research and ensure competitiveness using appropriate marketing strategy. Countries in Far East Asia like Japan, China, South Korea, and big markets such as India, South Africa, Russia, Brazil, Mexico and Chile in terms of population can be lucrative opportunities for market diversification.

Bangladesh RMG sector has a good number of world class companies those are already achieved high standard both in technology and producing quality products. Other factories need to come forward to follow the path of successful companies, and government and associations should extend special support in this regard.

Research findings identified that the rise of competitiveness and various strategic initiatives from other rival export markets (e.g. Vietnam, India, China and Cambodia) have adverse impact on the RMG sector development of Bangladesh. Any major changes in business policies or government decision in the destination countries may also increase the vulnerability of the RMG industry. All related stakeholders including government need to aware of any major shifts such as special treaty with the ‘common export destination countries’ governments, changes in exchange rate or interest rate, changes in business strategies of the competitors (e.g. use of innovative technology), and Bangladesh should take necessary counter initiatives and corrective actions for ensuring competitiveness.

A good, friendly and workable relationships with all brand buyers and export destination country governments should be the important consideration for RMG manufacturers, exporters and government of Bangladesh to continue a healthy market growth. The industry focus needs to shift towards improving productivity through upgrading products, processes, and functions in the whole value chain. Government to government, government to brand, and government, brand and industry collaborative initiatives may play important role in this regard.

**6.3.4. e. Forward Linkages Development and Modern Marketing Strategies Adaptation:** The demand and market context of RMG industry has changed a lot over the period. Historically buyers have purchased bulk number of same-line RMG products from Bangladesh based on their given design and specifications. Presently buyers prefer to source their products through agency-based sourcing or product-focused services across a wide range of product categories. Bangladesh RMG sector has yet to develop such kind of forward linkages and the country needs to take appropriate policy actions to fill the gaps through research and knowledge development. Government and industry associations in consultation with relevant stakeholders need to make necessary plan and policy actions in this regard. Bangladesh should develop several internationally standard sourcing agencies like Li & Fung Co<sup>23</sup> to improve the quality of products and to ensure

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<sup>23</sup>Li & Fung offers services in product design and development, raw materials and factory sourcing and capacity building, vendor compliance and distribution. It has over 250 offices in 40 markets, connecting some 15,000 suppliers with 8,000 customers through its services. One of the leading supply chain company in the world. For detail please visit: [www.lifung.com](http://www.lifung.com)

competitiveness of the RMG industry. These will help in better product development, negotiation of price, procurement of raw materials and components, quality control, factory compliance, order processing and manufacturing control and logistics.

Apart from these, all RMG related stakeholders including the government of Bangladesh needs to be aware of the recent trade-led structural transformation in international business where sophisticated labour-savings automation is being used which diminishes the importance of low labour costs as a factor to locate production. Scholars such as Laya (2019) argues that changing business models e.g. ‘nearshoring’ can back part of labor-intensive manufacturing products location towards advanced economies. This is because geographical proximity to major markets for first fashion is critical and three to four weeks shipping times from factories in South and East Asia cannot be a preferred option for the brand. Bangladesh RMG industry needs to be equipped with all necessary preparation through appropriate R & D to face the rapid changing marketing channels such as online marketing (e.g. Alibaba, Amazon), technology development such as fourth generation industrial revolutions, hand pick 3- D printer machines, use of artificial intelligence (e.g. Robotics) etc.

**6.3.4. f. Improvement in the Supply Chain:** To minimize the physical distance from the key market, Bangladesh needs to lower the lead time. The country should develop better raw material supply chain infrastructure including logistic support. A concerted effort from the government and industry stakeholders are needed to improve both backward and forward linkages as well as physical infrastructure development in lowering lead time and ensuring sustainable growth of the RMG industry of Bangladesh.

#### **6.3.5. Implementation of the Recommended Policies:**

To implement the above-mentioned policy recommendations, a concerted effort is needed from firms, industry and government. Considering the time frame, the following table (6.1) provides a roadmap, defined as short, medium and long term for recommended actions.

Table 6.1. Proposed time frame (short, medium and long term) for recommended policies

<b>Recommended Policies</b>	<b>Short-Term (need immediate attention: 0-12 months)</b>	<b>Medium-Term (one to three years)</b>	<b>Long-Term (Three years+)</b>
Safe Work Environment			
Product Development and Innovation			
Market Diversification			
Focus on Domestic Market			
Building Industry Capacity in Fashion Design			
Supporting Domestic Market Development			
Banning of Subcontracting to Non-compliant Factories			
Improvements in RMG Sector Infrastructure			
Improvements in Access to Finance			
Encourage Foreign Investment			
Focus on Continuing Market Access			
Expand Focus of Public Institutions on the RMG Sector			
Strategic Focus on the RMG Sector			
Factory Safety and Stability in Operating Environment			
Law and Order and Peace			
Monitoring Factory Compliance			
Dedicated Industrial Parks, Compliances and Collaboration			
Managerial Capacity Building			
Developing New Foreign Market Destinations			
Forward Linkages Development and Modern Marketing Strategies Adaptation			
Improvement in the Supply Chain			



#### **6.4. COVID – 19 (Coronavirus Disease) Issue and Bangladesh RMG Industry**

The present COVID-19 pandemic has created a terrible situation around the world. The global apparel industry is facing an unprecedented crisis, resulting a greater uncertainty in the sector. Major brand and fashion retailers in the Global North are closing their businesses and laying off workers. As a result, many of the brand or sourcing agents are cancelling or suspending orders placed in Bangladesh. According to the BGMEA report, as of 29 April 2020, a total US\$3.18 billion worth of export orders have been cancelled or suspended from 1150 factories. This will affect about 2.28 million RMG workers (Source: BGMEA website). The RMG export volume of Bangladesh for the first two months of two months of the pandemic (March and April 2020) also indicates a serious destruction of country exports. The export volume of March 2020 was 20 percent lower than the previous year; in April 2020, it has decreased more than 84 percent due to COVID-19 pandemic. Total exports on April 2020 was only US\$ 378.40 Million compared to US\$ 2.26 billion in the corresponding period last year (Prothom Alo, 2020; The Daily Star, 2020). Apart from this, many brands and buyers are now forcing Bangladeshi RMG suppliers for renegotiating the terms on original contracts and demanding heavy discount (up to 50 percent) on already shipped goods and six-month delays in payment for completed order (The Daily Star 2020a). All these indicate a major impact on the RMG industry of Bangladesh; the country needs to be prepared to face this unexpected *force majeure* situation.

According to the Porter diamond framework, this situation can be considered as a “chance event and it is much too early to analyze its ultimate impact on the RMG industry of Bangladesh. However, the impact of COVID-19 on the world economy will be multifaceted and multidimensional. Countries like Bangladesh could suffer the most as exports, official development assistance (ODA), and remittances from overseas workers – the three major pillars of the country’s economy, will be severely affected. Unlike other chance factors, this COVID-19 pandemic may not bring any positive news for Bangladesh RMG industry. It is very urgent for Bangladesh to prepare for this enormous challenge related to the Coronavirus.

One immediate challenge is to convince the buyers not to cancel or suspend the placed order as a responsible purchasing practices and ensure the fundamental rights of millions of workers and the livelihood of their families. It is ironic that “the same brands that demonstrated strong public commitment to protecting the safety and security of Bangladeshi garment workers

after the Rana Plaza collapse in 2013 are not hesitating to cancel or suspend orders or delay their payments” (Tanjeem 2020). The current President of the BGMEA, Dr. Rubana Huq, in an interview with the New York Times mentions, ‘For them (buyers), it’s a question of the survival of the businesses....For us, it’s the survival of our 4.1 million workers’ (New York Times, March 31, 2020). It would be a nearly impossible challenge for many of the RMG factories in developing countries like Bangladesh to survive if buyers continue to cancel or suspend orders. The Sustainable Textile of the Asian Region (STAR) – an inter-Asian umbrella network of textile producer associations that brings together representatives from Bangladesh, Cambodia, China, Myanmar, Pakistan and Vietnam -- published a nine points joint statement calling on global brands, retailers and traders to honor their contracts, not renegotiate payments or cancel orders, but to support the millions of workers and their families who supply the market (STAR 2020). The statement further added that “it is time for global businesses to uphold and honor their commitment to labor rights, social responsibility and sustainable supply chains”. (A copy of the joint statement is attached in Appendix -I.)

In this bleak scenario, the Swedish and Netherland governments came forward to support the RMG industry of Bangladesh and committed that their buyers would not cancel or suspend their placed orders from RMG factories. The Swedish Prime Minister Mr. Stefan Lofven, reinforced the commitment over a telephone call to Bangladeshi Prime Minister Sheikh Hasina on 29 April, 2020 (Financial Express, 29 April 2020) and Dutch minister for Foreign Trade and Development Cooperation Ms. Sigrid Kaag conveyed it to Bangladesh Foreign Minister Mr. AK Abdul Momen on 29 April in their telephonic conversation (UNB 30 April 2020). It is expected that other sourcing countries will follow Swedish and Dutch government policy as a good gesture ensuring ethical business practices from their own brands and buyers.

Bangladesh must need to take proper initiatives to cope with the upcoming challenges caused by the Coronavirus (COVID-19). Apart from the previous recommendations mentioned above in subsection 6.3, the following special policy recommendations should be considered:

- A high-level strategic committee (preferably headed by the Prime Minister) representing all related stakeholders needs to be formed immediately to identify problems, suggest remedies, and oversee the corrective actions.

- A crisis management fund through central bank (Bangladesh Bank) with a zero or one/two percent rate of interest needs to be developed for the RMG sector to overcoming the current situation and to settle differed payments.
- Industry associations (e.g. BGMEA, BKMEA) should support their members and maintain and share data on the global impact of coronavirus.
- The government needs to consider increased cash incentives or develop separate cash incentive packages through Bangladesh Bank to support Coronavirus-affected RMG factories for a reasonable period until recovery is possible.
- Special exchange rate incentives (like foreign remittances) need to be considered for the RMG sector to support their operating expenses during this extraordinary situation.
- The Bangladesh Bank should relax some terms and conditions in their guidelines related to the RMG industry to address the current situation.
- A strong and aggressive economic diplomacy effort, particularly negotiations with the government of major buyers' countries, is needed to address the challenges.
- The government should take initiatives to get involve international organizations (e.g. ILO, WTO) in ensuring fair trade and ethical business practices.
- RMG associations (e.g. BGMEA, BKMEA) should negotiate with brands or buyers to minimize the risk of cancellation, suspension or withhold the orders of their members. They may appoint local lobbyists to assist or work in favor of the RMG exporters of Bangladesh.

### **6.5. Limitation of the Study**

The principal focus of this study was to assess the competitiveness of RMG industry based on a specific theoretical framework (i.e. Porter Diamond model) and this framework, when supplemented by various enhancements of the framework by Rugman, Dunning and Park, generated important directions for policies that can contribute to the sustainability of this important industry sector of Bangladesh. However, as in many research studies, not all issues could be considered and thus they remain limitations of the findings of this study.

First, the study is based on a single industry, i.e., the RMG industry of Bangladesh. Therefore, the results could be valid only for garments industry of Bangladesh. The result might not be fully appropriate to explain competitiveness of other industries of the country.

Second, the study was conducted only in one country context. Therefore, the findings related to ‘Diamond’ models may not be generalized in other developing and emerging countries contexts. As Porter’s model was proposed based on the findings from developed and industrialized economies, and therefore, appeared to be not able to fully explain the competitiveness of RMG industry of Bangladesh, similarly this study’s single country focus can be considered a limitation.

Third, due to the scope and size of the project, the study collected data and information only from a limited set of firms and stakeholder groups. Representatives from other stakeholders such as local buying houses, sourcing companies or buyers other than Canada, Bangladesh Textile Mills Association (BTMA), factories located in export processing zones (EPZ), workers associations, port authorities, Bangladesh Investment Development Authority (BIDA), NGOs (i.e. Accord, Alliance, ILO) with a bigger sample size could have added new insights in the research.

And finally, in this study, emphasis was given on one particular theoretical framework, i.e., Porter’s diamond model, which limits the scope of wide-ranging analysis of the competitiveness of the RMG industry of Bangladesh from other competitiveness frameworks. Consideration of other theoretical frameworks such as ‘Global Competitiveness Index’ proposed by the World Economic Forum might find new evidence and factors to enhance the competitiveness of the RMG industry of Bangladesh and other emerging countries.

## **6.6. Future research directions**

The study findings of this research definitely has added new knowledge in the existing literature of international business and competitiveness analysis. It provided empirical evidence of attainment and sustained competitiveness of a specific industry from a small emerging economy (Bangladesh) context. However, the critical analysis of findings indicated some interesting emerging issues which opens up new avenues for future research on competitiveness analysis from a micro and macro level perspectives. Due to the limited scope, time and resources, this study was not able to investigate those issues. The future research on those issues may further enrich international business and competitiveness literature.

First, from the interviews, it was revealed that some RMG industries of Bangladesh are continuously enjoying competitiveness in the global market, while others struggle and failed

despite inherent national competitiveness opportunities for the industry. Future research with in-depth case studies of selected successful garments factories could provide better understanding of sustainable competitiveness and will help to develop useful guidelines for the whole industry or sector.

Second, while Bangladesh is still quiet backward in terms of ‘Global Competitiveness’ and other indexes, however, the RMG industry of Bangladesh achieved recommendable competitiveness against those odds, and still dominating in the global market. The reasons and factors of those conflicting scenarios of ‘backward in global competitiveness’ versus ‘success in industry competitiveness’ could be investigated in future. Such study will provide useful guidelines to other developing and emerging economies who are struggling with institutional voids and macro-economic uncertainties.

Third, though the study investigated the competitiveness of the RMG industry of Bangladesh using the competitiveness framework from an international business perspective, the emergence of the industry could be investigated using the cross-country cross-cultural perspective such as National Business System to better understand the emergence and development of specific RMG industry. Using alternative theoretical framework from different perspective could provide interesting insights to develop and nurture other industrial sectors. Other countries could learn from such research and follow the similar path of development while following own national business system.

## **6.7. Final Remarks**

The importance and contribution of RMG industry for export-led economic growth and development of Bangladesh is well documented in this research. For sustainable economic growth and development of the country, the RMG industry need to be nurtured properly and all the stakeholders should take necessary initiatives for the best interest of the country. A highly competitive RMG industry could re-enforce economic growth and ensure sustainability of the development of Bangladesh. However, the country needs to ensure favorable endowments such as gas & electricity, highway transport, capital supply, pool of qualified workforce, factory compliances, RMG related infrastructure, R & D, appropriate cluster development, proactive role

for innovation, safety and security, and continuous market and product development along with concerted efforts from all the relevant stakeholders.

The present study provided the systematic analysis of competitiveness of the RMG industry of Bangladesh using the Porter's diamond model and identified critical factors that might hinder the growth and continuation of competitiveness in near future. Based on those analysis and empirical evidence, it provided some policy recommendations to accelerate the RMG grounded export-led growth of the country. Despite some limitations of the study, it is assumed that findings of the study will be useful for academics, practitioners, and policy makers to develop economic and industrial development policies for any emerging economies contexts.

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## Appendices

### Appendix – A: Questionnaire- A

Serial Number:

Date:

#### **Interview Questionnaire of PhD Study: A Study on Competitiveness of Ready-made Garments for Export-led Economic Growth in Bangladesh: Issues and Challenges**

The purpose of this interview is to understand the current state of the Readymade Garment Industry of Bangladesh particularly the strength and weaknesses of the sector as well as to identify possible policy options to exploit opportunities and address challenges for sustainable and accelerated growth of the sector. Any information provided will remain strictly confidential as it is for pure academic purposes.

#### **Section A: Firm Information**

1.1 Name and location of the Firm:

1.2 Name and position of the interviewee:

1.3 Academic Qualification of the Interviewee:

----- Graduate ----, Masters -----, PhD -----, Others

1.4 Type of ownership of the firm:

----- Single, -----Partnership, ---- Corporation, ----- Joint-Venture with foreign firms,  
-----Totally foreign owned, ----- Other (please specify)

1.3 Year of establishment:

----- Before 1985, ----- 1985 to 2004, ----- 2005 to 2016

1.4 Current capital in BDT:

----- Less than 20 million, ---- 20 million to less than 40 million, ----- 40 million to less than 80 million, ----- more than 80 million (+ 50 crows BDT)

1.5 Number of employees:

---- Less than 500, ---- more than 500 but less than 1000, -----more than 1000

**Section – B**

**B.1: Statements related to strengths / opportunities of the RMG sector of Bangladesh**

<p><b>Listed below are the statements that reflect the strengths / opportunities of the RMG sector of Bangladesh.</b></p> <p>Please read and evaluate each statement carefully, then indicate the extent <b>to which you disagree or agree</b> by checking the appropriate number on a scale of -2 (Strongly Disagree) to +2 (Strongly Agree). Neutral or neither disagree nor agree (0) is the situation where interviewee is undecided to respond. Please circle the most appropriate answer.</p>	<p><b>Strongly Disagree</b></p>	<p><b>Disagree</b></p>	<p><b>Neutral</b></p>	<p><b>Agree</b></p>	<p><b>Strongly Agree</b></p>
	<p><b>-2</b></p>	<p><b>-1</b></p>	<p><b>0</b></p>	<p><b>1</b></p>	<p><b>2</b></p>
<p>2.1 Bangladesh RMG sector has reasonably solid industrial base and its products are very competitively priced, positioning it as world leader in apparel sector</p>	<p>-2</p>	<p>-1</p>	<p>0</p>	<p>1</p>	<p>2</p>
<p>2.2 Availability of a large pool of unskilled and semi-skilled workforce with continued capacity and competitive price have been the key factor for the success of the RMG industry of Bangladesh</p>	<p>-2</p>	<p>-1</p>	<p>0</p>	<p>1</p>	<p>2</p>
<p>2.3 Production capacity or volume of products (supplied by large number of factories) is one of the biggest advantages for the RMG sector of Bangladesh to be competitive in the world market</p>	<p>-2</p>	<p>-1</p>	<p>0</p>	<p>1</p>	<p>2</p>
<p>2.4 Favorable trade agreements / GSP facilities provide special privileges (e.g. duty free) for Bangladeshi RMG products in entering foreign markets thus making it more attractive to international buyers</p>	<p>-2</p>	<p>-1</p>	<p>0</p>	<p>1</p>	<p>2</p>

2.5 Favorable government policies (e.g. back to back LC, bonded warehouse, special incentives) placed Bangladesh apparel sector in an advantageous position to be competitive in the world market	-2	-1	0	1	2
2.6 Bangladesh RMG sector is working collaboratively with global stakeholders in responding to concerns of compliance issues after the Rana Plaza disaster.	-2	-1	0	1	2
2.7 Bangladesh RMG sector is responsive to buyer's need and adjust its production plan accordingly.	-2	-1	0	1	2
2.8 Some firms in the Bangladesh RMG sector have established direct offices and/or have representatives in their destination markets, making it easier for understanding global market trends and specific needs of buyers.	-2	-1	0	1	2
2.9 Bangladesh RMG sector has opportunities to expand its export destinations beyond the traditional (North American and Europe) markets	-2	-1	0	1	2
2.10 Bangladesh RMG sector has developed a strong backward linkage in knitwear garments that help in value addition of the products, lower the lead time and become more competitive in the world market.	-2	-1	0	1	2
2.11 Bangladesh has opportunities to attract the RMG related FDI from different countries (i.e. China, South Korea) to meet the gap of support industries and increase the competitiveness of the sector.	-2	-1	0	1	2
2.12 Huge young population (60% of total population are below 35) of Bangladesh could be yielded as a demographic dividend if the country able to train and educate them with the demand and need of the RMG sector.	-2	-1	0	1	2
2.13 Due to the strategic location and available capacity, the RMG industry of Bangladesh has potentials to get more access into the regional markets particularly to the BIMSTEC and BRICS countries.	-2	-1	0	1	2
2.14 Large number of support industries is a great strength for the RMG industry of Bangladesh to become competitive to the World market.	-2	-1	0	1	2
2.15 Rapidly growing large number of middle-class population of Bangladesh create a potentials for huge domestic demand of the RMG products	-2	-1	0	1	2
2.16 Collaborative action on compliance issues after Rana Plaza incident will bring enormous potentials for Bangladesh RMG	-2	-1	0	1	2

industry as no other comparator countries have taken massive compliance initiatives like Bangladesh					
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**B2: Statements related to weaknesses / threats of the RMG sector of Bangladesh**

<p><b>Listed below are the statements that reflects the weaknesses / threats of the RMG sector of Bangladesh.</b></p> <p>Please read and evaluate each statement carefully, then indicate the extent <b>to which you disagree or agree</b> by checking the appropriate number on a scale of -2 (Strongly Disagree) to +2 (Strongly Agree). Neutral (0) is the situation where interviewee is undecided (neither disagree nor agree) to respond. Please circle the most appropriate answer.</p>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	-2	-1	0	1	2
3.1 Shortage of gas and electricity is a major impediment for the RMG sector development and for it to be more competitive	-2	-1	0	1	2
3.2 Scarcity of industrial land and unplanned industrialization hinder the expansion of RMG sector and discourage steps towards developing an industry cluster	-2	-1	0	1	2
3.3 Transportation system (highway link, railroad, inland waterways, air transport and port) of Bangladesh is very poor and hinders RMG export competitiveness significantly	-2	-1	0	1	2
3.4 Insufficient soft infrastructure i.e. lack of quality education and training, IT, specialized institutions, skills development, fashion and design institutes, etc., adversely affects growth and sustainability of the RMG sector of Bangladesh	-2	-1	0	1	2
3.5 Bangladesh has huge deficiency in R &D and it has direct impact on competitiveness as both product specialisation and market derivation needed in-depth research					
3.6 Traditional roles of trade facilitation institutions e.g. Export Promotion Bureau (EPB), Board of Investment, Export Processing Zones Authority are not sufficiently responsive to the evolving nature of global trade and thus do not contribute to accelerated development and sustainable growth of the RMG sector of Bangladesh	-2	-1	0	1	2
3.7 Macro-economic contexts e.g. exchange rate, inflation rate, fiscal policy and monetary policy are not always responsive to the need for promoting increased competitiveness of RMG sector	-2	-1	0	1	2
3.8 Lack of strong connectivity and complementarity among different government policies and plans e.g. trade (import-	-2	-1	0	1	2



export) policy, industrial policy, labor policy, five-year plans etc hinder the overall development of the RMG sector of Bangladesh					
3.9 Limited access to finance and high bank interest rate are two major hindrances for the development of the RMG sector of Bangladesh	-2	-1	0	1	2
3.10 Government Officials responsible directly or indirectly for the RMG sector do not have adequate understanding of the RMG sector's value to the economy and thus are less motivated in initiating or recommending changes that has direct impact on the competitiveness of the sector.	-2	-1	0	1	2
3.11 Government policies relating to the RMG sector are often ad hoc in nature and there is a deficiency in "transparent and predictable" legal, commercial, and regulatory system (e.g. gas and electricity cost, wages) that hinder the overall development of the RMG industry of Bangladesh	-2	-1	0	1	2
3.12 Reputational issues (e.g. nation branding and country positioning) are important to ensure competitiveness of the RMG sector of Bangladesh	-2	-1	0	1	2
3.13 Shortage of raw materials and weak backward linkages for woven garments are major impediments to the development of a strong and vibrant RMG sector of Bangladesh	-2	-1	0	1	2
3.14 Weak human resource management (HRM) practices (e.g. lack of trained workforce, need-based training programs and international standard vocational education) create huge shortage of skilled workforce that impede accelerated growth of RMG sector significantly	-2	-1	0	1	2
3.15 Weak mid-level management and lack of professionalism are major impediments to the overall development of the garment sector of Bangladesh	-2	-1	0	1	2
3.16 Huge dependency on buying houses, middlemen and third-party marketing are major impediments to the overall development of the garment sector of Bangladesh	-2	-1	0	1	2
3.17 Absence of a comprehensive policy and action plan to develop clusters for RMG related industries hinder rapid expansion of the sector of Bangladesh	-2	-1	0	1	2
3.18 Because of the continuing practice of subcontracting to non-compliance factories as well as a lack of commitment to re-strengthening and/or relocating small or medium sized factories that have regulatory compliance issues,	-2	-1	0	1	2

competitiveness of the Bangladesh RMG sector will be significantly reduced in near future					
3.19 Bangladesh RMG sector faces significant pressures from different stakeholders such as international buyer alliance (e.g. Accord, Alliance etc.) and multinational organizations such as World Bank, International Labor Organization, World Trade Organization to remedy major structural, environmental and social compliances in the RMG factories. The absence of a coordinated response to remedy these shortcomings creates major threats to the sustainability of Bangladesh RMG exports to the world markets	-2	-1	0	1	2
3.20 As the Bangladesh RMG sector lacks commitment to improve production technologies and move aggressively towards digitalization through e-commerce, e-business and virtual business in a rapidly evolving world market that expects digital presence, there is increasing likelihood of considerable slowdown and possibly decline in the export opportunities for the sector in near future	-2	-1	0	1	2
3.21 Bangladesh RMG sector demonstrates little commitment for product upgradation (high value-added products) and specialisation on process (sophisticated machineries) and functional upgradation (total quality management) that may consider as major threats for the competitiveness of the industry	-2	-1	0	1	2
3.22 RMG industry of Bangladesh except a few do not take systematic R & D as their firm strategy and that considered as a major drawback for further development of the industry	-2	-1	0	1	2
3.23 Bangladesh RMG sector faces increasing threats and challenges due to the rise of competitiveness in export markets particularly from Vietnam, India, Cambodia and China.	-2	-1	0	1	2
3.24 Bangladesh RMG sector will be at huge risk if country is not ready for alternative arrangement (e.g. GSP plus or duty-free access) after GSP facilities withdrawal as it will move up to a middle-income country in 2021.	-2	-1	0	1	2
3.25 A demonstrated lack of strong commitment and consensus among all political parties, combined with political unrests and safety issues adversely affects the future prospect of Bangladesh RMG sector	-2	-1	0	1	2

### Section C: Semi-structured Questions

A. What are the major strengths of the RMG industry of Bangladesh?

- B. What are the major challenges you are facing to run the business? How you recommend to address those challenges?
  
- C. What are the major impediments in product diversification of the RMG sector? How to overcome those problems?
  
- D. How Bangladesh RMG industry can diversify its market and what policies you suggest entering into new market?
  
- E. In your opinion, what should be the priority agendas of Government for the overall development of the RMG industry of Bangladesh?
  
- F. What other policies or issues (not-mentioned earlier) you want to recommend in strengthening the RMG sector of Bangladesh?
  
- G. How Bangladesh RMG sector can maintain sustainable accelerated growth and ensure competitiveness to the World market?

**Thank you very much for your co-operation**

## Appendix – B: Questionnaire-C

Serial Number:

Date:

### **Survey Questionnaire of PhD Study: A Study on Competitiveness of Ready-made Garments for Export-led Economic Growth in Bangladesh: Issues and Challenges**

The purpose of this survey is to understand the current state of the Readymade Garment Industry of Bangladesh particularly the strength and weaknesses of the sector as well as to identify possible policy options to exploit opportunities and address challenges for sustainable and accelerated growth of the sector. Any information provided will remain strictly confidential as it is for pure academic purposes.

#### **Section A: Firm Information**

1.5 Name and location of the Firm:

1.6 Name and position of the interviewee:

1.7 Academic Qualification of the Interviewee:

----- Graduate ----, Masters -----, PhD -----, Others

1.8 Type of ownership of the firm:

----- Single, -----Partnership, ---- Corporation, ----- Joint-Venture with foreign firms,  
-----Totally foreign owned, ----- Other (please specify)

1.3 Year of establishment:

----- Before 1985, ----- 1985 to 2004, ----- 2005 to 2016

1.6 Current capital in BDT:

----- Less than 20 million, ---- 20 million to less than 40 million, ----- 40 million to less than 80 million, ----- more than 80 million (+ 50 crows BDT)

1.7 Number of employees:

---- Less than 500, ---- more than 500 but less than 1000, -----more than 1000

**Section – B**

**B.1: Statements related to strengths / opportunities of the RMG sector of Bangladesh**

<p><b>Listed below are the statements that reflect the strengths / opportunities of the RMG sector of Bangladesh.</b></p> <p>Please read and evaluate each statement carefully, then indicate the extent <b>to which you disagree or agree</b> by checking the appropriate number on a scale of -2 (Strongly Disagree) to +2 (Strongly Agree). Neutral or neither disagree nor agree (0) is the situation where interviewee is undecided to respond. Please circle the most appropriate answer.</p>	<p><b>Strongly Disagree</b></p>	<p><b>Disagree</b></p>	<p><b>Neutral</b></p>	<p><b>Agree</b></p>	<p><b>Strongly Agree</b></p>
	<p><b>-2</b></p>	<p><b>-1</b></p>	<p><b>0</b></p>	<p><b>1</b></p>	<p><b>2</b></p>
<p>2.1 Bangladesh RMG sector has reasonably solid industrial base and its products are very competitively priced, positioning it as world leader in apparel sector</p>	<p>-2</p>	<p>-1</p>	<p>0</p>	<p>1</p>	<p>2</p>
<p>2.2 Availability of a large pool of unskilled and semi-skilled workforce with continued capacity and competitive price have been the key factor for the success of the RMG industry of Bangladesh</p>	<p>-2</p>	<p>-1</p>	<p>0</p>	<p>1</p>	<p>2</p>
<p>2.3 Production capacity or volume of products (supplied by large number of factories) is one of the biggest advantages for the RMG sector of Bangladesh to be competitive in the world market</p>	<p>-2</p>	<p>-1</p>	<p>0</p>	<p>1</p>	<p>2</p>
<p>2.4 Favorable trade agreements / GSP facilities provide special privileges (e.g. duty free) for Bangladeshi RMG products in entering foreign markets thus making it more attractive to international buyers</p>	<p>-2</p>	<p>-1</p>	<p>0</p>	<p>1</p>	<p>2</p>

2.5 Favorable government policies (e.g. back to back LC, bonded warehouse, special incentives) placed Bangladesh apparel sector in an advantageous position to be competitive in the world market	-2	-1	0	1	2
2.6 Bangladesh RMG sector is working collaboratively with global stakeholders in responding to concerns of compliance issues after the Rana Plaza disaster.	-2	-1	0	1	2
2.7 Bangladesh RMG sector is responsive to buyer's need and adjust its production plan accordingly.	-2	-1	0	1	2
2.8 Some firms in the Bangladesh RMG sector have established direct offices and/or have representatives in their destination markets, making it easier for understanding global market trends and specific needs of buyers.	-2	-1	0	1	2
2.9 Bangladesh RMG sector has opportunities to expand its export destinations beyond the traditional (North American and Europe) markets	-2	-1	0	1	2
2.10 Bangladesh RMG sector has developed a strong backward linkage in knitwear garments that help in value addition of the products, lower the lead time and become more competitive in the world market.	-2	-1	0	1	2
2.11 Bangladesh has opportunities to attract the RMG related FDI from different countries (i.e. China, South Korea) to meet the gap of support industries and increase the competitiveness of the sector.	-2	-1	0	1	2
2.12 Huge young population (60% of total population are below 35) of Bangladesh could be yielded as a demographic dividend if the country able to train and educate them with the demand and need of the RMG sector.	-2	-1	0	1	2
2.13 Due to the strategic location and available capacity, the RMG industry of Bangladesh has potentials to get more access into the regional markets particularly to the BIMSTEC and BRICS countries.	-2	-1	0	1	2
2.14 Large number of support industries is a great strength for the RMG industry of Bangladesh to become competitive to the World market.	-2	-1	0	1	2
2.15 Rapidly growing large number of middle-class population of Bangladesh create a potentials for huge domestic demand of the RMG products	-2	-1	0	1	2
2.16 Collaborative action on compliance issues after Rana Plaza incident will bring enormous potentials for Bangladesh RMG	-2	-1	0	1	2

industry as no other comparator countries have taken massive compliance initiatives like Bangladesh					
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## B2: Statements related to weaknesses / threats of the RMG sector of Bangladesh

<p><b>Listed below are the statements that reflects the weaknesses / threats of the RMG sector of Bangladesh.</b></p> <p>Please read and evaluate each statement carefully, then indicate the extent <b>to which you disagree or agree</b> by checking the appropriate number on a scale of -2 (Strongly Disagree) to +2 (Strongly Agree). Neutral (0) is the situation where interviewee is undecided (neither disagree nor agree) to respond. Please circle the most appropriate answer.</p>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	-2	-1	0	1	2
3.1 Shortage of gas and electricity is a major impediment for the RMG sector development and for it to be more competitive	-2	-1	0	1	2
3.2 Scarcity of industrial land and unplanned industrialization hinder the expansion of RMG sector and discourage steps towards developing an industry cluster	-2	-1	0	1	2
3.3 Transportation system (highway link, railroad, inland waterways, air transport and port) of Bangladesh is very poor and hinders RMG export competitiveness significantly	-2	-1	0	1	2
3.4 Insufficient soft infrastructure i.e. lack of quality education and training, IT, specialized institutions, skills development, fashion and design institutes, etc., adversely affects growth and sustainability of the RMG sector of Bangladesh	-2	-1	0	1	2
3.5 Bangladesh has huge deficiency in R &D and it has direct impact on competitiveness as both product specialisation and market derivation needed in-depth research					
3.6 Traditional roles of trade facilitation institutions e.g. Export Promotion Bureau (EPB), Board of Investment, Export Processing Zones Authority are not sufficiently responsive to the evolving nature of global trade and thus do not contribute to accelerated development and sustainable growth of the RMG sector of Bangladesh	-2	-1	0	1	2
3.7 Macro-economic contexts e.g. exchange rate, inflation rate, fiscal policy and monetary policy are not always responsive to the need for promoting increased competitiveness of RMG sector	-2	-1	0	1	2
3.8 Lack of strong connectivity and complementarity among different government policies and plans e.g. trade (import-	-2	-1	0	1	2

export) policy, industrial policy, labor policy, five-year plans etc hinder the overall development of the RMG sector of Bangladesh					
3.9 Limited access to finance and high bank interest rate are two major hindrances for the development of the RMG sector of Bangladesh	-2	-1	0	1	2
3.10 Government Officials responsible directly or indirectly for the RMG sector do not have adequate understanding of the RMG sector's value to the economy and thus are less motivated in initiating or recommending changes that has direct impact on the competitiveness of the sector.	-2	-1	0	1	2
3.11 Government policies relating to the RMG sector are often ad hoc in nature and there is a deficiency in "transparent and predictable" legal, commercial, and regulatory system (e.g. gas and electricity cost, wages) that hinder the overall development of the RMG industry of Bangladesh	-2	-1	0	1	2
3.12 Reputational issues (e.g. nation branding and country positioning) are important to ensure competitiveness of the RMG sector of Bangladesh	-2	-1	0	1	2
3.13 Shortage of raw materials and weak backward linkages for woven garments are major impediments to the development of a strong and vibrant RMG sector of Bangladesh	-2	-1	0	1	2
3.14 Weak human resource management (HRM) practices (e.g. lack of trained workforce, need-based training programs and international standard vocational education) create huge shortage of skilled workforce that impede accelerated growth of RMG sector significantly	-2	-1	0	1	2
3.15 Weak mid-level management and lack of professionalism are major impediments to the overall development of the garment sector of Bangladesh	-2	-1	0	1	2
3.16 Huge dependency on buying houses, middlemen and third-party marketing are major impediments to the overall development of the garment sector of Bangladesh	-2	-1	0	1	2
3.17 Absence of a comprehensive policy and action plan to develop clusters for RMG related industries hinder rapid expansion of the sector of Bangladesh	-2	-1	0	1	2
3.18 Because of the continuing practice of subcontracting to non-compliance factories as well as a lack of commitment to re-strengthening and/or relocating small or medium sized factories that have regulatory compliance issues,	-2	-1	0	1	2



competitiveness of the Bangladesh RMG sector will be significantly reduced in near future					
3.19 Bangladesh RMG sector faces significant pressures from different stakeholders such as international buyer alliance (e.g. Accord, Alliance etc.) and multinational organizations such as World Bank, International Labor Organization, World Trade Organization to remedy major structural, environmental and social compliances in the RMG factories. The absence of a coordinated response to remedy these shortcomings creates major threats to the sustainability of Bangladesh RMG exports to the world markets	-2	-1	0	1	2
3.20 As the Bangladesh RMG sector lacks commitment to improve production technologies and move aggressively towards digitalization through e-commerce, e-business and virtual business in a rapidly evolving world market that expects digital presence, there is increasing likelihood of considerable slowdown and possibly decline in the export opportunities for the sector in near future	-2	-1	0	1	2
3.21 Bangladesh RMG sector demonstrates little commitment for product upgradation (high value-added products) and specialisation on process (sophisticated machineries) and functional upgradation (total quality management) that may consider as major threats for the competitiveness of the industry	-2	-1	0	1	2
3.22 RMG industry of Bangladesh except a few do not take systematic R & D as their firm strategy and that considered as a major drawback for further development of the industry	-2	-1	0	1	2
3.23 Bangladesh RMG sector faces increasing threats and challenges due to the rise of competitiveness in export markets particularly from Vietnam, India, Cambodia and China.	-2	-1	0	1	2
3.24 Bangladesh RMG sector will be at huge risk if country is not ready for alternative arrangement (e.g. GSP plus or duty-free access) after GSP facilities withdrawal as it will move up to a middle-income country in 2021.	-2	-1	0	1	2
3.25 A demonstrated lack of strong commitment and consensus among all political parties, combined with political unrests and safety issues adversely affects the future prospect of Bangladesh RMG sector	-2	-1	0	1	2

**Thank you very much for your co-operation**

## **Appendix – C: Questionnaire -B**

### **Questionnaire of PhD Study: A Study on Competitiveness of Ready-made Garments for Export-led Economic Growth in Bangladesh: Issues and Challenges.**

The purpose of this meeting is to understand the current state of the Readymade Garment Industry of Bangladesh particularly the strength and weaknesses of the sector as well as to identify possible policy options to exploit opportunities and address challenges for sustainable and accelerated growth of the sector. Any information provided will remain strictly confidential as it is for pure academic purposes.

#### **Section-1: Brief Profile of the Interviewee**

1.1 Name and location of the Firm/office/organization:

1.2 Name and position of the interviewee:

1.3 E-mail and contact phone number(s):

#### **Section -2: Question Guide**

Q-1. According to your views, what strength and opportunities Bangladesh have as a leading RMG exporter to the world market?

Q-2. What is your overall assessment about the state of RMG sector of Bangladesh?

Q-3. What are the buyers most motivational and challenging factors of doing business in Bangladesh?

Q-4. How do you foresee the future prospect of the Bangladesh RMG sector considering the overall global context?

Q-5. What are the major impediments for Bangladesh to strengthen its position as a global leader in RMG sector?

Q-6. Who are the competitors/rivals /potential players of Bangladesh RMG sector and what specialty they possesses?

Q-7. From which countries brands/buyers buy similar products that Bangladesh could offer and what are the motivations in it?

Q-8. How Bangladesh could increase the confidence level of its buyers and develop their business relations?

Q-9. What policies / strategies you suggest for diversifying the RMG products of Bangladesh?

Q-10. How Bangladesh can achieve sustainable accelerated growth and ensure competitiveness in the RMG sector, and strengthen its position in global value chain?

Q-11. Any other issues / concerns/ suggestions about the RMG sector of Bangladesh?

**Appendix D: Time Series Data (1983 to 2018-19) of RMG Export Growth and Comparative Statement on Export of RMG and Total Export of Bangladesh**

Table-D1: Time Series Data (1983-84 to 2018-19) of RMG Export Growth and Comparative Statement on Export of RMG and Total Export of Bangladesh

<b>Year</b>	<b>Export of RMG (in million US \$)</b>	<b>Annual Growth Rate %</b>	<b>Total Export of Bangladesh (in million US \$)</b>	<b>% of RMG's to Total Export</b>
1983-84	31.57	-	811.00	3.89
1984-85	116.2	268.07	934.43	12.44
1985-86	131.48	13.15	819.21	16.05
1986-87	298.67	127.16	1076.61	27.74
1987-88	433.92	45.28	1231.2	35.24
1988-89	471.09	8.57	1291.56	36.47
1989-90	624.16	32.49	1923.70	32.45
1990-91	866.82	38.88	1717.55	50.47
1991-92	1182.57	36.43	1993.90	59.31
1992-93	1445.02	22.19	2382.89	60.64
1993-94	1555.79	7.67	2533.90	61.40
1994-95	2228.35	43.30	3472.56	64.17
1995-96	2547.13	14.31	3882.42	65.61
1996-97	3001.25	17.83	4418.28	67.93
1997-98	3781.94	26.01	5161.20	73.28
1998-99	4019.98	6.29	5312.86	75.67
1999-00	4349.41	8.19	5752.20	75.61
2000-01	4859.83	11.74	6467.30	75.14
2001-02	4583.75	-5.68	5986.09	76.57
2002-03	4912.09	7.16	6548.44	75.01
2003-04	5686.09	15.76	7602.99	74.79
2004-05	6417.67	12.87	8654.52	74.15
2005-06	7900.80	23.11	10526.16	75.06
2006-07	9211.23	16.59	12177.86	75.64
2007-08	10699.80	16.16	14110.80	75.83

2008-09	12347.77	15.40	15565.19	79.33
2009-10	12496.72	1.21	16204.65	77.12
2010-11	17914.46	43.35	22924.38	78.15
2011-12	19089.73	6.56	24301.90	78.55
2012-13	21515.73	12.71	27027.36	79.61
2013-14	24491.88	13.83	30186.62	81.13
2014-15	25491.40	4.08	31208.94	81.68
2015-16	28094.16	10.21	34257.18	82.01
2016-17	28149.84	0.198	34655.90	81.23
2017-18	30614.76	8.76	36668.17	83.49
2018-19	34133.27	11.49	40535.04	84.21

**(Source: BGMEA 2019)**

**Appendix-E: Export Value of Five Major Exportable Items of RMG from Bangladesh**

(Value in MN. US\$)

Table E-1: Export Value of Five Major Exportable Items of RMG from Bangladesh for the Year 1993-94 to 2017-18.

<b>Year</b>	<b>Shirts</b>	<b>Trousers</b>	<b>Jackets</b>	<b>T-Shirt</b>	<b>Sweater</b>
1993-1994	805.34	80.56	126.85	225.9	....
1994-1995	791.20	101.23	146.83	232.24	....
1995-1996	807.66	112.02	171.73	366.36	70.41
1996-1997	759.57	230.98	309.21	391.21	196.6
1997-1998	961.13	333.28	467.19	388.5	296.29
1998-1999	1043.11	394.85	393.44	471.88	271.7
1999-2000	1021.17	484.06	439.77	563.58	325.07
2000-2001	1073.59	656.33	573.74	597.42	476.87
2001-2002	871.21	636.61	412.34	546.28	517.83
2002-2003	1019.87	643.66	464.51	642.62	578.37
2003-2004	1116.57	1334.85	364.77	1062.1	616.31
2004-2005	1053.34	1667.72	430.28	1349.71	893.12
2005-2006	1056.69	2165.25	389.52	1781.51	1044.01
2006-2007	943.44	2201.32	1005.06	2208.9	1248.09
2007-2008	915.6	2512.74	1181.52	2765.56	1474.09
2008-2009	1000.16	3007.29	1299.74	3065.86	1858.62
2009-2010	993.41	3035.35	1350.43	3145.52	1795.39
2010-2011	1566.42	4164.16	1887.50	4696.57	2488.19
2011-2012	1733.54	4686.39	2231.16	4713.11	2340.34
2012-2013	1972.89	5185.48	2634.28	5143.22	2620.73
2013-2014	2173.73	5690.78	2973.16	5863.81	2932.94
2014-2015	2271.43	5697.83	3183.17	6064.13	2829.16
2015-2016	2317.09	6319.00	3774.08	6118.53	3182.47
2016-2017	2108.38	6026.69	3546.88	5861.98	3361.53
2017-2018	2063.57	6389.38	3978.47	6292.25	3674.70

(Source: BGMEA 2019)

## Appendix-F: Comparison of selective countries - Logistic Performance Index – 2016

Table F-1: Comparison of selective countries - Logistic Performance Index – 2016

<b>Out of 160 countries</b>	<b>Bangladesh</b>	<b>China</b>	<b>India</b>	<b>Indonesia</b>	<b>Vietnam</b>	<b>Pakistan</b>	<b>Cambodia</b>
Overall Ranking	87	27	35	63	64	68	73
LPI Score (Average)	2.66	3.66	3.42	2.98	2.98	2.92	2.80
Efficiency of Customs clearance process	2.57	3.22	3.17	2.69	2.75	2.66	2.62
Quality of trade and transport related infrastructure	2.48	3.75	3.34	2.65	2.70	2.70	2.36
Easy of arranging competitively priced shipments	2.73	3.70	3.36	2.90	3.12	2.93	3.11
Competence and quality of logistics services	2.67	3.62	3.39	3.00	2.88	2.82	2.60
Track and Trace consignments	2.59	3.68	3.52	3.19	2.84	2.91	2.70
Timeliness of shipments reaching consignee on schedule	2.90	3.90	3.74	3.46	3.50	3.48	3.30
<b>Rating from 1 to 5, where 1= lowest and 5 = highest</b>							

(Source: World Bank 2016: Compiled from Logistic Performance Index – 2016)

**Appendix-G : Comparison of seven selective countries including Bangladesh on specific pillars of competitiveness based on the Global Competitiveness Report 2016-17**

Table G-1: Comparison of seven selective countries including Bangladesh on specific pillars of competitiveness based on the Global Competitiveness Report 2016-17

Out of 138 countries Score (1-7)	Bangladesh Country ranking 106		China Country ranking 28		India Country ranking 39		Indonesia Country ranking 41		Vietnam Country ranking 60		Pakistan Country ranking 122		Cambodia Country ranking 89	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Institution	125	3.1	45	4.3	42	4.4	56	4.1	82	3.8	111	3.3	104	3.5
Infrastructure	114	2.8	42	4.7	68	4.0	60	4.2	79	3.9	116	2.7	106	3.2
Macro-economic environment	65	4.8	8	6.2	75	4.5	30	5.5	77	4.5	116	3.8	50	5.0
Higher education and training	118	3.0	54	4.6	81	4.1	63	4.5	83	4.1	123	2.9	124	2.9
Labor market efficiency	120	3.6	39	4.5	84	4.1	108	3.8	63	4.3	129	3.3	58	4.4
Technological readiness	122	2.7	74	4.0	110	3.0	91	3.5	92	3.5	119	2.7	98	3.3
Innovation	121	2.8	30	4.0	29	4.0	31	4.0	73	3.3	75	3.3	118	2.8

Source: (WEF 2017), Global Competitiveness Report 2016-17, World Economic Forum. Available at: [http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017\\_FINAL.pdf](http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf)



## Appendix-H: Exemption letter related to Ethics Approval



**To:** Dr. Ken Coates  
Johnson-Shoyama Graduate School of Public Policy  
Rm. 181-101 Diefenbaker Place

**Student:** Mohammad Emdad Ullah Mian

**Date:** October 23, 2015

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Thank you for submitting your study entitled: ***Export-led Economic Growth for Developing Nations: Policy Analysis and Options for the Garment Industry of Bangladesh s***. The study meets the requirements for exemption status as per **The Tri-Council Policy Statement (TCPS): Ethical Conduct for Research Involving Humans, December 2014, Exemption Article 2.1** states “research may involve interaction with individuals who are not themselves the focus of the research in order to obtain information. For example, one may collect information from authorized personnel to release information or data in the ordinary course of their employment about organizations, policies, procedures, professional practices or statistical reports. Such individuals are **not considered participants** for the purposes of this Policy. This is distinct from situations where individuals are considered participants because they are themselves the focus of the research.

It should be noted that though your project is exempt of ethics review, your project should be conducted in an ethical manner (i.e. in accordance with the information that you submitted). It should also be noted that any deviation from the original methodology and/or research question should be brought to the attention of the Behavioural Research Ethics Board for further review.

Sincerely,

---

Scott Tunison, Vice-Chair  
Behavioural Research Ethics Board  
University of Saskatchewan

## Appendix- I: Joint Statement on the COVID-19 Crisis by STAR

### Joint Statement on Responsible Purchasing Practices amid the COVID-19 Crisis

April 2020

During this unprecedented time of global outbreak of the COVID-19, responsible business has become more important than ever for the whole world to survive and recover from the crisis. Especially, responsible purchasing practices of brand companies, retailers and traders of the global textile and apparel supply chains, will bring enormous impacts on the fundamental rights of millions of workers and the livelihood of their families in the supplier end. It is time for global businesses to uphold and honor their commitment to labor rights, social responsibility and sustainable supply chains.

With this in mind, we, the undersigned nine textile and garment business associations of the Sustainable Textile of Asian Region (STAR) Network from six producing and export countries, hereby call on global brand companies, retailers and traders to:

1. Carefully consider all potential impacts on workers, small businesses in the supply chain when taking significant purchasing decisions;
2. Honor the terms of purchasing contracts, fulfil obligations therein, and not re-negotiate price or payment terms;
3. Make practical plans to take responsibility of the suspended delivery or shipment, as well as the goods already produced or currently in production, proceed with payment as agreed upon, and not cancel confirmed orders which are already in production;
4. Offer fair compensation to suppliers (100% FOB) if production or delivery has to be suspended or stopped, or offer salaries directly to workers of suppliers;
5. Put no responsibility on suppliers for delay of delivery or shipment and claim no compensation for such delays;
6. Put no further improper pressure on suppliers by additional costs, rush orders or unnecessary visits and audits;
7. Make all efforts and engage with local stakeholders for a better understanding of the local situation and contexts;
8. Always resort to dialogue and collaborative settlement to ensure mutually acceptable solutions to disputes;
9. Support business partners on supply chain as much as possible, and aim at long-term strategy of business continuity, supply chain unity and social sustainability.

We appreciate the understanding, collaboration and support of our business partners and other stakeholders, and we are ready to work and walk with all responsible buyers globally to get through this crisis, towards a shared bright future.

This joint statement is made by (in alphabetical order):

**Bangladesh Garment Manufacturers and Exporters Association (BGMEA)**

**Bangladesh Knitwear Manufacturers and Exporters Association (BKMEA)**

**China National Textile and Apparel Council (CNTAC)**

**Garment Manufacturers Association in Cambodia (GMAC)**

**Myanmar Garment Manufacturers Association (MGMA)**

**Pakistan Hosiery Manufacturers and Exporters Association (PHMA)**

**Pakistan Textile Exporters Association (PTEA)**

**Towel Manufacturers Association of Pakistan (TMA)**

**Vietnam Textile and Garment Association (VITAS)**

Members of the Sustainable Textile of Asian Region (STAR) Network ([www.asiatex.org](http://www.asiatex.org))

 **STAR Sustainable Textile of the Asian Region**

