



ECONOMIC PROSPECTS AND PROBLEMS OF CANE BASED FURNITURE ENTERPRISES AS FAMILY BUSINESS AND THEIR BUSINESS TRENDS IN BANGLADESH

Md. Kamrul Hasan

Assistant Professor, Faculty of Business and Social Sciences, Sylhet International University, Bangladesh

Prodip Dey

Lecturer, Department of Business Administration, Sylhet International University

ABSTRACT

Cane based enterprise is one of the most flourished business in the northeastern region of Bangladesh. The purpose of the present study is to observe the pattern of production of cane based furniture in Sylhet city, identify the prospects and problems, and recommend solutions. The study reveals that most of the cane furniture enterprises (57%) is small and 36% is medium and 7% is large in size. Most of the (86%) entrepreneurs produce sofa, chair, rocking chair and bed. Sofa is the highest item in terms of volume of production while bed is the lowest. Sofa, chair and rocking chair are the most demanded and profitable items. Average monthly production and profit are Tk 221916 and Tk 22500 respectively per enterprise. The study also reveals that 51% entrepreneurs are suffering from shortage of capital and raw materials, whereas 35% of capital, skill labor, etc. The study suggests that entrepreneurs should create demand to all classes of people through proper promotional programs, newest designing, adding new features, extending the usages of cane furniture, improving quality considering customer demand. Government also should patronize this industry by giving logistic supports.

Keywords: Cane enterprises, Cane furniture, Raw materials, Sale and profit.

INTRODUCTION

Cane is one of the important natural resources of Bangladesh forests and homesteads (Ara Roshan, 1997a). Production of cane in Bangladesh is now much lesser than it used to be in the past. The country produced 3,938,000 feet of cane in 1985-86 and 2,938,000 feet in 1993-94 (Alam and Furukawa, 2009). The household life in Bangladesh is marked by diverse use of cane. Cane is useful in building traditional houses and is used to manufacture goods of utility and in making



diverse fancy articles of a house. In Bangladesh, it is one of the most important raw materials for cottage industries and also used for making furniture frames, walking sticks, umbrella handles, baskets, handicrafts and various fancy articles. Cane furniture adorned with creative design and artistry subtly bears testimony to the glorious tradition of handmade artifacts in Bangladesh. Such furniture ranges from dining tables to dressing tables or easy chairs to rocking chairs or from dress hangers to shoe racks. Artisan's gifted with artistic bent of mind employ combination of manual and mental labor in making high quality cane furniture like chairs, tables, sofa sets, book shelves, beds, corner shelves, partitions, wardrobes, almirahs, showcases, plantation cases, glass frames, trays, trolleys and show pieces. The image of different flowers, such as *Rajanigandha*, *Kadam*, *Suryamukhi* and *Shapla* or of the moon and stars, boats, and the waves of river, are manifested in the exterior decoration of the body of such furniture. However, many families of Bangladesh are directly and indirectly engaged in collecting, processing, manufacturing of cane and cane products in different parts of the country. Today small-scale cane industries play an important role in developing socioeconomic condition of villagers and rural lives. Running cane enterprises have become an important flourished business and provide direct economic opportunities for the poor or the middle-income section of people through employment and income generating schemes in the northeastern region of Bangladesh. According to BSCIC sources, among 4,226 handicraft villages producing 29 selected commodities, the number of villages producing bamboo and cane goods is 1154. Bamboo and cane goods comprise the largest sub-sector of handicrafts. The sub-sector provided employment to about 135,000 persons in 2000 (Alam and Furukawa, 2009). Cane products are in great demand throughout the world, especially in Asia and Europe. The demand for well processed, good quality canes are going up in the world market and it is presumed that the demand is three times greater than the supply. In the total world export of primary forest products, rattan occupies second position next to timber (Nuruzzaman, 2001). Bangladesh exports considerable quantity of assorted cane commodities to Russia, Germany, Singapore and the Middle East. Bangladesh earned considerable goodwill in cane crafts through participation in a number of international fairs held in Germany, Canada, Japan and some other countries. In 1999-2000, Bangladesh earned Tk 258.6 million by exporting cane and bamboo products (Banglapedia, 2009). The furniture market of Bangladesh is changing with the change of fashion and demand of the consumers. This study will help people to invest in the cane enterprises. It may also help the government and non government organizations to realize the necessity of providing expertise to the cane enterprises of the country

LITERATURE REVIEW

Rattans or cane is one of the most important natural resources of Bangladesh forests and homesteads (Ara Roshan, 1997a). About 600 species of 13 genera are found in the tropical forest ecosystems of the world. Out of them, Bangladesh is a home of only two genera; *Calamus* and



Daemonorops. Generally in the forests of Bangladesh rattans grow in the north-eastern hill forests of Chittagong, Cox's Bazar, Chittagong Hill Tracts and Sylhet (Ara Roshan, 1997b). In Bangladesh rattan collection from government forest is done by local people on payment of royalties to the Forest Department (Patric *et al.*, 1994). In furniture making Calamus guruba (jali bet or sundi bet) and Calamus tenuis (bet, jayo) are commonly used in Bangladesh (Banik, 1998). The climatic condition of Bangladesh is very suitable for cane growing. But this natural resource is getting depleted at an alarming rate (Banik, 1998). In Bangladesh, cane is one of the most important raw materials for cottage industries. Canes are used for making furniture frames, walking sticks, umbrella handles, baskets, handi-crafts and various fancy articles (Anon, 1980; Choudhury, 1984) appearing in Azad (2002). Rattan is one of the materials of cottage industries and this resource adds considerable amount of revenue to rural households (Mohiuddin *et al.*, 1986). Various authors (Akhter *et al.*, 1992; Shree *et al.*, 2000) studied various aspects of cane and bamboo based industry in Bangladesh. (Alamgir *et al.*: 2005) conducted research on the employment generation and economics of cane based furniture enterprises of Chittagong, Bangladesh. Economic profitability of cane based furniture is high and benefit cost ratio is 1:6 (Alamgir and Jasimuddin, 2006). Cane furniture is an environment-friendly, strong and naturally beautiful material. (Wright Gen, 2008). Though various aspects of cane and bamboo based industry in Bangladesh have been studied by various authors, it is found that no in-depth study regarding the production of cane furniture and its problems and prospects in Sylhet region has yet been conducted. The present study is an ample step to make up this deficiency.

Objectives of the Study

The core objective of the study is to examine the pattern of production and marketing of cane based furniture in Sylhet City Corporation (SCC). The specific objectives are;

-
- (i) To analyze the business policy of cane based furniture in terms of processing and procurement of raw materials, production of finish products and economic profitability in the study area;
 - (ii) To find out the opportunity and problems faced by the entrepreneurs in production of cane based product in the study area;
 - (iii) To give some suggestions for the betterment of cane based furniture industry in the study area;

METHODOLOGY OF THE STUDY

The study confined to Sylhet City Corporation (SCC) area of Bangladesh. It is located in north-eastern Bangladesh at 24°32'0"N, 91°52'0"E, on the northern bank of the Surma River and surrounded by the Jaintia, Khasi and Tripura hills. The area of SCC is 57.64 km. The total population of SCC is 369425 at 11,936 per sq km. The study is exploratory as well as descriptive



in nature. Because, different aspects and issues of the entrepreneurs and enterprises of cane furniture has been described. The study is based on both primary and secondary data. For collecting primary data, 50 enterprises of cane furniture have been selected through convenient sampling method from different areas of SCC. A structured questionnaire was used to collect data having both the close-ended and open-ended questions. Personal interview method has been used to get data. The secondary data used in the study have been collected from the publications of BSCIC, Bangladesh Bureau of Statistics, The concerned ministry and published thesis, Journal, Daily Newspapers, etc. The collected data have been analyzed through some common statistical techniques.

ANALYSES AND FINDINGS OF THE STUDY

Analyses and findings of the study are divided into the following

- 5.1. Nature of enterprises, demographic and socio-economic characteristics of Entrepreneurs.*
- 5.2. Production process of cane furniture in the study area*
- 5.3. Production and Marketing condition of cane furniture in the study area.*

Nature of Enterprises, Demographic and Socioeconomic Characteristics of Entrepreneurs

Many local and tribal people are living by cane industry in Sylhet. The industries are located at different areas of SCC. There are about 150 entrepreneurs and 5500 labors are directly and indirectly employed in production and marketing of cane based furniture in SCC (Field survey). The field survey revealed that out of 50 enterprises about 67% enterprises were established before 11-20 years, 16% before 1-10 years, and the remaining 17% before 21-30 years. The age of 56% entrepreneurs ranged between 30-50 years, 25% entrepreneurs ranged between 15-30 years, and only 19% entrepreneur is over 50 years. The analyses of educational qualification of the entrepreneurs revealed that 33% is illiterate, 60% is below S.S.C or equivalent, and only 7% is graduated and no entrepreneur has got post graduation degree.

The socio-economic analyses of the entrepreneurs showed that out 50 enterprises only 10 % entrepreneurs is involved in producing, 18% is in retailing and 70% is in both producing, whole selling and retailing where only 2% of them is exporting. The data on the amount of total investment revealed that investment of 41% enterprises ranged between Tk 1,00,000-200,000, 29% enterprises varied between Tk 2,00,000-3,00,000, 21% enterprises fluctuated between Tk 300,000-400,000 and only 9% enterprises ranged between Tk 400,000-600,000 and the average investment of the sampled enterprises is TK. 2,80,000 in cane furniture industry in SCC area. The data on initial capital revealed that 54% enterprises had been varied between Tk 20,000- 50,000, 27% enterprises between Tk 50,000-1,00,000, 17% enterprises between Tk 1,00,000-1,50,000 and only



4% enterprises between Tk 1,50,000-2,00,000 and on average it was only Tk.78, 000 of the sampled enterprises. Available data on the skillfulness of 326 labors of the sampled firms told that 63% (204) labor is skilled while 37% (122) is unskilled. The data about the size of the respondents firms exposed that highest (57%) enterprises are in small while 36% is in medium and only the 7% is in large in terms of labor.

Production Process and Nature of Cane Furniture

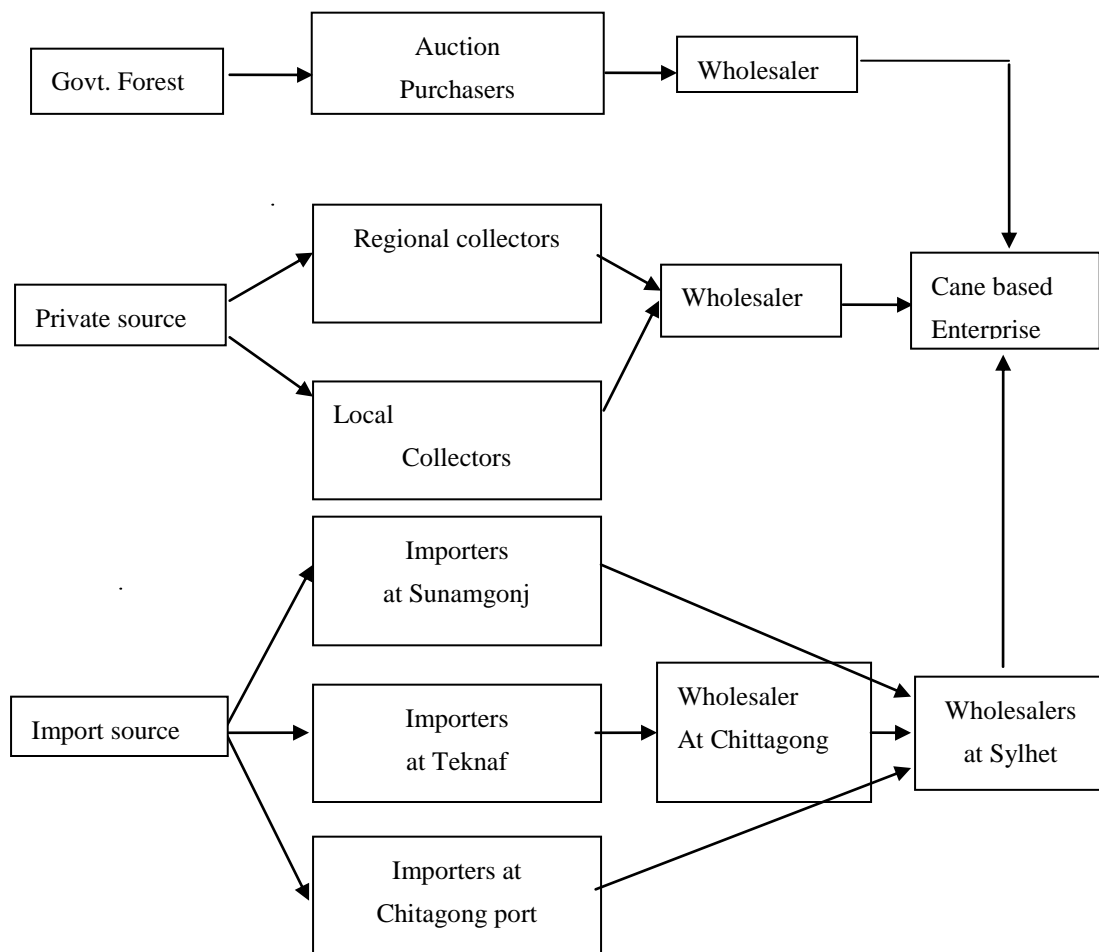
Cane is one of the important natural resources of Bangladesh forests and homesteads (Ara Roshan, 1997a). The importance and usage of it ranks next to timber and bamboo. Its natural qualities allow it to be tanned, shaped, and bent to make long-lasting and gorgeous looking furniture. Cane furniture adorned with creative design and artistry subtly bears testimony to the glorious tradition of handmade artifacts in Bangladesh. Such furniture ranges from dining tables to dressing tables or easy chairs to rocking chairs or from dress hangers to shoe racks. The image of different flowers, such as Rajanigandha, Kadam, Suryamukhi and Shapla or of the moon and stars, boats, and the waves of river, are manifested in the exterior decoration of the body of such furniture.

Types and sources of raw material and their use: Cane is the main raw material for cane furniture industry. There are 600 varieties cane consisting of 13 species in the world. Out of the 13 species only two viz. Calamus (Jali bet) and Daemonorops (golla bet) grow in Bangladesh. Generally, canes grow in the north- eastern hilly forests of Chittagong, Cox's bazar, Chittagong hill tracts & Sylhet. High quality cane is also produced in Comilla, Bogra, Jessore and Rajshah. Swamp forest of Sylhet region is also the home ground for cane. Red lands of Gowainghat, Jaintapur, Companigonj, Jakigonj and Jaflong areas are rich in cane. Among various species of cane, Golla (Daemonorops jenkisianus) and Calamus (Jali bet) are mostly used. Different varieties of cane are used for different purposes. **Jali bet** is used for weaving, netting, binding, crossing and design work. **Golla bet** is used for framework, structure, support and bracket and design also. **Bhudum bet** is mainly used mainly for hard structural works. Some enterprises also use bamboo and patipata (Schumannianthus dichotoma) as substitute of cane. Now-a-days, synthetic binding materials are also used in the cane enterprises as they last longer and cheaper in price.

Procurement of raw materials: Raw materials for cane furniture are procured from different sources using different channels. The cane of state owned forest is first procured by the listed traders (Mohalder) by open auction. After procurement from the forest the Mohalders then sell the cane to the wholesalers and the wholesalers then brought the cane by boat or truck to the local market at Ghashitula and Haripur of Sylhet for sale in retail. The entrepreneurs bought canes from the wholesaler in the village market. The private sources are divided into two categories: local and regional. The local sources of raw cane include the marshy areas of Sylhet where cane grows naturally. The growers brought the cane from different villages by head load, rickshaw vans or by

boat to the market. The wholesalers procure the raw material from local growers through local collectors and then brought them to SCC and sell to various cane based enterprises.

Figure-1. The major market channels for the raw materials from all sources.



[Source: Field survey]

The principal regional sources of cane are Chittagong Hill Tracts, Sunamgong, Haripur Bazar, Baralekha, Srimangal and Salutikor. The local traders (Mohajan) procure cane from regional sources and then sell to wholesalers. The entrepreneurs bought the cane from the wholesalers. The total cane supply of Ghashitula hat (a local market) comes from two sources. The local supply is about 75% and the remaining 25% of the total cane comes from Chittagong Hill Tracts. The raw cane traders also sell cane to the enterprises directly. The commission agents collect cane from Hills and homesteads of Chittagong Hill Tracts and they store the cane in their storehouse. The wholesalers buy cane from the commission agents and the enterprises procure from the whole seller directly and brought the cane by train or truck. Bangladesh imports cane from Myanmar, India, Indonesia, Malaysia and Singapore mainly by the traders of Chittagong. There is no agent or

retailer in Sylhet. About 35% of total cane used by enterprises is imported. The study found that all of the enterprises purchase raw materials from the retailers located in the village markets. They usually collect from Ghashitula Hat (a local market) in two market days a week.

Type of Raw Materials and Their Use in Furniture Production

Canes of different varieties are used in different purposes. In cane industry usually *jali* and *golla* canes are used as raw materials. Cane is used chiefly for knitting and binding and making structure of the finished products. Depending on the design, different kinds of thick and thin parts are pulled off from cane sticks. *Jali bet* is used for weaving, netting, binding, crossing and design work. *Golla bet* is used for framework, structure, support and bracket and design also. Depending on the nature of work, golla cane is cut into pieces lengthwise. *Bhudum bet* is used mainly for hard structural works. The type and usages of raw materials are shown in Table-2:

Table-2. The type and usages of raw materials.

SL. No	Source of raw materials	Types of cane	Percentage of usages
1	Local source (Village and Forest)	Golla & Jali	40
2	Regional source	Golla & Jali	25
3	Imported source	Golla & Bdudum	35

Source: Field Survey

Some enterprise owners also use bamboo and patipata (*Schumannianthus dichotoma*) in small quantity as raw material mixed with cane. Now-a-days, synthetic binding materials are also used in the cane enterprises, since these last longer and are cheaper.

Production, Selling and Economic Profitability

A production is bundle of physical service and symbolic attributes design to produce consumer want satisfaction (Kotler, 1997). In cane furniture industry, most common products in different size and nature are sofa set, dinning set, bed set, chairs, tables, divan, cradle, shelf and lamp stand. However, it is found that 86% enterprises produce Sofa, Chair, Rocking chair and Cradle. Sofa and Rocking chair are more selling items among all other produced items. In all category enterprises sofa is the highest produced items and the lowest produced item is bed. The price of the cane products varies from enterprise to enterprise and depends on number of labor involved, labor wage, cost of raw materials, cost of transportation, visual attraction and quality of products (Choudhury, 1984). The field survey has revealed that most of the producers of cane based furniture determine selling price on the basis of cost plus- profit method. Both production and selling are done at the same place, but larger enterprises have their own outlets in different market place of the city.

A broad range of types of products, production cost, selling price and net average profit of different articles are given in Table-6.



Table-6. Products, production cost, selling price and net profit of different cane products.

Name of the products	Size range of the products	Average production cost range per article	Average selling price range	Net average profit
Sofa Set	60" × 20" & 22" × 22"	8000-10500	8500-12000	1000
	54" × 18" & 20" × 20"	7000-8500	7500-9000	500
	36" × 18" & 18" × 18"	4000-5500	4000-7000	750
Dining Table	60" × 48" Full size	5500-7000	6000-8000	750
	48" × 36" Semi size	4000-5500	4500-6500	750
Bed	84" × 60" Double size	7500-9500	8000-10000	500
	84" × 48" Semi double	5000-6500	5000-7500	500
	84" × 36" Single size	4000-5000	4500-5000	250
Chair	Oval Shape	550-650	600-800	100
	Disco size	500-700	600-900	150
Dolna	Hanging	700-900	750-1000	75
	Standing	1000-1400	1000-1600	100
Rocking Chair	Easy size	1800-2400	2000-2800	300
	Medium size	1300-1500	1400-1800	200
	Small size	300-500	300-700	100
Shelve	Book shelve	600-900	650-1000	75
	Wall shelve	800-1200	1000-1400	200
	Corner shelve	1200-1600	1500-2000	350
Mora	Tool size	200-300	250-400	75
	Appeal size	200-300	250-400	75
	Fancy size	300-400	300-500	50
Tea table	Full size	700-1000	800-1200	150
	Semi size	500-700	500-800	50
Dressing table	Single size	3000-3600	3500-4200	550
	Family size	4500-6000	5000-7000	750
Divan	72" × 24"	4700-6200	5000-7000	550
	60" × 18"	3200-4300	3500-5000	500
Lamp stand	Different style	250-400	300-500	75

(Source: Field survey)

Almost all enterprises produce their products on the basis of order from customers. Larger enterprises get production orders from different parts of the country and even from abroad (Alam and Azad, 1996). In terms of product demand winter is better, since tourists come from all around and thus the market demand is increased manifold. During these days the enterprises employ more labor force to meet the increased demand of products. It shows that Production cost of a large size

sofa set is about Tk 8000 to 10500 and net average profit is Tk 1000. Chairs of different types and sizes are also produced at different costs (starting from Tk 550 to 900) and sold at a margin of about Tk 100-150. The study has revealed that the monthly sales volume of 71% sampled enterprises varied between Tk 1,00,000-1,50,000; the sales volume of 29% enterprises ranges between Tk. 1,50,000-3,00,00; and the average monthly sales volume is Tk 2,00,000 per month. The average monthly profit of 46% enterprises varies between Tk 20,000-30,000 and that of 29% of the enterprises range between Tk 10,000-20,000. In this case the average monthly profit is Tk 18,500.

Prospects of Cane Based Furniture Production and Marketing

Bangladesh is a country of Asian region with high potentiality in cottage industry. She also has a vast population. In one sense it is a burden and in other sense it is a resource which can create plenty of opportunities in the country's any sector production and other business (Rahman, 2007). As far as the production of cane and cane furniture are concerned, Bangladesh has some advantages in cane furniture production.

- 6.1. A concept has been developed in the society that cane furniture is environment friendly, strong and long-lasting and gorgeous looking furniture. Maintenance is very simple too. If proper care is taken, cane furniture can last for many years, or even decades. So, demand is increasing day by day.
- 6.2. Cane-made furniture has a huge demand all over the world, particularly in Asia and Europe. The demand for well processed, good quality canes are going up in the world market and it is assumed that the demand is three times higher than the supply.
- 6.3. Considering the present unemployment situation of the country there are many educated people are going for business under SME program and job in this industry.
- 6.4. The analysis of cane based cottage industry sector in the study area shows that the high level of strength is low labor cost due to unemployment problem.
- 6.5. In Bangladesh, cane grows in bushes and jungles in small amount and it is not cultivated commercially. Recently, the forest department has started commercial plantations cane in many forest areas. It will ensure the supply of raw materials in this industry.
- 6.6. The furniture market of Bangladesh is changing with the change of old trend and attitude of the consumers. The demand of natural and environment friendly product has been increasing day by day.
- 6.7. Recently BSCIC undertakes a program of preserving the indigenous tradition of handicrafts and revitalizes some of those in wane. Under this program BSCIC searches out traditional handicraft villages in remote areas of the country and offers different kinds of counseling for development and growth of handicrafts.
- 6.8. Bangladesh Small and Cottage Industries Corporation (BSCIC) has a design Centre. The centre supplies newly developed designs and models to assist the craftsmen working in this industry free of charge and this can create high demand of products.

Problems of Production and Marketing of Cane Furniture

The researchers have identified some problems faced the sampled enterprises and entrepreneurs. The problems can be classified into production and marketing. The problems are as follows:

- 7.1. Weakness remains due to the lack of financial and institutional support, instability of market demand, a decline in the availability of quality raw materials, lack of skill and



- managerial capability. Sometimes the owners cannot expand their business because for the lack of capital.
- 7.2. In Bangladesh, cane is not cultivated commercially. The country has to import good quality cane from outside, which raises the price of cane products. The price of cane, oil and other chemicals used in production are gradually increasing day by day. For this reason entrepreneurs are leaving their existing business.
 - 7.3. It is difficult or impossible to run a business like cane enterprise without having at least basic education. The higher educated people are not interested in this business. As a result they have become habituated in producing old and obsolete model production.
 - 7.4. The labors do their job in different level of production such as cane processing, making structure and giving the finishing touch. At different levels the wages range from Tk 30-120 per day, on an average. Due to this low wage, many labors are switching on to other job
 - 7.5. Actually cane furniture is not popular all classes of people. Due to low demand and high cost most of the producers can't achieve with their target sale and profit. As a result day by day they become de-motivated to carry on this business.
 - 7.6. Moreover, there is always addition of technologies in different stages of production of cane furniture in the world. But the entrepreneurs are not exposed to state-of-the-art technologies required to improve their production
 - 7.7. Availability of substitutes is a top-level threat to cane products. Substitutes like plastic furniture are sold comparatively at lower cost; as a result, many customers move towards those of cheap articles.
 - 7.8. Other problems include lack in consistent supply of raw material, higher cost of raw material collection and processing; and increasing utility payments.

Recommendations of the Study

Cane products are in great demand throughout the world. Bangladesh has attained a considerably good position in cane crafts through participation in a number of international fairs that helps us to earn a huge amount of foreign currencies. But at present two hundred year-old industry is facing a threat. The following recommendations can be made to improve the cane industry sector in Bangladesh in general, and in the study area in particular:

- 8.1. Government should patronize this industry by giving logistic support. Government should realize that this industry can be a source of foreign revenue, and create job opportunity. Financial and institutional support should be ensured both by government and by private sectors. Fund allocation in favor of artisans engaged in cane industries can be increased. Mechanism can be developed to finance the entrepreneurs, especially in financially hard situations.
- 8.2. The government agencies (i.e. Forest Department) should ensure sustainable supply of quality raw material by raising cane plantation in forest area. There are many hilly areas which are unused in Sylhet. The producers can combined or individually produce cane that will reduce the dependency on external sources for the supply of raw materials.
- 8.3. The study has revealed that 74% products are consumed by middle class people and only 7% are consumed by lower class people. So, all the enterprises should create new demand in upper and lower class customers. For that situation suggestion may be given to produce separate sets of superior quality products with various designs, set high price for higher class people. Low price can be set for middle and lower class people with medium and low quality products.
- 8.4. The study has also revealed that most of the customers think major cane furniture as obsolete, poor and ordinarily designed. So all enterprises should adopt new designs, new features to consider the customer needs.

- 8.5. The study reveals that the demand of this product is low in market. Awareness should be created among the people in favor of cane-based cottage industry and their products. In this case mass media can play prime role. Bangladesh Small and Cottage Industries Corporation (BSCIC) and other organizations can arrange trade fairs for these products throughout the country to develop and expand a local market
- 8.6. For better production cane furniture need skilled labor. Due to high labor cost price is increased. Though, it is the part of small and cottage industry, village women can be involved in production. Government also can establish separate institute to carry research, training for the workers both men and women on various aspects of product development.
- 8.7. In Sylhet city there is no association of cane furniture entrepreneurs. The entrepreneurs can form an independent organization that will help to protect their interest and expand their business.

CONCLUSION

Cane furniture is an environment-friendly, strong and naturally beautiful product of cottage industry. The possibilities of cane furniture are endless. But because of various constraints, this industry is not flourishing at a desired pace. In spite of some advantages and disadvantages of this industry has a number of desirable attributes of appropriateness in the context of prevailing socioeconomic conditions of the country. If the concerned authorities take necessary steps to solve the problems relating to the production of cane furniture and ensure the best use of present opportunity then this industry will be the weapon for earning foreign currency, creating employment opportunity and developing socioeconomic condition of Bangladeshi people specially in the study area.

REFERENCE

- Akhter, K., B.C. De, S.R. Dasgupta and M. Younuszzaman, 1992. Natural durability and treatibility of 10 village tree species. Bulletin 4. Wood Preservation Series, 46: 63-74.
- Alam, K.S. and A.K. Azad, 1996. Marketing of cosmetic products in dhaka city: A case study. Dhaka University Journal of Business Administration, 17(1): 173-182.
- Alam, M. and Y. Furukawa, 2009. Cane enterprises as family business in bangladesh: A case study. Electronic Journal of Family Business Studies (EJFBS) 3(2).
- Alamgir, M. and M. Jasimuddin, 2006. Economic profitability of cane based furniture enterprises of chittagong city corporation area, bangladesh. Journal of Forestry Research, 17(2): 153-156.
- Anon, 1980. Rattan: A report of a workshop held in singapore. Canada: International Research centre.
- Ara Roshan, 1997a. Taxonomy and ecology of rattan in bangladesh. Malaysia: Serdang

- Ara Roshan, 1997b. Silviculture, improvement and conservation of rattans in bangladesh. Malaysia: Serdang.
- Azad, M., 2002. Status and marketing of cane products in khulna city corpora-tion. Master's thesis, forestry and wood technology discipline. Khulna: Khulna University
- Banglapedia, 2009. National encyclopedia of bangladesh. Dhaka Asiatic Society of Bangladesh.
- Banik, A.R., 1998. Management and marketing of rattan based cottage industry in bangladesh. Journal of Business Studies, IBIUT, Dhaka.
- Choudhury, M.R., 1984. A study on supply and demand of bamboo and canes in bangladesh, flood and agriculture organization of the united nations. Rome.
- Kotler, P., 1997. Marketing management-analysis, planning, implementation and control, 9th edition, prentice hall international, . USA Inc, New jersey.
- Mohiuddin, M., M.H. Rashid and M.A. Rahman, 1986. Seed germination and optimal time of transfer of seedlings of calamus spp. From seed bed to polythene bag. Bano Biggyan Patrika, 15(1&2): 21-24.
- Nuruzzaman, M., 2001. A handbook of forest production in bangladesh. Dhaka: Janata Publication.
- Patric, B.D., U. Ward and M. Kashio, 1994. Non-wood forest products in asia. FAO, Bangkok.
- Rahman, M.M., 2007. Marketing of furniture product: A case study on mitsumaru furniture ltd. Metropolitan University Journal, 1(1).
- Shree, S.N., P.B. John, G.R. Lindsay and A.-M. Jose, 2000. Applications of geographical information systems (gis) for spatial decision support in aquaculture. Aquacultural Engineering, 23: 233-278.
- Wright Gen, 2008. Understanding more about cane furniture and wicker furniture. Available from www.articelesbase.com.