

Report On “How Circular Economy Can Contribute to Competitive Advantage in Bangladesh’s Ready-Made Garments Industry”

By

Faik Hamza

ID: 17304037

An Internship Report submitted to the “BRAC Business School” in partial fulfilment of the requirements for the degree of BBA

BRAC Business School BRAC University

February, 2022

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Declaration

It is hereby declared that,

1. The internship report submitted is my own original work while completing a degree at BRAC University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

Student's Full Name & Signature:

Md. Faik Hamza Faruqui

ID: 17304037

Supervisor's Full Name & Signature:

Ms. Raisa Tasneem Zaman

Lecturer, BRAC Business School

BRAC University

Letter of Transmittal

Ms. Raisa Tasneem Zaman

Lecturer

BRAC Business School

BRAC University

66 Mohakhali, Dhaka-1212

Subject: Submission of Report On “How Circular Economy Can Contribute to Competitive Advantage in Bangladesh’s Ready-Made Garments Industry”

Dear Miss,

It is indeed a great pleasure for me to be able to hand over the Report On “How Circular Economy Can Contribute to Competitive Advantage in Bangladesh’s Ready-Made Garments Industry”. This report is the result of the knowledge which has been acquired from the respective field of my internship. I have attempted my level best to prepare this report and tried to make it precise. The report writing was a challenging and interesting experience for me and I would like to give credit to you as I appreciate the detailed instruction that you have provided to me. I hope that you will find this report useful and fulfilling as per the requirements. I would be thankful if you would be kind enough to receive my report and provide your valuable judgment.

Sincerely yours,

Md. Faik Hamza Faruqui

ID: 17304037

BRAC Business School

BRAC University

Date: 09 February, 2022

Acknowledgement

I would like to express my sincerity and gratitude to everyone who helped me to complete my internship report. Many thanks to my academic supervisor, Ms. Raisa Tasneem Zaman, Lecturer, BRAC Business School, for guiding me to complete my internship report.

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I would furthermore like to extend my many thanks to my colleagues and the R&D and Communications team for being so supportive and helping to me by providing vital information and facilitating the creation of connections vital for my internship report. I feel blessed to be surrounded with by many positive and supportive people and I am grateful to the almighty.

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1.1 Student Information

Name: Faik Hamza Faruqui

ID: 17304037

Program: BBA

Major/Specialization: Marketing

1.2 Internship Information:

Period: From the 20th of December, 2021, till the 14th of March, 2022.

Company Name: Bangladesh Garments Manufacturers and Exporters Association

Department/Division: Communications

Address: BGMEA Complex, House #7/7A

Block #H-1, Sector #17, Uttara

Dhaka – 1230, Bangladesh

Internship Company Supervisor's Information: Mohammad Monower Hossain, Joint Secretary (Sustainability, RDTI)

Job Scope: To assist in writing press releases, internal reports, proofreading documents, write letters, create greetings and speeches and ensure smooth communication occurs between different departments.

1.3 Internship Outcomes:

1.3.1. Student Benefits to the Company:

Communication between members of an organization is key to achieving the organization's goals. It is important for everyone to be able to effectively communicate their messages to others, both within and outside of the organization, to maximize potential.

As an intern in the Communications Department, I helped by proofreading various documents containing vital information, which are to be disseminated among other members of the organization. This allows for smoother and better communication where there are less misunderstandings due to small spelling or grammatical errors.

I also wrote press releases, which are a part of the department's duties. Press releases are important for news outlets to base their news on, as they are an important source of information in regards to understanding what an organization is doing.

I have also participated in creating new events the organization had desired to launch. My work was to create a concept note as well as participate in meetings where ideas were brainstormed to further solidify the specific contents and the methodology of the work necessary to plan out the event and carry out said plans in due time.

1.3.2. Benefits to the Student:

The first problem my internship helped me to overcome was the fear of failing in a new environment. This fear is common among fresh graduates, but only through trial and error can a person truly learn and overcome their difficulties.

The second problem my internship helped me was with communication. I learned to adequately communicate my thoughts and suggestions to my seniors and supervisors and learned how to ask for help when I needed it.

Furthermore, I have gained valuable experience in working with people I am not immediately familiar with. This experience in working with others in a formal working environment is something I believe will help me immensely in future prospects.

1.3.3. Problems/Difficulties:

At first, it was hard to understand what exactly was required of me. The job specifications were vague enough that I felt lost on what exactly to do when my supervisors were not actively giving me work.

It was also hard to write press releases as I had no prior experience in this area. I had to learn about them first, then read the ones previously written by the department and slowly understand how to phrase sections with the language specific to the press releases the organization created. It took me a month to become accustomed to writing the press releases to a satisfactory degree.

1.3.4 Recommendations:

My recommendations to any intern doing an internship in the Communications department of BGMEA would be the following:

- Go around the office and try to become acquainted with at least the key members of the organization
- Communicate all issues with seniors and supervisors so they can help to the maximum degree
- Be mindful of the current environment and be vigilant when working
- Be polite and respectful
- Go in with the mindset to learn something, because the purpose of the internship is to have a learning experience above all

2.1 Introduction

According to the BGMEA official website, the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) is one of Bangladesh's largest trade organizations, representing the country's readymade garments sector. The association was formed in 1983. Since then, the BGMEA has evolved to look after an industry that is critical to Bangladesh's economic growth. BGMEA works with both domestic and international parties. Brands and development partners are among them, as they pave the path for Bangladesh's garment sector to grow further. At the time of writing, the BGMEA has roughly 4,000 registered garment manufacturers.

2.2 Overview of the Company

Bangladesh's RMG business currently contributes for roughly 84 percent of the country's overall exports. It has employed around 4.1 million people. BGMEA has been devoted to promoting and supporting advancement for the garment sector since its founding, including policy advocacy to the government, member services, and safeguarding employees' rights and social compliance at factories. BGMEA's headquarters are presently in Dhaka, Bangladesh, while its regional office is in Chattogram, Bangladesh. The organization now employs a total of 357 employees that provide services to members in the office.

Mission and Vision

As presented by the company on their official website, “*BGMEA envisions to forge a path for the RMG sector of Bangladesh to walk towards sustainable business by:*

- *Protecting and promoting the interest of the industry thereby ensuring a sustained growth in the foreign exchange earnings of the country.*
- *Establishing rights and privileges for the workforce, impacting their lives and society positively”*

Location of Operation:

As appropriately presented on their official website, the follow is their current location.

“BGMEA Head Office BGMEA Complex, House # 7/7A, Sector # 17, Block # H-1 Uttara, Dhaka - 1230, Bangladesh.”

Tel.: +88 01730442211

Email: info@bgmea.com.bd

Web: www.bgmea.com.bd

2.3 Management Practices

The organization's leadership style is democratic, where parties form within the organization before the voting process. The winning party creates a board of Directors, who then elects a President from the members of the winning party. A President's tenure is for 2 years, barring outstanding circumstances.

The organization releases circulars for recruitment and allows potential employees to sit for an exam. After this exam, promising candidates are selected and called in for an interview, where they are interviewed by a panel of directors.

The organization also uses internal sources when looking to hire employees.

The compensation system is simple. The employees receive monthly salaries, which are distributed in the first week of the new month. Furthermore, there are the fringe benefits of free lunch and tea/coffee on request during working hours.

Due to the nature of the organization as an association, there is no specific training program or initiation. The work is taught on the job and the departments work closely together and help each other as needed.

2.4 Marketing Practices

BGMEA is an association that deals with other businesses (making it a B2B business) and thus, does not have a dedicated marketing department. However, most of the work associated with marketing departments in any other given company are given to the Communications department. The marketing is based on representing the industries and firms currently working under the umbrella of the association.

The association essentially aims to market the RMG sector of Bangladesh to the international market, and to do this, they organize and hold various events and release various documents to the public so create transparency. An example of this is the Sustainability Report of 2020, released to the public by the association to create an understanding of the initiatives being

undertaken by the industry as a whole in regards to reducing carbon emissions, water consumption and creating a more sustainable environment.

2.5 Financial Performance and Accounting Practices

The BGMEA has a dedicated finance and accounting team that monitors and records all internal transactions. Furthermore, there has been definite growth in the company as more personnel are being hired and more foreign companies are investing in the industry itself. However, the financial statements of the organization are strictly confidential and I am not at liberty to discuss them.

2.6 Operations Management and Information System Practices

Employee's information is kept on local private servers, while information on data for sharing with stakeholders and clients do not exist, as they are not privy to sharing financial information with the public. However, due to the confidential nature of the system, I am not at liberty to discuss them.

2.7 Industry and Competitive Analysis

2.7.1 Porter's Five Forces Analysis:

Due to the specific nature of BGMEA as an association of garment factory and mill owners, the Porter's Five Forces analysis does not apply in a complete sense. Therefore, I will place the industry into a different kind of analysis through the internal structure of the system, thereby allowing an analysis of the different constituents of the Forces Porter had spoken of. To do this, we must first understand two key points. The first point is that the different Garments Associations of Bangladesh, such as BKMEA and BWMEA, are not in competition with each other, but rather exist in a mutually inclusive, cooperative and complementary way. The second point is that due to the reason BGMEA was first created and the contexts surrounding it, the organization will not have any substitutive threats. This is because the owners of different garments mills and factories came to create the Association for their specific needs. A separate association will arise only when these owners require it, and even then, it will exist in the aforementioned state within the industry.

- **Bargaining power of buyers: Low**

In this business, the buyer's negotiation power is limited. There are very few other associations that are on the level of BGMEA in Bangladesh. That is the main reason buyers, who are the different mill and firm owners, have low bargaining power as and they cannot simply be a part of another association.

- **Bargaining power of suppliers: Low**

Due to it being an association, the materials required to run the organization are not very niche and thus, can be easily obtained. This makes the bargaining power of suppliers very low, as the main component of the organization is the people working within it.

- **Threat of new entrants: Low**

The threat of new entrants in this sector is low. BGMEA has built the reputation and connections it has over many decades of work; any new entrants will have to overcome these obstacles to even catch up. And then can they work on becoming a competitive threat to the organization. There is also no need for a new entrant in the market, significant industry-wide shifts notwithstanding. Thus, the threat of new entrants is low.

- **Threat of substitutes: Low**

The threat of substitutes is low because there are no other organizations that provide the same benefits as BGMEA.

- **Competitive rivalry: Low**

There is no competition between firms as they exist in a mutually inclusive and complementary way. Members of one organization are also members of BGMEA, and they work with foreign buyers to ensure the collective interests of the owners of the garment's firms.

2.7.2. SWOT Analysis:

A SWOT analysis is a process by which a group (a) identifies internal and external performance promoters and demotivators, (b) analyzes those factors using contribution estimates to net value and controllability approximations, and (c) determines what future action the organization can take in response to those factors, according to Silber, Foshay, Watkins, Leigh, Moseley, James and Dessinger (2009). I will conduct a SWOT analysis of BGMEA here, so that the organization can be understood better. However, the same disclaimers that were applied to Porter's Five Forces need to be applied here as well.

- ❖ **Strength:**
 - **Expert Workforce:** The employees of BGMEA are all experts in their respective fields and work with each other in a tightly-knit hierarchy to ensure all proceedings occur smoothly and in a timely fashion.
 - **Small Size:** Compared to other conventional organizations, BGMEA has very few members, and thus can specialize and create an environment where there are less problems within the organization.
- ❖ **Weakness:**
 - **Small Size:** While the small size of the organization can be a net positive, it is also a weakness because, if a single member leaves or takes a leave of absence, the amount of work can become too great for the rest of the members to handle.
- ❖ **Opportunity:**
 - **Economic Growth:** In terms of economic growth, Bangladesh is now one of the world's fastest rising countries. Because of this, the association can more easily undertake the creation of different kinds of events such as an award for innovation by garments mills.
- ❖ **Threat:**
 - **Stigma:** Because there are no threats to the organization within the country because of the unique nature of the industry, this section will speak of international threats. The foreign industry is hesitant of engaging Bangladeshi suppliers as a result of several terrible occurrences such as the Rana Plaza catastrophe in 2013. This directly affects BGMEA's work as it prevents potential buyers from turning into actual buyers.

2.8 Summary and Conclusions

BGMEA is one of the very few organizations that plans and executes actions based on the further wellbeing of the country. The company has made significant progress and it is still progressing. They are still working to improve the efficiency and efficacy of their services and to provide the best possible service to the association's members. I believe their knowledge, assets and the visions of the previous Presidents of the organization make up the foundations of their long-term success.

2.9 Recommendations/Implications

BGMEA is doing well in their business. However, I have a few recommendations for the association.

- ❖ **Invest Into Research-Based Strategy:** Due to the weak foundation of the country in terms of research-based strategies, BGMEA would be able to employ much more effective strategies for the industry if they invest into scientific methodology-based research in the field.
- ❖ **Employ Stricter Policies:** As the RMG Industry is growing further and becoming an economic pillar of the country, there is a need for stricter policies that favour growth of the industry as a whole over favouring individual factory owners.

If these recommendations can be employed by the association, I believe they would be able to flourish further and stay within line of their organizational mission, vision and goals.

3.1 Introduction

Bangladesh's Ready-Made Garments (RMG) industry is one of the country's most important economic sectors. It is the world's second-largest exporter of garments in the world, only behind China. Bangladesh earned \$19.8 billion between July and November of FY22, which is 13.27 percent more than the objective of 17.47 percent, according to the Export Promotion Bureau (EPB). The garment industry grew by 22.97 percent from July to November of FY22, compared to the same period the previous year. During this time, garment exports totaled \$15.85 billion, a markup from \$12.89 billion in the same period of FY21. However, Bangladesh being the second largest RMG industry, produces large amounts of waste and this presents concerns for the environment, as well as opportunities of new revenue stream and competitive advantage (CA). Considering the recycling of waste, circular economy (CE) is a new business model that replaces or complements the traditional linear business model. This is founded on restorative and regenerative processes to reduce CO₂ emission, water consumption and harmful chemical wastes that adversely affect the environment (Rana and Tajuddin, 2021).

According to RMG Bangladesh, the RMG industry has produced 100 million tons of pre-production waste in the year of 2021. Since a large volume of waste is unused in mainstream linear economy model, Bangladesh loses that value this pre-production waste could have gained and contributed to the cost of production. The creation of fabrics requires input of cotton or non-cotton materials. Thus, if the waste was used in making new fabrics, Bangladesh could have saved from importing that equal amount of cotton or non-cotton materials. From a financial point of view, the use of textile waste could have contributed to the production cost of maintaining the stream of RMG products in supplier-firms. Thus, it would have saved dollars that the national government otherwise pays for importing raw materials for making new fabrics.

Financial loss or gain is not the only consideration to view how CE of the pre-production waste from garments production could contribute to CA. The environmental consideration in view of sustainable production is also a critical concern, to which CE contributes, and for which Garment industry receives pressures from European Buyers. If pre-production waste is used to make new materials to create fabrics, the firms can reduce water consumption and CO₂ emissions, which European Buyers are focusing on to meet the regulative guidelines introduced by the EU and the UN in global value chain (GVC). According to Rana and

Tajuddin (2021), the CE model can attain both water consumption and CO2 emission reduction.

According to a study conducted by the Circular Fashion Partnership, if cotton waste was recycled locally, imports would drop by 15%, saving the Bangladeshi government half a billion dollars that would have been spent on cotton imports. This can be facilitated through the implementation of a CE in Bangladesh. Bangladesh has likely the most in-demand and recyclable garbage of any nation that makes clothing, according to Global Fashion Agenda. However, the majority of this waste is now being exported and/or downcycled. As a result, the Bangladeshi RMG sector has a significant chance to become a pioneer in circularity by expanding the country's recycling capacity, producing greater value from waste streams, and ensuring the business's long-term sustainability in terms of climate change.

However, not all suppliers are equally capable. Some have the vision and necessary technology while some have adequate managerial capabilities. All suppliers do not tend to possess equal capacity and resource condition in adopting CE model. Suppliers' organisational and internal resource factors (i.e., finance, managerial & technological skills and vision) affect how these firms can make use of pre-production waste in their production system, which currently follows the linear business model. Given the existing technological and organisational capability that the suppliers of different sizes have, there is a need to explore *how suppliers perceive CE; meaning whether they are interested in or how they can adopt the CE model, to adopt the usage of pre-production waste to gain CA, and how the adoption of CE can contribute to gain CA in the relationship with buyers in GVC*. My project will focus on this research question.

The adoption of CE requires strategic decision and resource capability, while the internalisation of the entire CE system within a firm's ownership requires the suppliers to establish new plants for dismantling pre-production waste to convert to new threads and fabrics. Having it within the ownership structure can provide more CA but it would depend on the size and the capability of the suppliers. The other option of adopting CE is through the third-party sub-contract, though the financial gain from CE through this method may not gain full scale CA. However, understanding all these dynamics requires investigation on supplier-firms, and to do so, I aim to interview three suppliers of different sizes and capabilities (large, medium and small) to draw an in-depth insight on the research question mentioned above.

To understand how this can be applied to the RMG industry, first, I would like to discuss the production and consumption cycle where waste is produced most. Pre-production waste is the fabric waste that is created during the cutting-making-trimming (CMT) process. Presently, the pre-production waste is sold to local markets in areas such as Narayanganj and Mirpur, from where they are either sold to other buyers who can dismantle the waste into fibre, or to separate plants in India to dismantle, from where local buyers buy fabric to spin back into threads.

Post-consumption waste is the other side of the spectrum, which is produced by the buyers after the consumption of the product. Garments are thrown away or disposed of by consumers once they have fulfilled their utility, which buyers/retailers collect and send for further processing. Even though this can be another source of CE that contributes to CA for buyers and suppliers, my focus in this report will be to examine the CA gained by the utilization of pre-production waste due to time limitation and the complexity of the subject matter.

Thus, the focus of this report is to gain an understanding on how CE has the potential to increase the CA of firms within the garments industry through the utilization of pre-production waste in Bangladesh in the Global Value Chain (GVC) through a Buyer-Supplier Relationship (BSR) lens.

3.1.1 Literature Review

The focus of this research is on how CE can contribute to CA in the RMG industry in Bangladesh using pre-production waste. With that in consideration, the literature review has been organized into two sections.

First, the idea is to understand the concepts related to GVC activities and possibilities of using two types of garments waste, circular economy concept, competitive advantage in CE, and buyer-supplier relationships (BSRs) in GVC.

Second, in doing so, I will unfold the industry condition of Bangladesh so that this literature review can be placed into proper context.

1. **Understanding the Key Concepts:** GVC activities, CE, CA and BSR.

i. GVC Activities:

GVC primarily comprises of these activities globally dispersed: (1) research and new product development (R&D), (2) design, (3) production, (4) logistics (purchasing and distribution), (5) marketing and branding, and (6) services (see Figure 1).

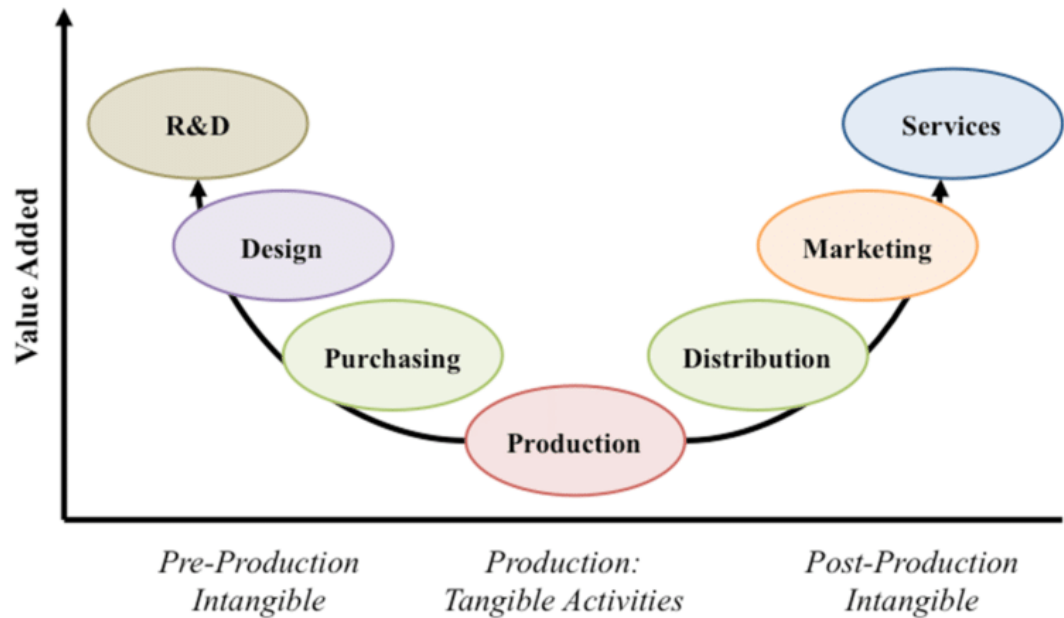


Figure 1: GVC primary activities globally dispersed.

Source: Fernandez-Stark, Frederick and Gereffi, (2011)

Circular economy is associated with all these activities, and it starts from R&D where the component development and process development segments are crucial. However, the design activity sets the foundation for circularity as to what sort of waste is being used for what kind of cloth and fashion, which eventually affects the production, supply chain, marketing and branding as well as services such as obtaining the used product from the customers and repairing the used product for extending its life cycle. The most striking aspect is that the intangible services that occur before and after the garment production process are the most critical value-adding phases, which demands us to broaden our perspectives on where the greatest gains can be made or the greatest wastes are generated in. These activities are described below.

- **R&D:** This value-adding activity includes companies that participate in R&D, activities related to enhancing the physical product or process, and market and customer research as well. For CE, the component and process development in relation to technology are the important aspects here.
- **Design:** This activity includes people and firms who supply aesthetic design, services, and goods and components along the value chain. Design and style actions are used to draw attention to a product, enhance its performance, reduce manufacturing costs and waste, and reuse the waste, all while giving the product a competitive advantage in the target market.
- **Purchasing/Sourcing (Inbound):** This activity includes the inbound procedures of acquiring and shipping textile items. Physically moving items as well as managing or supplying supply chain coordination technologies and equipment are all part of it. Internal and international collaboration can be part of logistics as well. In case of CE, how suppliers would source the waste, what sort of waste (pre-production or post-consumption), and which sources to collect them using are the important for consideration here.
- **Production/Assembly/Cut, Make, Trim (CMT):** Fabric or knit clothes is cut and sewn by apparel makers, or knit apparel is knit directly from yarn in this stage. The cut-and-sew industry includes a wide range of companies that make whole lines of both ready-to-wear and custom clothing. Apparel manufacturers can be contract suppliers of western buyers or buyer may internalise suppliers in its ownership. In case of CE, it is important to consider how much circular activities the buyer would perform in-house and how much activities of the value chain the supplier would perform in-house. For CE, one additional task is to collect the garment waste or second-hand cloth and dismantle them into fibre, and make threads and fabrics from there. Therefore, many value addition activities are involved in the production stage.
- **Distribution (Outbound):** This activity includes the apparel is distribution, where it is marketed through a network of wholesalers, agents, logistics businesses, and

other enterprises that provide value-added services outside of the manufacturing process as well.

- **Marketing and Sales:** This segment includes all activities and companies related with pricing, selling, and distributing a product, including branding and advertising. For CE product, retailers add up a sustainability aspect in branding the product and gain competitive advantage.
- **Services:** This encompasses any form of activity that a company or industry delivers to its suppliers, buyers, or employees, usually as a strategy to differentiate itself from its competitors in the market. However, for CE, this includes how retailer would collect the used cloths from the consumers or how it can provide services for repairing the used cloths to extend its lifespan.

ii. *Circular Economy in Bangladesh's Garments Industry:*

To understand how CE can affect Bangladesh's RMG industry, we must first understand what CE is. According to Geissdoerfer and Savaget (2017),

“Circular Economy is defined as a regenerative system in which resource input and waste, emission, and energy leakage are minimised by slowing, closing, and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling.”

According to the Ellen MacArthur Foundation (2015),

“A circular economy is one that is restorative and regenerative by design and aims to keep products, components, and materials at their highest utility and value at all times, distinguishing between technical and biological cycles.”

From the above definitions, we can infer that CE is an economic model that maximizes economic performance and minimizes ecological loss at the same time. The focal point of CE is how it promotes regeneration of natural resources while reducing the impact of climate change and enhancing economic gain. It is an economic system that substitutes the idea of "end-of-life" with recycling, reducing, recovering, and reusing resources in the manufacturing, distribution, and consumption processes.

So how does CE give the RMG industry of Bangladesh CA? To answer this question, we must first establish the connection between CE and the UN Global Sustainability Agenda. There are a total of 17 Sustainable Development Goals established by the UN. Of these, goals 12 to 15 are directly related to CE.

Goal 12. Ensure sustainable consumption and production patterns

Goal 13. Take urgent action to combat climate change and its impacts

Goal 14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Since the institutions in the global North (i.e., USA, Canada, Europe, The UK) have begun to change their regulations in line with the UN sustainability agenda to attain the SDGs, the governments of these countries are pushing the global brands/buyers to focus on attaining environmental and social sustainability. In this regard, CE is the best alternative that many global brands, such as H&M, Inditex, KiK, Better World Fashion, etc., have adopted.

Every global brand, given its internal capabilities, tends to adopt CE, fully or partially, that fits it with an aim to build a system to restore and regenerate natural resources and gain economic advantage while contributing to the greater society through employment creation, clean water supply and green production (Kirchherr, Reike and Hekkert, 2017).

Furthermore, according to Ghisellini, Cialani, and Ulgiati (2016), the practices propagated through the implementation of CE have the potential to both boost and contribute to climate action and mitigation by restructuring inefficient energy and resource supply chains, and extracting the maximum value from a product or service from its conception to its ultimate end. Through the application of CE, firms in Bangladesh can gain CA on the global market by helping buyers to attain SDGs. This is because global brands/buyers in the North are under pressure to attain the climate change agenda by 2030 as per European Union policy. Due to this, they are pushing their suppliers in the global South (i.e., Bangladesh, India, Cambodia, Vietnam, Sri Lanka, China) to reconfigure their production process.

We know that buyers tend to control the design, quality and branding and sales in the apparel global value chain while the sourcing of raw materials, production and packaging of garments are controlled by the suppliers with relational contracts with brands in the global South

(Hoque and Rana, 2020; Rana and Allen, 2021). As a result, due to buyer's demands to adopt CE to attain reduced CO2 emission and chemical waste, they need their suppliers to reconfigure their production process and have plants and factories use pre-production waste to make new garments from the waste-generated fabrics. The production network of global brands is dispersed across countries, mostly in the global south, and this is why the global value chain perspective is considered when looking into the circular production of apparel between buyers and suppliers of apparel production and how the adoption of CE by buyers can give CA to suppliers as well as buyers in the GVC (Gereffi, 2021).

Focus on gaining CA has been ignored in the literature with the exception of a case study by Ivang and Rana (2018). Their study shows how a company from Denmark called 'Better World Fashion' producing leather jackets sell globally. Their product is produced from the old leather apparels that consumers returned to them. However, their study illustrated the brands/buyer's perspective and the CE, and how the brand retailer in the global North can gain CA in its business model using CE concept. I will instead focus on supplier's perspective in my study to complement the gap in the literature.

iii. Competitive Advantage

Competitive advantage was defined as "the leverage a business has over its competitors in the same industry, which manifests the ability of a firm to exploit the opportunities in a market and neutralize the competitive threats" by Sigalas and Pekka (2013).

CA, according to Porter (1985), is the capacity to perform at a higher level than other organizations in the same industry or market due to particular traits and resources. The fundamental attributes that firm need to have to gain CA are the 'ability to differentiate', 'unique resources' (management and marketing capability, technological capability) rare factor inputs, inimitable inputs/process or capabilities. Due to unique, rare, valuable, and inimitable resources or skills, a company is said to have a CA when it is adopting a value-creating strategy that is not being applied by any existing or future competitor at the same time (Barney 1991). We can, therefore, derive that CA means the advantage a firm obtains through attributes and resources it possesses, which allows it to exploit market opportunities, neutralize threats and perform better than competitors within the same industry.

To gain CA, a firm can adopt one of four competitive strategies from a CE perspective.

1. **Cost Leadership:** Through the adoption of CE, a firm can reduce the operation costs for them to produce garments. This in turn will give them CA over firms that do not have CE.
2. **Product Differentiation:** Green products are currently being demanded by consumers. Through the adaption of CE, firms can differentiate themselves from other suppliers on the market by offering products that have been produced through environmentally friendly means.
3. **Focus Strategy:** The demand for green products by buyers is currently on the rise and will eventually stop being niche. Thus, this point does not apply to the RMG industry.
4. **Legitimacy Strategy:** Through the adoption of CE, firms can gain legitimacy (i.e., acceptance) to buyers, local and global institutions considering SDGs (Rana and Tajuddin, 2021; Rana and Sørensen, 2021).

However, not all firms are equally capable of implementing CE and gaining this CA. This depends on their Sustainability Capability (SC). This can be done through the application of the Circular Economy Mediated Sustainability Capability Measurement (CEMSCM) model proposed by Rana and Tajuddin (2021). However, it must be noted that, while firms that do not use the CE can also measure the level to which they possess SC using this model, this may entail subjective bias and would thus not be as accurate since this framework was intended to be used alongside CE.

iv. Buyer-Supplier Relationships

How CE creates CA in the GVC is a matter of how the buyer-supplier relationship is organized. Buyer-supplier relationship in GVC tends vary in terms to conditions.

One, value creation complexity and two, value activities along the value chain. Both conditions in the BSR influence CA; although who can gain how much CA depends on how and to what extent these conditions favour one party in the relationship.

Value creation complexity derives from how complex the product is which the supplier needs to manufacture, and what sort of involvement buyer has in the value creation process that supplier's carryout. If many different components are required to manufacture a product or if product-design requires not only several components but also the complex process, technologies, and higher degree of buyer's involvement, suppliers in that need to have dynamic capabilities and unique technology capability to exploit CA. However, if supplier have all these attributes, it can have a unique capability to gain sustainable CA. The same

applies to the buyer. However, the buyer would require having more, and in some cases, in-depth involvement with the suppliers, particularly in the component selection and process development for production. In that case, if the buyer can get the suppliers ready by knowledge sharing and collaborative governance, it can gain a high level of CA in both production and supply chain, which can leverage the buyer to have price and quality benefits in marketing.

Since CE is based on re-generative inputs, these attributes for buyer and suppliers in GVC would be little bit different than that of linear business model that the suppliers currently pursue. Thus, the CA that suppliers can gain would require to pinpoint with proper reasoning. While defining CA in the context of CE, we need to bear in mind the climate change perspective and sustainability in addition to cost and complexity as well.

Supply chain and CE are connected. Buyers control the downstream and drive the upstream activities. To achieve pre-production recycling, buyers need to develop a be-fitting relationship with their suppliers in terms of technology and knowledge sharing as well as long term commitment. For post-production, they need to jump through the hoops of sending back products to suppliers and that enhances more complexity in manufacturing and governance, which I do not tend to focus on in this study.

If the technology is not present, the supplier will be unable to comply. Internal capability of a supplier and supporting industry with policy in the country is a pre-requisite to gain CA in CE in GVC. The more value is added, the more CA they may get provided all the factors support the process.

2. Introduction to Apparel Industry in Bangladesh

The RMG sector of Bangladesh has seen immense growth in recent years. In 2020, it was recorded that there were over 4.2 million workers in the industry, of which 2.5 million are female and 1.8 million male workers.

According to the BGMEA Export Performance for 2021, this industry accounted for 81 percent of Bangladesh's overall export revenues in fiscal year 2020-21, with RMG exports alone accounting for 31.45 billion USD.

The industry currently has almost 5,000 garments factories at present, the vast majority of which are owned by private companies.

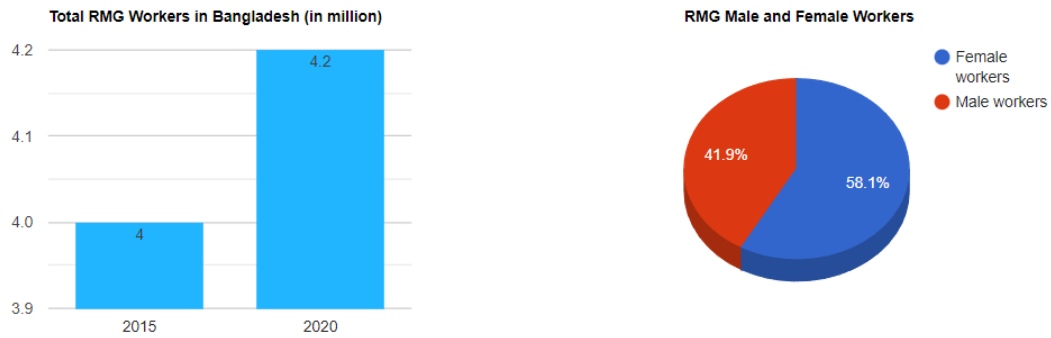
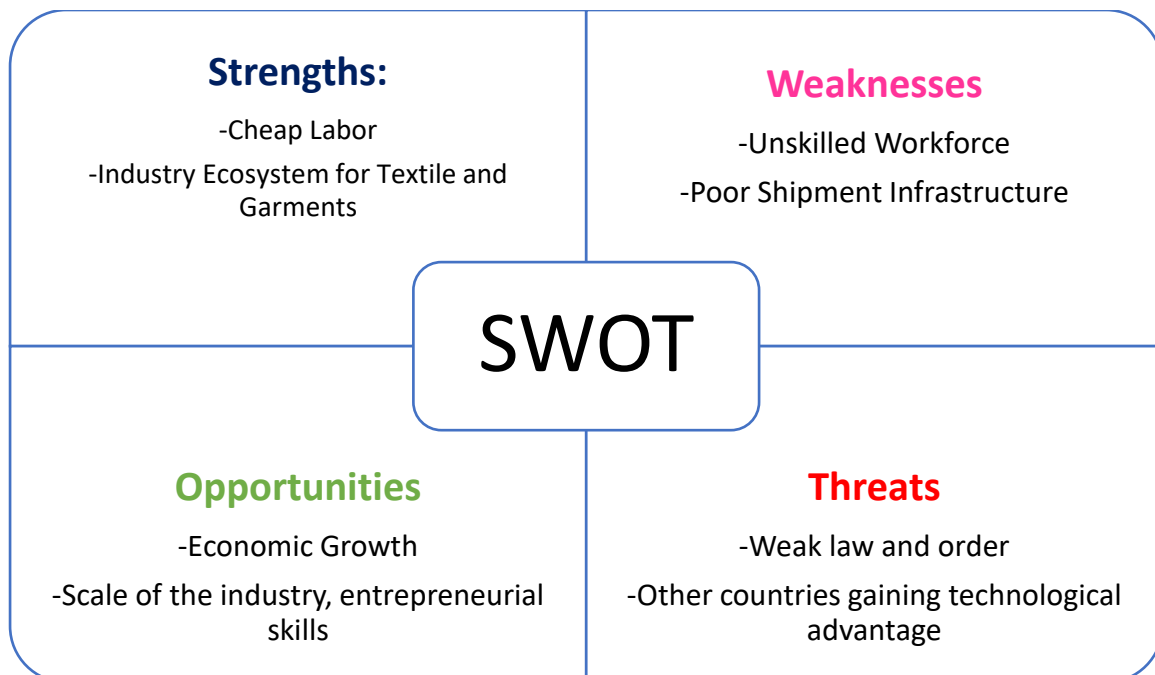


Figure 1. RMG Workers Growth & RMG Workers Gender Ratio

Source: *Business Inspection BD (2021)*

I have conducted a SWOT analysis to present the current state of Bangladesh's apparel industry. The SWOT analysis will be first put into prose first, and then put into a conventional 2x2 matrix, where each matrix will contain bullet points of the respective sector.

- i. Strengths: Cheap Labor, Industry Ecosystem for textile and garments
- ii. Weaknesses: Unskilled workforce and poor shipment infrastructure
- iii. Opportunities: Economic Growth, scale of the industry and entrepreneurial skills of business owners
- iv. Threats: Weak law and order, and other countries gaining technological advantage



3.1.2 Objective

The purpose of this report is to do a preliminary investigation and analyze how CE affects SMEs in the GVC and creates CA. Based on findings, I present recommendations for Bangladesh's RMG sector on achieving CE. However, due to the time constraints of the internship period, COVID-19 restrictions and limited access to resources, an in-depth analysis is not possible. Only theoretical arguments can be presented.

3.1.3 Significance

The findings of this report can be used to create a discussion on Bangladesh's RMG factories and gain an understanding of their capability and readiness in regards to the implementation of CE into their system. They can also be used to further research into this field as there is a critical lack of qualitative and quantitative study on this topic. Various companies can try to follow the recommendations present in this report to attempt to gain competitive advantage as well.

3.2 Methodology

The goal of this section is to explain how the studies were done for the purposes of this report. Due to the scope of this report, investigations were conducted only on the Suppliers side of the spectrum.

Primary data was collected through conducted interviews with respective managers of three suppliers of different sizes in the RMG industry of Bangladesh (large, medium, and small).

I used "semi-structured" interview over phone as this would yield the most gains on research question despite time constraints. BGMEA secretariates provided me assistance in securing interviews with the managers at different garment companies. I have prepared a set of guidelines for the semi-structured interview, which were to direct the interviewee throughout the interview. Due to its nature, the questions may alter as the respondents answer them. Therefore, the semi-structured interview structure also introduces a form of freedom, as the researcher is allowed to probe, clarify and ask follow-up questions and structure the interview as it goes forward (Barriball and While, 1994). The interviews aimed to investigate various

different aspects of the respective firms in order to obtain an understanding of the firm’s capabilities and whether they are willing to adopt CE when presented to them. In order to conduct the interview, topics relevant to the research were created in order to collect the essential data to answer the problem that lays within this research.

The general guidelines for the questions are attached as follows:

1. Level of involvement with Circular Economy.
2. Usage of Spinning mill efficiency.
3. Pre-Production recycling.
4. Capability of re-using pre-production waste.
5. Does buyer demand circularity
6. Differentiation strategy of firm.
7. Current buyers.
8. Willingness to integrate CE into firm, given pros and cons.

For the purposes of this research, three interviewees were selected based on the type of enterprise they were employed at, which are Large, Medium and Small respectively. The purposively selected interviewees were knowledgeable personnel so as to reflect on my questions. The names of the company and the interviewees have been kept anonymous to maintain the confidentiality that was agreed upon prior to the start of the interview.

Theoretical arguments were derived from the collected and compiled data.

Due to the current COVID-19 restrictions and constraints imposed on the creation of this report, the scope of research done was not exhaustive and leaves room for further investigation.

3.3 Findings and Analysis

I present different dimensions of CA that how CE can derive from the BSR in GVC that the supplier can attain. These dimensions are derived inductively based on my interviews with the interviewees and consulting BGMEA secretariates as well as reading related secondary documents.

Table 1: Summary of Interview data codes.

Firm	Size	Interest in CE	Level of Involvement with CE	Current Usage of Spinning Capacity	Pre-production Waste Recycling	Buyer Demands CE	Buyer values CE as Differentiation Strategy	Current Buyers	Will ingness to integrate CE
Alpha	13,500	Yes	High	Fully Utilized	Outsourced in Bangladesh	Yes	Yes	H&M	Yes
Beta	2,000	Yes	Low	Partially Utilized	Selling out	Yes	Yes	KiK	Yes
Gamma	25	Yes	High	Outsourced	Buying pre-production waste from open market and using in production	Selling garments to local markets	Yes	Local retail brands	Yes

❖ The findings (see Table 1) show that all the firms, regardless of size, are interested in and have a positive attitude towards CE. The Firms that have buyers that demand and pressurize for CE are prone to adopt CE. Where the buyers are not pressuring suppliers on climate change issues and circularity, the firms are somewhat reluctant.

❖ In the case of small type of firms, they are using pre-production waste to develop garments and supplying to the local market and are also considering supplying internationally through online means. CE is considered to be the point of differentiation for them to position to foreign market while CE provides a cost leadership for the approach in local retailers. These small firms have lack of resources to supply to large buyers.

- ❖ During the interviews with the managers of these firms, I discovered a pattern within them. The manager of Alpha spoke of high involvement with the implementation of CE in their current linear business model. He said that the company is currently outsourcing their pre-production waste to other companies where they are dismantled and converted to fiber. They then bought back this dismantled fiber and spun it within their own spinning mills into new fabric. He further added that the company is in the process of creating a mill where they could dismantle pre-production waste, thereby decreasing the extra costs incurred during the outsourcing process.

- ❖ In the case of Beta, it was found that they did not have much involvement with CE in their production cycle and instead sold their pre-production waste to the local market.

- ❖ Gamma, on the other hand, bought this pre-production waste alongside other kinds of fabric waste from the local market, use those waste-fabrics and make new cloths from them, then supply to the local brands and retailers.

- ❖ When discussing the current usage of their spinning mill capacity, the manager of Alpha had said that their mills are being fully utilized, as they were using them to spin fabrics using both raw materials and recycled materials. In contrast, Beta is underutilizing their mills as they were selling their pre-production waste, while Gamma is buying the pre-production waste from the waste-market and use them as raw material for making new cloths.

- ❖ The manager of firm Alpha said that their buyers placed considerable pressure on them to create less carbon emissions and use less raw materials in the manufacturing of garments. To meet the demands, Alpha is currently taking steps to further integrate CE into their current linear business model. Beta on the other hand is unable to fully comply with these demands, and their buyers, while interested in circular products, do not press them for compliance. They sell their pre-production waste to gain a small advantage over their competitors. Gamma is in a unique position in this scenario, because they buy this pre-production waste to introduce it into the local market through local brands. Because they can buy the fabric at a lower cost and

produce the clothes at reduced cost, they can sell the clothes at a lower cost as well, giving them a competitive advantage over other firms that do not possess the same circular capability.

❖ All three firms showed high willingness to adopt CE into their linear business model and showed a high level of understanding of the competitive advantage it provided them.

Thus, it depends on how firms use their resources and have their strategy lead to how a firm can enjoy CA from CE in their business. We can see that buyers play a crucial role in how suppliers can be motivated to adopt CE.

From the above discussion, I have derived three dimensions of CA from CE that suppliers can gain in apparel GVC. They are presented next.

Dimensions of Competitive Advantages from Circular Economy in Apparel GVC:

i) **Supplementary channel of profit, cost competitiveness and cost leadership in manufacturing:**

When circularity is added to the current linear production system of business, the Suppliers can utilize the existing spinning and manufacturing facilities to use the wastage for garment production. This can provide a new revenue stream for suppliers in addition to the linear production that they currently have. Since they can gain additional financial returns from using wastage, this contributes to overall cost competitiveness of the supplier. And thus, the supplier can go for lower price in the linear production while they gain additional revenue from the circular production and sale. And thus, they can gain competitive advantage compared to other suppliers that do not adopt circular economy.

Furthermore, if the firms internalize CE production, it will enhance the value chain, and the existing values relating to component manufacturing would be fully utilized and become complementary to CE model of production. However, if they externalize the textile waste process, then it may be hard to gain CA because every firm could do the same from the same factories.

ii) **Green Differentiation through CE Adoption:**

Suppliers, by adopting the CE system, can differentiate its capability of manufacturing linear and circular products. So, they can be perceived as more attractive to buyers, because buyers are under pressure to reduce CO₂ and water consumption due to EU regulation and UN SDG goals. This will also allow suppliers to have more bargaining power on price with buyers. Buyers can perceive suppliers as green, and thus the supplier can gain competitive advantage through bargain.

iii) **Global Legitimacy Earning:**

When suppliers can have full value chain for circularity on pre-production and post-consumption waste, it will gain high reputation for attaining sustainability in its operation. This has a spill-over effect in suppliers' legitimacy to buyers. In that case, more buyers will be attracted to the same suppliers and thus the supplier can ask for a higher price due to the sustainability that it addresses through operation and higher global legitimacy.

However, suppliers of different sizes would have different implications in how they could attain these dimensions of CA in CE. It is because of their internal resources and capabilities (finance, organizational, managerial and technological) and the degree of control they have over the foreign buyers vary widely (Rana and Tajuddin 2021).

3.4 Summary and Conclusions

To summarize, the findings of the analysis on the effect of CE on CA in the GVC for the RMG Industry of Bangladesh can be seen in three points, which are (i) Supplementary channel of profit, cost competitiveness and cost leadership in manufacturing, where the firm gains a competitive advantage against other firms in the same industry through reduction of the cost and gain an extra channel of earning through CE, (ii) Green Differentiation through CE adoption, where the differentiation strategy of the firm is the supply of green and circular products, which adds value to the product, allowing the firm to gain competitive advantage against other firms in the same industry, and (iii) Global legitimacy earning, where firms will

gain a competitive advantage as it can provide products manufactured through circularity, thus gaining legitimacy in the eyes of other global buyers.

However, we must recognize that not all firms are equally capable of incorporating CE into their manufacturing system. Their size, resources, the managerial capabilities, policies, strategy, etc., all must be taken into account when factoring their compatibility with circularity.

I have further observed that the RMG Industry is a buyer-driven industry, as the market shifts according to the demands of the European Buyers the suppliers need to reconfigure their capabilities and operations. As the buyers require Bangladesh's suppliers to adopt CE, the suppliers have begun to think and act to adopt circularity in operation and strategy. Thus, when the buyer demands, the supplier will drive to adopt CE.

3.5 Recommendations

From our findings, I can recommend the RMG Industry of Bangladesh to fund the creation of more waste dismantling mills within the country so that manufacturing costs can be reduced further in circular production.

The introduction of technology that can sort different kinds of fabrics in pre-production waste is also highly needed, as there is a current absence of it.

The introduction of new policies by the government that can encourage the garments mill owners to create mills and factories for dismantlement of waste fabrics will also help the industry move forward immensely.

Further studies should also be conducted in this area with more investigation on firms considering supplier perspective of the GVC. Further quantitative and qualitative studies are needed to make headway into new grounds in this topic.

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