

## **LEATHER INDUSTRY IS LAGGING BEHIND DUE TO NON-COMPLIANCE: A SYSTEMATIC REVIEW OF THE LEATHER INDUSTRIES IN BANGLADESH**

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### **ABSTRACT**

*One of Bangladesh's oldest businesses, leather industry, which exports 10% of the world's leather demand, has overtaken RMG as the nation's second-largest source of foreign money. Since gaining independence, the export of finished leather has increased by 80% while the export of raw hides has decreased by 79%. This indicates that the lack of appropriate policy implementation is the main reason why local business owners are unable to use rawhides that are readily available. Reasearchers, policy makers, professors have already identified possible constraints of the supply chain of leather industry in Bangladesh. This review article provides an assessment of Bangladesh's leather sector in order to identify and gather all of the obstacles under five categories. A broad literature review is carried out to obtain related informations and some root cause analysis was done on the five problem categories. According to the most recent research, the majority of scholars believe that Bangladesh's leather sector is currently facing the biggest challenges due to the environment and relocation issues. The second-most serious issues are inadequate information, a lack of technically skilled workforce, and inefficient policy. Researcher working with the problems regarding the leather industry will be able to get insights from the paper.*

**Key words:** *Leather Industry, constrains, barriers, review, non-compliance, Bangladesh*

### **INTRODUCTION**

Leather is one of the most innovative industries in Bangladesh. In terms of economic return and social advantages, it has sufficient room for both vertical and horizontal growth. Before 1971, only a few small and medium-sized tanneries manufactured wet blue leather. The majority of the production was destined for the domestic market, with just a small fraction destined for export. In the 1970s, the industry saw significant change. A significant portion of the failing enterprises were nationalized, and the industry struggled until 1980–81. After 1980–1981, significant legislative reforms led to the favorable growth of the industry (Khan, 2014a). During the 1980s and 1990s, many tanneries and manufacturing facilities were established, ushering in a new era for the country's leather and leather products industry. Bangladesh began exporting high-quality produced leather and a variety of leather items in place of raw leather. With population expansion and economic development, demand for leather products, particularly footwear, increased not

just on the foreign market but also on the local market. From 1950 to 2000, for instance, it climbed from 2.1 billion to 11.3 billion, an increase of over 438 percent, which is much more than the rise of the global population (Khan, 2014a). To compete for further orders on global markets, the nation's tanneries and makers of leather, leather items, and footwear have donned battle paint. During the period between July 2012 and January 2014, exports of leather products amounted to \$149.46 million, which is 8.46 percent less than the objective of \$163.28 million (Kazi Waliul Islam, 2022). EPB statistics indicated that the country's leather product export revenues were on the rise, mostly due to the worldwide demand for Bangladeshi leather products, which was primarily driven by their superior quality and more affordable costs. In terms of export revenues, however, polished leather far outperforms leather items. In fiscal years (FY) ranging from 2009 to 2018, the Bangladeshi economy grew by an average of 6.5% annually. In the 2016 fiscal year, growth rates exceeded 7 percent, with growth rates of 7.3 percent and 7.9 percent in the following two years. Historically, exports and remittances have been Bangladesh's primary sources of economic development. However, one sector dominates exports, namely ready-made garments (RMG), which accounts for more than 80 percent of yearly export revenues. Furthermore, RMG accounts for more than 45 percent of the added value in manufacturing. Bangladesh is susceptible to external shocks due to its utter reliance on RMG exports as a source of foreign currency. Since FY2013, RMG export growth has halted, and both export and GDP remittance shares have consistently decreased. During fiscal year 2018-19, exports of leather, leather goods, and footwear were worth USD 1.01 billion, a fall of 6.06 percent from the previous fiscal year. In 2017–18, Bangladesh exported \$1.08 billion worth of leather and leather goods, down from \$1.23 billion in 2016–17. During the 2019-20 fiscal year, export profits from the country's leather industry, the second biggest foreign currency earner after the RMG sector, decreased by 21.79% to \$0.79 billion, according to EPB figures. It shows, though, that the industry is declining at a great pace rather than increasing swiftly and dramatically (Table 1).

Table 1 Leather export earnings report (2013-2019)

Fiscal Year	Leather Export Earnings (in billion US\$)
2013-2014	1.12
2014-2015	1.13
2015-2016	1.16
2016-2017	1.23
2017-2018	1.08
2018-2019	1.01
2019-2020	0.79769

*Note. Adapted from Export Promotion Bureau(EPB) Statistics*

In recent years, the tannery subsector of the business has been particularly problematic. The export rate of tanned leather decreased from approximately \$300 million in FY 2016 to less than \$90 million in FY 2017. Several factors, including ineffective marketing, an incompetent workforce, a lack of finance, exploitative working conditions, and detrimental environmental practices, have prompted international censure and fines. Notably, Bangladesh's leather and leather goods exports are heavily concentrated in a small number of destinations. In 2015, Bangladesh exported 44 leather items to 84 countries. Viet Nam sold 59 leather goods to 122 locations; India sent 63 products to 196 destinations; and the People's Republic of China (PRC) exported 65 leather goods to 209 destinations, making it the global leader in leather exports (Chan Hong, 2018). However, one of the businesses with great development potential is leather, which utilizes Bangladesh's abundant supply of low-cost labor and raw materials. The industry has the potential to participate in global supply chains, enter a new market, and meet expanding local demand (Chan Hong, 2018). The industry's main strength is the availability of raw resources. As Bangladesh's RMG industry securely advances, Bangladesh's leather industries will benefit. As RMG's direct presence in Bangladesh

has attracted many prominent brands, they would be delighted to put their own leather goods orders in the same nation from which they purchase clothes for Bangladesh. Thus, the expansion of the textile and RMG industries greatly contributes to the expansion of the leather and related industries, such as the footwear and other leather products industries. The current global demand for shoes and accessories is almost \$215 billion, while Bangladesh exports just \$1.08 billion worth. We have a fantastic opportunity to take the market with our highest level of production and solid long-term planning. As Bangladesh's RMG business continues to thrive, the country's leather industry will reap further benefits. When RMG established a direct presence for many major brands in Bangladesh, they were delighted to place their own orders for leather items in the same nation from which they purchase apparel, namely, Bangladesh. Consequently, the expansion of the textile and RMG industries contributes significantly to the expansion of the leather and associated industries, such as footwear and other leather items. From raw leather collection through tanneries to shoes, coats, and bags, this industry employs over 5 million people. Without a doubt, the expertise, technical personnel, and labor created in this industry are a source of strength. The tannery business in Bangladesh might have reached \$10 billion in only five years (Suman Prosad Saha & Shadman Shakib, 2016). The present worldwide demand for clothes, footwear, and accessories is over \$215 billion, but Bangladesh only exports \$1.08 billion. As a result, we have enormous potential to gain a competitive advantage by utilizing our highest level of efficiency and excellent strategic planning. In the meantime, the government has drafted a program for the leather and leather products industry in an effort to increase foreign currency profits to \$5 billion and gross domestic product (GDP) contributions to 2.5% by 2021. Nevertheless, despite the government's efforts and the availability of raw skins, the industry continues to struggle.

## **OBJECTIVES**

- To analyze the current situation of the leather industry in Bangladesh
- To identify and gather the existing problems in Bangladesh's leather industry under five main categories based on literature review

## **LITERATURE REVIEW**

In the leather industry of Bangladesh before 1971, a few small and medium-sized tanners participated in the production of wet blue leather. The majority of these tanneries' products were sold on the local market. Khan noted that the leather business saw a significant transformation between 1970 and 1981. (Khan, 2014a). In the 1980s, a good transformation resulted from the adoption of key policies, ushering in a new era for the leather sector in Bangladesh. Thus, this sector began exporting leather and leather items of superior quality to foreign markets. This growth lasted until the year 2000, when the sector was able to earn \$11.3 billion, up from \$2.1 billion before (Khan, 2014a). Later EPB statistics revealed that exports of leather products increased to \$149.46 million between July 2012 and January 2014, 8.46 percent less than the objective of \$163.28 million. At that time, the export earnings of leather products exceeded those of leather items. In the 2016 fiscal year, growth rates exceeded 7 percent, with growth rates of 7.3 percent and 7.9 percent in the following two years. In the years after 2018, the industry, particularly the tannery and leather subsector, has struggled. Hossain added that the negative growth in 2018–19 was smaller than the negative growth of 12% in 2017–18. (Khatun et al., 2019). Poor marketing, an untrained workforce, a lack of funding, exploitative working conditions, and detrimental environmental practices are some of the factors that have led to international censure and penalties for this problem. Khan's research demonstrates that tanners in family businesses have little formal education and little or no knowledge of the complexity of leather production, environmental protection, and leather waste (Khan, 2014a). Islam provided a comprehensive explanation and noted that the leather industry has enough room for both vertical and horizontal growth in

terms of economic return and social advantages (Kazi Waliul Islam, 2022). According to Shahriar, nations that create their brand images (SME), such as Italy and Spain, dominate the global market by stressing their quality, while China, India, and Brazil emphasize cheap labor and low costs (Shahriar et al., 2021). Notably, Hong said unequivocally that Bangladesh's exports of leather and leather items are largely concentrated in a small number of destinations. In 2015, Bangladesh exported 44 leather items to 84 countries (Chan Hong, 2018). Viet Nam sold 59 leather goods to 122 locations; India sent 63 products to 196 destinations; and the People's Republic of China (PRC) exported 65 leather goods to 209 destinations, making it the global leader in leather exports (Chan Hong, 2018). He also mentioned the possibility of strong backward links with locally produced raw materials, which would allow for a high domestic raw material content (over 80%) value addition, an abundant low-cost supply, trainable manpower, and a favorable location. Hong noted that in order to become a big global player and to increase employment, the leather sector in Bangladesh must address certain difficulties. Multiple places throughout the value chain In addition to sector-specific obstacles, it is crucial to overcome major growth obstacles. There are negative opinions regarding, among other things, the availability of indigenous sub-materials and chemicals, infrastructure development in accordance with international standards, the Central Effluent Treatment Plant (CETP), the existence of an appropriate integrated plan, and the use of advanced technology. The Export Promotion Bureau (EPB) of Bangladesh revealed that the leather industry's export revenues are decreasing on a daily basis, with a (-6) percent growth rate in FY 2018-19, with export earnings decreasing from \$1.08 billion in 2017-18 to \$1.01 billion in 2018-19 (Rahman, 2022). The Beam home worker had a WDS (weighted discrepancy scores) score of 15.38, indicating they need training in the detection of hazardous substances and environmental pollution. The WDS score of 14.78 was assessed for administrative employers who need extensive training on odor management in industry. Bangladesh has a well-established tanning industry that generates around 2% to 3% of the world's leather from readily available raw materials (Khatun et al., 2019). It contributes approximately 2 percent to industrial production and 0.6 percent to the country's gross domestic product, and employs approximately 558,000 people directly in leather and leather goods production and 300,000 people indirectly in allied fields. Lack of knowledge and experience, lack of technical expertise, and corruption were cited as the top three casual challenges (Shoyeb Raihan et al., 2019). About 200 tanneries exist in Bangladesh. The tanneries release about 20,000 m<sup>3</sup> of effluents and 232 tons of solid trash daily. This enormous quantity of solid waste (sludge) is deposited in a residential neighborhood, resulting in severe air pollution. Additionally, it poses a concern to human health (Uddin et al., 2019). In the causal group, 'lack of understanding of local consumers about green goods' and 'lack of commitment from senior management' ranked highly. Lack of reverse logistics methods and obsolete equipment were the most influential obstacles (Moktadir et al., 2018). A lack of interest and assistance from top-level management, relating to "knowledge and support" difficulties, seems to be the most significant barrier to RL (Reverse Logistics) adoption in the Bangladeshi leather footwear sector (Moktadir et al., 2020).

## **METHODOLOGY**

Although there has been no comprehensive review of the leather industry in Bangladesh, many studies on subcomponents of the larger issue have been conducted. The report has been prepared based on data collected from secondary and tertiary sources and has been cited where appropriate. It was not possible to rely on primary sources because obtaining data from this source is difficult and requires specific authority permission. The secondary information came mainly from websites: the Bangladesh Bureau of Statistics, Bangladesh Bank, Ministry of Finance, and the Ministry of Industries of the Government of Bangladesh; the annual reports of several tanneries; various book articles regarding the leather industry; and various brochures published by the company. Secondary data were gathered from journal articles, conference proceedings, books, newspapers, and magazines that had been published. This study looked through the databases of ScienceDirect, Emerald Fulltext, Springer, abcGATE, Infor-Sci, IGI Global, Taylor & Francis, EBSCOhost, and IngentaJournals to review the literature on the leather business in Bangladesh. To make

sure that papers in other databases were included, the search engines Google Scholar and Scopus were also employed. The research methodology begins with the gathering of the article. Initially, the collection of articles employs the "Google Scholar" search engine and the "Researchgate" database. First, we established the relevant keywords for Google Scholar and ResearchGate articles. For the broad search in relation to the literature review subject, we chose the leather industry and problems as two basic keyword groups. Other keywords that have been used are "leather industry," "problems," "barriers," "Bangladesh," "leather export," "leather import," "raw hides," "finance," "marketing," "skilled labor," "technical drawbacks," "environmental issues," "relocation issues," "non-compliance," etc. After an initial search, 137 articles on Google Scholar and 52 articles on Researchgate were found. In the second stage, the article's title and abstract were thoroughly read, and sorting was done according to duplication and relevance. Additionally,

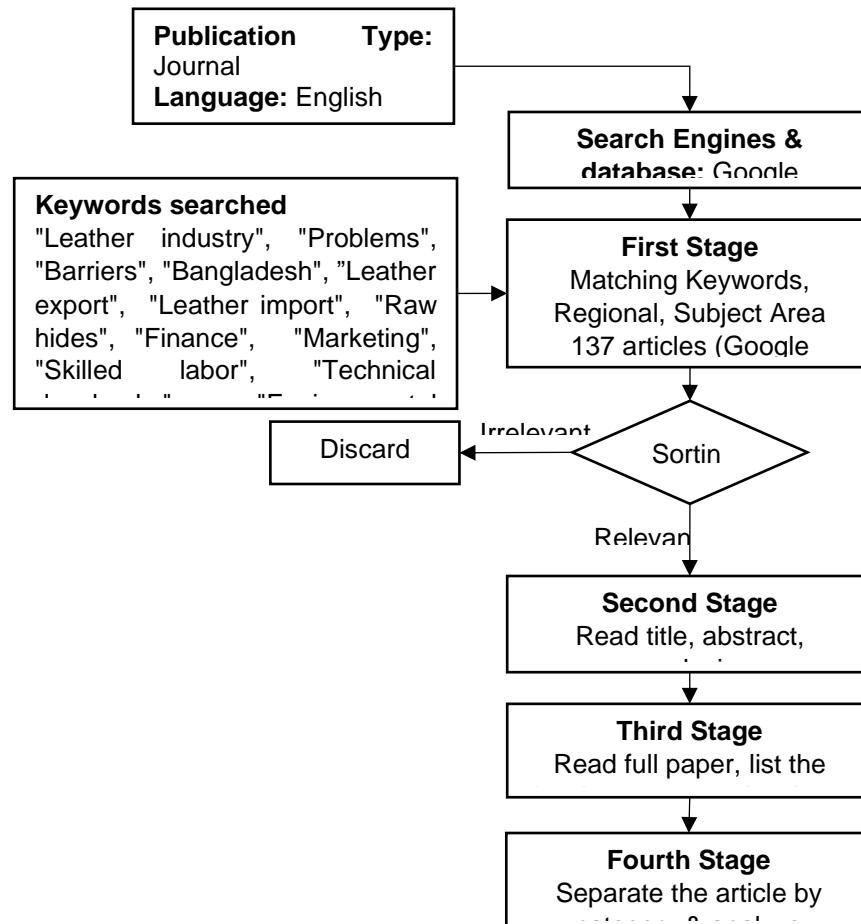


Figure 1 Research framework

it has been made sure that no review papers appeared in our results, and we excluded any papers that dealt with particular technical aspects of leather production or papers that dealt with other subjects like education, biology, etc. After the process, 53 articles remained for potential further review. Then, in the third and fourth stages, sequentially, full texts were read and problems were listed. After carefully analyzing the problems, they were categorized. The research framework is shown in Figure 1.

The total number of papers used in the research is shown in the figure below. The figure shows the distribution of articles by years. In the timeline ranging from 2000 to 2022, there are a total of 53 papers that were collected for research purposes. Among them, 29 papers were included in this paper for citation. Most of the papers (12) are from 2012. Five papers were collected for the years 2013, 2017, 2020, and 2022. There has been insufficient evaluation of the leather industry's problems from 2000 to 2012. Then it

increased again. That means that in recent years, researchers have regained interest in the topic of leather industries and associated problems.

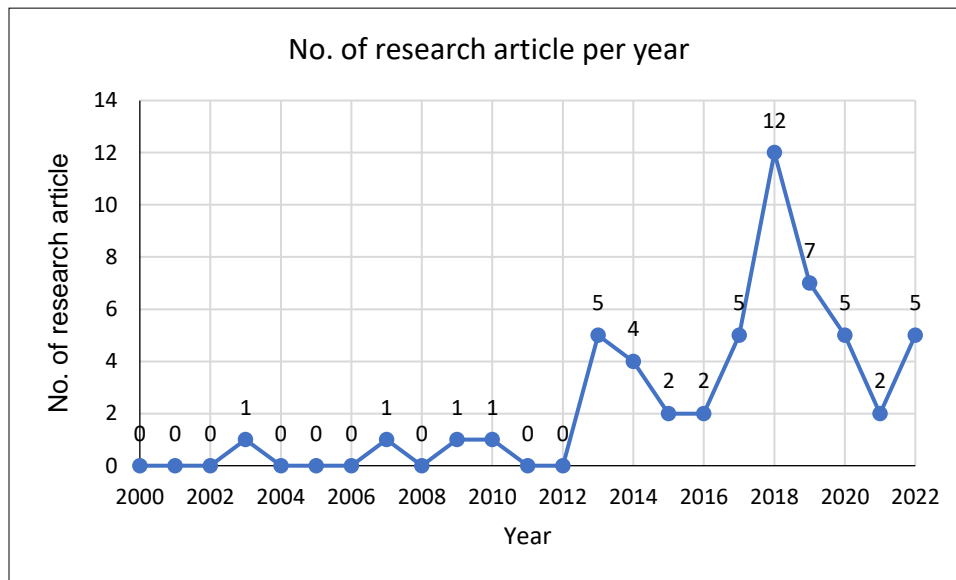


Figure 2 Number of research articles per year (related to the research)

## MAJOR CHALLENGES FACED BY LEATHER INDUSTRIES IN BANGLADESH

The leather sector is one of the oldest in Bangladesh, and tanneries employ 92% of all leather workers, making it the country's biggest employer. As a source of national export revenues, leather is second only to ready-made garments, and Bangladesh's leather exports account for 10% of worldwide demand. In recent years, the industry, notably the tannery subsector, has faced challenges. Today, exports of tanned leather are less than \$90 million, down from approximately \$300 million in fiscal year 2016. (Md. Sadat S. Shibli & Md. Taherul Islam, 2020). There are several causes for this ailment, including poor marketing, an unskilled workforce, and a lack of funding, but the most severe have been exploitative labor conditions, raw material collection constraints, destructive environmental practices, etc., which have resulted in international condemnation and sanctions. On the basis of a literature study, all important difficulties are grouped into five categories and presented with essential points. The following are the issues:

### CATEGORY 1: RAW MATERIALS BASE PROBLEMS AND CONSTRAINTS

- Wahiduzzaman, in 2014, in a paper titled "Leather Industry in Bangladesh: Opportunities and Challenges," stated some major issues regarding the raw materials and materials processing. According to the research, the supply of hides and skins is irregular and sometimes inadequate. Fifty percent (50%) of raw materials are collected during Eid al-Adha, and the rest of the raw materials are collected throughout the year. It causes irregularities in the supply. Nonetheless, it causes seasonality issues in the country's tanning process. In addition, the prices also fluctuate and sometimes fetch a high price in the total market. Furthermore, many premortem diseases affect Bangladesh's dides and skins. defects like diseases, pin marks, insect bites, tumors, parasites, ticks, band marks, paint, cuts, wounds, etc. According to the observation, the traditional use of cattle in agriculture is gradually declining. Obtaining raw materials while ensuring quality is difficult

because the chemical industry's backward linkages have not grown as expected (Wahiduzzaman Khan, 2014).

- S Soon Chan Hong, in his 2018 article titled "Developing the Leather Industry in Bangladesh," identified irregular and insufficient raw material supply as one of the primary issues. According to him, the quality control over the processing of raw materials is inefficient (Chan Hong, 2018b).
- In a 2022 article titled "Leather Industry of Bangladesh: Challenges and Opportunities," Kazi Waliul Islam describes the current procurement, preservation, and processing processes for these skins (raw materials) as obsolete (Kazi Waliul Islam, 2022).
- According to Islam et al. (2020), local businesses are not able to employ locally accessible rawhide largely due to the non-implementation of appropriate policies (Islam et al., 2020). (Islam et al., 2020).
- In his 2019 article titled "Bangladesh Leather Industry: From Hazaribagh to Savar," Mohammed Shehab addresses a number of concerns pertaining to the raw material procurement of Bangladesh's leather manufacturers. According to the study, the absence of established backward linkages causes recurring shortages of raw hides and skins among tanneries. The vast majority of tanners and commercial leather exporters rely largely on brokers to link them with customers, limiting processors from increasing their supply chain reach. In addition, because of the stagnating social, environmental, and economic circumstances in Bangladesh, many big foreign purchasers avoid purchasing directly from the country to prevent unfavorable publicity (Mohammed Shehab, 2019).
- In the paper titled "Bangladesh's Leather Industry" by Borkot Ali Mollik (2022), raw material difficulties are discussed. The leather and tannery sectors lack well-developed backward links, resulting in recurring shortages of raw hides and skins. Despite low costs in the last year, there were few buyers of skins and rawhide owing to a lack of demand. As a consequence, numerous rawhides and skins were discarded in the streets, and some individuals even buried the animals that were sacrificed (Mollik, 2022).
- In a Business Inspection article, Kazi Waliul Islam (2022) discusses the problem of inefficiency in raw material procurement. According to a BTTC source, the current overall supply of raw skin in Bangladesh is 20 million units, with 50 percent arriving during Eid-ul-Azha. Financing and maintaining the quality of the raw leather gathered at this stage necessitate a rapid pace of processing activities. In Bangladesh, however, the acquisition, preservation, and processing procedures for these skins are far more antiquated, inadequate, and sluggish. In addition to deteriorating skin quality, this often results in lasting skin damage (Kazi Waliul Islam, 2022).
- Md. Habibur Rahman (2022) noted in his article titled "A study of the leather industry of Bangladesh: identification of hurdles, difficulties, and ways out" that the majority of the chemicals used in the leather industry of Bangladesh are imported. The price of these chemicals and other sub-materials has multiplied throughout the COVID-19 epidemic, and the future is even less predictable (Rahman, 2022).

## **CATEGORY 2: CONSTRAINTS RELATED TO FINANCE AND MARKETING**

- Wahiduzzaman (2014) addressed high bank rates of interest, unhealthy competition in leather export markets, a sudden change in export policy, a lack of cost-benefit analysis, weak appraisal and monitoring of bank loans, and a scarcity of working capital as the major issues in the finance sector of the leather industry of Bangladesh. It is also stated that typical strikes and gheraos are political issues that cost 10 crores per year (Khan, 2014).
- Soon Chan Hong in 2018 indicated the absence of adequate access to finance as a major problem, making the tanneries unable to invest in upgrading technology and machinery and developing skills for reducing cost and improving leather quality. It is also a major issue for small and medium-sized footwear enterprises. Losing preferential market access is another problem affecting the leather sector (Chan Hong, 2018).
- Kazi Waliul Islam (2022) added that the import of advanced machinery and chemicals requires a higher cost for leather preparation, which causes a higher cost for leather processing. This research also found a lack of funding as a significant challenge facing the leather industry (Kazi Waliul Islam, 2022).
- Borkot Ali Mollik (2022), in the paper titled "Bangladesh's Leather Industry," said that the leather industry has limited financial and market access. Additionally, there is a lack of market intelligence and advertising as well as poor marketing expertise among local leather business owners (Mollik, 2022).
- In an article from Business Inspection, Kazi (2022) added that the leather industry's market has been discussed. Some large tanneries that directly purchase leather from small and medium tanneries dominate the leather market in Bangladesh. Due to this, the majority of the market's small tanneries now rely on brokers for the sale of their leather. Tanneries are unable to access international markets like conglomerates as a result of this market structure (Kazi Waliul Islam, 2022).
- Habibur Rahman (2022) in the paper "An analysis of the leather industry of Bangladesh: Identification of barriers, challenges, and way outs" added that: • If there is a delay in establishing international standard compliance, there will also be a delay in the issuance of some international certificates, such as the Leather Working Group (LWG) certification, which is necessary for market access in developed Asian, European, and American nations as well as the United States. The formation of long-term sustainable trade partnerships with these countries by additional new nations as well as current rivals may make entry into these markets more difficult for Bangladesh (Rahman, 2022).
- Raihan et al. (2019), in their paper titled "Modeling of Supply Chain Risks in the Leather Industry," determined that a competitive market is a major risk factor for Bangladesh's leather industry (Shoyeb Raihan et al., 2019).
- Suman Prosad Saha et al. (2016) stated in their paper titled "Market Orientation: Expedition from Antecedents of Business Performance in Alternative Leather Manufacturing Firms: A Study on the Alternative Leather Industry in Bangladesh" that market orientation for products and business performance prerequisites are essential, and they have been fully replicated in the artificial leather industry. According to the investigation, the performance of a company's products, its focus on the market, and its antecedents are what matter most for its overall success. Additionally, such factors significantly improve "business performance" statistically. On the other hand, organizational reward systems, interdepartmental connectivity, and top management's emphasis on risk taking all have a major impact on the level of business performance while having no effect on the success of market orientation (Suman Prosad Saha & Shadman Shakib, 2016).

## **CATEGORY 3: EXPORT MARKET AND IMPORT PROBLEMS**

- HL PAUL (2017), in a study titled "Bangladeshi Leather Industry: An Overview of Recent Sustainable Developments," asserts that the footwear industry is expanding at the quickest rate (Paul et al., 2013).
- Wahiduzzaman (2014), in the paper titled "Leather Industry in Bangladesh: Opportunities and Challenges," stated that limited access to market and market information, poor cooperation between firms and stakeholders, dominance of the global market by China, India, Thailand, and Indonesia, low awareness amongst international buyers, less awareness of international quality standards, insufficient cooperation and coordination between various regulators, policy makers, and stakeholders, and inadequate co-operation and coordination between various regulators, policy makers, and stakeholders Bangladesh's international reputation as a manufacturer of low-quality, low-priced items is an additional restriction. There is a lack of an integrated, all-inclusive policy with involvement from all relevant parties. In addition, the majority of factories do not participate in regular production or exports. Additionally, the nation lacks design, product development, and product testing capabilities (Khan, 2014).
- Soon Chan Hong (2018) cites the absence of market knowledge as a significant challenge for leather export. In addition, the lack of openness about business information among all parties is seen as a problem (Chan Hong & Development Bank, 2018).
- Kazi Waliul Islam (2022) said in his paper titled "Leather Industry of Bangladesh: Challenges and Opportunities" that the majority of the market's small tanneries rely on brokers for leather sales. As a consequence of this market structure, tanneries are unable to access global markets in the same manner as conglomerates (Kazi Waliul Islam, 2022).
- According to the Star Business Report for 2022, noncompliance is negatively impacting the leather industry. Another difficulty is that exporters of completed items must import rawhide from LWG-certified manufacturers in other countries in order to ship their products to developed markets, while a substantial quantity of rawhide produced in their own country goes unused owing to poor quality (Kazi Waliul Islam, 2022).
- Akhi Akter and Mir Abdullah Al Mahfuz claimed in their 2022 paper titled "An overview of the Bangladesh leather business" that the unlawful export of raw hides and skins is a significant problem in the Bangladesh leather industry (Akhi Akter & Mir Abdullah Al Mahfuz, 2018).
- Shahriar et al. (2021) discovered that the increase in physical distance between the nations is decreasing commerce between them (Shahriar et al., 2021).
- According to Asmina Akter (2019), a corporation can easily expand its global market if local environment factors such as competition, risks from new entrants, suppliers, customers, and substitute goods are favorable (Akter, 2019).
- Mohammad A. Razzaque, Mahtab Uddin, and Jillur Rahman (2018) have shown that despite the considerable export potential of leather and leather items, development has been modest. They proposed reevaluating export limits and establishing overall effectiveness (Mohammad A. Razzaque et al., 2018).

#### **CATEGORY 4: INEQUATE EXPERTISE, LACK OF TECHNICALLY SKILLED LABOUR ALONG WITH PROPER POLICY**

- Wahiduzzaman (2014) boldly stated that there is an acute shortage of trained manpower and persons with experienced technical know-how for production of quality crust and finished leather. Leather technologists who are graduates from the leather college at Hazaribagh, have little practical knowledge. Besides, there is no training institution for skilled and semi-skilled man power for leather processing. Marketing expertise is the major constraint in development and expansion of finished leather and leather product. There is lackings too (Khan, 2014).
- Soon Chan Hong (2018) also mentioned that lack of skilled workforce is a major challenge for leather sector in Bangladesh. Inefficient production technology, inadequate training facilities , low design capability and product innovation of firms are some remarkable issues there (Chan Hong & Development Bank, 2018a).
- Kazi Waliul Islam (2022) also agrees with others on the point that there is lack of an adequate skilled workforce in Bangladesh's leather industry (Kazi Waliul Islam, 2022).
- Akhi Akter & Mir Abdullah Al Mahfuz, in 2018, indicated the absence of integrated & long-term policy regarding Common Facility Center (CFC). Political instability, corruption, lack of backward linkage industry for chemicals/accessories and substandard quality of the products are some remarkable issues according to the research (Akhi Akter & Mir Abdullah Al Mahfuz, 2018).
- According to tribune report (2022) in the headline "Lack of compliance leading to slow growth of the leather industry" Zahur boldly mentioned that non-compliant factories are the main reason behind slowing down the growth of the leather industry in Bangladesh (Zahur, 2007).
- Md. Sadat S. Shibli and Md. Taherul Islam (2020) included in the report titled as "In Bangladesh, Tanneries in Trouble" that most workers are still temporary, with no benefits or allowances for their higher expenses and most of them work without formal employment agreements (Md. Sadat S. Shibli & Md. Taherul Islam, 2020).
- Joseph Strasser, Peter Dannenberg and Elmar Kulke (2013) mentioned that the seasonal intermediaries involved in the collection and delivery of RHS during Eid ul-Azha lack the logistical capabilities, expertise, and experience necessary to build the leather sector in Bangladesh (Strasser, 2015).
- M. Hedaitul Islam, Md Rayhan Sarker, Md Israil Hossain, Kauser Ali, K. M. Asadun Noor (2020) demonstrated that 'lack of knowledge and experience' as the first pivotal challenge to sustainable supply chain management (SSCM) implementation in leather sectors in Bangladesh. They also showed that the second most prevalent issue is a lack of technical knowledge (Islam et al., 2020).
- Mohammad A. Razzaque, Mahtab Uddin and Jillur Rahman (2018) stated that a severe skilled labor shortage exists in the leather industry, particularly at the highest levels of management (Mohammad A. Razzaque et al., 2018).

## **CATEGORY 5: ENVIRONMENT AND RELOCATION ISSUES**

- According to Md. Habibur Rahman, 2022, large-scale tannery animal production has major environmental consequences, including deforestation, wasteful use of water and land, and gas emissions (Rahman, 2022).
- Sumaya Khatun, 2019, stated that leather is environmentally harmful. The chemicals that are not biodegradable and are used to tan leather damage the water and the surrounding inhabitants. a very destructive endeavor. Leather and fashion kill around 5 million animals every year. Every day, Bangladeshi tanneries generate 20,000 m<sup>3</sup> of tannery wastewater and 232 t of solid trash (Khatun et al., 2019).
- S. Uddin (2019) observed that tanneries release wastes into waterlogged areas, such as rivers and canals, which include hazardous substances such as H<sub>2</sub>S (water), NH<sub>3</sub> (ammonia), poisonous chlorine, and nitrogen-based gases (Ahmed et al., 2016).
- According to a study by the Society for Environment and Human Development (SEHD), millions of people suffer from gastrointestinal, dermatological, and other conditions, and 90% of them die before the age of 50. Tanners assert that the June 2015 deadline for relocating tanneries cannot be met, mostly due to a lack of cash and time. This request was denied by the government (Hasnat et al., 2013).
- According to observers, the plan to shift tanneries from Hazaribagh to Savar does not augur well for tannery workers. Due to environmental concerns, Bangladesh is losing market share in the worldwide leather market.
- HL Paul, 2019, said that sustainable and cleaner manufacturing would be a vital priority for the construction of an environmentally-free society. Concerning the end-of-life, recycling, and re-use of leather and leather items, the Bangladeshi industry as a whole has substantial obstacles (Paul et al., 2013).
- Wahiduzzaman (2014) noted a number of environmental issues, such as the high cost of wastewater treatment, the inadequate drainage infrastructure, and the excessive use of water in tanning. Locals complained about frequent power outages, inefficient solid waste management, health issues, and contamination of the air, water, and soil (Khan, 2014).
- Soon Chan Hong, 2018, replied that the substantial contamination of the adjacent Buriganga River by Hazaribagh affected the value of Bangladeshi leather. The CETP is partially operational and pollutes the Dhaleshwari River (Chan Hong, 2018).
- Md. Mahamudul Hasan and colleagues (2019) discovered that both personnel and adjacent residents were overexposed (P 0.05) to chromium as compared to a control group of rural residents without industrial facilities (Hasan et al., 2019).
- According to Kazi Waliul Islam, in 2022, the facility can hold around 25,000 cubic meters of liquid waste every day, but the tanneries emit approximately 40,000 cubic meters of liquid waste per day. Insufficient solid waste management has not yet been established in this area. The majority of tanneries do not comply with Basic Health Compliance Guidelines (Kazi Waliul Islam, 2022).

- According to Star Business 2022, the leather sector is failing due to noncompliance. The most important aspect is solid waste management. The Rajuk has declared the lands "red zones" since 2017. Therefore, tanneries cannot sell them to pay off their obligations.
- Md. Sadat S. Shibli, 2020, highlighted a number of issue areas, such as insufficient marketing, an inexperienced work force, and a lack of money, which have garnered widespread criticism. Few bigger tanneries conform to national or international requirements for the storage, transport, and use of hazardous chemicals. This is due to the absence of suitable communication routes and a pervasive atmosphere of distrust (Md. Sadat S. Shibli & Md. Taherul Islam, 2020).
- According to Mohammed Shehab, in 2019, tanneries in Savar have begun discharging untreated sewage into a nearby river because of a lack of proper waste treatment facilities (Mohammed Shehab, 2019).
- It was announced by the Dhaka Tribune in 2022. Environmental problems, according to traders and exporters, prevent Bangladesh from selling leather to Europe and the United States, where it might earn up to \$10 billion annually.
- When it comes to climate change, the environmental concerns associated with the leather industry's practices are frequently overlooked. In addition to producing greenhouse gases, the leather industry harms the environment through the use of heavy metals, dyes, and acids. This industry accounts for 19% of global greenhouse gas emissions.
- Since the early 1960s, the Hazaribagh area of the city has been renowned for its robust leather industry. However, exponential economic growth often has detrimental environmental repercussions. In the Hazaribagh region, as well as the surrounding regions, there were severe health issues and substantial pollution. These enterprises once discharged 21,000 cubic meters of untreated wastewater into the river Buriganga, the principal perimeter river of the city, which comprised 40% of the affluent and was the second-largest source of pollution (Ullah et al., 2022).

## PROBLEMS EVALUATION

The table below summarizes all the significant difficulties under five major categories. In right column, the papers that are agree with the same subject of leather business is listed appropriately. The amount of reference here shows that most of the researchers are agree with those typical concerns.

Table 2 Problem categories with supporting citations

Serial	Categories	Condiered segments in the category	Supporting Papers	Counts
1	Raw materials based problems and constraints	<ul style="list-style-type: none"> <li>• Leather collection issues</li> <li>• Irregularities in the supply</li> <li>• Seasonality problems</li> <li>• Issues with defects</li> <li>• Lack of backward linkages chemical industry</li> <li>• Issues with existing procurement, preservation, and processing systems</li> </ul>	(Khan, 2014); (Chan Hong, 2018); (Kazi Waliul Islam, 2022); (Islam et al., 2020); (Mohammed Shehab, 2019); (Mollik, 2022); (Rahman, 2022)	7

		<ul style="list-style-type: none"> <li>• Peoblems faced by local entrepreneurs</li> <li>• Problems for being heavily reliant on brokers</li> </ul>		
2	Constraints related to finance and marketing	<ul style="list-style-type: none"> <li>• Hight bank rate of interest</li> <li>• Unhealthy competition in leather export markets</li> <li>• Sudden changes in export policy</li> <li>• Appraisal and monitoring of bank loans</li> <li>• Scarcity of working capital</li> <li>• Absence of adequate access to finance</li> <li>• Losing preferential market access</li> <li>• Import of advanced machineries and chemicals</li> <li>• Inadequate working capital finance</li> </ul>	(Shoyeb Raihan et al., 2019); (Khan, 2014); (Chan Hong, 2018); (Suman Prosad Saha & Shadman Shakib, 2016); (Kazi Waliul Islam, 2022); (Mollik, 2022); (Rahman, 2022)	7
3	Problems associated with export & import market	<ul style="list-style-type: none"> <li>• Limited access to market and market information</li> <li>• Poor cooperation between firms and stakeholders</li> <li>• Dominance of the world market</li> <li>• Low awareness amongst international buyers</li> <li>• Less awareness of international quality standards</li> <li>• Insufficient co-operation &amp; co-ordination between various regulators</li> <li>• Uneasy access to the local market for exporters</li> <li>• International image problem</li> <li>• Irregular production and exports</li> <li>• No design, product development or product testing capability</li> <li>• Dependence on brokers for export</li> <li>• Non-compliance</li> <li>• Finished goods exporters have to import rawhides from LWG-certified factories</li> <li>• Illegal export of raw hides/skins</li> </ul>	(Mohammad A. Razzaque et al., 2018); (Khan, 2014); (Paul et al., 2013); (Akhi Akter & Mir Abdullah Al Mahfuz, 2018); (Chan Hong, 2018); (Shahriar et al., 2021); (Kazi Waliul Islam, 2022); (Akter, 2019)	8
4	Inedequate expertise, lack of	<ul style="list-style-type: none"> <li>• acute shortage of trained manpower and persons</li> </ul>	(Khan, 2014); (Zahur, 2007); (Kazi Waliul Islam, 2022); (Md.	9

	technically skilled labour and proper policy	<ul style="list-style-type: none"> <li>• Leather technologists with little practical knowledge</li> <li>• No training institution for skilled and semi-skilled man power</li> <li>• Lack of marketing expertise</li> <li>• Inefficient production technology</li> <li>• absence of integrated &amp; long-term policy regarding Common Facility Center (CFC)</li> <li>• Political instability &amp; corruption problems</li> <li>• Lack of compliance</li> <li>• Workers are temporary</li> <li>•</li> </ul>	Sadat S. Shibli & Md. Taherul Islam, 2020); (Chan Hong, 2018); (Strasser, 2015); (Akhi Akter & Mir Abdullah Al Mahfuz, 2018); (Saimoon Rahman et al., 2018); (Mohammad A. Razzaque et al., 2018)	
5	Environment and relocation issues	<ul style="list-style-type: none"> <li>• Negative impact of large-scale livestock production on environment</li> <li>• Emission of non-biodegradable chemicals</li> <li>• High amount of solid waste production</li> <li>• Discharge of wastes into waterlogged area</li> <li>• Relocation barrier due to high interest loan of government</li> <li>• Relocation does not bode well for tannery employees</li> <li>• Losing market due to environmental concerns.</li> </ul>	(Rahman, 2022); (Khatun et al., 2019); (Uddin et al., 2019); (Hasnat et al., 2013); (Paul et al., 2013); (Mohammed Shehab, 2019); (Khan, 2014); (Chan Hong, 2018); (Hasan et al., 2019); (Kazi Waliul Islam, 2022); (Md. Sadat S. Shibli & Md. Taherul Islam, 2020); (Ullah et al., 2022)	12

## RESULTS

According to the current literature, the above research demonstrates that the majority of scholars feel that the environment and relocation difficulties are the most significant obstacles facing Bangladesh's leather industry. Inadequate knowledge, a shortage of technically qualified labor, and ineffective policy are the second-most critical challenges. The problems related to the export-import market, financing, and marketing, as well as the raw materials, follow suit. Figure 3 depicts the proportion of available literature supporting the interpretation of a finding.

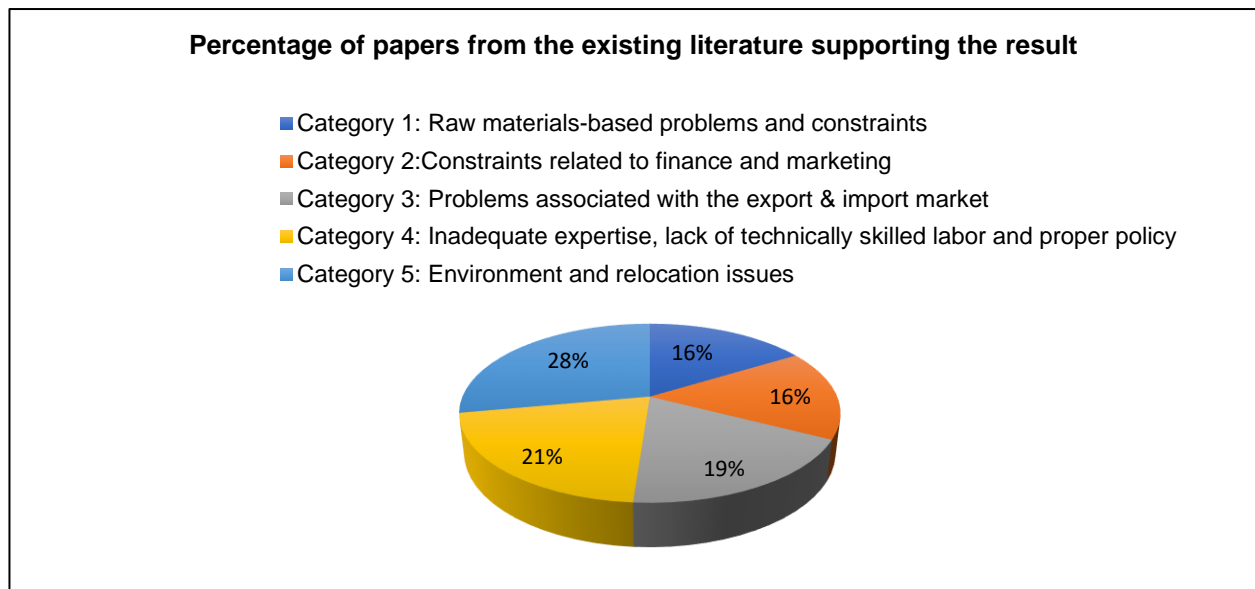


Figure 3 Percentage of papers from the existing literature that supports the result interpretation

## RECOMMENDATIONS

The findings of the research suggest that policymakers should immediately formulate appropriate policies for environmental and relocation concerns in first hand. Inadequate experience, a lack of technically qualified labor, and appropriate policy execution are important deficiencies. Consequently, it is advised that sufficient measures be taken to grow the required number of training institutes and increase the capability and competence of the workforce, depending on the sectors. Import and export markets must be captured for the sector's improvement. The quantity of intermediate beer should be reduced. To compete on worldwide marketplaces, leather quality standards must get sufficient consideration.

## DISCUSSION

The research's analysis of the literature reveals a thorough investigation of the issues now affecting one of Bangladesh's most important segments of the leather industry. According to the available literature, these are the main issues facing the leather industry. The literature backs up the statement stated earlier in the text. The research's objective of describing the present problems confronting the leather industry is achieved in the conclusion. The current difficulties facing the industry are of interest to lawmakers, reporters, and policymakers. The lack of a suitable policy and its repercussions are a major concern shared by all parties. Researchers suggested reassessing present policies to improve them. The study may be carried out from a larger viewpoint to interpret more specific concerns relating to the sector that all the researchers have highlighted.

## **CONCLUSION**

The research's objective was to group all probable contemporary difficulties in Bangladesh's leather industry into five major categories. The study's findings perfectly match its intended purpose. The study examines every assertion made by scholars working in the same field, classifies the problems into five broad categories, and finds that there is a great deal of agreement among these assertions. The study's conclusions will help academics with related research interests in their future work and in deciphering sensible defenses and recommendations. Policymakers should rethink and examine such challenges in order to further strengthen the industry. It is possible to identify the essential adjustments while striving to make the sector the second greatest contributor to GDP by analyzing these problems.

## **LIMITATIONS & FUTURE SCOPE**

A more specific result identifying the challenges that exist in the leather industry may be reached by reviewing additional papers. The report solely looks at problems relating to Bangladesh's leather sector. It is possible to perform extra studies to analyze the reasons for such challenges and potential remedies. During the survey, only theoretical data was gathered and analyzed. Researchers may obtain and evaluate numerical data to understand outcomes more accurately.

## **EXECUTIVE SUMMARY**

Leather is one of the oldest businesses in Bangladesh. Bangladesh's leather industry, which exports 10 percent of the world's leather demand, has eclipsed RMG as the nation's second-largest source of foreign currency. Bangladeshi leather is well-known around the world for its remarkable fine grain, consistent fiber structure, smooth feel, and natural texture. Exports of finished leather have increased by 80 percent since independence, but exports of raw hides have decreased by 79 percent. This shows that the lack of appropriate regulatory enforcement is the key reason why local business owners cannot use freely available materials. Conversely, Bangladesh has the potential to expand its market share in the global leather and footwear industry. Researchers, regulators, and professors have previously highlighted possible supply-chain constraints in the leather industry of Bangladesh. This review article seeks to identify and classify the challenges facing Bangladesh's leather industry into five distinct categories. In order to do this, the research piece was written using material gathered from secondary and tertiary sources and has been appropriately referenced. It was unable to depend on primary sources since collecting information from them is difficult and needs authorization from a certain authority. The majority of the secondary data comes from the websites of the Bangladesh Bureau of Statistics, Bangladesh Bank, Ministry of Finance, and Ministry of Industries. Published journal articles, conference proceedings, books, newspapers, and magazines were mined for secondary data. This literature review on the leather business in Bangladesh used ScienceDirect, Emerald Fulltext, Springer, abcGATE, and IngentaJournals databases. The research technique starts with article collection. The collection of papers first uses the "Google Scholar" search engine and the

"Researchgate" database. First, the relevant keywords for Google Scholar and ResearchGate publications were determined. We selected the leather industry and difficulties as our two primary keyword categories for a wide search related to the topic of the literature study. In the second step, the article's title and abstract were read extensively, and the articles were sorted according to relevancy and duplication. 53 articles have been gathered for the purposes of study. In all, 29 articles were cited in this work. The majority (12) of the articles are from 2012. Five papers for the years 2013, 2017, 2020, and 2022 were gathered. From 2000 to 2012, there was an inadequate examination of the difficulties facing the leather industry. Then it grew again. This indicates that scholars have recovered interest in the leather industry and related issues in recent years. The aforementioned study reveals, according to the present academic literature, that the majority of experts consider the environment and relocation challenges to be the most important barriers confronting Bangladesh's leather sector. Inadequate information, a lack of technically competent workers, and inefficient policy are the second-most significant obstacles. The export-import market, financial and marketing issues, as well as raw materials, follow suit. The outcomes of the study imply that authorities should quickly establish legislation that addresses environmental and relocation issues. Important weaknesses include inadequate expertise, a lack of technically skilled workers, and suitable policy implementation. Consequently, it is recommended that adequate steps be taken to expand the requisite number of training institutions and the skill and competency of the labor force, based on the sectors. Import and export markets must be tapped to develop the industry. There should be fewer intermediate beers available. To be competitive on international markets, leather quality requirements must be adequately considered.

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