

Entrepreneurial Perception about the Factors Affecting Innovation in the Bangladeshi Small and Medium Enterprises: A Study on the Jute Diversified Products Industry

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Abstract: In today's world, innovation is inevitable for the growth and survival of businesses, especially for the Small and Medium Enterprises (SMEs). This study steered to identify the factors which affect innovation of the SMEs. Here, Jute Diversified Products (JDP) industry is selected as a study area as this has emerged from the most traditional SME sector of Bangladesh. Five cases are introduced here to analyze the perceptions of the entrepreneurs regarding the motivating/ de-motivating factors in relation to innovation. The findings of the study suggest that knowledge factors, institutional factors, cost factors, market factors, legal factors, political factors and social factors have negative impacts on innovation while some forms of administrative factors act differently in the context of Bangladeshi SMEs.

Keywords: Innovation, Small and Medium Enterprises (SMEs), Jute Diversified Products (JDP) Industry, Entrepreneurs' Perceptions

1.0 Introduction

Innovation is closely associated with entrepreneurship. It is obvious that an entrepreneur needs to work with innovation as it plays an important role for the survival and success of the firms. Schumpeter used the term creative destruction (OECD, 2005) though innovation is considered as an integral part of entrepreneurship. Innovation is closely related with economic growth and considered as a determining factor of any firm's growth (Audretsch et al., 2014). All types of businesses require innovation, however, the resource-constrained SMEs need innovation more to survive in this competitive world. Small businesses incorporate more innovations quickly in comparison to the large businesses (Zhao, 2005). Whether any SME is going to adopt any sort of innovation, it is very important to see how the entrepreneurs reflect on the issue. Sahut & Peris-Ortiz (2014) identified a relationship among small business, entrepreneurship and innovation while Zhou (2005) discovered that entrepreneurship and innovation have positive relationships and they complement each other.

Business world is full of risks and uncertainties. Innovation might help a firm to face competition or to utilize opportunities for entering different markets (OECD, 2005). Besides, innovation might play a role in solving business problems and ultimately create unique ways of doing things. Further, innovation might play a role to solve problems and to improve performance. Additionally, innovation is important for creating competitive advantage for the firms, especially for the SMEs.

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2.0 Research Question

Innovation is ubiquitous (Kahn, 2018). Innovation can be found at the history of human civilization, however, it started to get noticed in the 1950s (McKeown, 2014). This study tries to focus on the issue which has not received enough scholarly attention so far.

Primary Research Question:

What are the entrepreneurs' perceptions about the motivating and de-motivating factors to innovation of the Bangladeshi SMEs?

Supplementary Research Questions:

- Which factors have positive impacts on the innovation of the Bangladeshi SMEs?
- Which factors have negative impacts on the innovation of the Bangladeshi SMEs?
- Which resources influence innovation of the Bangladeshi SMEs?
- How do the entrepreneurs minimize the negative impact of the de-motivating factors on the innovation of the Bangladeshi SMEs?

3.0 Literature Review

Literature review systematically analyses the relevant extant literature on the topic and tries to identify the research gap. Literature review of this study is divided into three parts: innovation, factors related to innovation and Jute Diversified Products (JDP) industry.

Innovation can be defined as new or creative ideas. Knowledge is important for the successful implementation of innovation (Drucker, 1985). Audretsch et al. (2014) emphasized on knowledge spillover theory where knowledge is considered as a basis of opportunities for the entrepreneurs. Innovation is not only related to the inception of any product or service but also to its development. Innovation is coined as practical creativity (McKeown, 2014). Tidd et al. (2005) defined innovation as the commercial application of any new ideas. OECD (2005) emphasized that innovation is the implementation of new or improved product / process/ marketing/ organizational methods which could occur in business practice, organization or with external relations. Innovation might take different forms: product, process, service, business model, marketing, organizational, radical, incremental, disruptive, architectural, technology, open, close etc. (Harel et al., 2020; OECD, 2005; Tidd et al., 2005). Innovation with equity should be ensured for a better world (UNCTAD, 2021). People from all race, gender and economic conditions should receive equal opportunity to get access to technology. Whether a firm will be innovative or not, it largely depends on the national and organizational culture (Zhao, 2005).

Both large enterprises and SMEs require innovation in this competitive world. Innovation plays a strong role in the growth and survival of the SMEs. Innovation is connected with some motivating and de-motivating factors. There are many factors which might cause obstruction for innovation or can slow down its progress. It is important to consider the relationship between a firm and its external environment for the initiation and implementation of innovation (Dobson et al., 2013). SMEs from the developing countries mainly face financial resource constraints. Innovation is

always expensive and the high price of innovation discourages initiation and implementation of innovation. It is assumed that the performances of the firms are negatively affected due to the barriers to innovation (Nassar & Faloye, 2015). Sometimes, it is really difficult to manage innovation in the small businesses in comparison to the large businesses as only manager cannot ensure successful implementation of innovation (Harel et al., 2020). The primary reason behind this failure is that the manager may not be capable enough to lead innovation in the businesses. Not only the internal environmental factors, but also the favorable factors from the external environment are pre-requisites for the successful initiation and implementation of the innovation (Trot, 2017).

There are few studies available on the barriers faced by the SMEs while implementing innovation. Different authors use different classifications to categorize those barriers. In the Asian SMEs, the type of barriers to innovation might act quite similarly. Human resource barrier (Ali & Shah, 2018), financial barrier (Ali & Shah, 2018; Weerasiri et al., 2012; Zhu et al., 2012), managerial barrier (Weerasiri et al., 2012), technological barrier (Weerasiri et al., 2012), lack of government support (Weerasiri et al., 2012), lack of institutional support (Weerasiri et al., 2012; Zhu et al., 2012), unfair competition (Zhu et al., 2012) and regulations & tax burdens (Zhu et al., 2012) are common barriers to innovation.

Very few studies are available on the factors affecting innovation in the Bangladeshi SMEs. Unfortunately, extant studies on the innovation of Bangladesh are concentrated on agriculture, health sector, renewable energy, telecommunication, aqua culture and public sector. Tahrima & Jaegal (2012) identified nine factors which affect government innovation in Bangladesh. Banu (2020) identified four types of barriers observed in the context of the Bangladeshi SMEs: financial resource barrier, human resource barrier, organizational barrier and external barrier. Bangladesh is the 116th innovative country as per Global Innovation Index 2019 (The Daily Star, 2019) and it is believed that the innovation activities are not happening smoothly due to some reasons. This study tries to tap this research gap. The purpose of the study is to find out those factors which are interrupting the innovation activities in the Bangladeshi SMEs. In addition, this study also tries to find the factors which positively affect the innovation activities and how resources are relevant in this procedure. It is very important to identify the resources which positively affect innovation in the SMEs. Identifying right kind of resources and their proper utilization might impact the SMEs of Bangladesh. Lack of resource is the major problem in any kind of development and innovative activities. Innovation is essential in every spheres of life, especially in each type of business. In a developing country like Bangladesh, innovation is critical in all sectors, especially in the JDP industry.

Jute, the golden fibre of Bangladesh, is the main cash crop of Bangladesh (Akter et al., 2020). The climate and soil of Bangladesh are very conducive for the production of jute (Islam & Ali, 2017). Few decades back, jute was the main means of livelihood of millions of farmers and industrial workers. Before 1971, Jute industry had enormous potential as prime foreign exchange earner. However, this dream did not come into reality due to plastic industry. Now, people can realize how they destroyed the environment by choosing plastic over the biodegradable jute. The current government wants to restore the golden past of this cash crop. At this moment, Bangladesh is considered as the second largest all over the world in producing this eco-friendly crop (Export Promotion Bureau, 2020-21). Bangladesh also earns a lot of foreign exchange by exporting rawjute, jute yarn & twine, jute socks and bags. Among our top export items, jute and jute goods are the third largest. In FY 2019-20, jute export income is USD 1161.48 million (Export Promotion Bureau, 2020-21).

Table 3.1: Export income by Jute and Jute related products in FY 2020-21

Commodities	Export Income (Million US \$)
Raw Jute	138.15
Jute Yarn & Twine	799.04
Jute socks and bags	138.66

Source: Export Promotion Bureau 2020-21, p. 20

Before 1980s, jute industry was the greatest contributor to our foreign export earnings. Jute sector has faced several challenges due to the absence of modern technology & machineries, low quality seeds & fertilizer, low marketing, natural disasters etc. In these days, the government of Bangladesh has focused on jute sector as the jute diversified products have gained popularity in the international market. In the last few years, people became environment conscious and most people prefer green instead of plastic. Bangladesh government established Jute Diversification Promotion Center (JDPC) under the Ministry of Textiles and Jute in 2002. It works with its seven wings named Jute Entrepreneur Service Centre (JESC) all over the country. JDPC and Bangladesh jute Research Institute (BJRI) are now working on the jute diversified products.

Jute goods received more attention than raw goods in these days. In 2015-16, raw jute export earning was 173.17 million US\$ and it decreases to 138.15 million US\$ in 2020-21. On the other hand, jute goods export earning was 746.41 million US\$ in 2015-16 and it turns into 1023.33 million US\$ in 2020-21 (Bangladesh Export Promotion Bureau, 2020-21). From the Table 3.1, it is clear that jute goods got preference in the international market before and this preference for jute goods show significant growth in this decade.

Jute goods can be categorized into traditional jute goods and diversified jute goods (Islam & Xiaoying, 2016). Bangladesh Investment Development Authority (2021) followed the definition of JDP as per the Jute Act 2017. Here JDP should have at least 50 per cent jute as raw material. JDP are known as innovative products and those products add value to the original one (Islam & Xiaoying, 2016). JDP involve different types of crafts items made from jute fabrics/ jute fibers/ jute yarns/ jute paper/ jute pulps/ blended jute fabrics & yarn/ laminated or non- laminated jute fabrics/ jute cotton fabrics/ printed or non-printed jute fabrics/ jute fabrics mixed with other materials/ fibres with or without jute vulcanized soles/ carded jute fibres/ intimate mixing of jute with resin etc. JDP include shopping bags, ladies bags, school bags, shoulder bags, party bags, lunch bags, laptop bags, purses, backpacks, baby bags, batua, travel bags, mobile bags, money bags, passport carry bags, garden bags, grocery bags, laundry bags, golf bags, lamp shed, table cloth, curtains, coasters, sofa cover, pillow cases, baskets, tray, pouch, carpets, satarangies, prayer mat, tea cozies, glass holders, tool boxes, pet accessories, shoes, toys, animal wears, wall & door hangings etc. (<https://jdpc.portal.gov.bd/>).

The government of Bangladesh wants to attract the foreign market by JDP as the world is getting more eco-friendly. Jute and JDP are gaining the attention of the world because of their environment friendly characteristics in comparison to plastic. Akter et al. (2020) emphasized on the importance of extensive research to diversify jute products as this industry shows slow progress due to the absence of appropriate modern technology. Chakma (2022) identified four barriers to the progress of this sector: absence of technology, lack of skilled manpower, absence of fiscal support and lack of research in diversifying products. It seems that most of the studies focuses on the challenges of the SMEs and it covers different types of barriers. Barriers to innovation in the Bangladeshi SMEs, especially in the JDP industry are not explored earlier.

4.0 Methodology

This is a qualitative study based on multiple cases. A qualitative study gives a chance to focus on the inner details of the study. Multiple case studies (Yin, 2003a) are used here to get different perspectives from a single phenomenon. Five sample case studies are selected purposively from the JDP industry of Bangladesh.

Table 4.1: Profile of the Sample Firms

Name of the Business	Entrepreneurs	Year of Establishment	Existing Product Line	Legal Ownership of the Business	Office & Factory	Local / International
Kazi Fashion House	Kazi Mazharul Hoque	2013	More than 15 types of jute products	Sole-proprietorship	North Jatrabari	Both
TULIKA	Esrat Jahan Chowdhury	2017	Bags	Sole-Proprietorship	Uttara	Both
Farjana's Jute & Crafts	Syeda Farjana Yesmin	2008	Bags	Sole-Proprietorship	Mohammadpur	Both
Amali Jute & Crafts	Ali Zakir (Managing Partner) and five other partners	2013	Various items: lunch bags, file folders, grocery bags, shopping bags, sports bags, travel bags, office bags, gents side shoulders	Partnership	Mohakhali DOHS, Keraniganj	Both
Karukaj Jute Products	Abdul Khaled (CEO & Product Designer)	1994	More than 45 types of jute products	Sole-proprietorship	Shantinagar, Narayanganj	Both

Source: Interview

Table 4.1 presents the basic details of the five SMEs from JDP industry. These SMEs are working in the JDP industry at least for five years. In these SMEs, TULIKA has started working for five years and other businesses are working with JDP for more than five years. In fact, Karukaj Jute Products is in this arena for twenty eight years. Amali Jute & Crafts is the partnership business while the rest of the businesses are sole-proprietorship businesses. TULIKA and Farjana's Jute & Crafts focus mainly on jute bags while other three businesses have varieties of jute items in their product line. In fact, Kazi Fashion House also produces items from bamboo, cane and coconut shell.

In this paper, the authors used the factors which are identified by Tahrima & Jaegal (2012). Tahrima & Jaegal (2012) used *knowledge factors* (insufficient innovation potential, lack of qualified personnel, lack of advanced technology, lack of proper management system and lack of market information), *institutional factors* (weak infrastructure and weak intellectual property rights protection), *cost factors* (complicated financial markets, excessive perceived risks and lack of funds), *market factors* (domination of established businesses), *legal factors* (lack of effective legislation and lack of proper taxation policies), *political factors* (political instability and lack of accountability), *administrative factors* (bureaucracy, corruption, lack of strategic vision, centralized policy making & resource allocation, politicization of services and outdated administrative systems) and *social factors* (social instability, lack of education & lack of values & beliefs) which affect government innovation in Bangladesh. Here, the authors try to replicate the study partially considering innovation in the Bangladeshi SMEs instead of government innovation. The authors used a mixed questionnaire to get entrepreneurs' viewpoints and perceptions about the factors affecting innovation in Bangladeshi SMEs. The questionnaire was divided into four parts. The first two parts are about the basic information of the entrepreneur and his/ her businesses. Then the next section is about innovation, barriers to innovation, resources essential for innovation and cost of innovation. The last part of the questionnaire is about different factors and their impacts on the innovation of the businesses. In this study, cross-case synthesis (Yin, 2003a; Yin, 2003b) is used to show whether there is any pattern among the entrepreneurs' perceptions regarding innovation.

5.0 Findings and Discussion

From the stories of the entrepreneurs, it is clear that the entrepreneurial journey was not easy for any of the entrepreneurs. All the entrepreneurs face ups and downs in their entrepreneurial experiences. Mr. Hoque left his job to start his entrepreneurial journey and unfortunately, he did not have his family support initially. Now, he is producing his jute products in his factory at Jatrabari. The entrepreneur is passionate about research. He was very much interested to work with jute as it has historical value. He emphasizes that the transformation of Bangladesh as digital Bangladesh and advancement in the digital technologies help current entrepreneurs to get all necessary information very easily. It is obvious that access to available information positively affect innovation in any type of businesses. However, it is more conducive to the SMEs, being a resource-constrained organization, to get straightforward help through digitalization and e-commerce. In fact, he mentions that more than 80 lakh people started online businesses during the COVID-19 pandemic and it was possible due to the digital technology. He also addresses

that the challenge of this industry is consumers' perceptions about jute. Handmade jute items are expensive as these are not produced by machine, however, people don't want to pay high price for handmade items. Common people still treat jute as 'bosta' and don't want to pay appropriate price for these diversified products.

Esrat Jahan Chowdhury is the CEO of TULIKA. She is also the director of the Bangladesh Jute Goods Exporters' Association (BJGEA). TULIKA always works for quality instead of quantity. Now, it is exporting jute products to the European countries. She left her job and started TULIKA as she cannot adjust herself with the corporate world. Her family was not supportive with her decision. She received training from B'YEAH (Bangladesh Youth Enterprise Advice and Help centre). She believes that it is possible to produce modern items with jute. TULIKA produces twenty kinds of products with more than fifty permanent and temporary workers and artisans at Uttara. TULIKA manually checks the quality of raw materials from the beginning of preparing its products. It has strong technical support and this innovative feature makes TULIKA different from others. During pandemic, Ms. Chowdhury received training on e-commerce and digital marketing and it ultimately helps her to get international orders. She complains that the procedure to get bank loan is complex. In fact, the SMEs also face the same procedure applicable for large businesses to get loan. Another thing, she mentions that it becomes difficult to survive if the SMEs do not receive regular orders throughout the year.

Syeda Farjana Yesmin is the entrepreneur of Farjana's Jute & Crafts. She always wants to work with products which are close to her culture and country. The products of Farjana's Jute & Crafts are mainly made by FJF fabrics and produced at Mohammadpur. Ms. Yesmin focuses her product design considering both modern and tribal designs. Incorporating tribal design in the jute bag is the innovative feature that made her products different from others. She mainly works with corporate orders. Ms. Yesmin is also not happy how Bangladeshi people still treat jute. Most of the customers treat jute item as 'chala' or 'bosta' and think that the entrepreneurs are charging unreasonable price. She complains about the banking system as well. She finds the procedures in the bank are not convenient and not helpful to the women entrepreneurs. In fact, women entrepreneurs sometimes need male members with them as guarantors.

Mr. Ali Zakir left his job and became an entrepreneur of Amali Jute & Crafts to work independently. Initially he starts with 4 workers. Amali Jute & Crafts is now producing its products in Keraniganj (office is at Mohakhali DOHS) with 10 permanent and some part-time workers. It seems Mr. Zakir is very innovative about labeling his products. Amali Jute & Crafts uses heading "Life style products" for its products and the entrepreneur is passionate about innovative and creative work. Another interesting thing is found that Amali Jute & Crafts attends fairs regularly and it provides the Google map links in its face book page for the convenience of the potential customers. Amali Jute & Crafts is the only case (in this study) which uses discount voucher offer for promotion in different festivals through Facebook. Mr. Zakir highlights that innovation can be implemented in the design of the JDP. He mentions that the design of the JDP can be made better and there is more scope to improve.

Mr. Khaled is the CEO and Product Designer of Karukaj Jute Products. He is also the chairman of the National Jute MSME's Umbrella. Initially, several partners were involved here, however, currently Mr. Khaled is the only owner of the business. Karukaj Jute products has its factory at Narayanganj with an office at Shantinagar. Mr. Kahed not only produces jute products but also trains entrepreneurs for making sustainable jute products. He trains entrepreneurs at Narayanganj. Mr. Khaled also uses an innovative term for his business: "Sustainable Jute Entrepreneurship".

The findings of this study shows that all the entrepreneurs believe that insufficient innovation potential, lack of proper management system, lack of qualified personnel, lack of advanced technology and lack of market information have negative impact on innovation. Weak infrastructure and weak intellectual property rights protection also have negative impact on innovation as per the entrepreneurs' perspectives. In addition, the entrepreneurs also perceive that complicated financial market, excessive perceived risks and lack of funds have negative impact on the innovation of the SMEs in Bangladesh.

Among five entrepreneurs, four entrepreneurs think that established businesses and strong competition have negative impact on innovation. It is found that legal factors have either negative impact or 'no impact' on innovation. Regarding political factors, all the entrepreneurs perceive similarly as this factor is detrimental for innovation in any business. The entrepreneurs from Amali Jute & Crafts and Karukaj Jute Products believe that centralized policy making and resource allocation are motivating factors for innovation in the SMEs. The entrepreneurs indicate that social factor is not positively connected with innovation in Bangladesh. All the entrepreneurs feel that social instability, lack of education and lack of values have negative impacts on innovation. However, the entrepreneur of Amali Jute & Crafts perceives that this factor has no impact on innovation. The entrepreneur of Karukaj Jute Products identifies that only lack of education negatively affects innovation but other social factors do not affect it. From the above findings, it is clear that this study shows quite similar result to the study of Tahrima & Jaegal (2012). However, this study finds marginally different perceptions of the entrepreneurs regarding administrative and social factors.

It is needless to say that all the entrepreneurs agree to that fact that whether some factors motivate or de-motivate innovation, however, innovation is a must. Mr. Hoque always does extensive research and tries to create innovative things by himself; however, he always focuses on customers' demands and preferences. Both Ms. Chowdhury and Ms. Yesmin find that innovation is costly here. They both do their research by themselves. Ms. Chowdhury commented that

"I want to keep my tradition alive, so innovation is a must. Innovation is the only way to get success. However, at the same time, it is very costly."

Ms. Yesmin also echoes Ms. Chowdhury's words. She clarifies that it is almost impossible to acquire market without innovation. She mentions that she usually takes help from Google search engine to find new creative ideas. Mr. Hoque also emphasizes on the importance of research and training to have access to the world market. He stated:

“It is really difficult to survive in the world market. Everything is changing here rapidly. To be competitive, every entrepreneur should think which product may attract the customer. Whatever product is doing well today may not capture the customers’ interests tomorrow. If any product does not get acceptance in the market, the entrepreneurs should do extensive research to innovate more suitable products for the customers.”

Mr. Zakir identifies that management skills (Human resources) & machineries (Organizational resources), while Ms. Chowdhury and Ms Yesmin identify skilled employees (Human resources) as important resources for innovation. Mr. Hoque pinpoints training of the entrepreneurs as crucial for the entrepreneurial success. In JDP industry, it seems that human resources and relationship play most crucial role for innovation. Mr. Hoque mentions that Kazi Fashion House made its first shipment to Dubai with the help of his college friends. Mr. Hoque acknowledges the contributions of his friends from two specific groups named NDC 99 and 97/99. Ms. Chowdhury emphasizes on network for innovation in sales & marketing. Ms. Chowdhury commented:

“I sell only on the basis of my network”

Amali Jute & Crafts also uses innovative approach in its marketing by making exclusive network with Daraz. It gives limited offer to customer for free shipping if the customers buy their products through Daraz. It supports the concept of innovation network mentioned by Dobson et al. (2013). Here, the entrepreneur is able to increase his/her sale by using different innovation networks within and across different organizations. From the above discussion, it is evident that all the entrepreneurs are conscious about innovation and its significance in the JDP industry. It is also apparent that the entrepreneurs are also facing challenges which are directly or indirectly affecting innovation.

6.0 Conclusion and Recommendations

An entrepreneur needs to be a smart innovator. Innovation is required for the survival and growth of the small businesses. It is also found that availability of resources plays an important role in introducing and implementing innovation in the business. Moreover, the characteristics and background of the entrepreneurs are also imperative. It is significant to see how passionate the entrepreneurs are to survive and grow. They need to balance between the newness of their ideas and at the same time, whether this idea will be able to solve their problem or create new opportunities for the businesses. It is needless to say that the SMEs should adopt innovation in their businesses more to survive in the uncertain and risky situations. The entrepreneurs should work on having networks/ contacts/ relationship to reduce the negative impacts of the de-motivating factors to innovation. The entrepreneurs should think about open innovation as it might help them to innovate easily in the resource-constrained environment. Moreover, research should be encouraged to innovate new things. At the same time, training and development activities are also essential to support and promote the new entrepreneurs in the JDP industry.

The government of Bangladesh should provide mortgage free loan to the SMEs of the JDP Industry. The entrepreneurs want ban on local raw jute export as it creates shortage of supply. Moreover, the government should work on the institutional, political, legal, administrative and social factors

to minimize the negative impact of the de-motivating factors. The government should make more educative public contents about the JDP industry and it might change the people's perceptions on 'bosta'. More public awareness and positive approaches should be created about this eco-friendly industry. At present, Oikko store, Priyoshop, Ekshop, Daraz and other e-commerce sites are promoting and selling the products of SMEs online. More efforts should be invested to promote this JDP industry. At the same time, appropriate policy and guidelines should be introduced to operate the e-commerce shops properly in Bangladesh. Now BSCIC, SME Foundation, Department of Youth Development and other government organizations are regularly arranging training programs and they should assess & address the needs on training regarding innovation in the JDP industry.

This study is limited to a single industry with only five case studies. The outcome of the study cannot be generalized to other industries. A bigger sample size might provide a different understanding of the motivating and de-motivating factors to innovation in the context of Bangladeshi SMEs. Besides, inclusion of other industries might provide a diverse and thought-provoking view about this under-researched topic.

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