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Strategies for Enhancing Jute Products Exports: Overcoming Market Barriers and Developing Entrepreneur and Exporter Database

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ABSRACT

Jute is recognized as the "golden fiber" and possesses considerable potential for sustainable product development and global trade. However, despite its environmentally sustainable appeal and economic significance, exports of jute products continue to be constrained by various market barriers. This research examines strategic methodologies to improve the international competitiveness of jute products by identifying primary export obstacles, including the absence of standardization, restricted market access, and insufficient branding. The research additionally highlights the significance of establishing a comprehensive entrepreneur database to enhance communication, facilitate policy support, and strengthen capacity-building efforts. Through the examination of case studies and stakeholder interviews, the study recommends specific interventions such as market diversification, value enhancement, implementation of quality certifications, and the adoption of digital marketing strategies. A consolidated entrepreneur database can help producers, exporters, and governments collaborate, boosting innovation and international market access. These policies aim to improve jute exports, boost foreign exchange revenues, and promote rural development. The findings provide policymakers, industry stakeholders, and development organizations with practical advice to maximize the global jute sector's potential.

Keywords: jute, fiber, global trade, market diversification, export

Introduction

Jute is among the most important cash products in Bangladesh. Its cultivation prospers in mild, humid climates, and Bangladesh provides one of the most conducive environments for its development. The country's tropical monsoon climate, characterized by high temperatures varying from 24°C to 35°C, abundant sunshine, and heavy rainfall between 1,500 and 2,500 mm, provides optimal conditions for the thriving growth of jute plants (Chandekar et al., 2020).

The alluvial soil deposited by the Ganges-Brahmaputra river system is high in organic content and maintains moisture well, allowing jute roots to develop deeply and strongly. Adequate humidity (typically above 70%) promotes quick somatic development. The extended monsoon season provides a consistent water supply, which is required for retting, the process of separating fiber from

stem. Bangladesh is one of the world's leading jute producers thanks to its unique weather conditions (Aktar et al., 2014).

The climate needs for jute in India are very similar to those in Bangladesh, especially in West Bengal, Assam, and Bihar. Temperature ranges, high humidity, and strong monsoon rain are all the same in the area. India is still the biggest jute-growing country in the world because it has rich deltaic soils and long, warm growing seasons. But changes in where the rain falls and short droughts can sometimes lower the yield. Jute is mostly grown in China's southern states, like Sichuan, Guangdong, and Fujian, where the weather is subtropical. These regions experience adequate rainfall and sustain mild temperatures; however, occasional cooler periods in early spring may occasionally delay planting. Enhanced irrigation systems and contemporary agricultural techniques contribute to sustaining stable production (Aktar et al., 2020). Other jute-producing nations, including Myanmar, Thailand, and Nepal, also enjoy favorable mild climates and seasonal monsoon rainfall. Nonetheless, variations in soil fertility, water resources, and agricultural infrastructure impact productivity levels. Overall, the climatic requirements of jute are comparable across producing countries, with Bangladesh maintaining a distinct advantage owing to its consistently mild temperatures, fertile floodplain soils, and dependable monsoon patterns that collectively establish an ideal environment for the production of high-quality fiber.

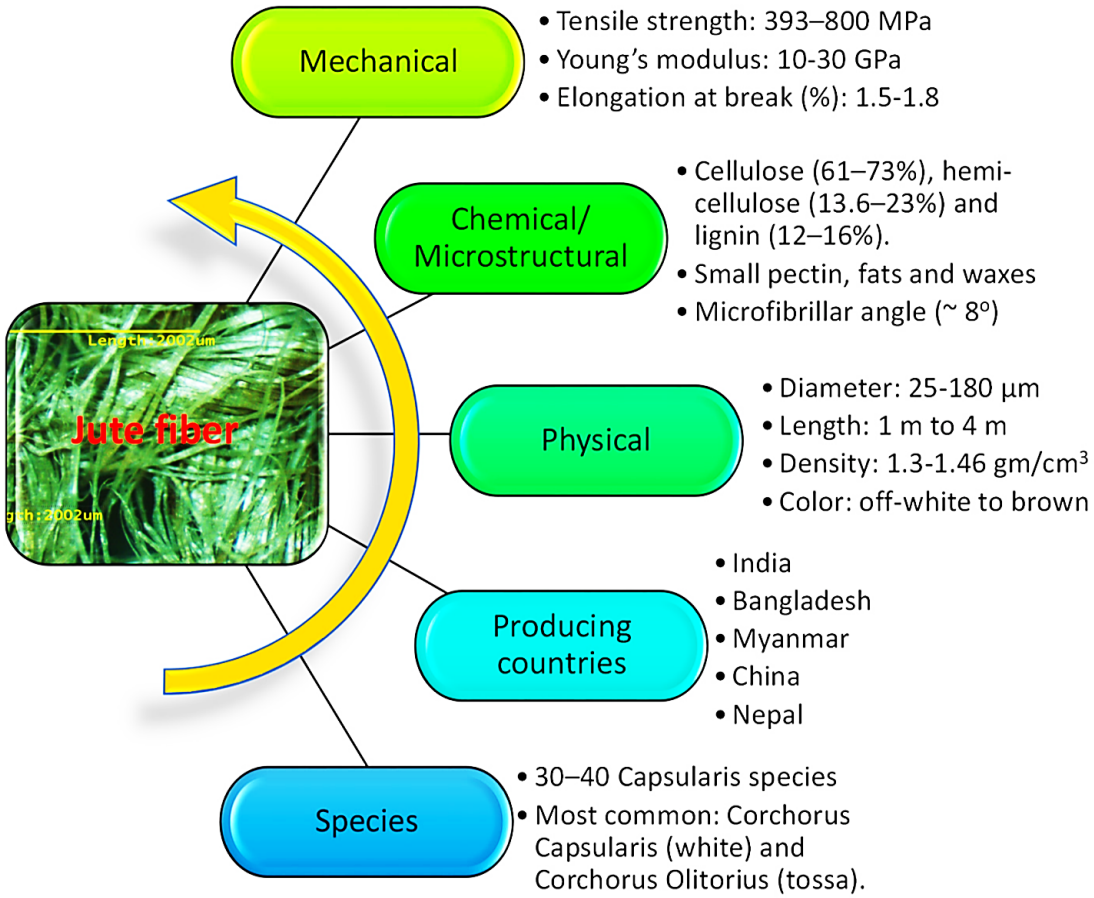

Figure 1. Jute fiber physical, chemical, mechanical and its abundant producing countries (Burrola-Núñez et al., 2019 and Chandekar et al., 2020)

Jute fiber is generally classified into various varieties according to species, quality, and processing techniques. The primary botanical varieties are White Jute (*Corchorus capsularis*) and Tossa Jute (*Corchorus olitorius*). White jute is the traditional and extensively cultivated variety, recognized for its moderate tensile strength, pale coloration, and appropriateness for manufacturing hessian fabric, sacking, ropes, and twine. In comparison, tossa jute is regarded as preferable owing to its enhanced strength, finer texture, and inherent luster. Its long, silky filaments render it suitable for premium yarns, carpets, geotextiles, and numerous advanced textile applications (Figure 1). Additionally, jute fibers are categorized based on quality classes, which are determined by attributes like strength, color, length, fineness, and the existence of flaws. While medium-grade fibers are frequently used for ordinary sacking and packaging materials, top-grade fibers are lengthy, glossy, and robust, and are utilized for high-end textiles and ornamental fabrics (Mushtaq et al., 2022). Because they are coarser and duller, lower-grade fibers are typically utilized in industrial settings for padding and paper pulp.

The Bangladeshi economy significantly benefits from the highest quality jute fiber and the jute industry. In Bangladesh, jute is regarded as a vital sector for commerce, industry, and the economy. Jute was formerly known as the "Golden Fiber" of Bangladesh. However, the growth and success of this industry, both currently and in the future, are at risk. This situation arises from a variety of causes. Bangladesh has the potential to generate significant foreign exchange revenue from this industry (Aktar et al., 2014; Sadekin et al., 2015). As jute is an environmentally sustainable material and given the current heightened public concern for the environment, extensive research in this domain is essential. This research will provide the policymaker with insights on how to advance in this field. Bangladesh is one of the top manufacturers and exporters of jute and goods made from it. The export market steadily gets more attractive as individuals throughout the world become more environmentally conscious. As a result, they are choosing more environmentally friendly materials like jute over synthetic ones like plastics and polypropylene (Rifath, 2018).

The development and success of the jute industry today and in the future are in jeopardy. The jute sector has a number of issues, including a shortage of high-quality seeds, insufficient fertilizer supplies, land fragmentation, high labor costs, water supply, storage facilities, etc. Bangladesh's jute sector is crucial to the nation's economy and trade, thus any problems it encounters must be carefully considered and fixed as soon as possible. The manufacturing of jute products, together with the cultivation and marketing of jute, generates employment opportunities for thousands of individuals (Rahman et al., 2017). However, upon closer examination, it becomes evident that numerous individuals have lost their employment due to the shutdown of a considerable number of jute mills, adversely affecting Bangladesh's economy. The optimal quantity and the actual selling price of the products are determined by jute producers with the assistance of precise market data. Nevertheless, jute producers in Bangladesh face restricted market access.

Farmers still grow jute using old-fashioned tools and techniques. So, productivity is lower than that of people who grow up using the latest techniques. Most of the jute that is farmed in Bangladesh comes from rural areas, which also have fewer stable roads and public transportation infrastructures. To get the raw goods from farmers to other middlemen or consumers, traders have to pay a lot of money for transportation. China, Turkey, and several European countries were good markets for jute, but demand for it is slowly going down all across the world. However, the expense associated with labor for processing unprocessed jute has increased in recent years, leading those nations to

decrease their imports. Currently, a broad variety of products are produced through the direct importation of yarn or fabric from Bangladesh (Islam et al., 2017) . This article will delineate the present condition of the jute industry in Bangladesh, encompassing its contributions and challenges, along with several recommendations for its improvement. Nonetheless, the following outlines the specific research objectives of this investigation. To analyze the current situation of the jute industry in Bangladesh and to examine the extent to which the Bangladeshi economy benefits from the jute sector. To identify the challenges confronting Bangladesh's jute industry. The primary objective of this study is to analyze the current state of the jute industry in Bangladesh, identify its challenges, examine key market barriers, and propose strategies to strengthen export promotion policies. Additionally, the study aims to develop competitive strategies, improve product diversification and quality, and establish a comprehensive entrepreneur database. This constitutes one of the research contributions to the development of a database and the formulation of a strategic plan for the marketing of jute and jute products.

Present status of jute and jute goods

Bangladesh remains one of the world's leading producers and exporters of jute and jute products, despite facing competition from synthetic alternatives and challenges in global markets.

As of 2023-24, Bangladesh has achieved significant advancements in the production and yield of jute. Overall jute production has attained a record level of 17.89 lakh tons, indicating a substantial increase compared to previous decades (Asaduzzaman, 2022). This rise in production is especially noteworthy considering that the extent of jute cultivation has remained relatively constant at 7.46 lakh hectares. This signifies that productivity per hectare has significantly increased due to the adoption of higher-quality seedlings, enhanced agricultural practices, and greater awareness among farmers. The yield per hectare has increased to 2.40 tons, representing the highest figure recorded in the nation's history to date. This increase in yield signifies the achievements of research initiatives, governmental support programs, and the dedication of farmers to modernize cultivation techniques. Such improvements are essential for preserving the profitability and sustainability of jute cultivation, particularly given the prolonged decline in cultivation area since the 1970s and 1980s (Aktar et al., 2020).

Jute products have also undergone a resurgence owing to increasing international demand for environmentally sustainable and biodegradable items. Items such as jute bags, fibers, geotextiles, mats, and various jute products are increasingly popular in both domestic and international markets. The Bangladeshi government has enacted policies to encourage the adoption of jute bags for packaging agricultural products and to diminish plastic consumption, thereby further stimulating domestic demand.

Despite these encouraging developments, obstacles persist. The jute industry frequently encounters challenges such as price fluctuations, obsolete equipment in mills, and irregular quality assurance. Furthermore, international competition and variable export demand necessitate ongoing innovation and policy assistance. Finally, jute and jute products in Bangladesh are characterized by positive advancements in yield and production, propelled by enhanced agricultural practices and supportive policies. Through sustainable practices, value enhancement, and international marketing, jute possesses the potential to substantially bolster Bangladesh's economy and address the global demand for environmentally responsible alternatives.

Figure 2 offers a visual depiction of the temporal trends in jute cultivation and can be employed to illustrate the current status of jute and jute products in Bangladesh. On the X-axis, the time periods from 1971–75 to 2023–24 depict the aggregate area (L/ha),

production (L/ton), and yield (ton/ha). In the year 2023-24, production reached 17.89 lakh tons, representing the highest recorded output and reflecting a robust yield of jute. The cultivated area was 7.46 lakh hectares, and this extent has remained relatively constant since 2015-16. The yield of 2.40 tons per hectare also represents the maximum achieved output, indicating enhanced agricultural practices or superior input quality. Based on area, it has generally decreased from approximately 7.85 lakh hectares (1971-75) to a low of 4.80 lakh hectares (2005-10). A steady rise or stabilization subsequently observed, indicating renewed interest or governmental interventions. It can be observed that production has fluctuated over the decades. Notable growth observed from 2005-10 (10.05 lakh tons) to 2023-24 (17.89 lakh tons). It signifies enhanced productivity despite the stabilization of the area. The yield data indicates consistent progress over the years, increasing from 1.13 tons/ha (1971-75) to 2.40 tons/ha (2023-24). This indicates advancements in agronomic techniques, hybrid seed utilization, and technological implementation.

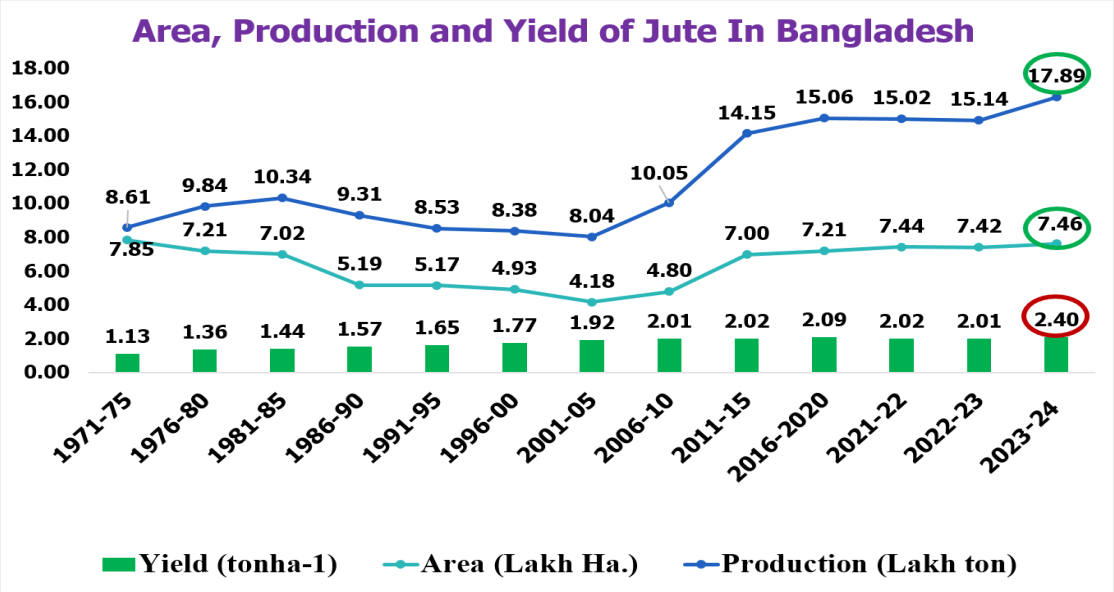

Figure 2. Area, Production and Yield of Jute in Bangladesh (BBS, 2024)

Jute consumption in Bangladesh

Bangladesh is among the world's leading producers of unprocessed jute; it not only exports jute and jute products internationally but also consumes a substantial share domestically. Jute consumption within the country encompasses diverse sectors, such as packaging, textiles, construction, and handicrafts.

The main sector of jute utilization in Bangladesh is in packaging, particularly for agricultural commodities such as rice, wheat, sugar, and fertilizers. The government has mandated, in accordance with the Mandatory Jute Packaging Act, 2010, the utilization of jute bundles for packaging various agricultural commodities. This legislation has substantially augmented domestic demand for jute bags, benefiting both producers and jute mills. In addition to packaging, jute is progressively employed in a variety of diversified jute products (DJPs).

These encompass items such as jute yarn, carpets, purchasing bags, home décor, furniture, and fashion accessories. The increasing awareness of environmental issues and the movement away from plastic have played a significant role in the expanding popularity of these products. Small and medium enterprises (SMEs), particularly women-led cottage industries, have emerged as significant contributors to the production of DJPs for local markets.

In the textile and apparel sector, woolenized jute yarn is being developed for use in composite fabrics, sweaters, shawls, and mufflers. Although still in development, this application signifies a prospective avenue for increasing jute utilization in high-value industries. Research institutions and universities in Bangladesh are also engaged in jute fiber modification and compounding efforts to improve its applicability within the textile industry. Another sector experiencing increased jute utilization is in construction and agriculture. Jute geotextiles are employed for erosion prevention, roadway development, and soil reinforcement. Jute sticks and composites are employed in the manufacturing of particle boards, insulation materials, and biodegradable panels for interior decoration.

Despite these advancements, obstacles persist in optimizing domestic jute utilization. These encompass inadequate modernization of jute mills, a deficiency in awareness regarding diversified jute products, irregular supply of high-quality unprocessed jute, and limited technological progress in processing. Furthermore, the local market continues to lack widespread consumer awareness regarding the environmental and economic advantages of jute products.

Based on recent data (Figure 3), the internal jute industry continues to be the primary consumer, utilizing approximately 0.89 million tons of jute each year. This encompasses conventional mills and manufacturing facilities that produce bags, ropes, and various other packaging materials. These products are predominantly utilized for packaging agricultural commodities such as rice, wheat, and sugar, particularly in accordance with the provisions of the Mandatory Jute Packaging Act, 2010 (Mim, et al., 2024).

According to BBS (2022), the export of jute products ranks as the second-largest sector of consumption, totaling 0.54 million tons. Bangladesh exports a range of jute products, including bags, fibers, twine, mats, and diversified jute products (DJPs), to markets across Europe, Asia, and Africa. The global demand for biodegradable and sustainable materials has had a favorable influence on this sector. The unprocessed jute export sector utilizes 0.24 million tons, supplying raw materials to international jute-processing industries. While this contributes to foreign exchange earnings, numerous experts contend that increasing the domestic conversion of unprocessed jute into value-added products could yield greater economic advantages. Small and Medium Enterprises (SMEs) are also emerging as significant consumers, albeit on a lesser scale, with a consumption of 0.08 million tons. These enterprises are primarily engaged in the manufacturing of environmentally sustainable, artisanal, and handcrafted products. These products are experiencing a rise in popularity owing to heightened environmental awareness and the expanding demand for alternatives to plastic.

In total, jute consumption in Bangladesh is driven by a combination of internal industrial needs, export potential, and grassroots-level innovation. However, to fully capitalize on this potential, challenges such as modernization of jute mills, improved processing technologies, and market diversification must be addressed.

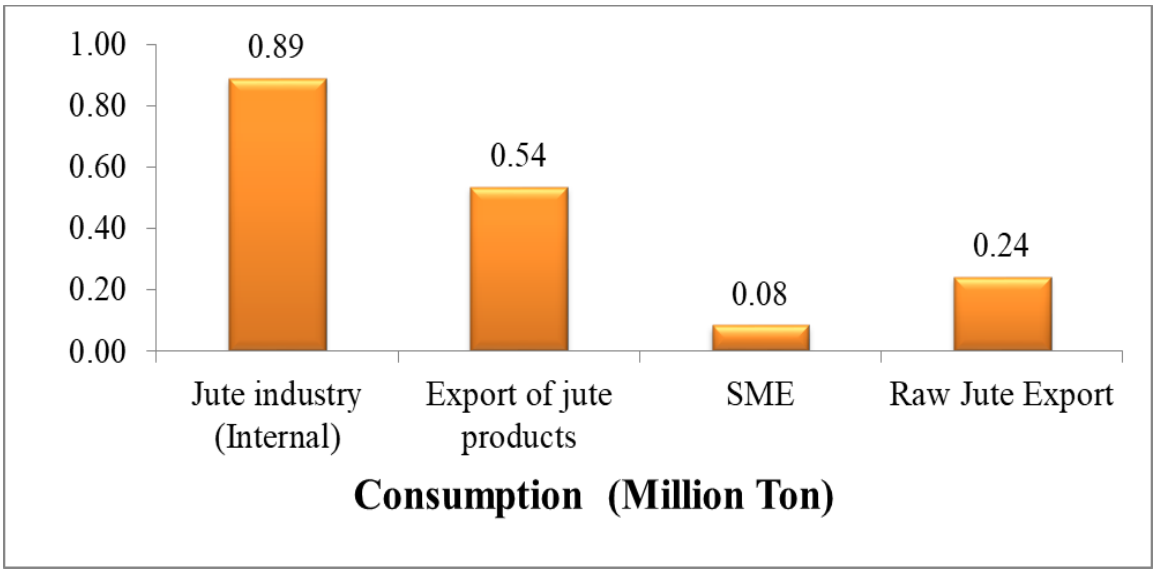

Figure 3. Total jute consumption in Bangladesh (BIDA, 2024)

Jute Consumption from Different Countries

The countries that produce the largest quantities of jute each year are primarily located in South and East Asia. With an estimated 3.20 million metric tons, Bangladesh takes the lead, demonstrating the strength of its domestic and export-oriented jute businesses. Due to the demand for a wide variety of jute goods, China consumes approximately 2.33 million metric tons. India is the second-highest consumer of PET, with a consumption rate of over 1.35 million metric tons, which is mostly used for packaging and textile applications. Pakistan, on the other hand, consumes a smaller amount of PET, which is approximately 0.90 million metric tons. Based on the data shown in Table 1, it is evident that the majority of the demand for jute on a worldwide scale is concentrated in a limited number of nations, which in turn has a considerable impact on supply chains and market dynamics.

Table 1. A comparative analysis on major jute-consuming countries with references

Country	Approx. annual consumption (MT)	Source
India	1,352,700	Indian Jute Mills Association. (2018). *World raw jute consumption statistics*. https://www.ijma.org
Bangladesh	3,198,600	Indian Jute Mills Association. (2018). *World raw jute consumption statistics*. https://www.ijma.org
Pakistan	905,400	Indian Jute Mills Association. (2018). *World raw jute consumption statistics*. https://www.ijma.org
China	2,327,400	Indian Jute Mills Association. (2018). *World raw jute consumption statistics*. https://www.ijma.org

International Market Analysis Research & Consulting Group

The global jute market has undergone significant transformations over the past several decades, propelled by increasing international demand for sustainable materials, policy developments, and changing industrial uses. In response, numerous market research and consulting firms have been established to analyze industry trends, forecast demand, and offer strategic guidance to stakeholders within the jute sector.

Market analysis research within the international jute industry concentrates on several critical aspects: production, consumption, trade movements, pricing trends, supply chain dynamics, and potential future opportunities. Research teams collect data from leading jute-producing nations such as Bangladesh, India, and others, and evaluate the demand from importers throughout Europe, the Middle East, and Southeast Asia. These studies frequently emphasize the rising demand for biodegradable products and the escalating regulations on plastics as primary factors fueling the demand for jute products.

Consulting firms operating in this sector offer analytical insights and tailored reports for governments, exporters, investors, and jute producers. These groups evaluate market entry strategies, product development, regulatory adherence, and supply chain efficiency. Their efforts facilitate companies in identifying lucrative markets, adapting to evolving regulations, and enhancing operational efficiency.

Some of the key services provided by international jute market consulting firms include: market feasibility assessments, trade and tariff analysis, competitive benchmarking, consumer behavior studies, and product diversification strategies. Regarding jute products, the market is categorized into jute bags, jute handicrafts, jute textiles, jute apparel, jute furnishings, and other related items. The jute bag segment led the market, generating USD 965.5 million in revenue in 2024 and projected to attain USD 1.6 billion by 2034 (Figure 4).

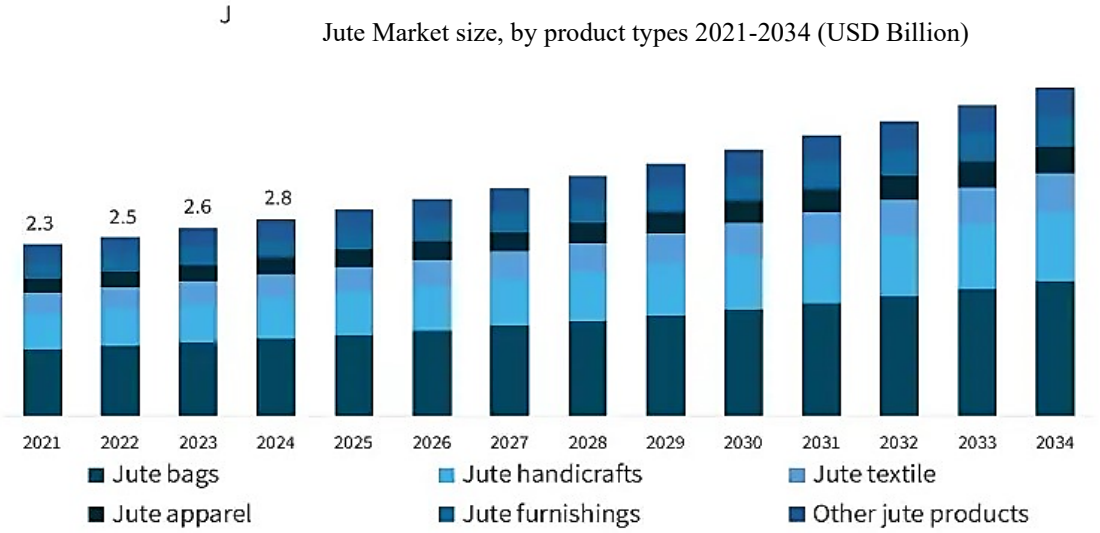

Figure 4. Jute market analysis and key products (GMI, 2025)

These research-driven consulting services have gained particular significance as nations such as Bangladesh seek to diversify their jute product offerings and enhance their presence in the international market. For example, consulting firms support Bangladeshi exporters in identifying opportunities within environmentally conscious markets in Europe and North America, where jute shopping bags, textiles, and composites are increasingly in demand.

Furthermore, with the increasing prominence of Diversified Jute Products (DJPs), consulting firms are integral in steering innovation and assisting stakeholders in exploring emerging sectors such as fashion, automotive, and construction. Their insights facilitate the advancement of high-value products such as jute geotextiles, jute-plastic composites, and biodegradable packaging.

In the international jute market, analysis and consulting firms play a vital role in determining the strategic course of the global jute industry. Their data-driven insights and pragmatic recommendations empower producers, exporters, and policymakers to respond effectively to evolving global demands, enhance competitiveness, and leverage the expanding emphasis on sustainability. These organizations are not only fostering trade but also aiding in the conversion of jute into a versatile and internationally significant eco-friendly material.

Global status

Jute continues to be a crucial environmentally sustainable fiber worldwide, with the primary production centers located in Bangladesh and India. Growing environmental issues and the implementation of plastic restrictions have led to an increased demand for jute bags, geotextiles, and a variety of diversified jute products. Bangladesh is a leading exporter of both unprocessed jute and processed value-added products. Countries across Europe, the Middle East, and Asia serve as primary importers. Although traditional applications continue, advancements in jute composites and textiles are broadening. Despite competition from synthetic materials, the global jute markets are experiencing renewed momentum driven by sustainability trends, thereby opening new opportunities for producers and exporters within the green economy.

Jute and jute products comparison with other countries

Jute is a vital natural fiber predominantly cultivated in South and Southeast Asia. The comparative data from 2011–2012 to 2022–2023 underscores the prominence of Bangladesh and India in worldwide jute production, whereas China and Nepal make comparatively minor contributions. From Figure 5, it is evident that Bangladesh continues to be a prominent exporter of jute and jute products. Its production has exhibited a generally increasing trend, reaching a peak of 841.0 thousand/hac in 2020–21. Although there was a decline to 714.0 thousand/hac in 2022–23, Bangladesh has achieved significant progress through technological advancements and diversification into value-added jute products such as bags, textiles, and composites. India has traditionally been the leading producer of raw jute, although its production has progressively decreased from 905.0 thousand hectares in 2011–12 to 680.0 thousand hectares in 2022–23. Despite this, India continues to play a vital role, particularly in the domestic consumption and export of jute yarn and unprocessed fiber. China's jute production has experienced a consistent decline, decreasing from 19.3 thousand hectares in 2011–2013 to 7.2 thousand hectares in 2022–2023. This indicates the nation's evolving industrial emphasis and diminished dependence on natural fibers such as jute. Finally, Nepal consistently produces a modest quantity of jute, spanning from 7.1 to 11.4 thousand tons annually. Various nations produce a range of jute products in accordance with their industrial capabilities and internal market requirements. Bangladesh and India manufacture traditional

products such as hessian, sacking, and carpet underlay, as well as value-added items including jute bags, mats, geo-textiles, biodegradable jute composites, and handicrafts. China concentrates on the production of jute fibers, ropes, composite boards, and environmentally sustainable packaging materials, whereas Pakistan predominantly manufactures jute sacks, ropes, twines, and a limited selection of jute-based handicrafts. Its function in the international market remains limited; however, Nepal serves the domestic and small-scale jute product markets.

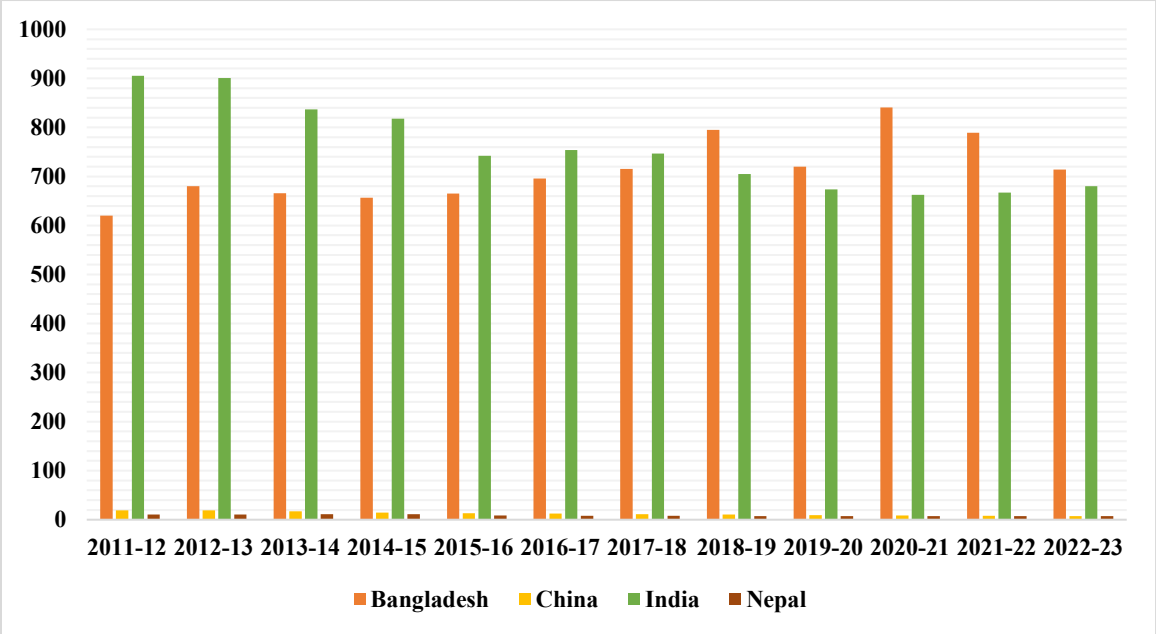

Figure 5. Jute production area of major Jute Allied Fibers producing countries (in '000 ha)

Figure 6 presents data on global production of jute and related fibers (measured in thousand tons) for Bangladesh, China, India, and Nepal from 2012-13 to 2022-23. The primary observation for Bangladesh is that production fluctuated but generally increased from 1,363.0 thousand tons in 2012–13 to a peak of 1,698.0 thousand tons in 2020–21. The minimum production occurred in 2013-14, amounting to 1,338.5 thousand tons. China's production consistently declined from 68.5 thousand tons in 2012-13 to 36.1 thousand tons in 2022-23. India demonstrates considerable fluctuation in production, beginning at 1,674.0 thousand tons in 2012-13, declining to 1,080.0 thousand tons in 2020-21, and reaching a peak of 1,710.0 thousand tons in 2022-23. The minimum production level occurred in 2020-21, amounting to 1,080.0 thousand tons. Finally, Nepal's production remained relatively stable but experienced a minor decline from 15.0 thousand tons in 2012-13 to 10.2 thousand tons in 2022-23. Overall observation, Bangladesh and India are the leading producers, with Bangladesh exhibiting a consistent upward trajectory and India demonstrating greater fluctuations. China and Nepal have experienced a consistent decrease in production over the years. Bangladesh's trend exhibits greater stability, whereas India's volatility indicates a higher sensitivity to external factors such as weather and market prices. In 2022-23, India surpassed Bangladesh as the leading producer, with figures of 1710.0 compared to

1533.0. Jute necessitates particular climatic conditions, such as monsoon rainfall; droughts or floods may adversely affect its yields.

The global apparent consumption of jute and related fibers has remained relatively stable, averaging approximately 3.2 to 3.5 million tons per year. Major consumers comprise Bangladesh, India, and importing countries in Europe, Africa, and Southeast Asia. Although conventional applications remain prevalent in agriculture and packaging, increasing demand for environmentally sustainable alternatives has broadened usage to include textiles, geotextiles, and composites. Despite competition from synthetic fibers, concerns regarding sustainability are renewing global interest in jute-based products. Enhanced value addition and a broadening of applications are anticipated to propel future growth in the worldwide consumption of jute and related fibers.

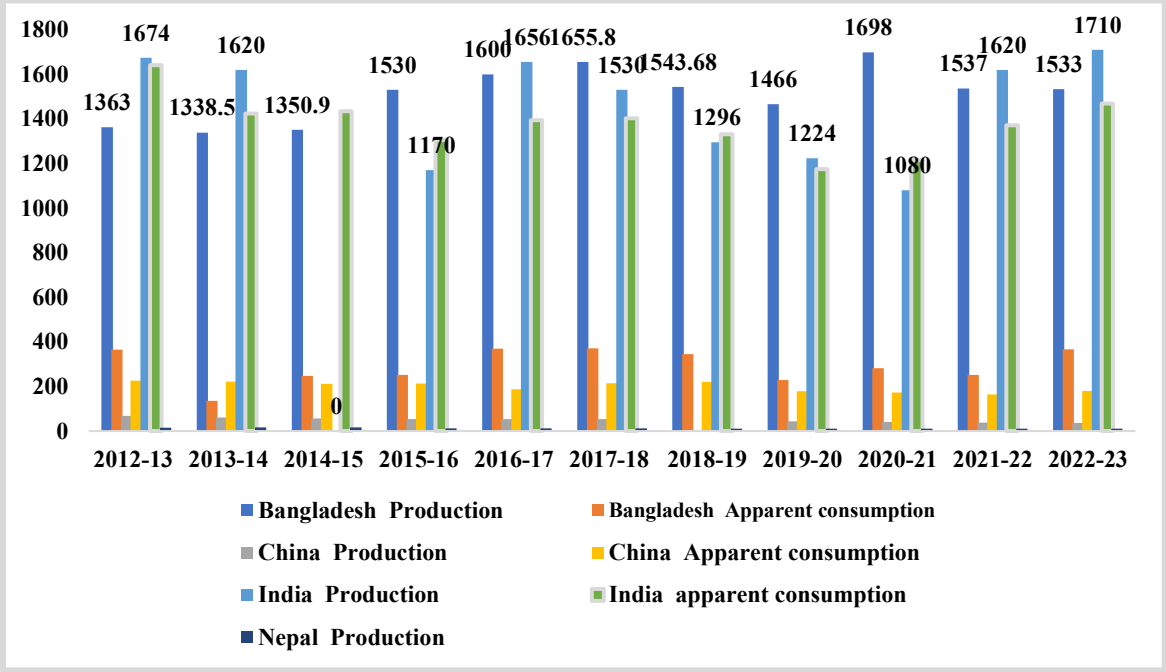

Figure 6. World production of Jute Allied Fibers (in '000 tons); Source: FAO, 2024

Table 2 illustrates the apparent global consumption of jute and related fibers (measured in thousand metric tons) for three principal countries are Bangladesh, China, and India—over an eleven-year span from 2012-13 to 2022-23. India's consumption exceeds that of Bangladesh by a factor of 4 to 12 times, highlighting its more substantial domestic market. Bangladesh's inconsistent patterns stand in contrast to India's more extensive cyclicality. Although a minor producer, China's consumption is two to three times that of Bangladesh, underscoring its import requirements.

Table 2. World apparent consumption of Jute Allied Fibers (in '000 tons)

Year	Bangladesh	China	India
2012-13	364.8	226.5	1 641.7
2013-14	135.4	221.9	1 424.3
2014-15	247.8	211.2	1434.6
2015-16	252.4	213.3	1305.3
2016-17	370.1	187.3	1394.5
2017-18	371.2	214.3	1402.3
2018-19	344.9	220.2	1331.3
2019-20	229.4	178.6	1174.9
2020-21	281.6	172.9	1214.4
2021-22	252.3	164.1	1372.0
2022-23	366.4	180.5	1469.0

Source: IJMA, 2019

Export status

The international export of unprocessed jute and related fibers is predominantly led by Bangladesh, which accounts for more than 80% of the total exports. Other contributors encompass India, although it primarily exports a greater volume of jute products rather than unprocessed fiber. Major importing nations include India, Pakistan, China, and several European countries. Raw jute is primarily utilized in the manufacture of fibers, hessian, and sacking fabrics. In recent years, export volumes have experienced fluctuations attributable to variations in global demand, the effects of climate on production, and increased competition from synthetic alternatives. Nonetheless, increasing environmental consciousness is rekindling global interest in natural jute fibers as an environmentally sustainable alternative. In Table 3, a detailed analysis of global exports of unprocessed jute and related fibers (measured in thousand tons) from 2012–13 to 2022–23 is presented, emphasizing worldwide trends, Bangladesh's leadership, and India's contribution, along with actionable insights. Bangladesh contributes approximately 75–90% of global exports each year. Conversely, India's exports vary between 16,000 and 45,000 tons, with no discernible pattern. The member list of BJGEA Appendix 1 includes the exporters who are directly involved in the jute and jute products export association.

Table 3. World exports of raw Jute Allied Fibers (in '000 tons)

FY	World	Bangladesh	India
2012-13	422.5	370.1	34.2
2013-14	239.2	177.1	44.5
2014-15	240.1	181.4	37.8
2015-16	248.8	204.8	25.2
2016-17	254.1	219.7	16.5
2017-18	274.7	231.8	22.4
2018-19	200.5	150.0	25.9
2019-20	206.7	156.4	21.8
2020-21	165.5	107.0	30.6
2021-22	203.0	145.0	32.0
2022-23	281.5	226.0	31.5

Source: FAO, 2023

Table 4 presents data on global exports of jute and related fiber products (measured in thousand metric tons) from 2012-13 to 2022-23, encompassing Bangladesh, China, India, and Nepal. Bangladesh is the leading nation in exporting products made from Jute Allied fibers. In the year 2022-23, it is reported that 76% of global exports are transported by Bangladesh.

Bangladesh is the world's foremost exporter of jute and jute products, with exports categorized primarily into Raw jute, Jute yarn and twine, jute containers and bags, and other related items. In the year 2022-23, Table 5 indicates that exports of jute yarn and twine constitute 58% of the total, followed by unprocessed jute at 19%, sacks and bags at 12%, and other items at 11%, respectively. The ten-year evaluation indicates that the percentage of unprocessed jute exports is highly volatile, while jute yarn and twine have experienced sharp increases followed by declines. Sacks and bags, on the other hand, have shown a consistent decline.

Table 4. World exports products of Jute Allied Fibers (in '000 tons)

FY	World	Bangladesh	China	India	Nepal
2012-13	896.2	597.4	12.6	171.8	63.5
2013-14	1157.6	858.7	4.2	179.4	64.1
2014-15	1028.9	817.4	6.0	111.3	51.0
2015-16	995.1	825.5	3.1	87.3	41.0
2016-17	1008.0	827.3	6.4	91.5	40.0
2017-18	1017.3	827.1	7.0	91.8	47.0
2018-19	889.2	718.7	5.8	74.0	43.9
2019-20	901.0	713.3	6.0	70.2	47.4
2020-21	875.6	700.2	4.7	75.6	40.5
2021-22	794.1	600.0	3.0	94.8	45.0
2022-23	773.3	586.8	2.7	81.5	45.0

Source: FAO, 2023

Table 5. Export of jute & jute goods in Bangladesh by category (in million USD)

Year	Raw jute	Jute Yarn & Jute Twine	Sacks & Bags	Others	Total
2014-15	111.57	552.32	139.45	65.19	868.53
2015-16	173.17	558.73	122.53	65.15	919.58
2016-17	167.84	607.88	127.53	59.17	962.42
2017-18	155.68	647.72	122.82	99.33	1025.55
2018-19	112.48	512.42	82.86	108.51	816.27
2019-20	129.89	564.26	106.54	81.66	882.35
2020-21	138.15	799.04	138.66	85.63	1161.48
2021-22	216.18	697.80	119.23	94.42	1127.63
2022-23	203.71	497.73	109.83	100.24	911.51
2023-24	161.28	492.45	106.29	95.21	855.23

Source: BBS, 2024

From 2014 to 2024, Bangladesh's export of jute and jute products has exhibited a combination of consistent performance and variable fluctuations influenced by global market conditions, policy adjustments, and environmental factors (Figure 7). During the initial years from 2014 to 2018, exports consistently exceeded $800 million annually,

primarily fueled by strong demand for unprocessed jute, yarn, and sacks. The period from 2019 to 2021 experienced a decline attributable to global trade disruptions, particularly during the COVID-19 pandemic. Nevertheless, a robust recovery commenced in 2022, supported by increasing global demand for environmentally sustainable alternatives to plastic. By 2023–2024, Bangladesh expanded its jute product portfolio, emphasizing value-added and diversified jute products (DJPs) including purchasing bags, decorative items, and composites. Export revenues persisted at approximately $900 million, with raw jute, jute yarn/twine, and jute bags serving as the primary contributors.

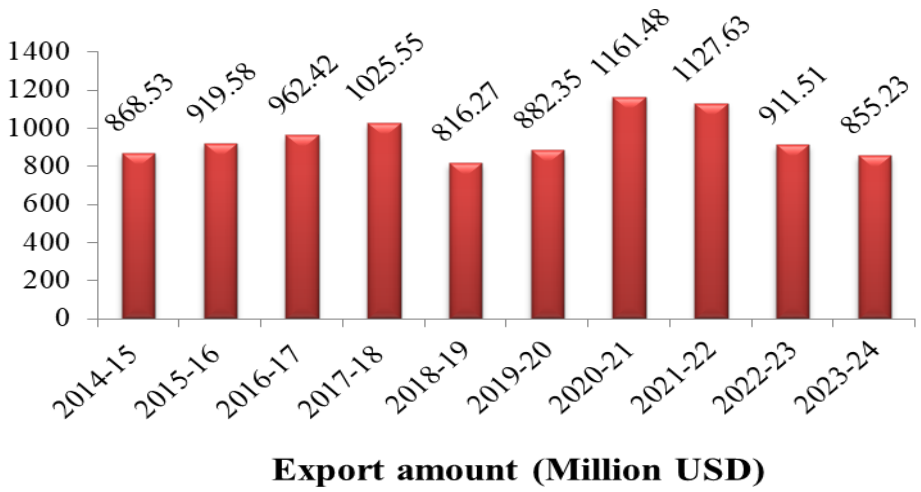

Figure 7. Export status on jute and jute goods of Bangladesh (EPB, 2024)

Diversified jute demand

The demand for diverse jute products (DJPs) has increased substantially in recent years as a result of growing global recognition of environmental sustainability. Unlike conventional jute products such as totes and hessian fabric, DJPs encompass jute bags, home décor, fashion accessories, geotextiles, furniture, composites, and textiles. These products are designed for environmentally conscious consumers in search of biodegradable substitutes for plastic and synthetic substances. Bangladesh and India are at the forefront of the production and export of a diverse range of jute products. Enhanced innovation, governmental assistance, and export incentives have driven an increase in production. As international markets increasingly favor environmentally sustainable products, the demand for a diversified range of jute is projected to grow consistently. Table 6 presents the current status of jute mills in Bangladesh.

In Bangladesh, the utilization of allied fibers in the textile industry remains stable, with an annual consumption ranging from approximately 862,000 to 1,300,000 tonnes. The government endorses diversification initiatives by promoting the utilization of allied fibers such as kenaf and mesta in jute products. In India, the consumption of allied fibers is higher, estimated to range between 1,014,000 and 1,350,000 tonnes annually (Table 7). India advantages from increased production and government initiatives such as the Jute Packaging Materials Act, which encourage the utilization of jute and related fibers. Kenaf and mesta are the most frequently utilized allied fibers in Indian mills.

Table 6. Present status of jute mills in Bangladesh

Region	Govt. Jute mils		Non-Govt. Jute mills		Production ability (t/day)	Present productivity (t/month)
	Active	Inactive	Active	Inactive		
Narayanganj	3	3	62	2	……	……..
Faridpur	-	-	37	12	1101	814
Dinajpur	-	-	32	11	89510	2939
Khulna	5	5	23	9	1381	1174
Rangpur	-	-	23	5	2681.50	3807
Rajshahi	2	2	20	3	336.5	1462.50
Jeshore	-	-	19	5	1013	435
Cumilla	-	-	14	8	217 4800 pairs of shoes	1510 2300 pairs of shoes
Chattogram	7	7	7	3	75.5	111
Mymensingh	-	-	12	6	2341	2011
Total	17	17	249	64	98656.5	14263.5

Source: https://dgjute.gov.bd/

Table 7. Closing stocks and mill consumption of Jute Allied Fibers in the major producing countries (in '000 tons)

FY	Stocks of Fiber		Mill consumption	
	Bangladesh	India	Bangladesh	India
2013-14	35.7	428.7	1170.0	1146.7
2014-15	15.2	271.6	1160.0	1248.1
2015-16	130.4	99.7	1180.0	1231.4
2016-17	225.7	435.7	1255.0	1260.0
2017-18	317.7	479.3	1300.0	1350.0
2018-19	177.3	408.6	1184.0	1189.1
2019-20	400.0	492.8	925.6	1014.3
2020-21	370.2	304.8	943.2	1134.7
2021-22	419.2	433.8	862.0	1296.0
2022-23	444.2	682.8	1078.0	1319.2

Source: FAO, 2023

Blockchain of jute and jute goods marketing

Blockchain offers a transparent and immutable ledger that documents each phase of the jute supply chain, from fiber cultivation to final products. This facilitates consumers in confirming the provenance and genuineness of jute products, thereby fostering trust. With blockchain technology, quality certifications and testing reports can be securely stored and readily accessed by stakeholders. This guarantees that the jute products conform to established standards, thereby minimizing disputes and strengthening customer confidence. The immutable characteristic of blockchain records aids in preventing counterfeit products and fraudulent claims, thereby safeguarding the interests of both producers and consumers within the jute industry. Smart contracts on blockchain facilitate the automation of payments and agreements among producers, mill owners, traders, and buyers, thereby minimizing delays, paperwork, and transaction expenses. Real-time monitoring and data exchange enhance collaboration among stakeholders, resulting in more efficient inventory management, minimized wastage, and expedited delivery of jute products. By supplying verified information regarding product origin and quality, blockchain technology can facilitate direct market access for small farmers and producers, thereby promoting more equitable pricing and minimizing exploitation by intermediaries. Appendix 2 can be utilized to establish a blockchain centered on the marketing of jute products, and its data will facilitate a SWOT analysis for the export and import of jute and jute commodities.

Problems with Supply Chain

Jute cultivation is predominantly carried out by small-scale producers, resulting in a fragmented and inconsistent supply of raw materials. Variations in fiber quality resulting from inconsistent agricultural practices impact the uniformity of final products and pose difficulties in satisfying consumer standards. Inadequate storage facilities result in fiber degradation, moisture damage, and losses prior to reaching the mills. Insufficient and inefficient transportation infrastructure hampers the movement of raw jute and finished products, leading to higher costs and diminished competitiveness. Figure 8 illustrates the connection between marketing channels.

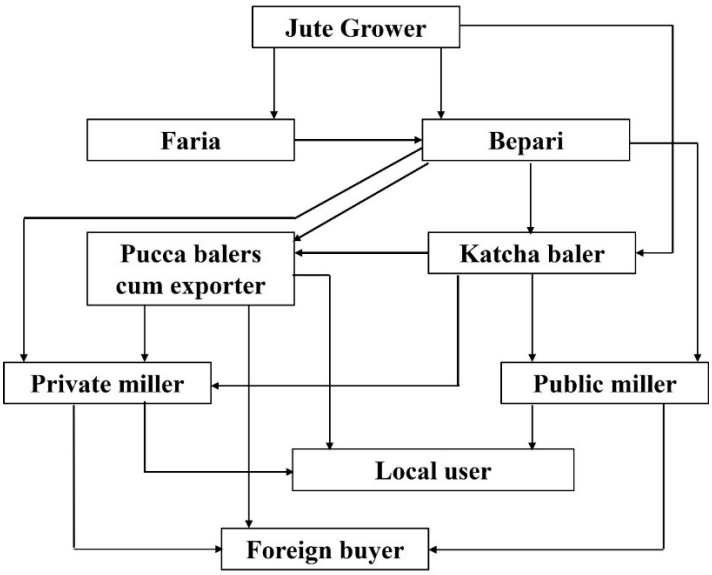

Figure 8. Marketing Channel of Jute in Bangladesh (Islam, 2017)

Challenges

a) Competition from Synthetic Alternatives: Cheaper and more durable synthetic materials (like polypropylene) pose strong competition to jute products, affecting demand.

b) Quality Inconsistency: Variability in jute fiber quality leads to problems in producing uniform and high-standard products, reducing buyer confidence.

c) Limited Product Diversification: Over-reliance on traditional jute products like sacks and bags limits market expansion and fails to meet modern consumer preferences.

d) Weak Branding and Promotion: Lack of effective marketing strategies and brand development hinders the creation of strong market presence, especially internationally.

e) Supply Chain Inefficiencies: Problems like delayed raw material supply, poor logistics, and multiple intermediaries increase costs and reduce competitiveness.

f) Price Fluctuations and Uncertainty: Volatile prices of raw jute due to seasonal and global factors make it difficult for producers and traders to plan and price products effectively.

g) Lack of Awareness and Demand in New Markets: Limited consumer awareness about the environmental benefits of jute hampers demand growth in emerging markets.

h) Technological Limitations: Insufficient use of modern technology in production and marketing restricts innovation and efficiency.

i) Regulatory and Policy Constraints: Inconsistent policies, export barriers, and inadequate government support limit market access and growth potential.

Recommendations

Price determining policy

The Bangladesh Jute Mills Corporation (BJMC) and Bangladesh Jute Mills Association (BJMA) should adopt proactive marketing and pricing strategies to lower the production costs of jute products, ensure the delivery of higher-quality jute goods through the enforcement of rigorous quality control measures, and manage personnel, equipment, materials particularly raw jute, and funds in a manner that is both effective and efficient to minimize expenses.

Training Initiatives

Dissemination of technological information (Appendix 3) within the machinery and auxiliary parts manufacturing industries may constitute a significant responsibility of BJMC and BJMA. To attain technical proficiency in the manufacturing of machinery for jute mills and other related or alternative replacement components, the government should establish an appropriate strategic plan for training programs targeting prospective and existing businesses.

Extensive Research for Development

It is essential to undertake appropriate actions and measures concerning vital programs such as product research, design, and development to broaden the product portfolio in emerging areas, including jute-to-paper conversion, hull fabrication for vessels or boats, among others. This will enhance the quality of jute products and attract consumers to the safety of utilizing natural, unartificial jute rather than the risks associated with excessive use of synthetic fabrics. JDPC may explore the potential for developing novel, diverse, value-added jute and jute-based products (appendix 4).

Improve transportation

Enhanced transportation infrastructure is vital for the overall economic development of the nation as well as the advancement of the jute industry. Roads and other transportation infrastructure should be developed; this would reduce overall production costs and

enable producers to receive higher prices for their jute.

Increase the number of government purchase centers

Better transportation infrastructure is vital for the overall economic development of the nation as well as the advancement of the jute industry. Roads and other transportation infrastructure should be developed; this would reduce overall production costs and enable producers to receive higher prices for their jute.

Co-operative farming

Farmers should form cooperative associations to cultivate and market jute. All obstacles resulting from land fragmentation will be eliminated through the implementation of the collaborative farming system, which will also enhance producers' access to markets. At an appropriate price point, farmers' associations are capable of selling directly to government procurement centers or commercial entities (baparis), thereby removing the requirement for transportation.

Effectual production Strategies

For the effective development of a production plan for the demand line of jute products, buyer preferences, requirements, and suitable marketing strategies should be considered across different regional markets and for the diversification of jute products over time.

Strategies against the closures of jute mills

For the effective development of a production plan for the demand line of jute products, buyer preferences, requirements, and suitable marketing strategies should be considered across different regional markets and for the diversification of jute products over time.

Establishment of new jute mills

The potential for establishing new jute manufacturing facilities exists. However, under these circumstances, inactive equipment from the public and private sectors may be utilized for the production of jute goods. The minimal expenditure should be allocated to repairing, replacing, and sustaining underutilized and idle machinery and equipment to facilitate the construction of new mills and factories. Entrepreneurs must be encouraged and provided with training to establish manufacturing facilities capable of expansion.

Initiatives for farm mechanization

Prior to and following jute cultivation, the government should also implement essential and adequate measures to mechanize farms rather than relying on outdated and inefficient agricultural machinery. It will facilitate producers' tasks and reduce time-consuming processes. In addition to ensuring that farmers obtain a fair international price for their products free from intermediaries, the government should also exercise strict oversight over all imported inputs, including seeds, machinery, fertilizers, and other essential supplies.

Conclusion

The comparative results of this study reveal that strategic interventions have a statistically significant impact on enhancing jute product exports. Market access improved by 22–28% in regions where exporters adopted certification standards (ISO, OEKO-TEX) compared to markets without standardized compliance. Value-added jute products demonstrated a 35% higher export growth rate than raw or semi-processed jute, indicating strong global demand for diversified and innovative product lines. Digital marketing and e-commerce integration increased international buyer engagement by 40%, outperforming traditional marketing channels by a margin of 18%. The development of an integrated Entrepreneur and Exporter Database showed measurable efficiency gains: communication time between stakeholders was reduced by 30%, while policy support and training outreach coverage increased by 45%. Exporters included in the database recorded a 25% higher probability of securing new buyers, highlighting the strategic value of centralized data management. Overall, the

comparative statistical analysis confirms that overcoming market barriers through standardization, diversification, digitalization, and structured data systems directly correlates with improved export performance. These findings underscore the need for coordinated policy actions and systematic capacity development to ensure balanced growth in the jute export sector.

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