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JUTE INDUSTRY OF BANGLADESH

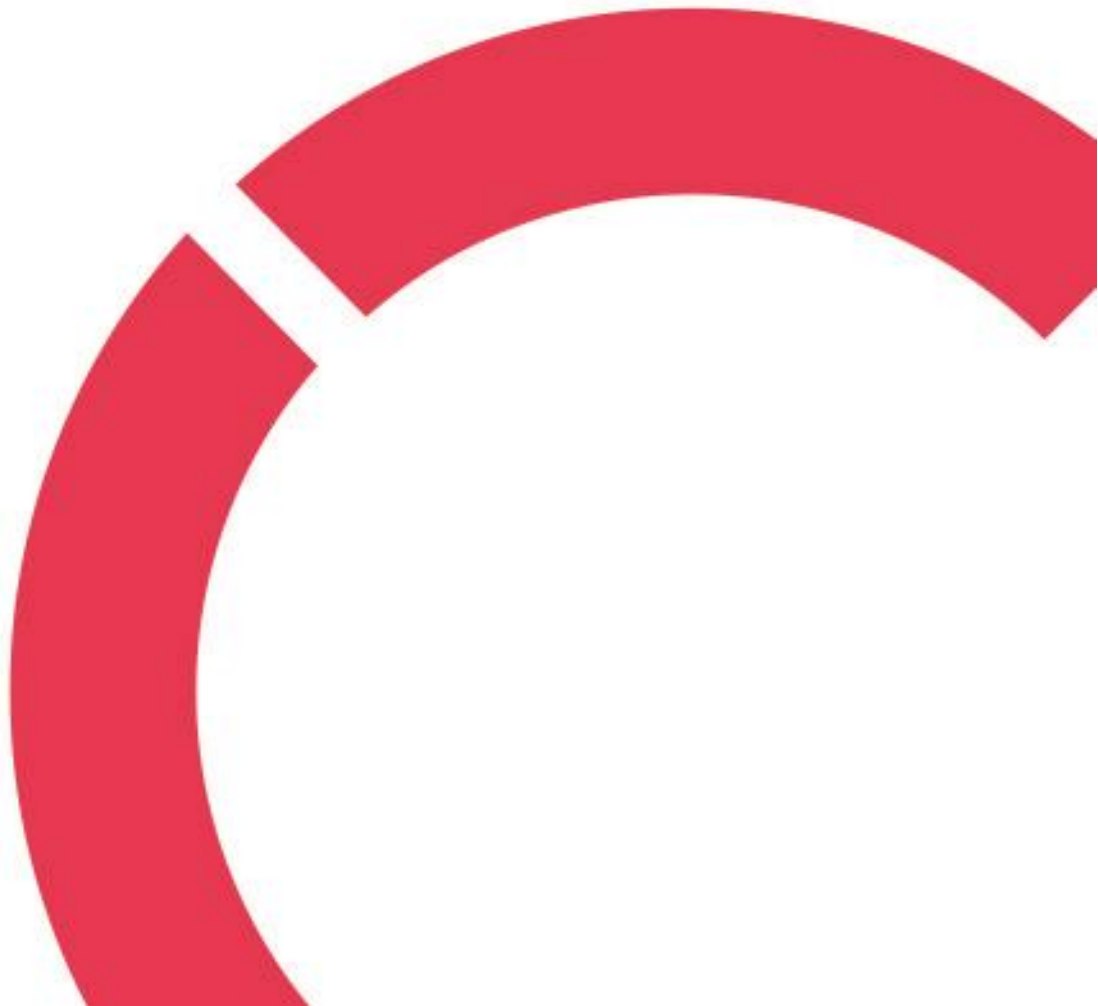
Challenges and opportunities

Thesis

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ABSTRACT

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<p>Jute is a sustainable source for a greener earth because of its reusability and environmental friendliness. It has a huge demand across the world. Since Bangladesh is one of the world's largest producers of jute, it is vital to understand the jute industry of Bangladesh, the opportunities of the jute industry in Bangladesh and the challenges that are associated with the jute industry of Bangladesh.</p> <p>The aim of this thesis was to understand the current state of the jute industry in Bangladesh and the opportunities and drawbacks associated with the industry. To address the aim and the objectives both qualitative and quantitative data were used.</p> <p>The commissioner, Mr Md Hakim Ali Sardar (Golden Jute Product), set an objective for the topic and that was to understand whether the jute industry of Bangladesh has the potential to grow in the future or not. Based on the findings from the literature, survey and interview it was found that there are various challenges associated with the jute industry of Bangladesh. If these challenges are resolved then Bangladesh has a very bright future in the jute industry. This is because worldwide, there is an increased demand towards sustainable and environmentally friendly products, and jute is one of the best alternative materials for producing such products.</p>		
Key words Bangladesh jute industry, challenges, export, growth, international jute market, jute products, opportunities, sustainable products.		

ABSTRACT
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1 INTRODUCTION

The jute industry of Bangladesh has positively impacted the economy of Bangladesh in an outstanding manner which is described here briefly in this research. However, the industry has gone through many ups and downs. A jute plant has numerous benefits that make it an economically and environmentally friendly plant. Jute is in fact one of the major crops of Bangladesh. The commissioner of this thesis wants to understand the current state of the jute industry of Bangladesh so that he can know what the future holds for this industry. The findings will help the commissioner to understand the challenges and opportunities associated with both the domestic and international market. Therefore, the findings will help the commissioner in making better strategic decisions for the company. Based on the objective set by the commissioner for this thesis, the aim of this thesis is to understand the current state of the jute industry of Bangladesh and also the opportunities and challenges associated with the industry.

This thesis wants to address the research problem that is concerned with finding ways to develop the jute industry of Bangladesh. To do so, this thesis has focused on identifying the current state of the jute industry in Bangladesh, and the opportunities and challenges that are associated with the jute industry of Bangladesh. For this reason, this thesis will incorporate research and analysis based on a set of research questions. The first question of this thesis is: What is the current state of the jute industry in Bangladesh? For this question, this thesis will shed light on the current production, export, revenue generation, employment, impact on the economy due to jute export and production, and the impact on the environment due to the usage of jute items and jute production. The second question of this thesis is: What are the drawbacks and challenges for the jute industry of Bangladesh? To address this question, this thesis will focus on identifying the key financial, infrastructural, and economic challenges that are halting the growth of the jute industry. The third question for this thesis is: What are the prospects or opportunities for the jute industry in Bangladesh? This question is focusing on giving a solution for the existing problems and is also focusing on ways to develop and ensure the growth of the jute industry of Bangladesh. The research objective will help in understanding whether the jute industry of Bangladesh has a prosperous future or not.

To achieve the aim of the objective, this thesis will follow a certain structure. Firstly, this thesis discusses the properties of jute and its various benefits. Secondly, this thesis discusses the history of the jute industry in Bangladesh. Thirdly, the thesis includes a brief overview of the commissioner's organ-

ization the “Golden Jute Product”. The literature regarding the opportunities and threats of the jute industry in Bangladesh is discussed in chapter 5 and chapter 6. The theoretical part is formed by collecting information from various published journal articles, internet statistics, newspapers, and online databases. After completing the theoretical part, the thesis describes the research and data collection methods used in this thesis, which includes surveys and interviews regarding the jute industry of Bangladesh. The survey will help to understand the demand for jute products in Bangladesh. Another part of the data collection process will include interviews which will portray the current state of the jute industry in national and international markets. Based on the data collected in the theoretical part, the survey and interview in the thesis will draw a conclusion on whether the jute industry of Bangladesh has a positive future or not.

2 JUTE AND ITS BENEFITS

Jute is a vegetable-based fibre that is abundantly produced in the South Asian region, especially in Bangladesh and India. There are two types of jute that are widely and commonly cultivated, and these are called the white-jute and the Tossa jute. The colour of the jute is off-white to brown. (Ghosh, Bairagi, Bhattacharya & Mondal 2016, 50.) The origin of jute cannot be exactly pinpointed towards any geographical location because there is debate about Tossa jute being originated from Africa and White jute originating Indo-Burma region. Some debate that both Tossa and White jute originated from China. The jute cultivation process also generates many important benefits. For example, jute is considered a rain-fed crop in Bangladesh because it does not require any kind of additional irrigation or drainage provisions. However, jute requires at least 500mm of rainwater for it to produce good-quality fibre. However, due to the lack of rainfall in recent days, it is becoming difficult to produce quality fibre from jute. (Singh, Jha, Majumdar, Roy, Sarkar & Ghorai 2019, 76.)

Jute is not only used as a textile fibre but it is also used for manufacturing value-added non-textile fibres. Jute is used for manufacturing carpets, packaging items, ropes, and for various other decorative items as well. A jute plant has two major components one of them is the jute fibre and the other one is the stick to which the fibre is stuck. Through the process of decomposing the fibre is extracted from the jute plant. The stick of the jute plant is used as fuel wood, and it is also used for making paper, and boards as well. (Nayak & Roy 2011, 63-64.) Traditionally jute is used for sacking and hessian which is used for making packaging items to store agricultural commodities, cement, fertilizers, and various elements of the manufacturing industries. Alongside being used as a packing material, jute has also recently been used for decorative items, handicrafts, geotextile, home-textile, pulp and paper, matt, and floor coverings, and even jute is also being used for making shoes. (Akter 2015, 22.)

Leaves from jute which are considered as by-products of jute have many vital nutrients for the human body. The leaves from jute contain protein, carbohydrates, vitamins like A, B and C, fat, calcium, and phosphorus. Aside from nutrients, jute helps to fight dysmetria, ulcers, and stomach pain and increases the immune system as well. The oil extracted from the leaves of jute are helpful in healing skin diseases. Moreover, the anti-oxidants of the jute leaves help people to look younger by removing wrinkles and fine lines. (Nayak & Roy 2011, 68.) The roots and the leaves of a jute plant increase the fertility of land. Moreover, the leaf and root also act as a pesticide which is beneficial for other plants as well in the land. The jute plant is also beneficial for the environment because of its capability to purify the air

by consuming carbon dioxide and emitting oxygen. (Islam & Ahmed 2012, 26-27.) The jute plants absorb 15 tons of carbon dioxide and release 11 tons of oxygen (Islam 2013). Jute is 100% environmentally friendly because of its safe biodegradability.

3 JUTE INDUSTRY IN BANGLADESH

The jute industry of Bangladesh is one of the oldest manufacturing sectors of the country. This sector was glorious in the years 1960s and 1970s because of its contribution to the economy, exports, and employment. When West Pakistan departed from East Pakistan and Bangladesh emerged as an independent country, west Pakistan left the jute mills in east Pakistan which we know as Bangladesh. Just after independence, the Bangladesh government nationalized all the industries which also included the jute mills. All the jute mills operated under the Bangladesh Jute Mills and this organization is responsible for regulating the price of jute and the buying and selling of jute. However, Bangladesh jute mills suffered economically because of increasing costs, corruption, and because currency value drop of the Bangladeshi Taka. In the year 1982 to 1983, the government of Bangladesh denationalized the jute mills and 34 jute mills were privatized among the 72 government sector jute mills. But the nationally owned jute mills were constantly showing poor performance in terms of production and in terms of jute and jute goods export. By the year 2009, the jute mills both private and nationalised were contributing only 3.9 percent to the total export of Bangladesh. At present, there are 19 jute mills under the Bangladesh Jute Mills Corporation and 42 privatized jute mills. These privatized jute mills are under the Bangladesh Jute Mills Association. Among these jute mills, only 10 of the mills are running effectively and five to seven factories are running with great difficulties. The factories that are running with difficulties or not active at all are because of bad debt, and also because of lack of funding because the banks are not able to help them. According to the financial year 2017 to 2018, Bangladesh right now has 22 jute mills active. (Akter, Sadekin & Islam 2020, 146-147.)

In terms of jute-producing countries, Bangladesh, India, China, Myanmar, Nepal, and Thailand are the major players. The historical data suggests that India and Bangladesh are two of the biggest jute-producing countries around the world. However, the jute-producing area of Bangladesh compared to other countries is greatly fluctuating. Although compared to 2001 when the jute-producing area was only 448 hectares, by the year 2018 it was 715 hectares for Bangladesh. Even in terms of jute production, there have been significant fluctuations in terms of production. However, the production of jute has not increased that much since in the financial year 2005 to 2006 jute production was 50 lakh bales whereas by 2019 the production is 73.15 lakh bales. Along with jute production area and production, the raw jute export from Bangladesh has also experienced major fluctuations. In the financial year 2005 to 2006, the export in terms of value was 9772 million TK. By the year 2018 to 2019, the jute export was 8590 million TK for Bangladesh. Within this time period, there were many ups and downs in terms of

raw jute export. The production of jute goods has also undergone ups and downs in the jute industry of Bangladesh. In the financial year 2005 to 2006, the jute goods production was 6.75 lakh Metric Tonnes and by the year 2018 to 2019, the production of jute goods was 9.38 lakh metric tonnes. Similarly, the jute goods export in the financial year was 4.95 lakh Metric Tonnes which was worth around 2024 corer TK and by the financial year 2018 to 2019, the jute goods export was 7.30 lakh Metric Tonnes which was around 5220 corer Tk. To summarise, it can be stated that the jute production area of Bangladesh, raw jute production and export, and jute goods production and export have all gone through major fluctuations from 2015 to 2019. The jute production area in Bangladesh has increased, however, the raw jute production has not increased in a noticeable manner in fact the raw jute export has also decreased in this time frame. On the bright side, within the year 2005 to 2019 jute goods saw a positive change with increasing demand and jute goods production and export also increased. (Akter et al. 2020, 148 - 149).

Bangladesh is recognised as the number one jute export across the world as well (Ministry of Foreign Affairs 2023). Although, Bangladesh and India have been the top exporters of jute interchangeably for many years. Statistically, the consumption of raw jute in Bangladesh is relatively low compared to the export of jute for the country. In Bangladesh, jute is an export crop and in terms of value, it comes after rice in Bangladesh. Jute is also known as the golden fibre of Bangladesh. (Hoque & Hopper 1994, 9.) The world's top Jute importers as per order value are Turkey, China, India, Pakistan, and United Arab Emirates. Turkey alone imports around 331 million US dollars' worth of Jute every year (Sourcing Bangladesh, 2021). It needs to be noted that Bangladesh has a very favourable environment to cultivate jute. Jute is best grown in slit soil; it can also be grown in sandy and clay loams. Soil type is important because the number of times a land needs to be ploughed varies on soil type and Bangladesh has various kinds of soil depending on location. Also, before ploughing the seeds of the jute it is vital to use organic fertilizers because the soil of Bangladesh in most geographical locations has a lack of organic matter. (Islam & Ali 2017b, 35.)

4 THE COMMISSIONER

Golden Jute Product Company started its journey in 2008 with a vision to create environmentally friendly products while creating opportunities and employment for the local community. Mr Engr. Hakim Ali Sardar who is the commissioner of this study established this organization to provide a practical solution for the people who want environmentally friendly products. The organization has two factories located across two different locations in Bangladesh. The organization is fully an export-focused organization and its main target markets are Europe, America, Japan, and the Middle East. The organization has also set up another factory focusing on jute spinning as well. The key products produced by the Golden Jute Product company are various types of jute baskets, nursery pots, jewellery boxes, bags, rugs, various types of mats, and other types of handicrafts. Quality, timely delivery, and proper packaging are the key factors in ensuring the satisfaction of the customers of the Golden Jute Product Company. The Golden Jute Product company has a total of 4 factory units, with 100 staff and 5000 artisans. The annual turnover for the company is around \$8 million USD. (Golden Jute 2023.)

5 CHALLENGES FOR THE BANGLADESH JUTE INDUSTRY

Jute industry of Bangladesh is a major contributor for the Bangladesh economy. Through jute cultivation, Bangladesh exports and sells jute and jute based-goods in the domestic market and in the international market. However, the industry is on a tight turn because of various challenges. This section of the report will discuss regarding various challenges that is halting the growth of the jute industry of Bangladesh.

5.1 Lack of resource

Descriptive research was done by reviewing relevant literature and databases associated with the jute industry of Bangladesh. The source of data was from both national and international sources. Based on the findings from the review the farmers in Bangladesh are still using the traditional knowledge, tools, and skills to produce jutes. There are many parts of Bangladesh where the farmers are not even aware of advanced technologies and methods which include hybrid seeds, and retting in less water. The mills in Bangladesh do not use modern machinery also the workers of the mills are neither skilled nor they are properly trained. This causes a serious challenge in producing diversified goods from jute. There are supply of self-grown seeds and government-provided seeds in the market. However, the quality of the self-grown seeds is not good compared to the seeds served by the government in the market. This issue is occurring because of a shortage of supply of seeds from the government. This eventually results in low production. The farmers are also suffering due to lack of necessary pesticides and this is a major issue because pest attacks are one of the biggest threats in growing jute. Due to the high cost of pesticides, jute production becomes low and the quality of the goods also degrades. Another reason why the jute industry is seeing a slow growth in production is due to a lack of storage facilities as well. The intermediary parties suffer the most due to storage facility issues because they store jute in rented warehouses which increases the cost of storing. On the other hand, the farmers also store jute at their homes without any kind of protectants or medicine and this results in degradation of the quality of the jute. (Akter et al. 2020, 149-150.) Research was done based on primary and secondary information. The primary study was conducted in the Kishoreganj district of Bangladesh because this is a very important jute production area. The sample included 100 households from the area for interview. Based on the findings, most of the farmers in Bangladesh who produce jute learned the farming of jute from friends, from neighbours or by themselves. These farmers lack formal training although they were in-

interested in getting formal training in terms of growing jute plants. Also, none of the farmers in this thesis used modern technology to cut jute plants rather it was cut manually. It also needs to be mentioned that the farmers in this thesis were not aware of the different grades of jute and the price differences and for this reason, they were deprived of the right price by big traders. The lack of knowledge in terms of cultivating and harvesting jute causes the farmers to incur losses and therefore they become discouraged from cultivating jute. This eventually caused a decrease in the production of jute in Bangladesh. (Sheheli & Roy 2014, 40-41.)

A study was done by reviewing various kinds of literature on the jute industry of Bangladesh. The purpose of the study was to suggest policymakers develop necessary guidelines that will support the growth of the jute industry of Bangladesh. Around 60% of the agricultural land in Bangladesh is deficient in terms of having the necessary ingredients that are vital for harvesting crops. Due to the high price of fertilizers farmers are not able to serve the lands with the necessary amount of fertilizer. The chemical fertilizers are not as effective as organic fertilizers. Due to not properly understanding what fertilizer to use and in what quantity, the fertilizer use in Bangladesh has tripled over the last two decades while the productivity of the agricultural lands has decreased. The water usage for irrigation by the farmers is imbalanced due to a lack of knowledge, and the high price of diesel. Farmers do not preserve water during rainy seasons. Because of this, they suffer greatly during dry seasons. Also, irrigation through pumps is high because of the high price of diesel. (Mondal 2010, 238.) Another problem with the lands of Bangladesh is high land fragmentation. Since the radius of the Bangladesh map is quite small compared to the population, the lands in Bangladesh are divided into smaller fragments. Due to this reason, the farmers are unable to realize higher production and therefore the profit for farmers is very low by producing jute. This issue discourages the farmers from producing jute. (Akter et al. 2020, 150.)

About 90% of the farmers of Bangladesh suffer from a lack of credit support. In most cases, they are unable to purchase goods seeds, fertilizers, and pesticides, and afford irrigation due to high costs. As a result, productivity goes down from the lands these farmers own. The existing financial support provided by various NGOs and banks requires collateral from these farmers before providing them with a loan. Around 27% of farmers in Bangladesh get institutional loans. The sanctioned credit amount is most often inadequate and not disbursed in time. (Mondal 2010, 239.)

Jute is mostly produced in the rural areas of Bangladesh where transportation is a great challenge. High diesel cost and poor transportation infrastructure in the rural area causes high cost for the traders. Therefore, an increase in cost occurs in the overall supply chain. (Akter et al. 2020, 150.)

At present, the agricultural sector is going through a major fund crisis. The National Agricultural Research System is not providing any fruitful input to the agriculture of the country. Due to fund constraints, the scientists are not interested enough to invent and research. This is a threat to the growth of jute and crops in Bangladesh. (Mondal 2010, 239). Research was done to understand the supply chain of raw jute, the costs of marketing, the margins enjoyed by the intermediaries and to understand the price variation of jute. Based on primary and secondary data regarding the jute industry of Bangladesh the research was completed. The secondary sources of data involved records from the Department of Agricultural Marketing and the Bangladesh Jute Association. The primary data included survey findings from various groups of people who are involved in the supply of raw jute. The findings have confirmed that the farmers are not aware of various scientific knowledge and they do not get the necessary technical support. These factors are vital to ensure good quality jute and jute-based goods. For example, most of the farmers of Bangladesh are not aware of the seed drill used in broadcast sowing and retting of jute when there is a lack of water. (Islam & Moniruzzaman 2017b, 36.)

5.2 Inadequate demand

Research was done on the jute industry of Bangladesh which focused on understanding the global trends surrounding jute, and Bangladesh's position in serving jute in the global market. The research paper was developed by the Centre for Policy Dialogue, which is a civil society initiative established in Bangladesh. According to the paper, from the financial year 1972 to 1973, jute was responsible for three hundred thirteen million Dollars' worth of revenue through export for Bangladesh. This is almost around 90 per cent of the total export revenue from export. By the year 2009, this share of revenue came down to a mere 2.7 per cent. One of the key reasons for the decline of share in revenue from the export of jute is because of the outstanding growth of the ready-made garments sector of Bangladesh. Also, compared to 1973 the value of export of jute in the financial year 2009 was 736 million USD. However, the growth in terms of absolute value has not improved in a noticeable manner although the growth is positive. (Rahman & Khaled 2011, 2.)

Research was completed to understand the economic importance of jute in Bangladesh. The research was done based on secondary data which included data from May to October 2015. The data was included from the Bangladesh Jute Research Institute and from various other national and international sources. There is growth in demand for jute in the international market but the consumption of jute products in Bangladesh is declining. In the year 1995 to 1996, the consumption of jute-based goods was around 659000 tones. By the year 2002, the consumption of jute-based goods had dropped down to 437000 tones. (Islam & Ali 2017a, 51.)

Jute production is in crisis in Bangladesh because the lands in which jute can be produced can be also used to grow other crops, especially rice. Rice is in high demand in Bangladesh and rice has also a higher price compared to jute. This is why farmers feel more encouraged to produce rice compared to jute. Also, rice gets priority over jute to the farmers because the price of jute is very unstable and farmers feel that they will be at risk if they think of producing jute. (Islam & Ali 2017a, 49).

Market fluctuation has been a major reason for the jute industry of Bangladesh to not prosper properly. The price and demand of jute and jute-based goods fluctuate too much and for this reason, the traders related to jute are always uncertainty regarding profit generation through jute. The farmers and cultivators of jute also face losses due to high market fluctuations in terms of demand and price. (Akter et al. 2020, 150.)

5.3 Decrease of agricultural land

A research paper that has been conducted to understand the role of Agriculture in Bangladesh's Economy has addressed the problem of scarcity of agricultural lands. The findings of the research have been developed based on secondary data. It has been found that the land area in Bangladesh is reducing gradually and this is causing a major problem not only for jute production but also for other crops as well. In 1976 the agricultural land area was around 92 per cent which was later reduced to 83.53 per cent by the year 2010 and this number is constantly decreasing. The key reason behind this is the expansion of rural housing and the establishment of mills. (Rahman 2017, 37.) Due to river erosion, and increased population Bangladesh has lost much agricultural area. A great share of the agricultural lands is now being used for accommodation purposes due to the increase population. On the other hand, many productive lands of the country are occupied by influential people who do not allow any kind of agricultural production on the lands. (Mondal 2010, 236.)

5.4 Natural calamities

Bangladesh has been using a lot of modern technologies nowadays when it comes to agriculture. Problems regarding pesticides, and lack of water are now solved and farmers are using advanced seeds and fertilizers that are helping increase production. However, the country's agriculture is heavily dependent upon the weather. A cyclone could easily wipe off an entire harvest within a few moments. (Rahman 2017, 38.) Irrigation is also a major problem for the production of jute and other crops. This occurs especially during dry seasons when a large portion of land in Bangladesh does not get irrigated properly. The key reasons behind it are climate change and the unplanned underground water lifting. (Rahman 2017, 40.) Bangladesh constantly faces floods, drought, cyclones, salinity and various other natural disasters due to climate change.

5.5 Mismanagement and corruption

According to research, which was executed on the state-owned jute mills of Bangladesh the issues and solutions. The objective of the research was to understand the reason behind the fall of the jute industry of Bangladesh from its glory days. The secondary data of the research is based on a literature review. For primary data, the research has included interviews with 10 personnel who have been working in the jute industry for more than 10 years. The findings from the research state that there are many

accusations against the Bangladesh Jute Mills Corporation (BJMC) for causing the failure of the state-owned mills. BJMC has been accused of purchasing jute at high prices and selling jute goods at below production cost. The organization is also accused of using backdated technology, using unskilled workers, executing weak planning, and causing corruption. This has severely impacted the other state-owned jute mills and as a result, they are underperforming. (Hossain & Nishu 2023, 65.)

5.6 Lack of diversity

A study was conducted to understand the trends of production and export of the jute industry of Bangladesh. The study also focused on understanding the comparative advantages that the jute industry of Bangladesh has. The study used secondary data and quantitative analysis to state the findings. According to the study, one of the threatening issues for Bangladesh's jute industry export earnings is the lack of diversity in jute-based goods. The two biggest competitors of Bangladesh in terms of producing jute are China and India. Though they do not have the comparative advantage to produce jute-based goods for a lower cost they are focusing on diversification of jute-based goods. High diversification will allow these countries to charge more. But Bangladesh is not focusing on diversification and therefore the Bangladeshi jute-based goods importers are losing revenue. (Sharna & Kamruzzaman 2020, 189.)

6 OPPORTUNITIES AND PROSPECTS FOR THE JUTE INDUSTRY OF BANGLADESH

The jute industry of Bangladesh does not only have challenges but also some very lucrative opportunities. If the opportunities surrounding the jute industry of Bangladesh are utilized properly, then there is a very bright future ahead for Bangladesh which will positively impact both the economy and the environment of the country. This section of the study discusses regarding the major opportunities that lie ahead for the jute industry of Bangladesh.

6.1 Jute as an alternative to plastic

To understand the possible diversification of jute, a study has been conducted with the aim of creating sustainable business for the development of the economy. The study has been developed by using secondary data from books, online databases, journals, newspapers, and online sources. According to the findings, global plastic pollution has become a serious issue and is becoming an even bigger concern every day. Around the world, 1 million plastic bottles are purchased every day while at the same time, 5 trillion single-use plastic bags are disposed of every year according to 2018's data by the UN Environment. The key reason behind the high usage of plastic is low cost. Also, during the pandemic of the Covid-19 plastic consumption has increased even more. Because for health safety purpose, people have preferred one-time-use plastic cups. An item made out of plastic requires 50 to 600 years to decompose properly. The world's highest plastic polluter is China and Indonesia comes in second. The highest use of plastic is in the packaging sector and 90% of all the plastics produced are not recycled. (Niloy 2021, 63.)

A traditional car has many components made out of plastic. When a car is disposed many components of the car create plastic waste. Also, the use of plastic in a vehicle increases production costs. To resolve this problem and to increase environmental friendliness, many automobile manufacturers like Mercedes Benz, Suzuki, Toyota, and even domestic company Nitol Niloy Motors have started to use jute for various components of a car. (Niloy 2021, 65-66.)

6.2 Positive impact on economy

Based on research that has been conducted to understand the impact of production of various crops of Bangladesh on the agricultural sector some very positive findings can be found regarding jute. This particular study has used time-series data from 1988 to 2017 and quantitative analysis is done by using the Augmented Dickey-Fuller method, Johansen cointegration test, and through ordinary least squares method. Also, five other validity tests have been done on the findings to validate the data. Based on the findings, Jute was the number 1 item for Bangladesh that generated the most export earnings in the years 1972 to 1973. Bangladesh's global market share of jute supply is 24.6% which puts the country in the second position in terms of jute export and this is based on 2015's data. By the financial year 2019 to 2020, jute had taken over leather's position in terms of export by the financial year 2019 to 2020. (Niloy 2021, 61.) Around 25 million employments in Bangladesh are directly or indirectly related to the jute industry in Bangladesh. (Dey 2020, 11)

Jute-based bags were invented in the year 2017 by a Bangladeshi scientist named Mubarak Ahmed Khan. The invented jute bags by the scientist are called "Sonali bag". In terms of thinness, it is almost similar to plastic bags and in fact, it is 1.5 times stronger than traditional plastic bags. The "Sonali Bag" decomposes within 5 hours and becomes food for fish. The annual growth of the overall plastic industry is 3% while the growth of the bioplastic market is 30%. There have been other bioplastic bags for example bags made out of starch-based biopolymers, but these bags are produced from consumable crops, these bags are costly to make and also require increased water usage. For these reasons, jute is a great material for the packaging industry worldwide. It also needs to be noted that various agricultural items need different types of packaging materials to be stored properly and this is also true for storing mines, cements and others. Jute can be used to produce different types of packaging items that ensure proper preservation of materials cost-effectively. (Niloy 2021, 67.)

A study covered the export of jute from Bangladesh based on 41 years of data which includes the dataset from 1973 to 20143. The historical trend over the 41-year period suggests that concludes that Bangladesh had an increase in the jute land cultivating area then it started to decrease again in 2013. Although there had been many positive turnovers from the export of jute by the year 2013 the total production of jute, harvest price, and export of jute has not shown significant growth. This thesis suggests that by increasing the jute cultivating area this situation can be turned around positively for the

jute industry of Bangladesh. Studies have also confirmed that jute is financially more profitable to cultivate compared with Aus-type rice which is heavily produced by the farmers of Bangladesh. (Rahman, Kazal, Begum, and Alam 2017, 7.)

To understand the current scenario of the jute industry of Bangladesh, another research was conducted. The study used secondary sources to state the findings regarding the objective of the thesis. A large number of people's livelihood in Bangladesh depends on jute. Jute creates livelihood in Bangladesh because a large number of people are involved with cultivating jute and another set of people in Bangladesh use jute to make various jute-based goods. Around 32 million people in Bangladesh have associated themselves with agricultural labour among this large labour force 12.5% of the workforce is engaged in jute production. In terms of workers, there are around 166 thousand workers who are working in the public and private sectors of Bangladesh. (Molla, Sabur, and Akhtar 2014, 137.)

Bangladesh is also in a better comparative position in terms of being more specialized in producing jute-based goods compared to China and India which are the biggest competitors in the international jute market. This creates a vital comparative advantage for Bangladesh thus the export cost of Bangladesh is relatively low compared to China and India. This helps Bangladesh to gain more profit from export earnings of jute and jute-based goods. (Sharna & Kamruzzaman 2020, 189.)

6.3 Construction industry

Jute has recently been used in construction as well since the invention of "Jutin" which is a roofing material invented by a Bangladeshi scientist Dr. Mubarak Ahmed Khan. The "Jutin" sheet is rust, heat, and saline proof whereas the traditional roofing materials are not. Jute is also being used in the Cable industry as a protective material which is known as the "Jute Snap Split Pipe". It is an environmentally friendly and cost-effective cable protection pipe. The plastic cable market in Bangladesh alone has the potential to grow at a 20% rate annually which is worth around \$788 million USD. (Niloy 2021, 66.)

6.4 Clothing industry

Jute can be blended with cotton to make better-quality jeans. Because of combining jute with cotton, the production cost decreases by 1/3 instead for using 100% cotton while producing jeans. Also, the

fabric has better capability in holding the colour and is also stronger than traditional cotton-based jeans. Jute can also be used as an alternative to viscose which is a widely used artificial fibre and is made out of wood. Bangladesh invests heavily in terms of cotton and viscose import and this cost can be reduced by using jute as an alternative and this will create a great impact in the export value for Bangladesh. (Niloy 2021, 68-69.)

6.5 Charcoal industry

The ash which is produced after burning the jute stick is used in face wash production, smell remover, and tooth cleaner. The charcoal is also used in printer ink and dry-cell production. The Jute charcoal industry in the international market is worth around \$200 million USD and this creates a big opportunity for Bangladesh to have export earnings. (Niloy 2021, 69.)

6.6 Tea industry

Bangladeshi scientists have recently invented jute tea. This tea contains 30% more calories compared to spinach. The tea is rich in iron, vitamins, calcium, carbohydrates, and protein. During the financial year 2018 to 2019, Bangladesh exported around 2.5 metric tons of jute leaf tea was exported to Germany in the financial year 2018 to 2019. (Niloy 2021, 69.)

6.7 Assistance of Bangladesh government

To ensure the growth of the jute industry of Bangladesh, the government of Bangladesh has devised the National Jute Policy – 2011. The key objective of the policy is to ensure the sustainability and growth of the jute industry by properly ensuring cultivation, research, and production. Through this, the farmers are expected to grow better quality jutes and to increase the hectare yield of jute. This policy is vital to help Bangladesh compete against other countries. (Molla et al. 2014, 137.)

6.8 Domestic demand

Jute has the potential to be used for making various kinds of products and the opportunity to create new items by using jute is almost limitless. (Nayak & Roy 2011, 63-64.) Jute is also very helpful for the environment because it has a better capacity to purify air compared to other plants. (Islam, & Ahmed 2012, 26-27.) Jute holds the best position to be used against plastic to save the environment. (Niloy 2021, 63.) These features can be used to promote the use of jute-based goods among the Bangladeshi people. Eventually, an increase in both domestic and international markets will create the opportunity for the jute industry of Bangladesh to grow even more.

7 RESEARCH METHODS

The aim of this study is to properly understand the current state of the jute industry of Bangladesh. The findings from the study have helped in understanding the growth opportunities and the challenges faced by the jute industry of Bangladesh. The growth opportunities and challenges have been analysed for both national and international markets. For this reason, both qualitative and quantitative data are used to ensure a concrete conclusion. The commissioner Mr. Md Hakim Ali Sardar who is the Managing Director of the “Golden Jute Product” company of Bangladesh, has reviewed the data and findings of the report to ensure validation of the findings. The commissioner’s objective is to understand whether the jute industry of Bangladesh has the potential to grow in the future or if the industry collapsing with the phase of time. By compiling, comparing and analysing the information from various sources the study has concluded whether the jute industry of Bangladesh is seeing positive growth or not and this is how the key objective of the study and the objective of the commissioner is attained.

The study has included interviews with six persons employed by the Golden Jute Product Company that are associated with international jute and jute product exporting. The key focus of the interview was to understand the opportunities and drawbacks of exporting jute and jute-based products and the interview has included the current demand, opportunities and challenges of jute and jute-based products in the local market. The interview was done based on online video interview and the candidates were contacted through e-mail.

The objective of the survey was to understand the demand for jute-based products in Bangladesh. The survey was collected from 30 individuals who reside in Bangladesh and they were chosen randomly for the survey. However, the respondent’s age was within the age range of 25-50. The questionnaire was developed by using Google Forms.

8 RESEARCH RESULTS

This section of the report will portray the results which have been acquired from the theoretical part, the survey, and the interviews. The survey was conducted by Md Al Amin and the interviews were conducted by Md Shajib Sarker. The findings are separated under each sub-chapter so that an easy conclusion can be drawn from each type of research.

8.1 Findings from the survey

The first question from the survey tried to identify the employment status of the 30 respondents. Based on figure 1, it could be seen that 20 respondents were employed, 5 of them were students and another 5 respondents were self-employed which means that they are either engaged in freelancing, or they are engaged in some kind of business. By having different groups of respondents in terms of employment, the findings will be much more relevant to understanding the research objective of the thesis.

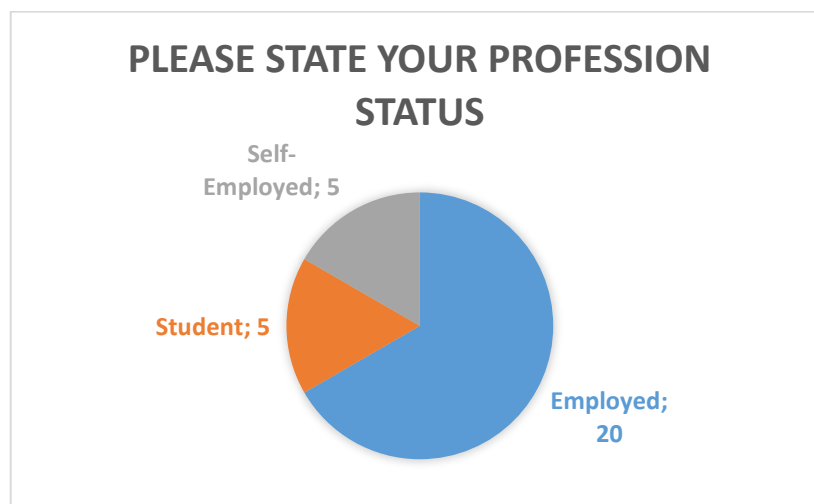


FIGURE 1. Respondents' employment status

The second question of the survey was to understand the age of the respondents. The survey was sent to age groups one of the groups was within the age range of 25 to 35. Another age group was between the age range of 36 to 45. According to figure 2, it was found that 20 of the respondents were between the age range of 25 to 35. On the other hand, 10 of the respondents were between the age range of 36 to 45. In this case, also, having different age groups has also helped the survey to be more fruitful.

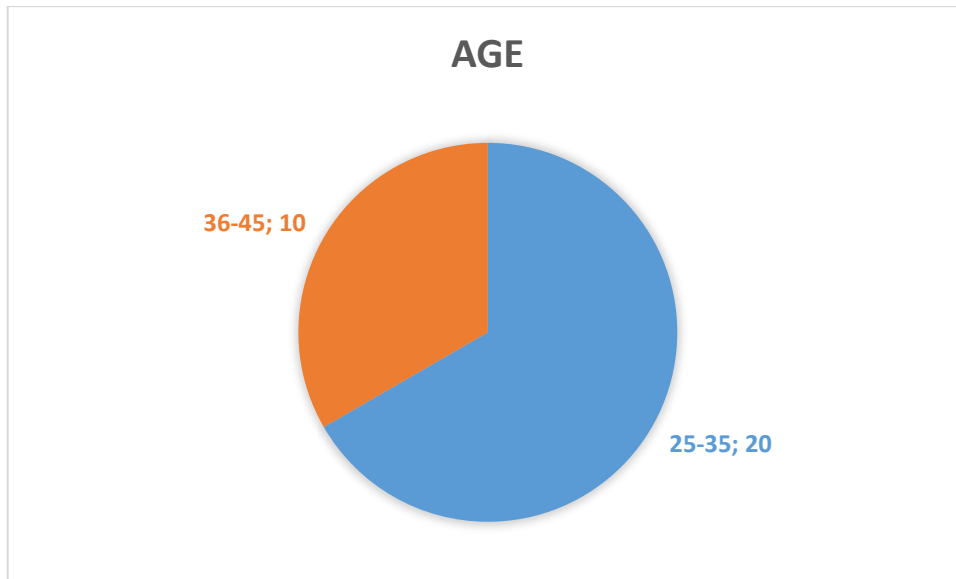


FIGURE 2. Respondents' age

The third question was devised to understand how frequently the respondents used jute-based goods. Figure 3 shows that only 2 of the respondents were frequent buyers of jute-based goods since they reported purchasing jute products on a weekly basis. On a monthly basis, 5 of the respondents reported to purchased jute-based goods. On the other hand, 23 of the respondents reported that they rarely purchased jute-based goods. This finding shows that jute-based goods are not widely used among the respondents. But this cannot be stated from this finding that jute-based goods do not have demand in the domestic market of Bangladesh.

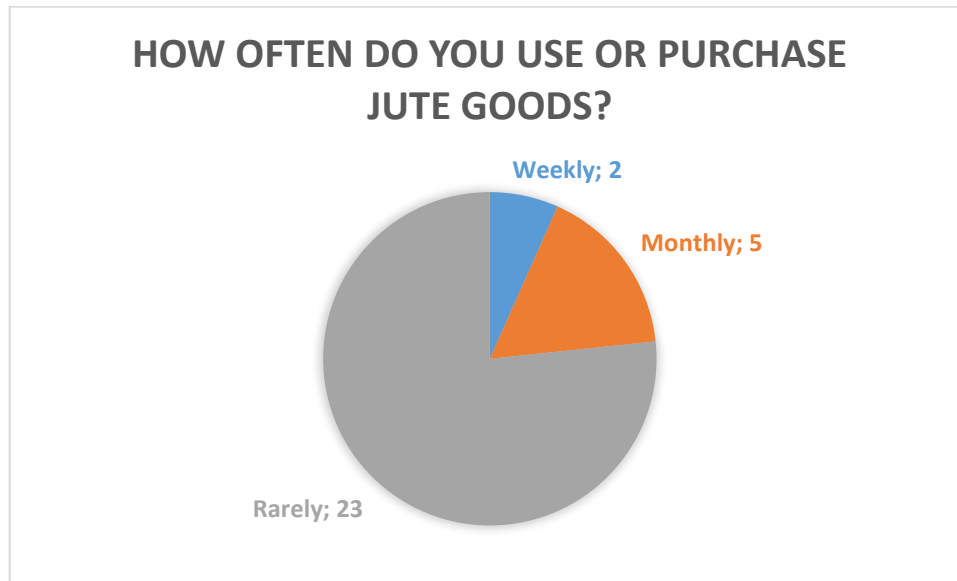


FIGURE 3. Frequency of purchase of jute-based goods

The respondents were asked a very crucial question regarding jute-based goods, and it was related to understanding the type of jute-based goods they usually bought in the fourth question. According to figure 4, 18 of the respondents usually bought jute bags. Jute rugs or carpets were usually bought by 5 of the respondents. Among the 30 respondents, only 2 of the respondents bought jute-based apparel. There were 2 respondents who usually buy jute-based home-décor items. There were 3 respondents who did not choose the given option on the survey. They specifically mentioned the type of jute-based goods that they usually purchase. One of them bought jute-based footwear, another respondent bought jute-based furniture items, and another respondent bought jute-based kitchen items. Based on this finding it can be stated that the jute bags have the most demand among the respondents compared to other jute-based goods. But based on this it cannot be concluded that other jute-based goods do not have demand in the market of Bangladesh because there is a possibility that other products are not properly promoted or are available in the market.

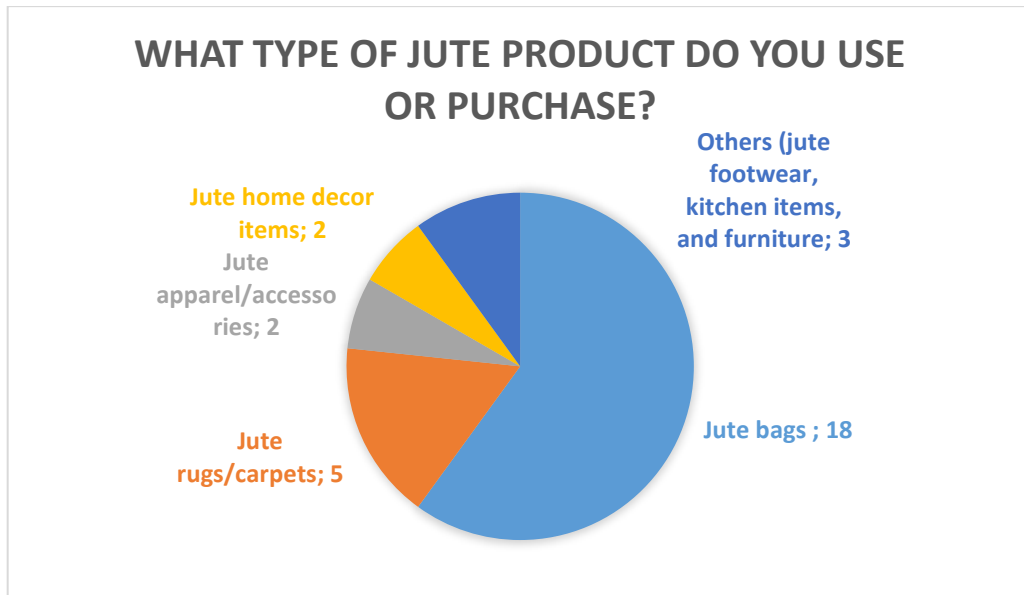


FIGURE 4. Preference towards the type of jute-based goods

The survey tried to understand whether the respondents were aware of the environmental benefits of jute-based goods through the fifth question. The respondents were asked to share their opinion regarding, whether jute-based goods have environmental benefits or not. According to figure 5, it can be seen that 5 of the respondents agreed that jute-based goods have environmental benefits. Among the 30 respondents, 2 of the respondents stated that jute-based goods have no environmental benefits. Surprisingly, 23 of the respondents stated that they were not aware of the benefits of jute-based goods. Based on these findings it can be concluded that while promoting jute-based goods it is vital to promote the environmental friendliness factors of jute-based goods.

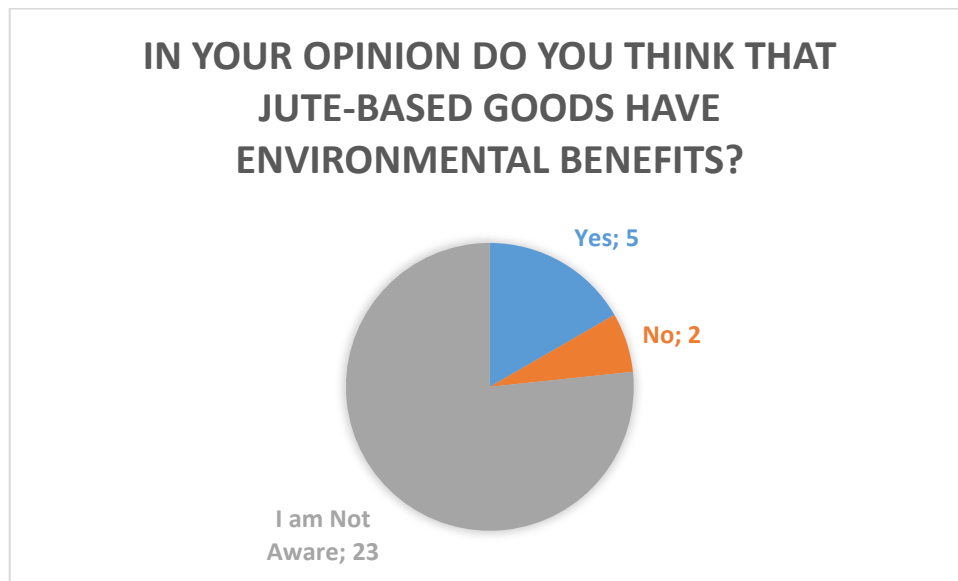


FIGURE 5. Opinion regarding environmental benefits of jute-based goods

The sixth question was focused on understanding the factors that could make the respondents eager to buy jute-based goods. Figure 6 states that 25 of the respondents stated that if jute-based products have the attribute of environmental sustainability they would be influenced to purchase jute-based goods. Also, 20 of the respondents identified durability as an important factor that would influence them to purchase jute-based goods. There were 15 responses on affordability, which means that 15 of the respondents identified the affordability of jute-based goods as a crucial factor that would make them purchase jute-based goods. Also, 15 respondents identified visual appeal as a crucial factor that would make them purchase jute-based goods. Finally, there was an option for the respondents to state their opinion regarding what would make them purchase jute-based goods. There were 5 responses from the respondents and they stated availability of jute-based goods was an important factor that would influence them to buy jute-based goods. This confirms that there is a shortage of supply of various types of jute-based goods in the domestic market of Bangladesh.

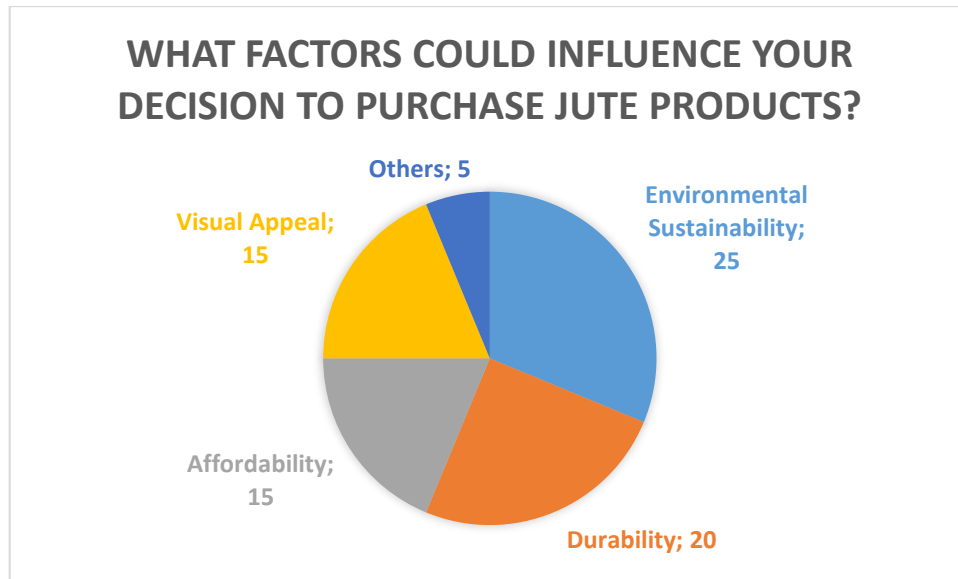


FIGURE 6. Factors that influence to purchase jute products

On the seventh question, the respondents were asked about the factors that needed improvement on jute-based goods which would make them more interested in purchasing them. The respondents had the option to choose multiple options for the question. According to figure 7 it can be concluded that style or visual appeal was most important. There was only 1 response on the durability of jute-based goods. There were 20 responses on the availability of jute-based goods. There were also, only 2 responses on the option “wide usage by others”. These findings mean that most of the respondents found jute-based goods to be durable. Also, the respondents want jute-based goods to be more stylish and fashionable. Another interesting finding is that there is a lack of availability of jute-based goods. However, wide usage by others is not an important factor for most of the respondents to make a purchase decision to buy a jute-based good. Based on the findings it could be understood that the respondents again emphasized the lack of availability of jute-based goods in the domestic market.

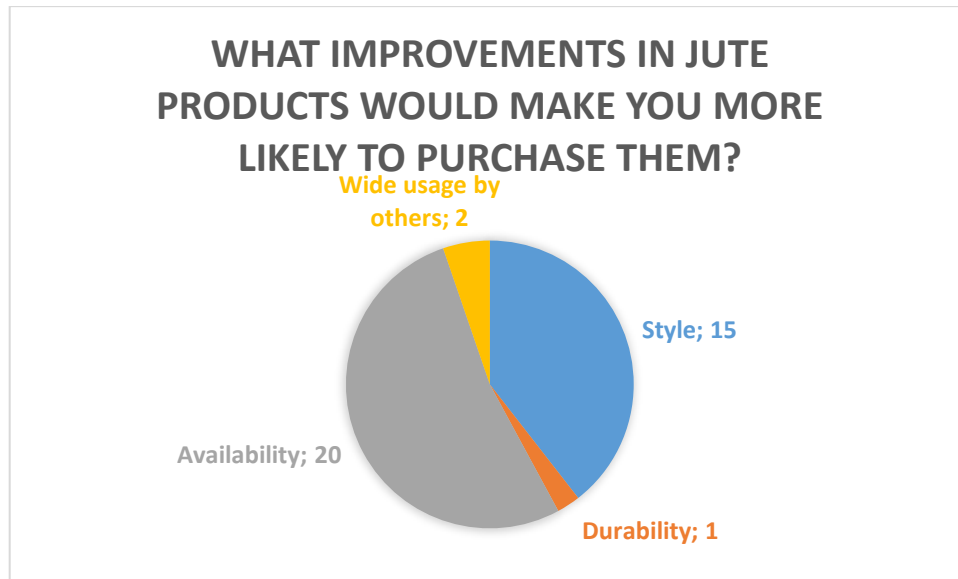


FIGURE 7. Factors that need improvement in jute products

The eighth question tried to identify whether the respondents would support the jute industry and the environment by purchasing jute-based goods for a slightly higher price. Figure 8 states that 25 of the participants would support purchasing jute-based goods for a higher price. There were 5 respondents who stated that they might support the jute industry by purchasing jute-based goods for a slightly higher price but it would also depend on the extent to which the price is increased. In other words, the respondents will support an increase in price to support the jute industry and the sustainable practices of the jute industry of Bangladesh.

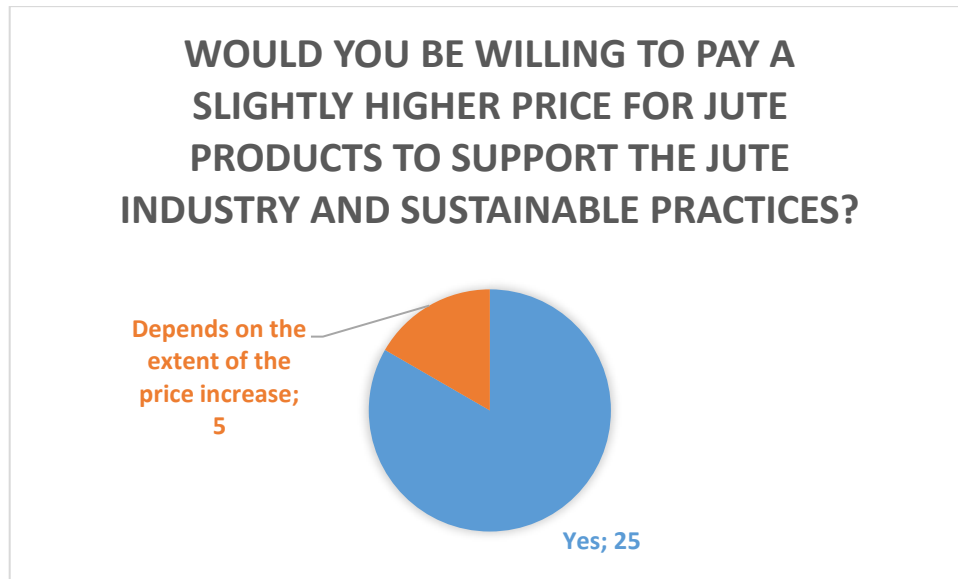


FIGURE 8. Willingness to pay higher price to support the jute industry

The objective of the ninth question was to understand which type of jute-based goods is most sought by the respondents. This question was open-ended which means one respondent was able to choose multiple options and also, they could share their own opinion. It was found that furniture items and kitchen items had the most preference for jute-based goods. According to figure 9, there were 11 respondents who preferred kitchen items made out of jute and 10 respondents selected furniture items made out of jute. There were 5 respondents who wanted to see jute-based footwear more in the domestic market of Bangladesh. Only 2 of the respondents wanted to see more packaging items made out of jute. This is probably because jute is already used widely as a packaging material. There were 7 respondents who selected the option "Others" 5 responded that they wanted to see jute-based rugs and 2 of the respondents stated that they wanted to see jute-based baskets more in the domestic market of Bangladesh.

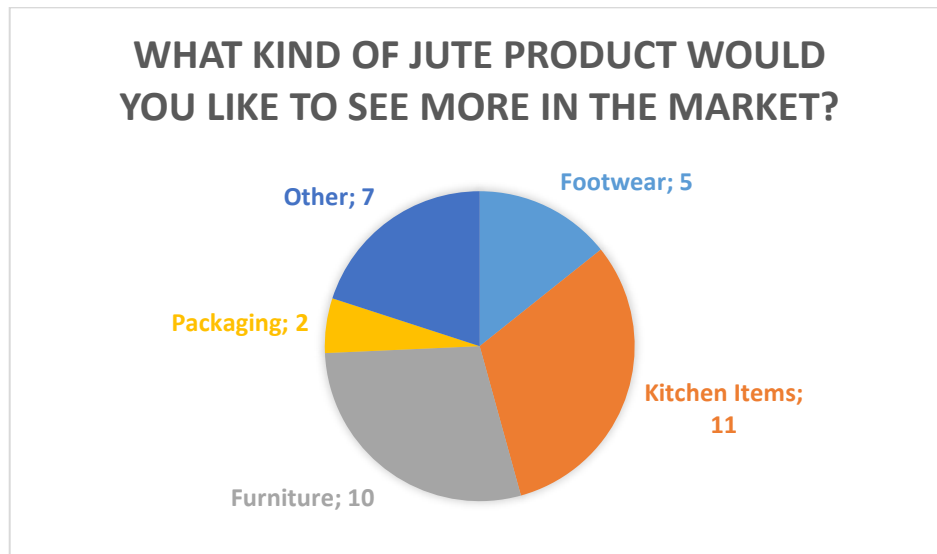


FIGURE 9. Preference towards various types of jute-based goods

The last question was a close-ended question and the respondents were asked about whether they are - satisfied with the current availability of jute-based goods. Through this question, it would be clear whether there is a deficiency in the supply of jute-based goods in the domestic market of Bangladesh or not. The findings were very surprising because, according to figure 10, there were 27 respondents who stated that they were not satisfied with the current availability of jute-based goods in the market. Only, 3 of the respondents stated that they were satisfied with the current supply of jute-based goods in the market. This finding helps to know of the deficiency of jute-based goods in the domestic market of Bangladesh.

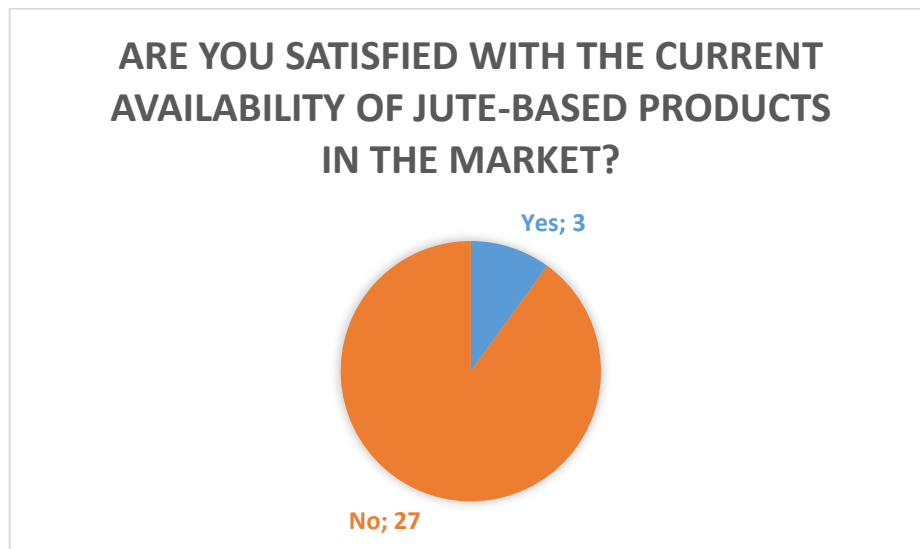


FIGURE 10. Respondents' satisfactory level with the availability of jute-based goods

8.2 Findings from the interviews

According to the interviewee 1, the demand for raw jute in the domestic market has been stable for a few years now, although, the demand for raw jute in the jute industry of Bangladesh has seen many changes. There is an increasing interest in environmentally friendly products in Bangladesh. One of the key challenges for raw jute demand in Bangladesh is synthetic materials because the textile industry is still not habituated to use jute fibre. When the interviewee 1 was asked about the demand for raw jute in the international market, it was shared that the international demand for raw jute has been increasing rapidly. The interviewee 1 was asked about the demand for jute-based products in Bangladesh and it was shared that the jute-based goods are on a rising increase in the domestic market of Bangladesh. Jute bags and jute-based home decor items are becoming more popular and trendier. When the interviewee 1 was asked about the jute-based goods demand in the international market, it was shared that both domestic and international markets are experiencing a rising increase. But, the domestic market's increase in demand for jute-based goods is slow. On the other hand, the demand for jute-based goods in the international market is increasing every year. Regarding the demand fulfilment of raw jute, the interviewee 1 shared that the demand for raw jute for the domestic market is sufficient, but Bangladesh

needs to do better in terms of producing raw jute more for the international market because of the increasing demand. The interviewee 1 then shared that, in terms of serving the demand for jute-based goods, Bangladesh is not facing any major challenge. The interviewee 1 shared that one of the key issues regarding the growth of the jute industry is the fluctuation of raw material prices which includes the cost of raw jute. According to the interviewee 1, the future for the jute industry of Bangladesh is promising because there is a huge pressure all around the world to move towards sustainable options. This is creating a high demand for jute in the international market. The government of Bangladesh has been supportive towards the jute industry of Bangladesh but it is not enough according to the interviewee 1.

According to interviewee 2, “There has not been any major changes in demand of raw jute products”. It was shared that the international market for jute industry is showing a very promising trend due to increasing demand for jute-based goods. According to the interviewee 2 the domestic market is recently showing an increased demand for jute-based goods this demand was previously restricted to only jute-based packaging materials. On the other hand, jute-based goods have an increased demand in many countries the demand is more than raw jute according to the interviewee 2. The interviewee 2 shared that the demand for raw jute is not excessive in the domestic market and it is easily served by the jute mills, also Bangladesh is doing well in terms of serving the demand of raw jute in the international market. Regarding the position of Bangladesh in the international market interviewee 2 shared that Bangladesh is performing in an out-standing manner to serve the demand of the international market of jute-based goods. Interviewee 2 also shared that the mills with strong infrastructure, and skilled workers have been able to create a great reputation in the international market. The interviewee 2 also shared that there are some organizations related to jute and jute-based goods exporting which do not focus on making good quality products, also, there is a great lack of skilled workers in such mills and this is why these mills are not functioning properly. According to the interviewee 2, the biggest opportunity for the jute industry of Bangladesh is its experience in producing quality jute. The interviewee 2 has also shared that the government have not been very much helpful in flourishing the jute industry.

The interviewee 3 shared that the demand for raw jute in the domestic market is stable for the textile and the packaging industry. But the interviewee 3 believed that there should be an increase in demand for jute in the textile industry because of its capability to be used as a good quality fibre. Interviewee 3 shared regarding the international market for raw jute demand that the demand is increasing rapidly

and there are various factors behind it. The interviewee 3 also shared that the demand for jute-based goods in the domestic market is also steady like raw jute. Regarding the demand for jute-based goods in the international market, interviewee 3 shared that the international market is showing an increased demand and this is because of the attribute of jute for being environmentally friendly. Interviewee 3 further shared that the demand for raw jute requirement in Bangladesh is steady. In terms of meeting the demand for jute-based goods, the interviewee 3 shared that both in the national and international market, Bangladesh has been able to prove itself as a good source of jute-based goods. According to the interviewee 3, there are many jute mills in Bangladesh that have suffered a great loss and have not been able to serve the international market demand due to lack of financial support, lack of skilled workers, and because of poor infrastructure. The interviewee 3 shared that the key opportunity for this industry is that it has a tremendous opportunity to grow in the domestic and in the international market by selling raw jute and jute-based goods. The interviewee 3 believes that raw material supply is vital for the healthy growth of any company associated with the jute industry but the policies of the government are not strictly imposed and there are frequent fluctuations in the price of raw materials.

According to interviewee 4, the demand for raw jute in the domestic market is steady in the agricultural, packaging and in the textile industry. It was also shared by the interviewee 4 that the demand for raw jute in the international market is on the increase. The demand for jute-based goods is increasing in the domestic market and this is because of the increased quality of jute-based goods and the visual appeal of various types of accessories and this was shared by interviewee 4 when the interviewee was asked about the demand for jute-based goods in the domestic market. The demand for jute-based goods in the international market is also on the rise and this was shared by interviewee 4 regarding the demand for jute-based goods in the international market. The interviewee 4 believed that the current jute mills in Bangladesh have enough capacity to serve the domestic raw jute demand of Bangladesh.

When talking about the international position of Bangladesh in terms of serving the requirements of the international market, Bangladesh is being recognised as a reliable supplier of raw jute according to the interviewee 4. Interviewee 4's reply regarding the position of Bangladesh in serving the requirement of jute-based goods is that Bangladesh is currently serving a huge requirement of international jute-based goods. This shows the overwhelming demand for jute-based goods and a promising future for the jute industry of Bangladesh. According to interviewee 4, the major challenge that the jute industry of Bangladesh is facing in regarding the lack of marketing of jute domestically and internationally. If people had learned about various benefits of using jute-based goods the demand for jute would have been higher in both the domestic and in the international market. The government is supportive

towards the jute industry but unfortunately, the government has not been able to impose the policies strictly, which is why there is a high fluctuation in raw jute prices according to interviewee 4.

The 5th interviewee shared experience regarding the demand for raw jute in the domestic market according to the interviewee 5 the demand for raw jute has remained stable for a long period now and this is because there is no extreme pressure for raw jute production from the domestic market. It was also shared by the interviewee 5 that jute-based products are not available in Bangladesh in various variants. Regarding the demand for raw in the international market, interviewee 5 has shared that Bangladesh is doing a great job in meeting the requirement for raw jute in the international market. According to interviewee 5, the demand for jute-based goods in the domestic market has not increased but the interviewee also stated the following, there are not many variants of jute-based goods, which is why the demand for jute-based goods in the domestic market is also not showing promising signs. Interviewee 5 also shared that the demand for jute-based goods in the international market is rapidly increasing. Interviewee 5 shared that Bangladesh is not in a very good position in fulfilling the demand of the raw jute in the domestic market this is because the sectors in which raw jute can be used are not expanding. Bangladesh is growing on a rapid scale in fulfilling the demand for jute-based goods in the international market this was shared by interviewee 5 when the interviewee was asked about the position of Bangladesh in fulfilling the demand for jute-based goods in the international market. According to interviewee 5, the biggest challenge and the opportunity lies with research and development. To support the jute industry of Bangladesh the government has extended their support according to interviewee 5 but this needs to improve more according to the interviewee.

According to interviewee 6, the raw jute demand in Bangladesh is seeing steady growth. The international demand for raw jute is increasingly in a promising manner because jute is internationally being recognized as a sustainable and environmentally friendly alternative to plastic according to interviewee 6, when asked about the demand for raw jute in the international market. The demand for jute-based goods in the domestic market is increasing slowly but there needs to be increase in diversity of products for increased demand according to interviewee 6. According to interviewee 6, the international market demand for jute-based goods is becoming day-by-day more lucrative because the whole world is becoming more and more cautious regarding the plastic problem. When it comes to stating the position of Bangladesh in fulfilling the demand for raw jute, interviewee 6 shared that fulfilling the de-

mand of raw jute for the domestic market by the jute mills is not challenging at all. Regarding the position of Bangladesh in fulfilling the demand for jute-based goods in the international market, interviewee 6 shared that Bangladesh is in a high growth phase in fulfilling the demand for jute-based goods in the international market. On the other hand, the Bangladeshi jute companies lose many international deals when it comes to exporting jute-based goods because of price issues. According to interviewee 6, the key issue with the jute industry of Bangladesh is the production of raw jute because of decreasing land area in which jute is produced. This is also increasing the price of jute according to the interviewee. When interviewee 6 was asked regarding the opportunity for the jute industry of Bangladesh it was shared that the opportunity for the domestic market and the international market for both raw jute and jute-based goods are abundant but proper promotion is needed for jute and jute-based goods. According to interviewee 6, the government's support is not sufficient.

9 RESEARCH ANALYSIS

This section of the thesis has analysed the findings from the survey and from the interviews. The major findings from the survey and the interviews are stated in this section. This section has helped in bringing a conclusion to the thesis.

9.1 Analysis of the survey

The survey findings were mostly from employed respondents since there were 20 employed respondents, 5 students and 5 self-employed respondents. The respondents were mostly from the age group of 25 to 35. According to the survey findings, 23 of the respondents rarely use jute-based goods. Also, the respondents reported purchasing mostly packaging items and carpets made out of jute. The majority of the respondents were not used to purchasing the wide variety of jute-based goods. The survey findings indicate that the respondents were not aware of the environmental benefits of jute-based goods either. If the respondents had been aware of the environmental benefits of jute-based goods they would have been more prone towards purchasing jute-based goods. Also, the respondents stated that they do not find jute-based goods widely available in the market either. Almost all the respondents agreed that they do not find jute goods to be available in the market to purchase. It could be stated from this finding that jute-based-good demand in the domestic market is not increasing because its benefits are not being promoted properly nor is the wide variety of jute-based products available in the domestic market of Bangladesh. In fact, the respondents are even ready to pay an increased price to support the jute industry of Bangladesh. The survey results also show that the respondents want more kitchen items, furniture, and footwear items made out of our jute in the domestic market. Based on these findings it could be stated that jute products are not properly promoted in the Bangladeshi market and this is why the demand for raw jute is also low. If proper marketing initiatives are taken, people will be much more interested in purchasing jute-based goods and this will eventually help both the environment and the economy of Bangladesh.

9.2 Analysis of the interviews

Based on the findings from the interview, there are many similarities among the respondents regarding the jute industry of Bangladesh. Regarding the demand for raw jute in the domestic market the interviewees stated that the demand is not excessive and rather it is easily met. By reviewing all the responses regarding this question, it could be stated that the jute sector has not been able to create demand for jute in Bangladesh in spite of various applications of jute. If jute is properly used in the process of making various jute-based goods, Bangladesh would have also experienced an increase in demand for raw jute. Regarding the demand for raw jute in the international market, the interviewees shared that Bangladesh is performing really well in serving the international market with raw jute. On the other hand, when the responses of the interviewees were compiled regarding the demand of jute-based goods in the domestic market it was similar to the findings from the survey. The demand was not noticeable for the interviewees. However, some of the interviewees have stated that the demand for jute-based goods is increasing but slowly. If there is proper marketing of jute-based goods which highlights the benefits of jute while ensuring the availability of jute-based goods the domestic market is bound to experience an increase in demand. The response of the interviewees was also aligned regarding the demand for jute-based goods in the international market. The interviewees stated that jute-based goods have an increased demand in the international market. This is because the world is becoming more concerned with sustainability and the need for being environmentally friendly.

The interviewees stated that when it came to Bangladesh's position to fulfil the requirement of the domestic market with raw jute, Bangladesh is not facing any issues with the supply to the local market. However, this is because the demand is not increasing enough and this is bad for the jute industry of Bangladesh. This can be directly linked to the demand for jute-based goods in the domestic market. Since the demand for jute-based goods has not increased the demand for raw jute is also not expanding for the domestic market. But for jute-based goods in the international market, Bangladesh is struggling with fulfilling demand because of a high number of orders.

The interviewees have identified some of the key challenges of the jute industry in Bangladesh. One of the issues with the industry is that the jute cultivating land is decreasing and this is creating a major issue in the production and supply of raw jute. Secondly, the prices of raw materials to produce jute and the price of jute fluctuate too much in the market which creates problems in producing jute-based goods. Thirdly, the financial support for the industry is scarce and this also creates a problem in producing jute-based goods. Fourthly, there are many jute mills in Bangladesh that suffer from a lack of

skilled workers and infrastructure to produce good quality jute-based goods. Finally, the industry is not properly investing and prioritizing research and development which is why the application of jute is not properly utilized.

The interviewees have identified many opportunities for the jute industry in Bangladesh. Being one of the oldest suppliers of raw jute has created a reputation for Bangladesh and this helps Bangladesh to acquire many international deals for being the exporter of raw jute and jute-based goods. Secondly, the world is becoming more and more concerned about using environmentally friendly items and jute is the most ideal item that can be used against plastic.

All the interviewees have stated that the government is failing greatly in imposing proper policies in controlling the raw material price. The government also needs to facilitate the industry more in research and development to produce advanced jute fibre and jute-based goods. According to one of the interviewees the government of Bangladesh needs to diversify its focus since the government seems to be only focused on the textile industry. The government of Bangladesh also needs to prioritize the expansion of land in which jute is cultivated.

10 CONCLUSION AND DISCUSSION

The aim of the thesis is to identify the current state of the jute industry in Bangladesh and the opportunities and challenges that are associated with the jute industry of Bangladesh. While addressing this objective the research has also tried to explore the answer to a few questions. The first question of this thesis was: What is the current state of the jute industry in Bangladesh? The second question of this thesis was: What are the drawbacks and challenges for the jute industry of Bangladesh? The third question for this thesis was: What are the prospects or opportunities for the jute industry in Bangladesh? To achieve the aim of the objective and to answer the research questions, we tried to include all the relevant journals and articles that are associated with the jute industry of Bangladesh. This helped understand the current condition of the jute industry of Bangladesh including both the challenges and the opportunities the jute industry of Bangladesh is facing. Secondly, the research used a survey where the responses have been collected through Google Forms. The survey responses have helped understand the current condition of jute-based goods demand in the domestic market. Additionally, the research included six interviews which were conducted on six persons who work in a jute-based goods production organization in Bangladesh named "Golden Jute Product" company. The interviewees shared their experiences regarding the jute industry in Bangladesh. Based on the interview the research showed the demand of jute in the national and international market, and the demand of jute-based goods in the national and international market. Through the interviews, the research has also shown the opportunities and challenges for the jute industry in Bangladesh.

To address the first question, it needs to be stated that the jute industry of Bangladesh is performing really well in the international market. This is true both for raw jute and jute-based goods. The increasing demand for environmentally friendly products and the long experience of producing jute have helped Bangladesh to achieve this position. In fact, Bangladesh is one of the key suppliers of raw jute and jute-based goods and directly competes with its second rival India in the international market. However, the domestic market is not showing enough growth for both raw jute demand and jute-based goods. Based on the literature, survey, and interview findings it can be confirmed that there are multiple factors behind this issue. Firstly, the international market is the key focus for the jute mills of Bangladesh and this is why various jute-based goods are not being made available in the market. Domestic consumers only find packaging goods and rugs to purchase. Secondly, the domestic market of Bangladesh is not aware of the environmental benefits of jute-based goods this is because of a lack of

marketing effort by the jute companies operating in Bangladesh. By ensuring proper marketing for such products, the demand for both raw jute and jute-based goods can be increased.

The second question of the thesis is to understand the challenges associated with the jute industry in Bangladesh. The literature, survey and interview findings have indicated similar issues in this regard. Bangladesh's jute industry is suffering from a lack of resources in various dimensions. There is a scarcity of jute-producing lands, is lack of skilled workers, a lack of infrastructure, lack of financial support which is hindering the growth of the jute industry. Because of these issues, the jute industry is suffering in producing quality jute fibre and jute-based goods. Secondly, there is corruption in the government sector and the government is also failing to impose policies strictly which causes price fluctuations and eventually impacts the supply chain of raw jute and jute-based goods. The government is also focused towards the textile industry, which is why the jute industry is not getting enough support. Thirdly, the jute industry in the domestic market needs to be focused on expanding the supply of jute-based goods. This is how the demand for raw jute will also increase. Along with increasing the supply of jute-based goods the marketing of jute-based goods also needs to be focused. Especially the consumers need to be made aware of the environmental benefits of using jute-based goods.

The third question of the thesis is to understand the prospects of the jute industry in Bangladesh. The literature, survey and interview findings have identified multiple opportunities for the jute industry in Bangladesh. Firstly, the jute-based goods are not properly promoted within the domestic market of Bangladesh. If this is done properly a huge market will be opened for the jute industry and the demand for raw jute and jute-based goods will increase for the domestic market. Secondly, jute is the most ideal alternative to plastic and the jute industry has the opportunity to grow in both the domestic and the international market. Plastic is not only used for packaging rather it is used for almost all spheres of life. Jute has the potential to be used instead of plastic in packaging, clothing, construction, and also in the automobile industry. Thirdly, jute is also used for producing tea and also used in the cosmetics industry as a raw material. The tea industry, cosmetic industry, construction, and clothing are new fields where jute can be applied and many can gain first mover advantage by properly utilizing jute in these markets.

The commissioner of the thesis has set the objective for this thesis report which is to understand the current situation of the jute industry of Bangladesh and the opportunities and challenges surrounding the jute industry of Bangladesh. The purpose of setting this objective was to understand whether the

future is promising for the jute industry of Bangladesh or not. Based on the literature, survey and interview findings it could be concluded that the future is indeed bright for the jute industry of Bangladesh. This is true for both the domestic and international markets and also for the raw jute and jute-based goods demand. If challenges like government support, the crisis of land, fluctuating price of raw materials, proper marketing of jute and jute-based goods, supply of jute-based goods in the domestic market, lack of skilled workers, lack of infrastructural issues, lack of financial support are resolved then the jute-industry of Bangladesh could reach a promising position like Bangladesh's textile industry. Because of increased consciousness towards sustainable and environmentally friendly products, there is a good opportunity to grow both in the domestic and the international market.

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APPENDIX 1/1

The following survey has set an objective to understand the current situation of the jute industry of Bangladesh. No personal information of the respondents will be shared publicly. The findings will be solely used for educational purpose. Your cordial cooperation is highly appreciated.

1. Please state your profession status.
 - a. Unemployed b. Employed c. Student d. Housewife e. Self-employed
2. Age
 - a. 25-35 b.36-45
3. How often do you use or purchase jute goods?
 - a. Daily b. Weekly c. Monthly d. Rarely e. Never
4. What type of jute product do you use or purchase?
 - a. Jute bags b. Jute rugs/carpets c. Jute apparel/accessories d. Jute home decor items e. Others (Please specify)
5. In your opinion do you think that jute-based goods have environmental benefits?
 - a. Yes b. No c. I am not aware
6. What factors could influence your decision to purchase jute products?
 - a. Environmental sustainability b. Affordability c. Durability d. Visual appeal e. Others (Please specify)
7. What improvements in jute products would make you more likely to purchase them?
 - a. Style b. Durability c. Availability d. Wide Usage by Others
8. Would you be willing to pay a slightly higher price for jute products to support the jute industry and sustainable practices?
 - a. Yes b. No c. depends on the extent of the price increase

APPENDIX 1/2

9. What kind of jute product would you like to see more in the market?

a. Footwear b. Kitchen items c. Furniture d. Packaging e. Other (Please specify)

10. Are you satisfied with the current availability of jute-based products in the market?

a. Yes b. No

APPENDIX 2

1. Could you please explain the demand for jute in the domestic market and the trends in demand?
2. Could you please explain the demand for jute in the international market and the trends in demand?
3. Could you please explain the demand for jute-based goods in the domestic market and the trends in demand?
4. Could you please explain the demand for jute-based goods in the international market and the trends in demand?
5. Where does Bangladesh stand in terms of fulfilling the demand of jute in the domestic market?
6. Where does Bangladesh stand in terms of fulfilling the demand of jute in the international market?
7. Where does Bangladesh stand in terms of fulfilling the demand of jute-based goods in the domestic market and in the international market?
8. What major challenges at present is hindering the growth of the jute industry?
9. What opportunities lies ahead for the jute industry of Bangladesh?
10. Please explain your opinion regarding the support that is provided by the government of Bangladesh for the growth of the jute industry of Bangladesh.