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Case

## The sustainable competitiveness of Bangladesh's garment industry

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### Abstract

Despite its significant contributions to economic growth and being the country's export engine, Bangladesh's garment industry has faced systemic issues of sustainable competitiveness. A milestone that triggered a change in the industry's approach to sustainability was the 2013 Rana Plaza garment factory collapse, which killed over 1,100 and injured hundreds. This case helps to explore developments in Bangladesh's sustainable competitiveness in international markets from political, economic, social, technological, environmental, and legal perspectives.

**Keywords:** Sustainable competitiveness, economic sustainability, environmental sustainability, social sustainability, Bangladesh, garment industry

Employing over 5 million people, most of whom are women from rural areas, the garment industry accounts for 16% of Bangladesh's gross domestic product (GDP)<sup>1,2,3</sup>. As of 2023, with exports of USD 38 billion, Bangladesh was the world's second-largest exporter of ready-made garments (RMG) after China (USD 165 billion), ahead of Türkiye (USD 19 billion) and India (USD 15 billion)<sup>4</sup>. Despite this success, the industry has been facing important sustainability challenges<sup>5</sup>. With river pollution, excessive water consumption, and high levels of greenhouse gas emissions, the industry has been a major environmental polluter in Bangladesh<sup>6</sup>. Although research institutes such as Bangladesh University of Textiles and Ahsanullah University of Science and Technology have been working on eco-friendly garment manufacturing, a lack of financing, technology, and skills has hindered large-scale innovations<sup>7,8</sup>. Moreover, there has been a serious neglect of work safety measures, resulting in the 2013 Rana Plaza garment factory collapse, which killed over 1,100 and injured hundreds<sup>9</sup>.

The Rana Plaza accident was a milestone for the government and the industry in their approach to corporate social responsibility. Signed on May 15, 2013, the Accord on Fire and Building Safety in Bangladesh has prioritized inspections, corrective plans, and worker training to increase workplace safety and fairness<sup>10</sup>. In addition, global brands like H&M, Zara, and Primark have started to prioritize using sustainable supply chains and eco-friendly garments, pressuring Bangladesh's garment industry to adopt further sustainable practices<sup>11</sup>. Adopting sustainable practices, however, incurs additional costs, which may not be affordable for small firms. Considering this challenge, could adopting sustainable practices be a means for Bangladesh's garment industry to create a competitive advantage in international markets?

## **Bangladesh and its garment industry**

Bangladesh, officially called the People's Republic of Bangladesh, is a developing country located in South Asia, bordering India, Myanmar, and the Bay of Bengal (See Exhibit 1). It has a population of 171.5 million people, and its capital city is Dhaka. Bangladesh achieved its independence on March 26, 1971, and operates as a parliamentary democracy. The country's relationship with neighboring India is crucial, marked by strong trade ties (USD 16 billion in 2022), water-sharing agreements, and regional security cooperation, despite occasional tensions due to border disputes and migration issues<sup>12</sup>.

Bangladesh's GDP per capita improved significantly from USD 134 in 1972 to USD 2,784 in 2024<sup>13,14</sup>. As of 2023, the service sector, the manufacturing sector, and the agriculture sector accounted respectively for 51.2%, 37.6%, and 11.2% of GDP, and 37.7%, 17.0%, and 45.3% of employment<sup>15</sup>. Its major industries are garments, textiles, chemical/organic fertilizers, pharmaceuticals, jute and jute goods, tea processing, paper and newsprints, cement, light engineering, sugar, leather goods, food, fish, and poultry<sup>16</sup>. Foreign direct investment inflows reached USD 3.40 billion in 2022, with China, the United States, and Japan being major investors<sup>17</sup>.

In the World Economic Forum's Global Competitiveness Report, Bangladesh ranked 105<sup>th</sup> among 141 countries. Hence, there is room for improvement in many fields like innovation capability, ICT adoption, institutions, skills, product market, business dynamism, labor market, infrastructure, and financial system (see Exhibit 2).

Bangladesh's garment industry began in the late 1970s with visionary entrepreneurs seeing the potential<sup>18</sup>. The Multi-Fiber Arrangement, which imposed quotas on the amounts of exports from developing to developed countries, opened doors for Bangladesh to export low-cost garments to Europe and the United States<sup>19</sup>. The 1978 partnership between South Korea's Daewoo Group and Bangladesh's Dosh Garments was crucial for the industry to learn modern garment manufacturing processes<sup>20</sup>.

The industry grew exponentially in the 1990s, fueled by a large, cost-effective labor force, mostly rural women<sup>21</sup>. Although Bangladesh faced challenges from increasing competition after the abolishment of the Multi-Fiber Arrangement in 2005<sup>22</sup>, the industry's trained labor and duty-free access to the European Union kept it competitive<sup>23,24</sup>. The top destination markets for Bangladesh's RMG exports in 2024 were the European Union (50.34% of exports), the United States (18.72%), and the United Kingdom (11.25%)<sup>25</sup>. Being Bangladesh's largest economic engine today, the garment industry has contributed to job creation, foreign currency revenues, poverty reduction, and infrastructure development<sup>26,27,28</sup>.

Garment industrial areas are clustered around Dhaka, Chittagong, and Khulna (see Exhibit 3). Bangladesh's spinning, dyeing, and finishing operations have built a self-sufficient supply chain, and the emergence of backward linkages has strengthened the supply chain, enabling manufacturers to achieve economies of scale, quality control, and shorter lead times<sup>29</sup>. Ancillary sectors, such as packaging, logistics, and chemical industries, support the garment industry, ensuring effective production, transportation, and distribution<sup>30</sup>.

## **Tackling of environmental challenges by Bangladesh's garment industry**

The garment industry in Bangladesh has been traditionally challenged by its energy-intensive operations, unsustainable water consumption, and poor management of hazardous chemicals<sup>31</sup>. Old garment factories use non-renewable sources of energy like natural gas and coal, which increase greenhouse gas emissions, while poor treatment of hazardous chemicals, such as metals, azo dyes, and sulfates, pollutes water and degrades the environment<sup>32,33</sup>. As a result, Bangladesh contributed to 20% of worldwide industrial water pollution during 2021-2022<sup>34</sup>. Moreover, the production process in Bangladesh uses five times more water per garment than global standards, stressing the country's freshwater reserves, notably in industrial Dhaka and Gazipur<sup>35</sup>. Groundwater levels in important garment manufacturing locations have plummeted two to three meters per year due to huge exploitation<sup>36</sup>.

On the other hand, there is increasing awareness and care for environmental issues among garment manufacturers, as expressed by the Bangladesh Garment Manufacturers and Exporters Association<sup>37</sup>. During the last 13 years, 232 garment factories have received the Leadership in Energy and Environmental Design (LEED) certification (see Exhibit 4)<sup>38</sup>. LEED certification aims to reduce the use of energy and water, as well as greenhouse gas emissions, benefiting

both business and the environment. Environmentally sustainable practices adopted by garment factories include investments in eco-friendly dyeing, which reduces water pollution and improves aquatic habitats, energy-efficient solutions such as Light-Emitting Diode lighting, renewable energy sources like solar panels and wind turbines, recycling technologies, and the use of biodegradable and eco-friendly materials<sup>39,40,41</sup>.

Bangladesh's garment industry is heavily influenced by global customers, like H&M and Marks & Spencer, which prioritize sustainability along their supply chains<sup>42</sup>. These customers impose strong environmental compliance terms in procurement contracts, provide training and technical assistance, and use sustainability scorecards to assess their suppliers' environmental performance<sup>43,44</sup>. Noncompliance can lead to reputational damage, negative media coverage, and supply chain exclusion. Nevertheless, undertaking sustainability initiatives is still costly for many of Bangladesh's small and medium-sized garment manufacturers<sup>45</sup>. They need support through financial incentives, technical assistance, and training<sup>46</sup>.

### **Addressing social challenges in Bangladesh's garment industry**

Garment workers in Bangladesh earn low wages: in 2023, the industry's minimum monthly wage of USD 113 was much below those in the garment industries of China (USD 300), Cambodia (USD 200), Vietnam (USD 200), and India (USD 170)<sup>47</sup>. Excessive working hours and overtime are also prevalent among Bangladesh's garment workers, with 42% working more than 60 hours per week<sup>48</sup>. One reason behind the poor work conditions is that only 10% of garment firms in Bangladesh belong to a functioning trade union<sup>49</sup>.

Workplace safety issues in Bangladesh's garment industry have peaked with the 2013 Rana Plaza disaster<sup>50</sup>. This has led to the introduction of the Bangladesh Accord on Fire and Building Safety in 2013, thanks to which more than 38,000 inspections have been completed until 2021, remediating 91% of safety issues in the inspected factories<sup>51</sup>. However, nearly 3,000 factories serving mostly subcontractors and small customers have remained outside inspection coverage<sup>52</sup>.

Access to occupational healthcare is a major issue in Bangladesh's garment industry. In 2024, 67% of workers faced a lack of access to first-aid facilities or on-site medical professionals<sup>53</sup>. There are initiatives to address this challenge, such as HERhealth, which offers prenatal care and dietary assistance to female workers, and CARE Bangladesh, which provides basic health care at factory-based clinics<sup>54</sup>.

Bangladesh's garment industry has significantly contributed to gender equality, as women make up 80% of the industry, accounting for four out of the industry's five million workers<sup>55</sup>. This has led to economic empowerment and initiated a social change, with a shift in family attitudes towards working women in rural areas. However, women are still under-represented in higher-paying managerial positions. The garment industry's "glass ceiling" significantly inhibits women's job advancement, with only 5-10% of managers and supervisors being women<sup>56</sup>. Gender-based violence and harassment are also prevalent. In 2022, 50% of female garment workers experienced workplace harassment, including verbal abuse, intimidation, and physical assault<sup>57</sup>.

Another challenge of Bangladesh's garment industry is the use of child labor. United Nations Children's Fund (UNICEF) predicted that 4.30% of informal garment manufacturing workers in Bangladesh were under the age of 14<sup>58</sup>. To fight against this, the Bangladeshi government is collaborating with non-governmental organizations to promote children's transition from job to school, with initiatives like the Child Labor Elimination Project enrolling 12,000 former child laborers in school, and conditional cash transfer programs lowering dropout rates in garment-dependent areas by 18%<sup>59</sup>.

Global customers increasingly promote ethical sourcing and corporate social responsibility. In 2022, 85% of big garment manufacturers in Bangladesh needed ethical audits to maintain contracts with prominent global customers, and the acquisition of global ethics certifications, such as Fair Trade, SA8000, and Global Organic Textile Standard (GOTS), is on the rise<sup>60</sup>.

There is progress in recruiting marginalized groups like slum dwellers and ethnic minorities into the workforce, despite language and cultural hurdles hindering their integration into the workforce<sup>61</sup>. Less than 1% of Bangladesh's garment industry workforce is physically challenged, with most working in non-production activities<sup>62</sup>. Barriers to

inclusion include physical accessibility issues and limited training programs for these workers. Government programs like the National Action Plan for Persons with Disabilities aim to raise employment rates for physically challenged people in all industries. It is observed that Bangladesh's garment industry's inclusivity policies have led to beneficial results in terms of higher employee satisfaction<sup>63</sup>.

### **Challenges ahead**

The Bangladeshi government has adopted the United Nations' Sustainable Development Goals for 2030. However, Bangladesh's social progress index in 2025 was 54.60 out of 100, ranking 122<sup>nd</sup> among 170 countries (see Exhibit 5)<sup>64</sup>. Thus, national sustainability challenges continue to endanger the garment industry's sustainable competitiveness in international markets. The industry is currently facing five major challenges that demand urgent solutions.

The first challenge is about labor rights, wages, and working conditions<sup>65</sup>. Minimum wages fall short of meeting living standards, and workers work long hours with little social protection<sup>66</sup>. How could Bangladesh improve salaries and working conditions while remaining cost-competitive?

The second challenge is environmental pollution and waste management. The garment industry releases harmful chemicals into rivers, pollutes water, and emits greenhouse gases<sup>67</sup>. What policies and financial mechanisms could help, especially small and medium-sized garment manufacturers, to implement sustainable manufacturing practices, e.g., the adoption of circular economy practices?

The third challenge relates to global market competition. Manufacturing in Bangladesh is under pressure from rivals in low-manufacturing countries in the region, like Vietnam, India, Cambodia, and China<sup>68</sup>. How could Bangladesh's garment industry improve its competitiveness against rivals from these countries?

The fourth challenge is related to political stability in Bangladesh and trade relations with neighboring countries, especially India.

Finally, the fifth challenge is about advancements in automation, digital technologies, and artificial intelligence, and the lack of sufficient technological training in the industry. Will the industry be able to catch up with new technologies? How will these technologies affect the workforce in the industry?

**Exhibits**

**Exhibit 1.** Bangladesh's geographical location in South Asia



Source: Bangladesh Textile Journal (2023). *Geographically Bangladesh is the most important country in South Asia.*  
<https://bangladesh-textile-journal.com/geographically-bangladesh-is-the-most-important-country-in-south-asia/>

**Exhibit 2.** Bangladesh's competitiveness performance

# Bangladesh

**105th** /141

Global Competitiveness Index 4.0 2019 edition

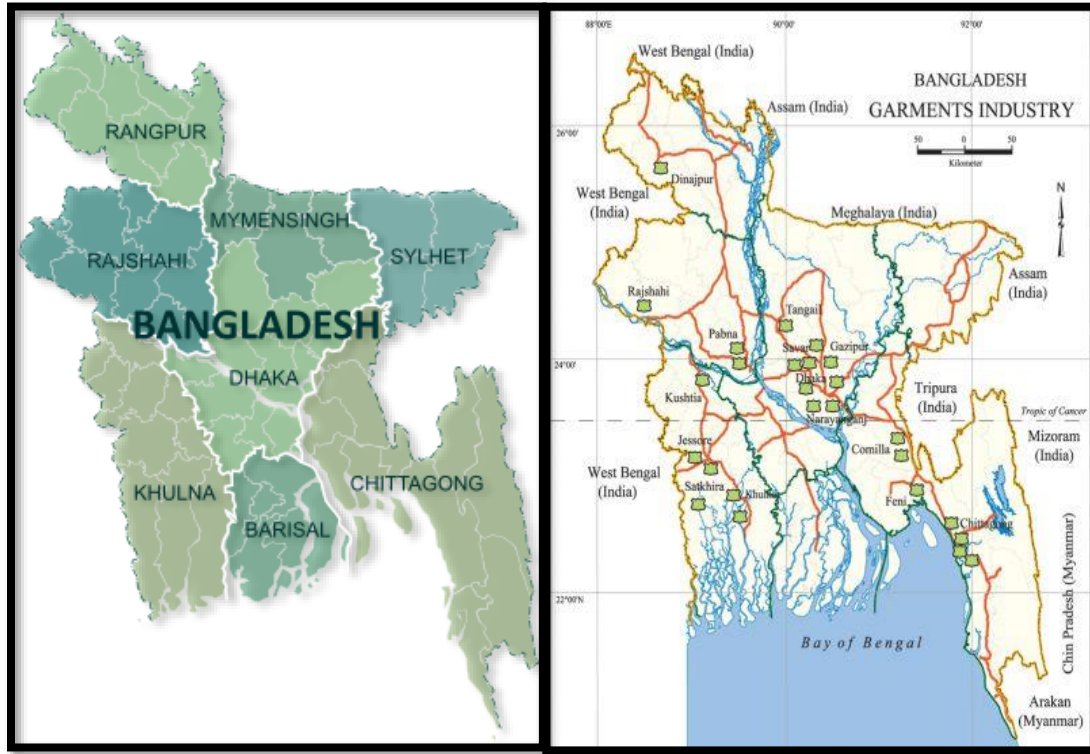
Rank in 2018 edition: 103rd/140

**Performance Overview 2019** Key ◊ Previous edition ▲ Lower-middle-income group average ◻ South Asia average



Source: Schwab, K. (2019). *The global competitiveness report 2019.* World Economic Forum.  
[https://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf)

**Exhibit 3.** Geographical locations of garment industrial areas in Bangladesh



Source: Banglapedia (n.d.). *Garments*. [https://en.banglapedia.org/index.php/Garment\\_Industry](https://en.banglapedia.org/index.php/Garment_Industry)

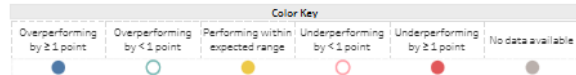
**Exhibit 4.** Number of new LEED-certified factories in Bangladesh's garment industry by year



Source: Denim Focus (2025). *Bangladesh's LEED-certified factories: A model for sustainable manufacturing*. <https://denimfocus.net/bangladeshs-leed-certified-factories-a-model-for-sustainable-manufacturing/>

**Exhibit 5. Social progress indices of Bangladesh**

	Score	Rank			Score	Rank			Score	Rank	
<b>Basic Needs</b>	<b>72.89</b>	<b>114</b>		<b>Foundations of Wellbeing</b>	<b>56.32</b>	<b>115</b>		<b>Opportunity</b>	<b>34.59</b>	<b>150</b>	
<b>Nutrition and Medical Care</b>	67.90	122		<b>Basic Education</b>	68.62	98		<b>Rights and Voice</b>	28.81	142	
Child mortality	83.20	113		Children grow and learn	82.39	33		Equality before the law and individual liberty index	34.90	134	
Child stunting	43.99	140		Equal access to quality education	21.67	141		Freedom of peaceful assembly	27.77	147	
Diet low in fruits and vegetables	33.76	162		Gender parity in secondary attainment	86.91	101		Perception of corruption	24.00	139	
Infectious diseases	88.22	88		Primary school enrollment	91.66	94		Political rights	37.50	107	
Maternal mortality	81.39	110		Secondary school attainment	45.95	109		Rights equality among social groups	22.20	154	
Undernourishment	80.38	109		<b>Information and Communications</b>	54.84	116		<b>Freedom and Choice</b>	53.19	139	
<b>Water and Sanitation</b>	82.02	101		Access to online governance	61.64	69		CSOs repressions	53.53	122	
Basic sanitation service	57.32	125		Internet users	44.50	125		Early marriage	9.39	168	
Basic water service	97.36	64		Mobile telephone users	75.32	112		Freedom over life choices	84.56	28	
Satisfaction with water quality	76.92	42		World Press Freedom Index	27.64	153		Satisfied demand for contraception	74.77	68	
Unsafe water, sanitation and hygiene	90.55	116		<b>Health</b>	50.11	103		Vulnerable employment	41.54	119	
<b>Housing</b>	65.14	120		Access to essential health services	53.20	124		<b>Inclusive society</b>	31.25	153	
Access to electricity	99.40	101		Equal access to quality healthcare	10.07	165		Acceptance of gays and lesbians	66.50	29	
Dissatisfaction with housing affordability	64.88	20		Health problems	47.66	95		Count on help	14.05	145	
Household air pollution	59.59	136		Life expectancy at 65	54.35	60		Discrimination and violence against m...	12.22	155	
Usage of clean fuels and technology for cooking	28.00	131		Non-communicable diseases	65.17	76		Equal access index	28.70	146	
<b>Safety</b>	76.52	63		<b>Environmental Quality</b>	51.72	148		<b>Advanced Education</b>	25.10	116	
Interpersonal violence	84.25	71		Lead exposure	64.19	141		Academic freedom	12.90	150	
Intimate partner violence	54.79	139		Outdoor air pollution	84.04	72		Citable documents	1.60	118	
Money stolen	79.81	62		Particulate matter pollution	33.64	162		Expected years of tertiary schooling	23.40	99	
Transportation related injuries	88.11	48		Waste recovery	3.10	98		Quality weighted universities	60.59	58	
Feelingsafe walking alone	71.67	32						Women with advanced education	28.29	136	
<b>Peer Countries</b>	Cabo Verde, Angola, Nicaragua, Congo, Republic of, Ghana, India, Uzbekistan, Côte d'Ivoire, Laos, Honduras, Mauritania, Timor-Leste, Morocco, Djibouti, Kyrgyzstan										



Source: Social Progress Imperative (2025). 2025 AITi global social progress index. <https://www.socialprogress.org/social-progress-index>

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