



Alternate Futures for the RMG Industry in Bangladesh

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About the H&M Foundation

The H&M Foundation is an independent non-profit global foundation for public good, headquartered in Stockholm, Sweden. This foundation is privately funded by the Stefan Persson family, founders and main owners of the H&M Group. Founded to accelerate the realisation of the UN Sustainable Development Goals 2030, H&M Foundation uses collaboration and innovation to co-create, fund and share solutions for the world's most urgent challenges. To help safeguard the welfare of humanity, the Foundation is catalysing the fashion industry to become planet positive and accelerating development for inclusive societies. Breakthrough innovations and findings are openly shared for anyone to adopt and scale, in order to contribute to systems change. The H&M Foundation can also provide emergency relief.

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About the Collective Impact initiative for Female Garment Workers in Bangladesh

The H&M Foundation is currently running a long-term programme to prepare female garment workers in Bangladesh for a future where the textile industry is defined by automation and digitalisation, in order to safeguard their livelihoods. To this end, the Foundation is equipping and empowering female garment workers through appropriate training for new roles, undertaking broader initiatives to improve the enabling environment for female workers' career progression and employability, and co-designing holistic activities together with a diverse group of stakeholders, including local organisations, entrepreneurs, innovators, public agencies, and academia.

The Asia Foundation, a non-profit international development organisation, is playing the role of the backbone organisation to lead this initiative and coordinate the activities of all the intervention partners. The Asia Foundation has deep local expertise in good governance, women's empowerment and gender equality, inclusive economic growth, environment and climate action, as well as regional and international relations.

To learn more, please visit: [asiafoundation.org](https://www.asiafoundation.org)



CONTENTS

Introduction	01
Scenario Framework	04
Scenario Narratives	08
Implications for Stakeholders	24
Call to Action	27
Appendix	28
Endnotes	46
Acknowledgments	50

Foreword

Bangladesh's ready-made garment (RMG) sector today faces an uncertain future. For years, the RMG sector has been at the forefront of the country's economic transformation, becoming a global export leader. However, its RMG success story is now under threat; in 2026 it will lose preferential trading access to key markets after it graduates from the status of a Least Developed Country (LDC). As a lasting legacy of the COVID-19 pandemic, international apparel brands are also starting to turn away from their global supply chains and looking towards regional production hubs, close to their consumers. Automation and digitisation are gaining prominence, leading to significant improvements in productivity, but at the cost of potential large-scale job losses. Over 60% of the RMG workforce may be made unemployed by 2041. Women workers, who currently dominate the sector, are most at risk and are overrepresented in low-paid and low-skilled jobs.

The pandemic has also damaged Bangladesh's overall economic outlook. Amidst uncertainty about access to vaccines, new COVID-19 waves and further societal disruption, it is unclear whether Bangladesh will return to its pre-pandemic prosperity, as economic growth and employment levels remain disconcerting.

The H&M Foundation is committed to supporting the Bangladeshi RMG industry's future evolution, with the primary goal of safeguarding the livelihoods of female garment workers. In doing so, we are affirming our mission of using philanthropy to further the development of inclusive societies, safeguard human welfare, and catalyse the fashion industry to become planet positive. Core to our culture of innovation, we believe in disrupting traditional systems and creating nimble and agile solutions to the problems in front of us. The uncertainties characterizing Bangladesh's female garment workers require pioneering and creative approaches by donors and implementers when designing interventions. That's why we are moving away from traditional donor relations and have started co-creating solutions that address the root causes of inequality and centre equality.

This strategy aims to create systems change in the long-term and bring gender equality into the factory floor.

Scenario planning, which is still nascent in global fashion and philanthropy, is exactly the approach we need to be more effective in driving change. By stretching our thinking and being data-driven, scenario planning allows us to envision the multiple divergent and plausible futures in which our interventions might be operating, identify opportunities for impact, and ensure that we are appropriately prepared for these futures.

Through its Collective Impact initiative, the H&M Foundation is already utilising the results from this scenario planning exercise. We are in the process of co-designing future-sensitive holistic activities together with a diverse group of stakeholders, focused on equipping Bangladeshi female garment workers through appropriate training for new roles, and undertaking initiatives to improve the enabling environment for female workers' career progression and employability.

Ultimately, we believe that for change to truly occur, it is important that our insights are operationalised by others quickly and at scale. We, therefore, hope that you can leverage our findings to further shape the future of Bangladesh's RMG industry. We look forward to collaborating in the future.

- Charlotte Brunnström and Fernanda Drumond, The H&M Foundation



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INTRODUCTION

What is the current situation for the RMG industry in Bangladesh?^a

Bangladesh's economy has grown by nearly 15 times since 1980¹, leading to a significant reduction in the number of people living below the poverty line. An increasing proportion of Bangladesh's population now belongs to the middle class, projected to reach 40% by 2026².

The country's workers increasingly live in urban areas³, leaving their rural hometowns and villages for bustling metropolitan cities like Dhaka and Chattogram. This has coincided with a reduction in the number of individuals employed in agriculture, and the rising prominence of the services sector. In 2020, 28 million individuals were employed in Bangladesh's service sector, compared to 27.4 million individuals who were employed in agriculture⁴.

The RMG sector has played a critical role in Bangladesh's economic development, currently employing nearly 4 million people⁵, and contributing 14% to Bangladesh's GDP⁶. Today, it is undergoing a structural transformation alongside a changing global fashion industry.

Greater adoption of automation has transformed the manufacturing processes followed by Bangladesh's RMG factories. Large and medium-sized factories are leading the adoption of more advanced and cutting-edge production technology, to expedite the pace of production and reduce order lead times⁷.

The sector is also witnessing consolidation with international brands opting for longer-term strategic contracts with fewer, but larger RMG factories. Large factories now account for over 60% of Bangladesh's total RMG export value⁸.

a Refer to Appendix C for a deep-dive into trends, driving forces, and events shaping Bangladesh

The tastes and preferences of global fashion consumers are changing. The COVID-19 pandemic contributed to the growth of online apparel shopping, moving sales away from retail outlets⁹. Gen Z consumers are environmentally conscious, adopting sustainable fashion choices, seeking to lessen their carbon footprint¹⁰.

These changes are percolating to the international apparel retailers. With a data-driven, customer-centric approach, retailers are making data-driven sourcing decisions to boost agility and reduce order lead times¹¹. In addition, 32 major apparel retailers signed the 2019 Fashion Pact, committing to a set of shared environmental-sustainability objectives. Retailers have also utilised a focus on sustainability as a competitive advantage, often launching an increasing number of sustainable fashion products and positioning themselves as specialised sustainability players¹².

International apparel retailers have also been embracing near-shoring practices. With regional hubs like Mexico and Turkey gaining prominence and becoming more cost-competitive, some retailers in the U.S and E.U find it logistically easier and economical to procure apparel from these geographically proximate locations¹³. Near-shoring is disadvantageous for Bangladesh's RMG industry, which has relied on these key markets for 80% of its export demand over the years¹⁴.

Bangladesh has been losing competitiveness as a global RMG exporter. Vietnam has inched past Bangladesh to occupy the position of the world's second-largest RMG exporting country after China. Vietnam boasted of USD 28 billion annual RMG exports in 2020, compared to Bangladesh's USD 27 billion exports value¹⁵. A diverse product mix of over 10 types of complex apparel, as well as potential benefits from preferential trade access to US and EU markets, has bolstered Vietnam's competitive position.

Why scenario planning?

According to Peter Schwartz, a leading futurist, "Scenarios give us a new, shared language that deepens our conversations about the future and how we can help to shape it". Scenario planning starts by identifying forces of change in the world, and then combining these forces in different ways to create a set of rich, data-driven stories about how the future may unfold. These stories help capture what it would be like for individuals, an organisation, or community to live in these futures. As these scenarios are hypotheses and not future predictions, they are utilised in multiple stories to showcase a range of possibilities, positive and negative, expected and surprising^{16, 17}.

Scenario planning provides organisations a framework to proactively recognise and adapt to change over time. Organisations can use this tool to stress-test their current strategies and plans under different scenarios, refine their strategies to improve resilience, and institute mechanisms to track indicators of changing operating contexts¹⁸.

The underlying factors affecting Bangladesh's RMG industry, such as the rate of adoption of automation among suppliers and preferential access to key export markets, are uncertain. As a result, scenario planning prepares for a range of potential scenarios that might unfold in the future.

The H&M Foundation is currently running a long-term Collective Impact initiative to prepare female garment workers in Bangladesh for an increasingly automated and digital future in the RMG industry. To ensure that the interventions aimed at improving the employability of female workers are future-sensitive, a scenario planning exercise was undertaken to understand how Bangladesh's RMG industry might evolve by 2030.

What is the focal question?

To understand the evolution of Bangladesh's RMG industry by 2030, the following focal question was identified for this scenario planning exercise:

How might the RMG industry in Bangladesh evolve over the next ten years?

In other words, how would the structure of the industry change by 2030? What products would global consumers demand and how would their preferences affect RMG stakeholders such as suppliers? What would be the impact of these changes on the international competitiveness of Bangladesh's industry in the future?

SCENARIO FRAMEWORK

Selecting critical uncertainties

Several trends will continue to shape the landscape of Bangladesh's RMG industry over the next ten years.

For example, Bangladesh is highly likely to continue to transition to a digital economy, given that this is a global trend. Internet, smartphone, and social media penetration has risen rapidly in Bangladesh and will continue to do so in the years to come.

The country's RMG factories are already transitioning towards the use of more advanced production technologies. Although the pace of this change is unclear, it is reasonably certain that garment production will become more automated in the next 10 years.

These trends will certainly impact the evolution of Bangladesh's RMG industry. However, as these trends are pervasive across all scenarios, they cannot be used to differentiate between potential future scenarios.

Scenarios are developed based on 'uncertainties' — trends or driving forces that are highly relevant to the focal question, but have uncertain future outcomes that cannot be controlled, due to the multitude of factors or stakeholders involved. We cannot predict what these outcomes will be in the future.

We have developed the scenario framework as a 2x2-matrix diagram to provide a structured method of understanding a future where two 'critical uncertainties' evolve together. From a long-list of uncertainties developed through stakeholder consultations^b, we selected two 'critical uncertainties', which had the highest degree of uncertain outcomes, and the highest potential impact on Bangladesh's RMG industry.

^b Refer to appendix A for our overall scenario planning approach

Each of the two selected critical uncertainties is presented as an axis on the scenario framework and has two divergent endpoints or possibilities. When combined, four distinct and plausible scenarios are created for the evolution of Bangladesh’s RMG industry.

Uncertainty #1: Relative competitiveness of Bangladesh’s RMG sector



This critical uncertainty focuses on the attractiveness of Bangladesh as an apparel sourcing destination, compared to other major RMG producers e.g., China, Vietnam and India.

In a world where the relative competitiveness of Bangladesh’s RMG sector is low, Bangladesh no longer remains among the top three RMG exporting countries. It also ranks amongst the bottom 100 in the global ease of doing business index^c.

In a world where its RMG sector is highly competitive, Bangladesh ranks among the top three RMG exporting countries. It also ranks amongst the top 90 in the global ease of doing business index.

The relative competitiveness of Bangladesh’s RMG sector significantly impacts Bangladesh’s total RMG export volume, the profitability of Bangladeshi RMG suppliers, and the total size of the workforce. It is also uncertain as it is dependent on a range of uncertain factors, including Bangladesh’s pace of automation relative to competitor countries, and its ability to negotiate preferential trade agreements post its graduation from LDC status in 2026.

Uncertainty #2: State of global fashion



This critical uncertainty refers to the type of fashion demanded by consumers in the future - affordable fast fashion in popular styles that consumers can easily replace or high-value and durable apparel in classic and timeless styles, that consumers can use for a longer period.

c Refer to appendix B for information on indicators and signposts for each uncertainty

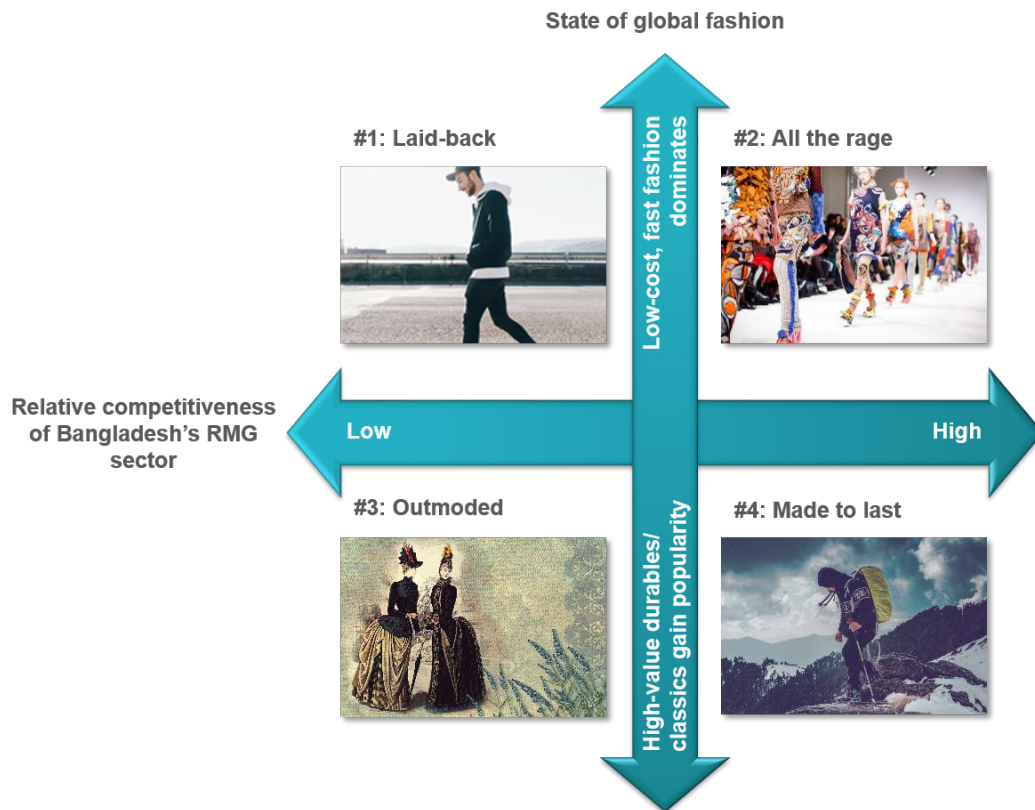
In a world where low-cost fast fashion dominates, consumers on average spend less than 60% of their waking hours at their homes per day. They require more apparel as a result of greater time spent outdoors and at in-person events, and spend less than or equal to USD 15 for each apparel purchase.

The converse is true in a world where high-value durable apparel is popular. Consumers spend a lot more time at their homes, and as a result of this, their purchase of new apparel is limited, but they spend a higher amount on each apparel purchase.

Global consumer tastes and preferences in the future are beyond the control of Bangladesh’s RMG industry and cannot be easily predicted. However, they have several fundamental implications on Bangladesh’s RMG sector, including the types of materials sourced, apparel pricing, product diversification, and workforce skill requirements.

Scenarios for the RMG industry in 2030

Once the uncertainties mentioned above are combined on the two axes, four scenarios representing the future evolution of Bangladesh’s RMG industry are generated:



Laid-back — In a world where even though low-cost fashion, which is historically Bangladesh's stronghold, dominates, Bangladesh RMG still loses competitiveness. The country is not proactive enough to maintain its competitive advantage, as other countries have stepped up by investing in product diversification and automation

All the rage — Bangladesh dominates international fast fashion markets and is an in-fashion sourcing destination in the global fashion industry, creating trendy clothes that are in vogue among consumers. The RMG sector now completes buyers' orders in under a record three weeks, supported by its timely adoption of automation. It now produces more complex garments and styles, using various fabrics

Outmoded — Bangladesh's RMG industry has lost relevance in a changing world where consumers prefer high-value and durable apparel, and buyers prefer working with multi-competent suppliers. The sector continues to rely on low-cost labour-intensive production, while its competitors have significantly invested in automation and backward linkages for sustainable fabrics

Made to last — Bangladesh's RMG sector reaps the rewards of its early and proactive investments in automation and backward linkages, successfully adapting to a changing world. Asian consumers have taken to Bangladesh's homegrown fashion brands, while buyers view the country as a key sourcing destination. Bangladesh retains its dominant position in global RMG production

SCENARIO NARRATIVES



Scenario #1: Laid-back

In the early 2000s, few could have predicted how the rapid growth of supply chain and communication technology would shape the world of fashion globally. Today in 2030, physical stores are no longer dominant in many parts of the world. The COVID-19 pandemic gave consumers, particularly in high-income countries, the impetus to abandon retail stores and move towards shopping from the comfort of their homes. Many consumers across the world now instantaneously purchase their favourite products online through virtual stores. Each consumer has a digital avatar that exactly matches their physical characteristics, and allows them to try out products in a digital fitting room. Predictive analytics utilise a consumer's unique shopping history and social media activity to recommend upcoming fashion trends and brands that may interest them. Augmented reality eyewear allows customers to immediately obtain information about products that they see people wearing on the streets.

Customer purchasing power and financial independence have increased significantly over the last decade. The global middle class has risen to more than 5 billion people this decade, buoyed by emerging economies like Indonesia, Turkey and Brazil. The rapid advancement in technology, particularly the emergence of the metaverse and improved access to high-speed internet, has ensured that individuals in every remote corner of the world have access to healthcare, education, and financial services. Entrepreneurship and innovation have created employment opportunities for consumers globally. Consumers' vastly increased earning potential and disposable incomes have driven up demand for the latest technology and fashion trends.

As the COVID-19 pandemic receded in 2023, individuals across the world rushed back to offices. In-person events, like music festivals and sports competitions, returned with renewed vigour. After a prolonged period of lockdowns, consumers began spending increasing amounts of time outside their homes and resumed international travel. The prospect of flaunting one's fashion choices on social media has encouraged consumers across age groups to frequently purchase new clothes and experiment with new fashion styles. Influencers on Instagram and TikTok have popularised the 'outfit of the day' trend, to showcase the season's latest fashion collections. Newly financially independent



Gen Zs now desire cheap apparel that can be easily discarded as fashion trends change, and therefore consider affordable pricing to be a key factor when making purchase decisions. However, given that they value sustainability, these consumers prefer purchasing garments made of recycled fibres.

Large international apparel brands, such as Shein, continue to embrace fast-fashion and dominate global apparel markets. They successfully launch an average of three low-cost garment collections per month that closely match current fashion trends, by using data-driven and consumer-centric decision-making. An online-first approach and an increased focus on artificial intelligence and data analytics has enabled them to reduce overhead costs and improve their speed in bringing new apparel collections to the market. They rely on their young customers and select influencers to post videos on social media describing the products they have purchased, to attract additional customers.

Although these brands depend on a diverse group of global suppliers, they are selective about sourcing apparel from suppliers who have demonstrated multiple competencies. In particular, brands prefer suppliers who are equipped with advanced production technology, have the capability to produce a diverse basket of goods, and have set in place efficiencies in production processes, labour, costs and order lead-time. Many Bangladeshi suppliers have not been able to meet these requirements and have failed in renewing their partnerships with their buyers.

As a result, Bangladesh's competitiveness as an RMG exporter has been affected. The exchange rate has appreciated, and the country has lost its preferential access to key trading partners after graduating from LDC status in 2026. As a result, Bangladesh is no longer exempted from trade duties and trade quotas. It has not been able to secure new preferential trade agreements with the US or the EU, despite their trading history with Bangladesh. It has also been held back by poor-quality public infrastructure and inadequate policy support from the government. Frequent power and gas shortages increase lead times and the costs of production for Bangladeshi suppliers. Higher congestion and inefficiencies at the Chattogram port affect the timely shipment of apparel. New government projects aiming to ease infrastructural bottlenecks have been delayed. Government subsidies and tax incentives have not targeted the RMG sector.

Bangladeshi suppliers have also been slow to adopt advanced production technologies, and a majority of them have only automated the processes of cutting and spreading. They lack awareness of available advanced machinery, and perceive them to be unaffordable compared to labour. A national focus on labour-intensive production has led to limited technology transfer through foreign direct investment. Bangladeshi suppliers instead rely on a primarily low-skilled workforce that utilises basic sewing machines to manufacture apparel, which limits their productivity compared to their international counterparts. Bangladeshi suppliers also lack product diversification. They do not produce complex garments and styles, and only use synthetic materials, with little attention paid to consumer sustainability concerns.



Consequently, many countries like China, Vietnam, Turkey and Cambodia are more competitive as RMG exporters. Vietnam has reduced its lead-time by improving backward linkages and investing in advanced production technology, and has diversified its product offerings. China has leveraged its global infrastructure development strategy Belt and Road Initiative for preferential trade access with the EU. The Belt and Road Initiative currently includes 160 countries and adds US\$ 4 trillion to global GDP annually. While Bangladesh continues to rely on the import of fabrics from other countries, China has invested heavily in the production of low-cost synthetic fabrics, used as raw materials by its RMG industry.

Bangladesh's society has been impacted by its weakening RMG sector. Falling export demand has led to significant unemployment; the overall RMG workforce has reduced from 4.2 million to 2.5 million. Urbanisation has weakened as a result, given that workers are no longer moving to major urban centres like Dhaka and Chattogram at the same rate as before.

Bangladeshi suppliers' focus on minimising labour costs has also led to a limited focus on worker welfare and poor working conditions in factories. Garment workers receive variable-pay contracts, low wages, long working hours, and have limited exit options due to their low skill levels. Female garment workers are especially deprived of upward progression opportunities and are severely underrepresented in managerial and leadership roles, resulting in them being paid significantly lower than male garment workers. Female garment workers also lack access to childcare facilities, and adequate gender-sensitive toilets in factories, and frequently face harassment from their supervisors.

Ultimately, Bangladesh has lost out on multiple fronts due to its laid-back approach.












HEADLINES WE MAY SEE IN THE FUTURE

2022-24	2025-27	2028-30
Social media frenzy bumps up sale of fast-fashion retailers	OOTD: “Outfit-of-the-day” trend on social media gives rise to throwaway fashion	The monster in our closet: fast fashion waste doubles in 5 years
Fast fashion graveyards in Chile and Ghana	Need for speed: from fast to ultra-fast fashion	China invests in textile recycling as brands look for at-scale solutions after successful pilots
Poor business ranking turns investors skeptical of Bangladesh	Vietnam achieves highest RMG labor productivity due to automation investments	BDT remains overvalued
Bangladesh RMG sector denied export subsidies	Poor infrastructure hurts Bangladesh’s hopes of achieving double-digit economic growth	No new jobs in RMG for Bangladesh’s youth
RMG sector can either hate it or prepare for it, because 4IR can no longer be ignored	No new investments in Bangladesh’s RMG sector	Graduation from LDC proves detrimental to Bangladeshi RMG

WHO BENEFITS AND WHO LOSES OUT

	WHO BENEFITS 	WHO LOSES OUT 
 Suppliers	Smaller Bangladeshi factories <i>Able to retain their market share due to limited consolidation</i>	Larger Bangladeshi factories <i>Unable to maintain their partnerships with large brands</i>
 Apparel buyers	International brands <i>Able to retain their global dominance</i>	Local homegrown brands <i>Unable to appeal to consumers in key markets e.g., Asia</i>
 Products	Low-cost fast fashion <i>Currently desired by global consumers, given large wardrobes</i>	High-value durables or classics <i>Not currently in demand due to their high prices</i>
 Apparel sourcing destinations	Turkey, Cambodia <i>Capture Bangladesh’s global RMG market share</i>	Bangladesh <i>Loses market share to competing countries</i>
 Workers	Low-skilled workers <i>Basic machine operation skills are still valued in the RMG sector</i>	High-skilled workers <i>Multi-machine operation skills do not command high wages</i>



Scenario #2: All the rage

Today in 2030, prosperity and optimism have taken over the globe. After claiming millions of lives and disrupting daily living, the COVID-19 pandemic subsided in 2023 and is now a thing of the past. Over the last decade, consumer incomes and purchasing power have greatly risen across the world. Emerging economies such as Indonesia and Philippines in Asia, and Egypt and Nigeria in Africa, have contributed to the exponential growth of the global middle class. Many Gen Zs have come of age and are revelling in their newfound financial freedom, spending their disposable income on premium products, such as organic food and the latest technology gadgets. New employment opportunities have been created because of widespread access to high-speed internet and the emergence of the metaverse, which has pioneered the growth of innovative companies in a range of sectors, including fashion, transportation, and entertainment.

The return to normalcy has encouraged individuals to spend greater time outside their homes and attend events in person. Regular office routines have returned, and events like expositions, conferences, exhibitions and concerts draw huge crowds. A rise in revenge tourism has caused international travel to surpass pre-pandemic levels. As a result, global consumers prefer to change their wardrobes frequently and purchase new clothes, using each item no more than 10 times.

Apparel shopping has become increasingly online-first. Although certain low income and lower-middle income countries in Asia and Africa still have a strong physical retail presence, online sales now account for nearly 60% of global apparel sales. Virtual stores have become commonplace; smartphone cameras are used to scan consumers' physical profiles and provide customised clothing recommendations. Augmented reality eyewear can now simulate a catwalk, allowing consumers to visualise their products in 3D. Virtual stores are integrated with prominent social media platforms such as TikTok and Instagram, allowing influencers and customers to display their chosen outfits to their virtual communities, as they purchase them.

Consumers continue to value low-cost fast fashion, but remain focused on sustainability. Pricing is a key driver for them when purchasing apparel, to help them quickly refresh their wardrobes as fashion trends change. However, consumers prefer clothing made of recyclable fibres such as organic cotton and recycled polyester. They are also conscious of brands' climate footprint, and desire transparency from brands regarding their sustainability practices.

International apparel brands dominate the apparel sourcing market, and face limited competition from local homegrown brands. International brands have made significant investments in artificial intelligence and data analytics to help them keep pace with rapidly evolving consumer preferences and trends, allowing them to launch three fresh collections per month. They rely extensively on influencers to attract additional customers, providing them with free products in exchange for social media posts. These international brands also continue to frequently source from Bangladeshi

suppliers. They regularly engage in local industry forums with various Bangladeshi RMG stakeholders, discussing their changing sourcing requirements and the sector's competitiveness.

Bangladesh's RMG suppliers have gained a reputation for producing affordable and stylish clothes, while employing innovative new methods of production. Suppliers have rapidly adopted advanced machinery, across the functions of production as well as order and inventory management, leading to a significantly reduced order lead-time of under three weeks. Fully automatic sewing machines manufacture high-quality apparel and embellish them with pockets, buttons and collars. Greater digitisation has led to the establishment of a real-time interactive interface, to help plan production based on buyers' rapidly changing order quantities. Performance monitoring systems spot bottlenecks in the production line and improve workers' efficiency. Suppliers are also producing more complex garments and styles, and utilising recycled fibres, which have appealed to international brands.

Although China remains a market leader, Bangladesh's RMG exports have rapidly grown because of preferential market access, upgraded infrastructure and investments in automation. Even though Bangladesh lost preferential duty-free access to key markets after graduating from LDC status in 2026, its exchange rate has depreciated. It has also renewed bilateral trade agreements with the US, EU, Canada, India and Australia. To facilitate international trade and logistics, the government has rapidly launched new infrastructure projects like deep sea ports and high-speed expressways within the country. Existing infrastructure has been upgraded to improve its efficiency and reduce the shipment time of apparel. While Turkey and Cambodia's competitiveness have fallen because of poor levels of automation, Bangladesh's timely investment in advanced production technology has significantly driven its growth.

An unfortunate downside of this growth has been the increased degradation of Bangladesh's environment. The RMG industry has become the largest polluter of Dhaka's watershed because of the increased production of dyed and bleached synthetic fibres. Subsidised investments in clean energy have reduced this sector's use of fossil fuels for production, but climate change remains a significant reality. Extreme climate events such as heatwaves and cyclones have increased in frequency, and have begun to create internally displaced individuals across Bangladesh.

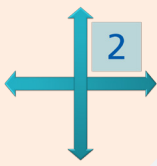
Bangladesh's working population has benefited from the RMG sector's success. The RMG workforce continues to be large, employing 4.2 million individuals. Workers continue to move to Dhaka and Chattogram from rural areas, in search of employment opportunities. Although male garment workers are still dominant, Bangladesh's RMG sector today offers greater new opportunities to female garment workers in advanced machine operation, which has improved the overall female labour participation rate. Women have access to government-sponsored upskilling initiatives focused on machine operation skills and on the production of complex garments and styles.



Garment workers who have survived the RMG sector's automation now benefit from higher skills and increased wages. They receive full-time employment contracts with social security benefits and have reduced working hours. Female garment workers face reduced gender discrimination. The wage gap between male and female garment workers persists, but has decreased marginally to 20%. Female garment workers who demonstrate competency in advanced machine operation are better able to advance in the sector. These workers also have improved access to gender-sensitive facilities at factories, like adequate toilets and on-site childcare facilities.

Ahead of its competitors on all fronts, Bangladesh is all the rage in garment production.












HEADLINES WE MAY SEE IN THE FUTURE

2022-24	2025-27	2028-30
Tik-tok made me buy it!: Social media fuels fast fashion	Virtual try-ons boost sales for online retailers	Low-cost, recycled fibers are winning hearts
Greenwashing in fast fashion is on the rise	Style that's sustainable: A new fast-fashion formula	Bangladesh hits unprecedented double-digit GDP growth
Slowly, but surely, Bangladesh climbs ease of business rankings	Bangladesh's first deep sea port inaugurated	Bangladesh RMG sees business opportunity in the global recycling revolution
4IR boosts Bangladesh RMG's speed to market	Renewed business environment attracts FDI in Bangladesh	Bangladesh's RMG sector becomes a frontrunner in transparent value chains
New competency-based curricula improves worker skills and productivity in Bangladeshi RMG	Bangladesh increases RMG exports to Australia and India	Bangladesh's women see attractive opportunities in the RMG sector

WHO BENEFITS AND WHO LOSES OUT

	WHO BENEFITS 	WHO LOSES OUT 
 Suppliers	Larger Bangladeshi factories <i>Increase their market share due to increased consolidation</i>	Smaller Bangladeshi factories <i>Unable to meet the costs of automation</i>
 Apparel buyers	International brands <i>Able to retain their global dominance</i>	Local homegrown brands <i>Unable to appeal to consumers in key markets e.g., Asia</i>
 Products	Low-cost fast fashion <i>Currently desired by global consumers, given large wardrobes</i>	High-value durables or classics <i>Not currently in demand due to their high prices</i>
 Apparel sourcing destinations	Bangladesh <i>Retains its competitiveness as an RMG exporter</i>	Turkey, Cambodia <i>Unable to improve their market share in global RMG exports</i>
 Workers	High-skilled workers <i>Multi-machine operation skills command high wages</i>	Low-skilled workers <i>Must adapt to the sector's new technological skill requirements</i>

Scenario #3: Outmoded

After a long drawn out global fight against the COVID-19 pandemic, normalcy finally returned in 2027. Vaccine nationalism gave way to vaccine diplomacy, providing thousands of individuals in low income and lower-middle income countries with the freedom to resume their daily lives. Today in 2030, the economic recovery of major markets like the US and EU has restored global economic growth. After years of economic turbulence, older Millennials around the world enjoy rising incomes and financial security. They are able to spend on leisure travel and home ownership, while still generating household savings.

Global consumers spend most of their time in their homes, after major industries such as IT and financial services have retained the work-from-home model adopted during the pandemic. New employment opportunities, driven by the emergence of the metaverse and improved access to high-speed internet, have allowed global consumers to build multiple sources of income from the comfort of their homes. Individuals across the world occupy various roles, including cybersecurity experts, data brokers, virtual store managers, and NFT strategists on the metaverse.

Global fashion has also transformed; apparel consumption has reduced by 50% in the last decade. Consumers require far fewer clothes and prefer a smaller but long-lasting wardrobe, comprising of high-value garments that mix durable basics and timeless, classic styles. A greater focus on sustainable fashion sees environmentally conscious millennials vet fashion brands based on their climate footprints. Consumers prioritise apparel made of natural and recycled fibres, and prefer brands that provide transparency on their sourcing practices and environmental impact. Influencers spearhead brands' marketing efforts and regularly create content on Instagram and TikTok relating to minimalism and sustainability.

Consumers continue to primarily purchase apparel online; physical retail stores are prominent only in low, lower-middle, and some higher-middle income countries. Instead, virtual stores have gained popularity; AI-based digital stylists provide consumers with personal recommendations on fashion products and trends, based on an individual's price range and physical profile. Fashion collections available online are customised based on data analytics that reveal unique customer preferences in various geographies. Online platforms offer customers clothing subscription services, enabling them to rent a clothing collection for a monthly membership fee, while addressing their sustainability concerns.

Large international brands continue to dominate global markets, even as they face stiff competition from local and affordable homegrown brands that have risen in prominence. These brands have evolved based on the preferences of global consumers, and now launch less than five collections of higher-priced and long-lasting clothes per year. They source apparel from regional production hubs across South America, Eastern Europe and Asia, located near key consumption geographies such as

the US and EU, to ensure supply chain efficiencies. International brands are selective in sourcing from suppliers, prioritising suppliers who demonstrate a high degree of automation in their production processes, possess superior quality control mechanisms, and utilise sustainable and durable fabrics.

Many of Bangladesh's RMG suppliers have failed to meet these standards, as they were unable to adapt to changing consumer preferences in the early 2020s. Suppliers have not invested in sustainable production practices, and do not produce high-quality garments made with natural or recyclable fibres. Automated production is currently limited to cutting and spreading. Automation is perceived to be unaffordable compared to the cost of labour, as minimum-wage levels in Bangladesh remain low.

As a result, Bangladesh is no longer a leader in global RMG exports. Limited efforts have been made to promote the adoption of advanced production technologies; production continues to be labour-intensive, and technology transfers through foreign direct investment remain limited. International trade is also severely hindered by the country's poor-quality infrastructure — frequent power interruptions, increased port congestion, and delays in major infrastructure projects have increased suppliers' order lead times. At both the industry and the national level, a dearth of public and private investments has impeded Bangladesh's advancement as a global RMG exporter. There has been insufficient investment in backward linkages in the RMG supply chain or in developing sustainable production processes, such as the sorting of garments for recycling. Bangladeshi suppliers who want to produce garments made with high-value raw materials like natural fibres must rely on expensive imports. To make matters worse, Bangladesh's Taka has appreciated, and it has lost its preferential trade access to major markets after graduating from LDC status in 2026.

Conversely, competitors such as Cambodia, Turkey, China, Vietnam and India are now key regional production hubs for international brands. These countries have pivoted to advanced production technologies, which allow suppliers to manufacture apparel of various cuts and styles and to produce high-value garments such as women's wear and kids' wear. Investments in backward linkages have enabled their suppliers to focus on sustainable fabrics, while superior quality control processes have ensured that their products remain durable.

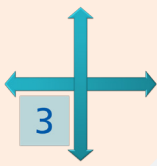
A faltering RMG sector has adversely impacted Bangladeshi society. Many garment workers have been rendered unemployed, as the majority of Bangladesh's RMG factories have closed. The RMG sector now contributes less than 30% to Bangladesh's annual export earnings and employs fewer than a million garment workers. Laid-off garment workers have been forced to return to their native villages from RMG clusters in Dhaka and Chattogram, while they search for new employment and skilling opportunities in other sectors.

Garment workers who have survived these changes experience worsening working conditions. They continue to receive variable pay contracts, and are paid reduced wages and overtime allowances for

longer working hours, as surviving factories face extreme cost pressures. However, they have few exit or growth opportunities as they remain low-skilled. Female garment workers are especially affected. Increased pressures on worker productivity have led to higher verbal and physical harassment of female garment workers by supervisors, who are still predominantly male. Gender-sensitive facilities, such as child care and female-friendly toilets, are severely limited. Trade unions have limited bargaining power and influence on these conditions, given the sector's reducing employment base and the constant threat of being laid off.

A former industry leader that has failed to adapt to a changing world, Bangladesh has been outmoded.












HEADLINES WE MAY SEE IN THE FUTURE

2022-24	2025-27	2028-30
Work from home becomes the norm, lowers clothing demand	#repeatyourclothes takes social media by a storm	From two releases a month in 2020 to six releases a year in 2030 – the new face of fashion!
European consumers are demanding more durable garments	Local brands win as consumers reject fast fashion	Local over global: fashion's new adage
Fast-track projects not so fast in Bangladesh	Mexico and Vietnam are leading hubs for apparel brands. Bangladesh is no longer the golden child.	Bangladesh's trade deficit and external debt are at an all-time high
A warren of bank scams goes unpunished	BDT position weakens as economy struggles	Bangladesh exits top-10 garment exporters' list
With 4IR knocking on the door, is Bangladesh RMG ready?	No new investments in Bangladeshi RMG	Mass layoffs continue in wake of Bangladeshi RMG sector's decline

WHO BENEFITS AND WHO LOSES OUT

	WHO BENEFITS 	WHO LOSES OUT 
 Suppliers	<i>Not applicable</i>	All Bangladeshi suppliers <i>Face extreme cost pressures and reducing demand from buyers</i>
 Apparel buyers	International brands <i>Able to retain their global dominance</i>	Local homegrown brands <i>Growing in presence, but unable to outcompete international brands</i>
 Products	High-value durables or classics <i>Currently desired by global consumers, given small wardrobes</i>	Low-cost fast fashion <i>Not currently in demand due to at-home lifestyles</i>
 Apparel sourcing destinations	Turkey, Cambodia <i>Capture Bangladesh's global RMG market share</i>	Bangladesh <i>Loses market share to competing countries</i>
 Workers	<i>Not applicable</i>	All garment workers <i>Face constant threat of being laid off</i>



Scenario #4: Made to last

Today in 2030, the global economy is thriving, three years after the COVID-19 pandemic finally receded. Economic stability has been restored to the US and EU. Low and lower-middle income countries in Asia and Africa were finally able to vaccinate the majority of their populations, due to a coordinated global vaccine drive. Organisations like the IMF helped kick start these economies after years of struggle, through targeted humanitarian assistance, debt relief and grants. Older millennials around the world have been uplifted by their newfound financial stability, choosing to spend their disposable income on the latest lifestyle trends. The emergence of advanced technology such as artificial intelligence and augmented reality, coupled with widespread access to high-speed internet and the metaverse, has accelerated entrepreneurship and innovation around the world. Several startups have emerged across critical sectors such as education, agriculture, and transportation.

Global consumers spend most of their time at home, as work-from-home practices developed during the pandemic have continued. Upcoming technology startups rely on international teams, with employees situated in different parts of the world exclusively communicating virtually via Zoom. Lockdowns and frequent COVID-19 waves have also forced larger organisations across major industries to operate virtually, to safeguard the health and productivity of their workers.

Global fashion has been significantly impacted. Consumers require significantly fewer clothes and maintain smaller wardrobes, consisting of higher quality and long-lasting garments. Driven by sustainability concerns, they value timeless and durable clothes made of natural and recycled fibres. They assess brands based on their eco-friendly shipping practices, sustainability of packaging, and use of harmful chemicals. Consumers are increasingly open to buying second-hand, and identifying best practices from brands on how to increase the lifecycle of their purchased clothes. Social media platforms such as Instagram and TikTok play a crucial role in driving interest in sustainability; influencers and celebrities frequently advertise how their fashion choices are part of their daily efforts to reduce their climate footprint.

Global consumers primarily rely on online platforms to purchase clothes — online shopping accounts for 60% of global apparel sales. Virtual stores provide customers with avatars and allow them to visualise their products in 3D. Visual search tools enable customers to upload photos with their favourite styles, and provide customers with recommendations of products that match these styles. Online platforms are significantly integrated with social media — customers can invite their social media friends to view and rate their product wish lists, and are notified about what products they are purchasing.

International brands face increasing competition from local homegrown labels that offer apparel closely matching consumers' regional and cultural tastes. In response to changing preferences, international brands now roll out less than five fresh collections per year of more expensive, durable



and higher value-added apparel. These brands have also started sourcing from regional production hubs located near consumer geographies to ensure supply chain efficiencies. They prioritise suppliers that demonstrate vital competencies, including the use of sustainable and durable fabrics, a high degree of automation, and superior quality control mechanisms.

Bangladesh's RMG suppliers have successfully kept pace with the changing preferences of international brands. In 2022, they made early investments in advanced production technology and product diversification. They now use fully automated machinery to efficiently produce classic and timeless apparel in various cuts and styles. They have also focused on developing fibres made from natural sources, backed by extensive government-sponsored research and development efforts. Their investment in natural fibres made of banana and pineapple has made Bangladesh a pioneer in the manufacturing and use of innovative natural fabrics at scale. These fabrics are durable and soft, and rival synthetic fibres like polyester, or other recycled fabrics like linen. Several mature Bangladeshi RMG suppliers have been inspired by their success to create their own homegrown fashion brands, which are now directly retailing across Asia. The 'Made in Bangladesh' label on apparel is widely considered a hallmark of its unparalleled quality.

Bangladesh has retained its dominant position in the global RMG industry, despite facing competition from Cambodia and Turkey — both of which benefit from their proximity to key markets. Automation has played a key role in Bangladesh's success; the Digital Bangladesh initiative has attracted increased foreign direct investment, which has boosted technology transfers. Bangladesh also enjoys preferential access to major markets after inking bilateral trade agreements with several countries such as the US, EU, Australia and Japan. These agreements, coupled with a depreciating Taka, have ensured exports remain competitive despite Bangladesh's exit from LDC status in 2026. Sustainability has been a critical differentiator for Bangladesh's RMG sector. Its backward linkages in natural and recycled fibres have reduced its dependence on expensive imports, while investments in recycling capabilities have ensured that recyclable garments are appropriately sorted. Factories also use greater amounts of renewable energy, due to national investments in solar and hydropower plants, in response to increased threats posed by climate change.

The success of Bangladesh's RMG industry has had varying implications on Bangladeshi society. A higher value of RMG exports has led to a high GDP growth rate. However, income inequality and regional disparities have worsened as urban, high-skilled workers have gained a wage advantage. Rapid automation has caused the RMG workforce to shrink to 2 million workers. Female garment workers have been disproportionately affected and most have not been given opportunities to learn advanced machine operation skills. Overall female labour force participation in Bangladesh has reduced as a result, as many female garment workers have been forced to return to their home towns in rural areas.

Female workers remaining in the RMG sector are adversely affected by the worsening representation of women in supervisory and managerial roles in factories. This has led to widening gender pay gaps that see them being paid 30% less than their male counterparts. Female garment workers continue to endure high levels of harassment, given their diminished roles and value in a changed sector that is run by male supervisors and managers.

Male garment workers face a diametrically opposite experience. Many of them retain their roles in RMG factories in Dhaka and Chattogram, and are provided with the training they need to adapt to an increasingly automated world. They now benefit from increased wage levels because of their higher skill grades, are awarded full-time employment contracts and social security benefits, and enjoy reduced working hours.

Riding on the back of greater worker welfare, advanced automated production and cutting-edge innovation, Bangladesh's RMG industry proves that it was made to last, much like the apparel it creates.












HEADLINES WE MAY SEE IN THE FUTURE







2022-24	2025-27	2028-30
Think trademark, not trend: consumers shop consciously	Back to basics: natural fibers' major comeback	Luxurious minimalism: the changing definition of 'in-fashion'
Could hemp be the strong and sustainable future of fashion?	Capsule wardrobes: the cool new social media trend	Made in Bangladesh is a status symbol in Asia as local, homegrown brands lead the way in high-quality styles and garments
Bangladesh's GDP bounces back to pre-pandemic levels	As ease of business advances, Bangladesh hits unprecedented double-digit GDP growth	Bangladesh leads the way in sustainable garment production
Bangladesh RMG attracts foreign investments	Bangladesh government encourages innovation by supporting 4IR focused startups	Bangladeshi RMG workforce is in demand internationally!
100% digital wage remittance achieved in Bangladeshi RMG sector	Bangladesh is ahead of competitors in automation	

WHO BENEFITS AND WHO LOSES OUT








	WHO BENEFITS 	WHO LOSES OUT 
 Suppliers	Larger Bangladeshi factories <i>Increase their market share due to increased consolidation</i>	Smaller Bangladeshi factories <i>Unable to meet the costs of automation</i>
 Apparel buyers	Local homegrown brands <i>Increasingly competitive in global apparel sales</i>	International brands <i>Lose market share to local homegrown brands</i>
 Products	High-value durables or classics <i>Currently desired by global consumers, given small wardrobes</i>	Low-cost fast fashion <i>Not currently in demand due to at-home lifestyles</i>
 Apparel sourcing destinations	Bangladesh <i>Retains its competitiveness as an RMG exporter</i>	Turkey, Cambodia <i>Unable to improve their market share in global RMG exports</i>
 Workers	High-skilled workers <i>Advanced machine operation skills command high wages</i>	Low-skilled workers <i>Must adapt to the sector's new technological skill requirements</i>

IMPLICATIONS FOR STAKEHOLDERS

For each scenario, implications have been identified for policymakers in Bangladesh, workers' rights organisations, development organisations, skilling providers, RMG industry bodies, apparel buyers, and RMG suppliers:

		Scenarios			
					
		LAID-BACK	ALL THE RAGE	OUTMODED	MADE TO LAST
Policymakers in Bangladesh 	<ul style="list-style-type: none"> Support the development of social security schemes for garment workers, including financial assistance for workers during crises e.g., COVID-19 lockdowns 	<ul style="list-style-type: none"> Provide RMG factories with soft loans, tax incentives and subsidies, to enable them to further automate and expand production 	<ul style="list-style-type: none"> Identify high potential sectors that unemployed garment workers can be absorbed into, and support job creation in these sectors by providing emerging enterprises with tax incentives, subsidies, access to funding, soft loans etc. 	<ul style="list-style-type: none"> Mobilise funding, provide incubation support, and offer tax incentives for female entrepreneurs in STEM-related fields 	
Workers' rights organisations 	<ul style="list-style-type: none"> Organise advocacy meetings with Bangladeshi RMG suppliers, prominent international brands, and international labour rights organisations to highlight worsening working conditions 	<ul style="list-style-type: none"> Continue to engage with workers across RMG factories to ensure working condition improvements are maintained 	<ul style="list-style-type: none"> Organise advocacy meetings with Bangladeshi RMG suppliers, prominent international brands, and international labour rights organisations to highlight worsening working conditions 	<ul style="list-style-type: none"> Engage with RMG suppliers to advocate for increased female participation in the RMG sector, and brainstorm on existing obstacles and potential solutions 	

Scenarios

	 LAID-BACK	 ALL THE RAGE	 OUTMODDED	 MADE TO LAST
Development organisations 	<ul style="list-style-type: none"> Support interventions that facilitate cross-sector dialogue and coordination between RMG stakeholders e.g., industry forums, dialogue series 	<ul style="list-style-type: none"> Support interventions that facilitate the advancement of female garment workers, e.g., soft-skills training programmes and in-person coaching for high-potential female workers 	<ul style="list-style-type: none"> Support interventions that enhance the employability of unemployed garment workers, by developing upskilling/ reskilling programmes focused on job-specific skills for best-fit roles in new employment sectors 	<ul style="list-style-type: none"> Support interventions that provide female workers with skilling programmes catering to the RMG sector's advanced machine operation needs
Skilling providers 	<ul style="list-style-type: none"> Create curricula offerings targeted at roles in other labour-intensive manufacturing sectors (e.g., agro-processing, leather goods manufacturing) 	<ul style="list-style-type: none"> Regularly update curricula of existing RMG skilling programmes, to ensure alignment with frequently changing machine operation skill requirements desired by RMG factories 	<ul style="list-style-type: none"> Partner with development organisations to identify skilling needs for high potential alternative livelihood sectors, and develop related curricula 	<ul style="list-style-type: none"> Provide female workers with equitable access to RMG skilling programmes related to advanced machine operation
RMG industry bodies 	<ul style="list-style-type: none"> Organise technology expositions with advanced production machinery providers, to enhance awareness of these technologies amongst RMG suppliers and support their uptake 	<ul style="list-style-type: none"> Provide RMG suppliers with access to soft capital by linking them to relevant financial institutions, so that they can further expand production 	<ul style="list-style-type: none"> Coordinate with industry bodies in high potential employment sectors to identify alternative employment pathways for laid-off female garment workers 	<ul style="list-style-type: none"> Capture data on member factories' proportion of leadership/ managerial positions occupied by females

Scenarios



LAID-BACK



ALL THE RAGE



OUTMODED



MADE TO LAST

Apparel buyers



- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> Attend Bangladesh RMG industry forums and highlight how local RMG suppliers can enhance their international competitiveness | <ul style="list-style-type: none"> Retain a focus on worker welfare and maintenance of gender-sensitive facilities in partner RMG supplier factories | <ul style="list-style-type: none"> Attend Bangladesh RMG industry forums and highlight how local RMG suppliers can enhance their international competitiveness | <ul style="list-style-type: none"> Engage with RMG supplier partners on key obstacles and solutions relating to female participation in increasingly automated RMG factories |
|---|---|---|---|

RMG suppliers



- | | | | |
|--|---|---|---|
| <ul style="list-style-type: none"> Create a gender-inclusive work environment, by installing gender-sensitive facilities (e.g., female-friendly toilets) and creating pathways for high potential female workers to obtain managerial/ leadership positions | <ul style="list-style-type: none"> Retain a focus on worker welfare and maintain existing workplace norms and facilities | <ul style="list-style-type: none"> Connect laid-off employees to employment and skilling providers to facilitate their transition into other sectors | <ul style="list-style-type: none"> Support female workers in learning advanced machine operation skills by connecting them to relevant skilling programmes |
|--|---|---|---|

CALL TO ACTION

Ultimately, it is clear from our scenario planning process that the future awaiting Bangladesh, its RMG sector, and its female garment workers, is uncertain. We cannot predict how key uncertainties, such as the state of global fashion and the relative competitiveness of Bangladesh's RMG sector, will evolve by 2030. Yet, it is certain that there are continuing risks associated with the future. It is therefore essential that stakeholders resist the temptation to predict that one scenario is more likely to occur, and instead be open and aware of the multiple possibilities inherent to an uncertain future.

Existing interventions currently do not sufficiently prepare female garment workers for the various risks that an uncertain future brings, including the realisation of the worst-case scenario, 'Outmoded'. Critical intervention gaps exist, related to creating opportunities for female workers to advance in the RMG industry, preparing female workers for alternative livelihood opportunities, addressing gender norms, and improving working and living conditions.

Multiple stakeholders, including funders and implementers, can collaborate to safeguard Bangladesh's female garment workers, ensuring that future risks are accounted for, irrespective of the scenario that materialises. Successful collaboration will require stakeholders to work towards a common goal, coordinate their actions, and actively share learnings as they strive towards creating impact.

Sensing is the cornerstone of planning and pivoting for the future. In order for funders and implementers to remain nimble and agile, they must monitor key indicators and regularly track how the Bangladeshi RMG industry is evolving, modifying their interventions accordingly.

APPENDIX

A. Approach for scenario planning

From December 2021 to March 2022, the following activities were performed as part of this scenario planning exercise:

- 1. Background research and interviews** with apparel sourcing teams, stakeholders in the Government of Bangladesh, garment businesses, and think-tanks, to identify trends and uncertainties that may impact Bangladesh's RMG industry in the future
- 2. Virtual scenario development workshop** with key stakeholders, to capture key uncertainties affecting the RMG industry and surface initial scenarios facing the RMG industry by 2030
- 3. Identification of critical uncertainties** from the long-list of uncertainties identified in the virtual scenario development workshop
- 4. Development of a scenario framework for the RMG industry in 2030**, clearly identifying four relevant, plausible and divergent scenarios, including their names, deep causes, descriptions, and end states

B. Indicators and signposts

The following are proposed indicators and signposts of the relative competitiveness of the RMG industry^d.

Proposed indicator	Measurement			Current Value	Source for tracking indicator
	Unit	Duration	Frequency		
Preferential trade access to key markets (incl. US, EU, China)					
Active international trade agreements	No. of countries	Point in time	Annual	23+ (2020)	WTO
Ease of doing business/ efficiency of public infrastructure					
Ease of doing business index^e	Rank out of 190	Point in time	Annual	168th (2020)	World Bank
Corruption Perceptions Index	Rank out of 180	Point in time	Annual	147th (2021)	Transparency International
Annual FDI inflows	Billion USD	Y-o-Y	Annual	1.9 (2019)	World Bank Data
Rate of automation adoption					
Growth (%) in gross capital formation	USD / BDT	Y-o-Y	Annual, starting 2022	10% (2018), 8% (2019), 2% (2020)	World Bank Data
% of garment manufacturing activities that are automated	% of activities	Point in time	Every 3 years	8% (2020)	Pulse Automation Survey by Shimmy Technologies
Extent of brands' long-term engagement with suppliers					
% of suppliers with whom buyers have long term order commitments	% of suppliers	Point in time	Every 3 years	Negligible (2021)	Supplier surveys
Extent of product diversification					
Cotton-based items as % of RMG exports	USD / BDT	Y-o-Y	Annual	74% (2020)	BGMEA
Basic 5 items as % of RMG exports	USD / BDT	Y-o-Y	Annual	73% (2020)	BGMEA
Relative export competitiveness					
Ranking among RMG exporting countries	Rank	Y-o-Y	Annual	3rd (2020)	WTO Stats

d Indicators are variables that help us track the progress of critical uncertainties, and the emergence of future scenarios. Signposts assign values to each indicator by scenario, helping assess whether a particular scenario is emerging

e The Business Enabling Environment (BEE) project is intended to replace this index. In case timely data from BEE is not available, the Global Competitiveness Index by World Economic Forum is recommended as a proxy indicator

Proposed indicator	Value of indicator by scenario (or signpost)			
	Laid-back	All the rage	Outmoded	Made to last
Preferential trade access to key markets (incl. US, EU, China)				
Active international trade agreements	10–20 countries	20+ countries	< 10 countries	20+ countries
Ease of doing business/ efficiency of public infrastructure				
Ease of doing business index ^e	Bottom 100	Top 90	Bottom 100	Top 90
Corruption Perceptions Index	Bottom 100	Top 90	Bottom 100	Top 80
Annual FDI inflows	< USD 3 Bn	USD 3–5 Bn	< USD 3 Bn	> USD 5 Bn
Rate of automation adoption				
Growth (%) in gross capital formation	< 10%	10%–15%	< 10%	> 15%
% of garment manufacturing activities that are automated	< 30%	30%–40%	< 30%	≥ 40%
Extent of brands' long-term engagement with suppliers				
% of suppliers with whom buyers have long term order commitments	< 20%	20%–30%	< 20%	> 30%
Extent of product diversification				
Cotton-based items as % of RMG exports	≥ 60%	< 50%	≥ 60%	50%–60%
Basic 5 items as % of RMG exports	≥ 60%	< 50%	≥ 60%	50%–60%
Relative export competitiveness				
Ranking among RMG exporting countries	Exits top 3	Stays in top 3	Exits top 3	Stays in top 3

The following are proposed indicators and signposts of the state of global fashion.

Proposed Indicator	Measurement			Current Value	Source for tracking indicator
	Unit	Duration	Frequency		
Consumer preference to buy more/fewer clothes					
% of waking hours spent at home (per day average, all days)	No. of hours	Y-o-Y	Annual	50% (2019); 65% (2020)	American Time Use Survey
Time spent each day on laptops/desktops/tablets/ mobiles	No. of hours	Y-o-Y	Annual	5:36 (2012); 6:51 (2020)	GlobalWebIndex (GWI)
Consumers' price sensitivity					
% of consumers who use responsible production as a key purchasing criterion	No. of respondents	Point in time	Annual	16% (2019)	Pulse of the Fashion Industry, BCG
Prevalence of fast fashion					
Global apparel consumption (volumes)	Million tons OR billion units	Y-o-Y	Annual	62 million tons (2015); 107 billion units (2016)	Eurostat/ Euromonitor International
Average price per unit of apparel	USD (2016 constant prices)	Y-o-Y	Annual	USD ~13 (USD 1.34 trillion/ 107 billion units) (2016)	Euromonitor International

Proposed indicator	Value of indicator by scenario (or signpost)			
	Laid-back	All the rage	Outmoded	Made to last
Consumer preference to buy more/fewer clothes				
% of waking hours spent at home (per day average, all days)	< 60%	< 60%	≥ 60%	≥ 60%
Time spent each day on laptops/desktops/tablets/ mobiles	< 5 hours	< 5 hours	≥ 5 hours	≥ 5 hours
Consumers' price sensitivity				
% of consumers who use responsible production as a key purchasing criterion	≤ 40%	≤ 40%	> 40%	> 40%
Prevalence of fast fashion				
Global apparel consumption (volumes)	≥ 100 million tons OR ≥ 100 billion units	≥ 100 million tons OR ≥ 100 billion units	< 100 million tons OR < 100 billion units	< 100 million tons OR < 100 billion units
Average price per unit of apparel	≤ USD 15	≤ USD 15	> USD 15	> USD 15

C. Trends, driving forces and events

The following are the key trends and driving forces that shape the broader ecosystem of Bangladesh. These factors, categorised as social, technological, economic, environmental and political trends, impact the overall landscape within which Bangladesh's RMG sector is positioned.

SOCIAL TRENDS AND DRIVING FORCES

Increased urbanisation and congestion of metropolitan cities

Urbanisation is increasing in Bangladesh, with 39% of the total population residing in urban areas in 2020 (compared to 24% in 2000). This has led to an increase in population density and congestion in the metropolitan cities

Bangladesh's urban population was 24% in 2000 and 31% in 2010. Bangladesh now has eight metropolitan cities, compared to just one in 1981, which are increasingly becoming more congested as the population density increases over time^{19, 20}.

Shift in employment from agriculture to industry and services

The share of Bangladesh's population employed in agriculture has reduced from 2000 and stagnated since, while the share of those employed in the industry and services sectors has increased. The services sector overtook agriculture as the top employer in 2020

The services sector employed 28 million workers in 2020, as against the 27.4 million workers employed in agriculture and the 14 million workers in the industry sector in the same year²¹.

Rising female labour force participation rate

Bangladesh's female labour force participation rate is significantly higher than its South Asian peers. While the proportion of women employed in agriculture declined, the proportion in the industry and services sectors rose between 2010 and 2019

Bangladesh's female labour force participation rate has been rising since 2011 and was pegged at 36% in 2019. In the same year, neighbouring countries India, Pakistan and Sri Lanka reported 21%, 22%, and 33.5% respectively. The proportion of Bangladeshi women employed in agriculture

declined from 65.8% in 2010 to 59.2% in 2019. This proportion in industry and services rose from 13% and 21.2% respectively in 2010 to 16.5% and 24.3% in 2019^{22, 23}.

Increasing proportion of working-age population

Bangladesh's dependency ratio has been decreasing for decades. 68% of its population is now of working age, creating a demographic dividend. Reaping the economic benefits of the dividend will depend on the rate of job creation in the country

Bangladesh's dependency ratio - the ratio of dependents (people younger than 15 or older than 64) to the working-age population (between 15 and 64 years) - has decreased steadily since 1980, and fell to under 50% in 2020. A key uncertainty associated with this trend is the rate of job creation — a low rate will prevent Bangladesh from leveraging this demographic dividend²⁴.

Growing social fissures due to the refugee crisis

As the Rohingya crisis becomes more protracted, Bangladesh is witnessing growing social fissures. Native citizens fear competition from Rohingya refugees for the same resources and unskilled jobs

By August 2021, Bangladesh hosted over 890,000 Rohingya refugees in its Cox's Bazar District. Almost half of the respondents of a 2019 survey of 2,881 Bangladeshi households were unhappy with the presence of Rohingya people in their communities, primarily due to fears of competition over resources and jobs and of increased crime rates. A potential implication of the crisis was a fall in average incomes of unskilled workers – the average income of daily labourers fell by 40-45% in refugee settlement areas like Cox's Bazar, Teknaf and Ukhiya^{25, 26}.

TECHNOLOGICAL TRENDS AND DRIVING FORCES

Increase in internet and smartphone penetration

In addition to smartphone adoption, internet penetration in Bangladesh has increased by around three times from 2013 to 2020. However, there are regional disparities in access to digital infrastructure like high-speed internet, due to poor infrastructure in rural areas and the lack of 4G frequency. Bangladesh's transition to a digital economy by 2030 remains uncertain

Internet penetration as a percentage of the population in Bangladesh increased from 24% in 2013 to 69% in 2020. Smartphone adoption is also projected to increase to 62% in 2025, compared to 31% in 2017. However, the average internet speed of mobile operators in Bangladesh is the least among the neighboring South Asian countries, with 71% of mobile internet subscribers still using 2G services in 2017. Operators face poor financial viability when attempting to build infrastructure in rural areas, while 4G frequency is lacking. The pace of Bangladesh's transformation into a digital economy by 2030 remains uncertain^{27, 28, 29}.

Increased social media user base

Active social media users in Bangladesh are increasing rapidly. Facebook remains the dominant player with ~8.5 million new users in 2021

Active social media users increased by 46% from 2018 to 2021. Facebook has consistently remained the dominant player with 52.8 million users in 2021, compared to LinkedIn's 4.7 million users and Instagram's 4.6 million users in the same year^{30, 31}.

Increased use of mobile payment services

Access to digital banking services has increased, with mobile banking witnessing the highest growth in terms of the number of users and transaction value

Digital banking services, including debit, credit and international cards, and mobile and internet banking have increased in Bangladesh. Mobile banking witnessed the highest growth in terms of a 25% increase in registered users and a 29% increase in the transaction value from December 2019 to 2020. The transaction value of mobile financial services has increased for nearly all purposes, including in Peer to Peer (P2P) transactions, Business to Person (B2P) transactions like salary disbursements, Person-to-Business (P2B) transactions like utility bill payments, etc^{32, 33}.

ECONOMIC TRENDS AND DRIVING FORCES

High economic growth with slower job creation

Bangladesh has continuously witnessed a high GDP growth rate, even during the COVID-19 pandemic. However, the number of new jobs grew by only 1/4th of the GDP growth rate in this period. The future rate of GDP growth and rate of youth unemployment remains uncertain

Bangladesh witnessed consistently high GDP growth rates of 6-8% from 2014 to 2019 and maintained a relatively high GDP growth rate of 3.5% in 2020, despite the COVID-19 pandemic. However, the number of new jobs created grew by only 2.7% between 2013 and 2020. The rate of reduction in youth unemployment by 2030 remains uncertain^{34, 35}.

Rising contribution of the industry sector to GDP

The share of the agriculture and services sectors in Bangladesh's GDP has been declining, while industry sector's share has been rising, driven by the manufacturing and construction sub-sectors

The share of the agriculture and services sectors gradually declined from 18% and 56% respectively in 2011 to 13% and 53% in 2019. However, the industry sector's share increased from 26% to 34% during this period, driven by the manufacturing and construction subsectors which grew by 31% and 35% respectively³⁶.

RMG continues to be the top export category

The category of RMG has constituted the largest share of exports from Bangladesh over the years, with non-knit men's suits and knit t-shirts being the top RMG products exported in recent years

The RMG category has constituted over 85% share of the total exports from Bangladesh over the last three years. Non-knit men's suits and knit t-shirts had an export share of 17-18% each in 2018 and 2019^{37, 38}.

Increase in income inequality

Bangladesh's economic inequality has increased over the last two decades. Significant economic regional disparities exist, with the North-western region lagging behind the rest of Bangladesh

The share of national income earned by the top 5% of households rose from 19% in 1991 to 28% in 2016. The Gini coefficient also increased from 0.40 to 0.48, with a value of '0' representing perfect equality and '1' representing perfect inequality. Additionally, 30.5% of the population in the North-western region of Rangpur and 17.6% in Mymensingh live below the poverty line^{39, 40}.

Increase in size of the middle class

Bangladesh's middle-income class has been consistently increasing over the last two decades, while the low income class and poor class has been shrinking

In 2001, Bangladesh's population almost entirely belonged to the low income and poor class (those with income between USD 2.1 and 4 per day, and under USD 2 per day, respectively). The country's middle-income class (those with income between USD 4.1 and 20 per day) rose to 35% in 2015, and is projected to increase to 40% by 2026. However, only ~1% of its population is expected to belong to the high-income class (those with income greater than USD 20 per day)⁴¹.

Increase in Bangladesh's trade deficit

Bangladesh's trade deficit has significantly increased over the last two decades, particularly with China and India. This is due to the rising cost of imports, especially raw materials for the RMG industry

Bangladesh's trade deficit increased from USD 2.46 billion in 2000 to USD 18.48 billion in 2020 - with significant deficits to the tune of USD 16.8 billion and USD 7.9 billion with China and India respectively in 2018. This was due to the rising costs of imports, especially raw materials for the RMG industry, and the increased prices of other products^{42, 43, 44}.

ENVIRONMENTAL TRENDS AND DRIVING FORCES

Increasing severity of climate disasters

Disasters have caused significant displacement of Bangladesh's population each year, with ~4.4 million people displaced in 2020. A projected 50 cm rise in sea level by 2050 may cause an additional loss of 11% of Bangladesh's land and affect 15 million people. The rate of increase in global temperatures remains uncertain

The period when global temperatures will surpass the 1.5-degree threshold cannot be predicted. The likely impact of this rise in temperature on displacement, loss of lands and livelihoods in Bangladesh is uncertain^{45, 46, 47}.

Increasing greenhouse gas emissions

Greenhouse gas emissions grew by 64% from 1990 to 2016, with agriculture being the major contributor. However, per capita carbon dioxide emissions remain relatively low in comparison to neighbouring countries, including India, Pakistan, and Sri Lanka

Bangladesh's greenhouse gas emissions grew from 88.4 million tonnes in 1990 to 144.7 million tonnes in 2016. In 2020, Bangladesh's per capita carbon dioxide emissions of 0.56 tonnes were significantly lower than India's 1.8 tonnes, and the estimated 1 tonne each emitted by Pakistan and Sri Lanka⁴⁸.

Increased amount of clean energy

The amount of clean energy generated has increased over the last decade. However, its proportion in the total energy generated has reduced from 87% to 81% from 2011 to 2019. Hydropower constitutes the largest share of renewable energy sources, while the share of solar energy has also recently increased

The amount of clean energy generated (including natural gas and renewables) increased from 39 terawatt-hours (TWh) in 2011 to 69 TWh in 2019. Renewables constituted 1-2% of the total energy produced. Among renewables, hydropower contributed ~70-80% to the total renewable energy generated from 2014 to 2019. The share of solar energy also increased to 32% in 2019⁴⁹.

POLITICAL TRENDS AND DRIVING FORCES

Government push for infrastructure upgradation

The Bangladeshi government is pushing for the upgradation of infrastructure, particularly for transportation and energy. The increase in total investments can be attributed to the public sector, even as the 8th Five Year Plan encourages more private investments

The Bangladeshi government is focused on recent infrastructure projects such as the Padma Bridge and Rail Link, the Rooppur Nuclear Power Plant, and the Matarbari Deep Sea Port. The increase in overall investments from 19% in 2011 to 26% in 2019 can be attributed to the public sector. However, the 8th Five Year Plan has projected that the private sector will lead infrastructure investments, after the establishment of the Free-Trade Zones and Special Economic Zones^{50, 51, 52}.

Increasing subsidy bill

Bangladesh's subsidy bill has been rising since 2018, due to the power and energy sectors. The power subsidy is expected to touch Taka (Tk) 200 billion in 2022

Bangladesh's subsidy bill rose from Tk 192 billion in 2018-19 to Tk 329 billion in 2020-21, due to the increasing share of the power and energy sector valued at 37%, 46% and 58% in 2018-19, 2019-20 and 2020-21 respectively. 45% of power in 2019-20 was purchased from independent power producers at a per-unit cost of Tk 8.3/KwH, which was nearly double the Tk 4.5/KwH for electricity purchased from public power plants^{53, 54, 55}.

Slow advance in Global Ease of Doing Business ranking

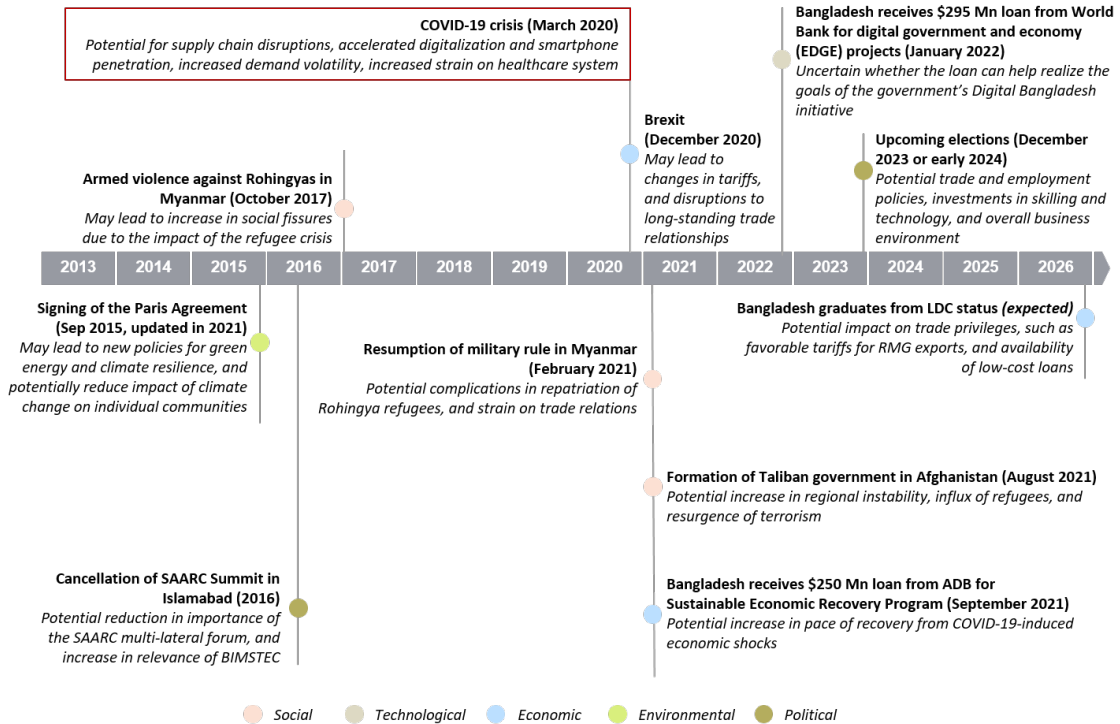
Bangladesh advanced 8 places to a ranking of 168 out of 190, in the Global Ease of Doing Business index from 2019 to 2020. However, its performance is still much lower than its neighbouring countries. With 15 reforms since 2003-04, the Bangladeshi government has taken measures towards improving the ranking. The pace and extent of improvement remains to be seen

Bangladesh improved its rankings on parameters such as the ease of availing credit, electricity, construction permits, etc., but lagged on other parameters such as resolving insolvency and registering property. Despite measures to establish two separate courts to resolve commercial disputes within 500 days, reduce export and import costs, enhance the cargo handling capacity of ports, and improve access to credit - Bangladesh's ranking remains much lower than India's rank of 77, Bhutan's rank of 81, Sri Lanka's rank of 100 and Nepal's rank of 110. It is uncertain if Bangladesh will remain in the bottom quartile of countries, or move into the league of the top 100 countries ranked in this index⁵⁶.

EVENTS

Key events impacting the broader context of the RMG industry in Bangladesh, and the potential uncertainties created by them, have been identified and are graphically represented below.

KEY EVENTS SHAPING THE BROADER CONTEXT OF THE RMG INDUSTRY IN BANGLADESH, FOR THE PERIOD 2013-26



The following are key trends and driving forces that currently directly impact Bangladesh's RMG industry, categorised into suppliers, competitors, buyers, and customers.

SUPPLIERS TRENDS AND DRIVING FORCES

Increase in large RMG factories' share of exports

Bangladesh has fewer but larger RMG factories accounting for a greater share of the country's total export value, as international buyers opt for strategic, longer-term partnerships with trusted suppliers. The extent of future consolidation of the industry remains uncertain

The export value per RMG factory grew by 27% between 2014 and 2019, while the number of factories grew by only 9% from 4,200 to 4,600 during this period. Around 347 large factories (with more than 2,000 employees) accounted for 63% of the total export value in 2019-2020^{57, 58, 59}.

Growth in 4IR technology adoption

The RMG industry is undergoing a technological transformation, with large and medium factories increasingly using more advanced machinery. However, the rate at which 4IR technologies will continue to be adopted remains uncertain

38% each of large and medium RMG factories used advanced machinery, as per a 2018 assessment based on the quality of basic machinery and the use of advanced machinery⁶⁰.

Increased environmental sustainability measures

Bangladesh is a global pioneer in environmentally sustainable RMG production, and has set up the highest number of LEED-certified green garment factories in the world

Bangladesh houses over 150 LEED-certified green garment factories and over 1,500 Global Organic Textile Standard certified companies. This results from a growing focus on environmental sustainability amongst garment manufacturers, the government, and the international buyers' community^{61, 62}.

COMPETITORS TRENDS AND DRIVING FORCES

Increased competition from Vietnam

Vietnam has replaced Bangladesh as the second-largest RMG exporting country after China, due to the production of complex, diversified products and preferential trade agreements with EU and US buyers. Bangladesh's product diversification and international trade positioning will determine its future global competitiveness

Vietnam had a high compounded annual growth rate (CAGR) of 10% between 2010 and 2020, compared to Bangladesh's 6% during the same period. Bangladesh's comparative international trade position in 2030 is uncertain, after its graduation from the status of an LDC during this decade^{63, 64, 65, 66, 67}.

Increased nearshoring

Buyers in the US and EU have started sourcing more garments from nearshore locations instead of Bangladesh, due to the reduced gap between relative garment landed costs. Global supply chain disruptions during the COVID-19 crisis have accelerated this shift

According to a 2018 report by McKinsey, under 50% of EU and US retailers sourced garments from nearshore locations in 2018. By 2025, this figure is projected to exceed 80%. Retailers like Italy's Benetton have already shifted production from Asian RMG hubs to nearshore locations in Europe^{68, 69, 70}.

BUYERS TRENDS AND DRIVING FORCES

Continued dependence on traditional markets

Around 80% of Bangladesh's total RMG exports by value have consistently been to the EU and US, indicating a continued demand dependence on these markets. However, the future markets of Bangladesh's remain uncertain

The EU accounts for around 62% of Bangladesh's total RMG export value, with the US accounting for around 18%, and other markets together accounting for the remaining proportion. Over half of the exports to non-traditional markets are to Japan, Australia, Russia, and India⁷¹.

Increased buyer push for worker welfare

A series of accidents, caused by unsafe conditions in RMG factories, triggered new safety pacts by international buyers in the early 2010s. This has improved health and safety facilities in factories, and increased international buyers' push for worker welfare

In 2013, the legally binding Accord on Fire and Building Safety in Bangladesh was signed by 260 EU retailers, and the non-legally binding Alliance for Bangladesh Worker Safety was signed by 26 US retailers, to ensure safe working conditions in RMG factories^{72, 73, 74, 75}.

Shift towards data-driven, customer-centric decision-making

The COVID-19 crisis has prompted companies to boost agility and shorten lead times via data-driven sourcing decisions, customer-centric product mix and designs, and digitized operations

A 2021 survey with Chief Purchasing Officers (CPOs) of 38 apparel brands indicated that a majority of brands were adopting several measures in the face of COVID-induced demand volatility. These included multi-country sourcing to increase in-season reactivity and analytical decision-making, building strategic links with trusted suppliers for fast production cycles and flexible batch sizes, and virtual sampling due to travel restrictions and supply chain disruptions⁷⁶.

Increased consolidation of large apparel retailers

A majority of the fashion industry's profits is concentrated in the hands of the top 20% of companies. This is expected to increase further, as these cash-rich companies consolidate via mergers, acquisitions and investments in smaller businesses that are more susceptible to COVID-19-induced disruptions

The top 20% of companies made 97% of the fashion industry's profits in 2017. Since the start of the pandemic, Richemont invested USD 1.1 billion in Farfetch. LVMH acquired Pucci and purchased a majority stake in Off-White, while the Authentic Brands Group acquired Reebok^{77, 78, 79}.

CUSTOMERS TRENDS AND DRIVING FORCES

Increase in growth of online shopping for apparel

The COVID-19 crisis has led to increased use of online channels for apparel purchase, especially among Gen Z and millennials. A reversal of this shift to physical channels is unlikely in the future

A 2020 McKinsey survey of over 2,000 European apparel customers indicated that 43% of surveyed consumers switched from physical to online channels for the first time, given the pandemic. This trend was more pronounced for younger generations, with 84% of Gen-Z (aged 18-23) and 76% of millennials (aged 24-30) shifting to online channels. Most respondents across age groups did not anticipate reversing this shift and purchasing more apparel from physical stores in the future⁸⁰.

Increase in customer push for sustainable fashion

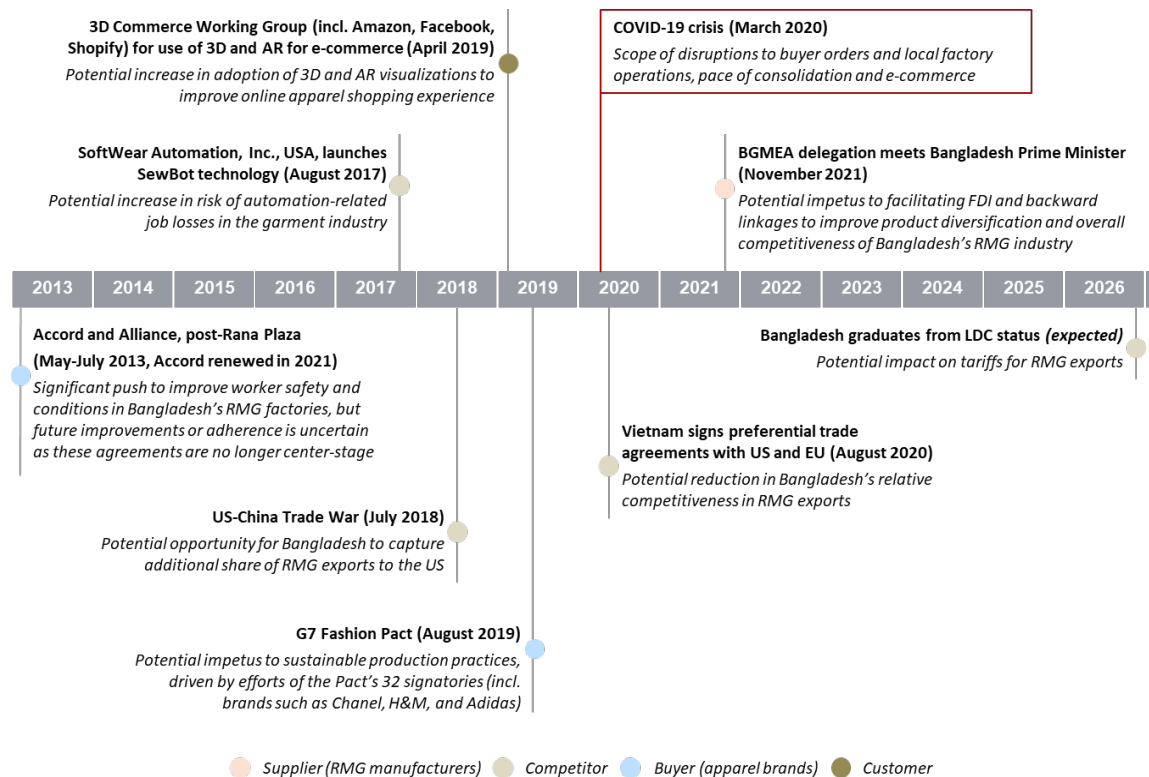
Sustainability has become an area of focus due to growing consumer awareness, a push for sustainable fashion driven by social-media-savvy Gen Z, and political action for green production taken by various national governments. Sustainability is becoming a competitive advantage for apparel retailers

Sustainable fashion is becoming a driver of apparel purchase decisions, especially for Gen Z consumers. This is indicated by a three-fold increase in internet searches for 'sustainable fashion' and a five-fold increase in Instagram hits on the hashtag #sustainablefashion over three years. Multilateral government action towards sustainability has been taken in countries of apparel production and consumption, such as the 2019 Fashion Pact signed by 32 major apparel retailers from G7 countries. There is a five-fold increase in the number of sustainable fashion products launched over two years, while specialised sustainability players like Allbirds and Everlane have rapidly grown in this period⁸¹.

EVENTS

Key events impacting Bangladesh's RMG industry, and the potential uncertainties created by them, are graphically represented below.

KEY EVENTS IMPACTING BANGLADESH'S RMG INDUSTRY, FOR THE PERIOD 2013-26



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