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A Study on the Socio-Economic Condition of Bamboo Mat Manufacturing Female Artisans of Assam with special reference to Kuriha Village

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Abstract:

In North-Eastern region of India including Assam, small scale industries like cottage, handicraft industries have been playing a very significant role in its economy. Bamboo production and manufacturing of different bamboo based products are providing source of livelihood for a large sections of society in Assam; especially for rural poor and home based female workers in the unorganized sector. Kuriha village is now identified as a cluster which is the largest producer and exporter of bamboo mat in Assam. The main objective of this paper is to study the socio-economic conditions of female artisans those are engaged in the production of bamboo mat with reference to Kuriha village. The study is basically based on primary data that is collected from 250 female manufacturers of Kuriha village and the local traders. The study reveals that the socio-economic status of the female artisans of the village is not favorable one. They are still lagging behind in case of formal education, proper sanitation and housing facilities, using LPG, different types of Government facilities and incentives, etc. and the main reason behind their low living standard is identified as depriving them from descent wage or earnings by intermediaries. So this paper is offering different policy measures that should be jointly taken by the Government and other private organization in order to improve the conditions of those female artisans and thus expecting for the rapid expansion of bamboo mat enterprise by engaging more employment opportunities in near future.

Key words: Small scale industry; unorganized sector; cluster; socio-economic; living standard; intermediary; employment opportunity

1. Introduction:

In North-Eastern region of India including Assam, small scale industries like cottage, handicraft industries have been playing a very significant role in its economy. Assam is the most populated economy in the north-east region which is relatively backward than other regions of India in terms of Human Development Index (HDI), Net State Domestic Product (NSDP) per capita, rate of unemployment etc. Informal working women of Assam are largely related with traditional economy like, agriculture, fishing, hunting, animal husbandry, weaving, domestic service etc. Bamboo is a particular type of grass plant that is indigenously related to the culture, daily basic needs and the economy of Assamese people. Apart from agriculture, Bamboo production and manufacturing of different bamboo based products are providing source of livelihood for a large sections of society in Assam (Assam as India's Gateway to Assam Report, 2021); specially for rural poor and home based female workers in the unorganized sector (Jamatia, n.a.). Jamatia in his paper attempted to identify the main characteristics, potentials and constraints of *Agarbatti* (bamboo based sticks) industry in North-East India. He characterized the industry as informal, traditional, home based and the workers as contractual and unorganized. Baishya and Baishya attempted to find out the problem and prospects of bamboo based industries based on secondary data. They found people engaged in the production process as illiterate, below poverty category and belong to remote area but mentioned about high potentiality to increase employment. Khataniar, R attempted to find the interrelation among the structure, functioning, productive capacity and income generation of can and bamboo production of Barpeta.

The study on the literature of bamboo product and its producers sated that the study that have been made on this field till now in Assam is not sufficient. There is no single study is done in bamboo mat production of Kuriha village which is the largest producer and exporter of this bamboo mat of the state. There is a great potentiality to bring this manufacturing unit into an international level and thus to create employment generation especially to the rural traditional women workers. This paper is mainly concentrating on the female artisans those are engaged in the production of bamboo mat and aimed to reveal the socio-economic conditions of such females with special reference to Kuriha village of Barpeta District.

1.1 About the product:

Bamboo is a fast growing, versatile, renewable and low cost maintainable plant that is vastly available all over Assam. The resource has very extensive use. Different products have been produced from bamboo like furniture, mat, boards, charcoal, decorative items, construction of house, paper, etc. Bamboo production is India's third handicraft production (Baishya and Baishya, 2022). The North-East region has 28 percent of bamboo area and 66 percent of growing stock of India. Assam stands fourth position in total bamboo production area in entire North-East (Ministry of Statistics & Program Implementation, 2021).

Bamboo mat is a plywood-like wooden board made from layers of woven bamboo that have been pressed together (). It can be used for different purposes like, roofs, doors, ceilings, different types of utensils and furniture, in brick industry, labour use and in some ritual activities for all religions like in mandir for puja purpose, wrapping dead bodies to take them last ride etc. It is purely labour intensive product.

1.2 About the place

Barpeta District is one of the major producers of bamboo and bamboo based products and Kuriha village of the district is the main producer and exporter of bamboo mat which is locally known as *Dhari*. Kuriha village is now identified as cluster of bamboo production along with 500plus artisans and 12 SHGs. Each and every family of this village is directly or indirectly engaged with this occupation from generations after generations. All the artisans of the product are unorganized in nature.

1.3 Market condition of the product:

Bamboo mats produced in the Kuriha village are mainly exported to other states like Telangana, Maharashtra, Karnataka, Kolkata and also out of the country. Within the state, the mats have special demand in the market of Howly, Kharupetiyā, Guwahati, Barpeta, Bongaigaon and Pathsala. Raw materials used in the production of the mat are *Rosi*, Bamboo, Weapon (handmade) and labour. Apart from the local supply of the raw material, bamboo are also supplied from Shimla, Baghmara, Ancholi and Ananda Bazar. The amount of mat that produced is mainly dependent on the quality and size of the bamboo and from the dealer side it is informed that the sale and export of the mat depends upon its production. Though the market of the product is expanding, the economic condition and the living status of the manufacturers are not growing as well. Only 40percent of total revenue or the market price of a bamboo mat goes to these producers.

1.4 Role of female artisans:

In case of developing countries like India, unorganized sector is providing engagement to almost 96 percent (2009-10) of female workers. In Assam also the rate of women workforce in informal small scale enterprises is higher than that of men. Because it is very easy for women to enter such field as it needs less skills and training where majority of women of Assam are deprived of such facilities. The similar is happening in Kuriha village also. All the female artisans are unorganized workers and they are mainly engaged in the production process as employer and contributing family helper. They are investing 12-15 hours of their daily working hours in production of these bamboo mats without having any basic schooling education and other minimum living facilities and healthcare. So, it is very important to study the socio-economic conditions of such females. Therefore, the main objective of this paper is to study the socio-economic conditions of female artisans those are engaged in the production of bamboo mat with reference to Kuriha village.

3. Sources of Data and Methodology

3.1.1 Sources:

As there is dearth of authentic information regarding women bamboo artisans through secondary sources, the whole survey is basically based on primary data. However, available secondary information has also been utilized whenever it is necessary. The present study is carried out in Kuriha village of Barpeta district of Assam during the month of December, 2022. Face to face interviews have been done by using pre-tested and well-structured schedule. Market related information have been collected from some local traders of the district.

3.1.2 Sampling Procedure:

For the specification, the research is concentrated to female workers who are primarily engaged in manufacturing of bamboo mats. A multi-stage sampling technique has been adopted for selection of study area. The stages are

Stage-I: Selection of village

Stage-II: Selection of respondents

3.1.3 Sample Size Determination:

In Kuriha village, there are 761 women workers according to the District Census Handbook Barpeta and from the local source it is informed that almost all females of the village are directly or indirectly engaged in this household manufacturing process. Therefore total population can be considered as 761 (N).

By applying Solvin's formula (Tejada and et al, 2012)), 262 is the sample from female working population of both Municipality Boards. Hence, around 250 female workers have been taken as sample size (n) for the present study.

Slovin's formula, $n = N / 1 + n (e)^2$

Where, n, N and e represent sample size, population and margin error to be decide by the researcher (5 percent) respectively.

3.1.4 Methodology:

The whole study is descriptive in nature. For the analysis of collected data, different tables, pie diagram, column chart, venn diagram etc. are used.

4 Results and discussion:

The components of socio-economic condition are considered as the main determinants to analyze the status of women in their respective society. After making an in depth survey, the socio-economic components are discussed as follows –

4.1 Age of female artisans:

Age is considered as main component in any economic analysis whether it is about a producer or consumer. It is used as a measure of physical ability, level of skill, experience etc. The distribution of bamboo mat producing female artisans according to their age is given in the table

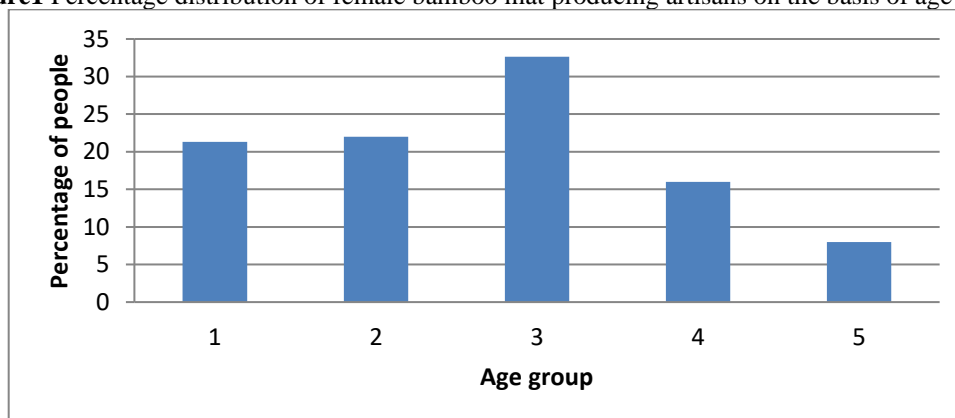
Table 1 Percentage distribution of female bamboo mat producing artisans on the basis of age group

Age group	In percent
15-24	21.33
25-34	22
35-44	32.66
45-54	16
55-64	8

Source: Author’s own calculation from field survey

From the table, it is seen that major proportions of artisans come from the age group 35-44, i.e.; 32.66 percent followed by age group 25-34 (22 percent) and age group 15-24 (21.33 percent). The oldest age group (55-64) is contributing less to the occupation. This can also be presented by given figure1

Figure1 Percentage distribution of female bamboo mat producing artisans on the basis of age group



Source: Author’s own calculation from field survey

In the figure1, age group is measured in x-axis and percentage distribution is measured in y-axis.

4.2 Education:

Among the major components of socio-economic status, education is one. It helps us to create equal opportunities. Being educated, people can break regional, social, cultural and gender based obstacles and hence increase their status in the society. Here, table2 shows the educational attainment of the female of our study area.

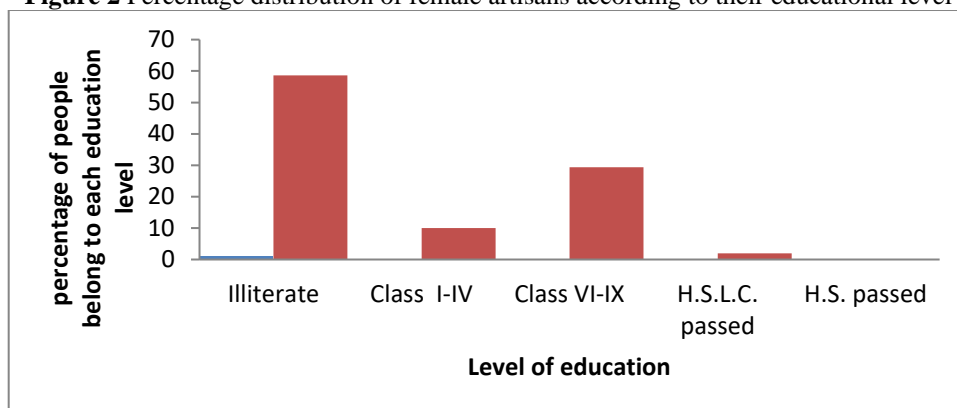
Table 2 Percentage distribution of female artisans according to their educational level

Education	In percent
Illiterate	58.66
Class I-IV	10
Class VI-IX	29.33
H.S.L.C. passed	2
H.S. passed	0

Source: Author’s own calculation from field survey

The figure of table2 shows that a major proportion of those female are illiterate that is almost 60 percent. Only two percent of them have completed their school level examination. No one of them is able to complete H.S. level study. Apart from that 10 percent have completed lower primary and 29.33 have studied up to high school. The distribution is also presented in the figure 2.

Figure 2 Percentage distribution of female artisans according to their educational level



Source: Author’s own calculation from field survey

4.3 Other components:

Apart from the main components of socio-economic status, there are so many important factors without which the study cannot be considered as complete one and those are marital status of female, electricity facility in their house, type of house and sanitation, source of water supply, type of cooking fuel, type of medical treatment, types assets used, social participation, avail of government scheme, etc. The result of all those components is presented here.

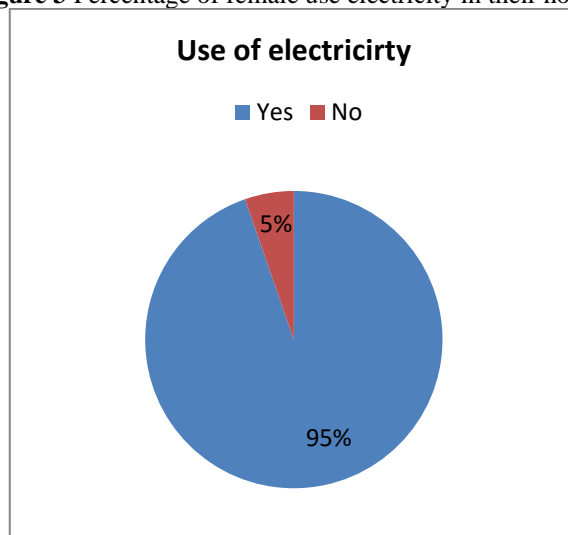
Table 3 Percentage of female use electricity in their houses

Electricity	In percent
Yes	94.66
No	5.33

Source: Author’s own calculation from field survey

The people of Kuriha village are using the facility of electricity in a large proportion that is almost 97 percent. Still there are some people who are not able to afford the power supply in their houses.

Figure 3 Percentage of female use electricity in their houses



Source: Author’s own calculation from field survey

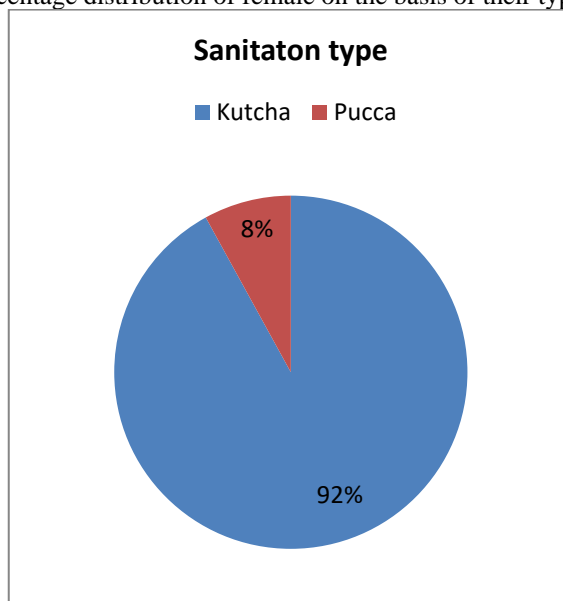
Table 4 Percentage distribution of female on the basis of their type of sanitation

Type of sanitation	In percent
Kutchha	92
Pucca	8

Source: Author’s own calculation from field survey

92 percent of bamboo product manufacturer are still using kutcha sanitation process which is not favourable for their health. Only eight percent of them are able to upgrade their sanitation system.

Figure 4 Percentage distribution of female on the basis of their type of sanitation



Source: Author's own calculation from field survey

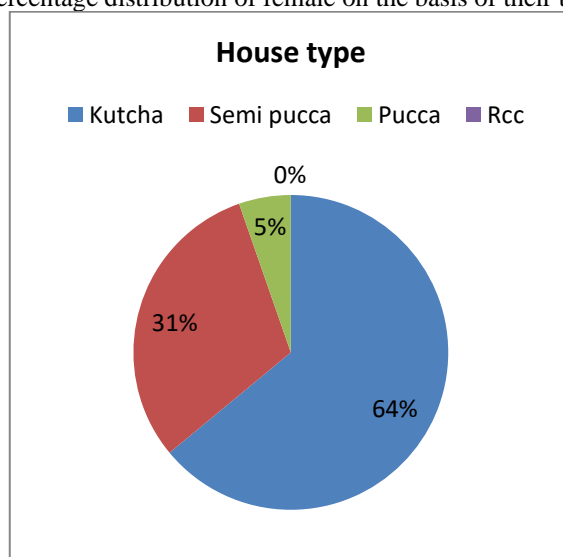
Table 5 Percentage distribution of female on the basis of their type of house

Type of house	In percent
Kutchha	64
Semi pucca	30.66
Pucca	5.33
RCC	0

Source: Author's own calculation from field survey

Generally house is considered the base of the economic status of a person. In Kuriha village, more than half of the people are living in kutcha house (64 percent). There is no building or RCC house in the village. Hardly six percent of them have pucca house.

Figure 5 Percentage distribution of female on the basis of their type of house



Source: Author's own calculation from field survey

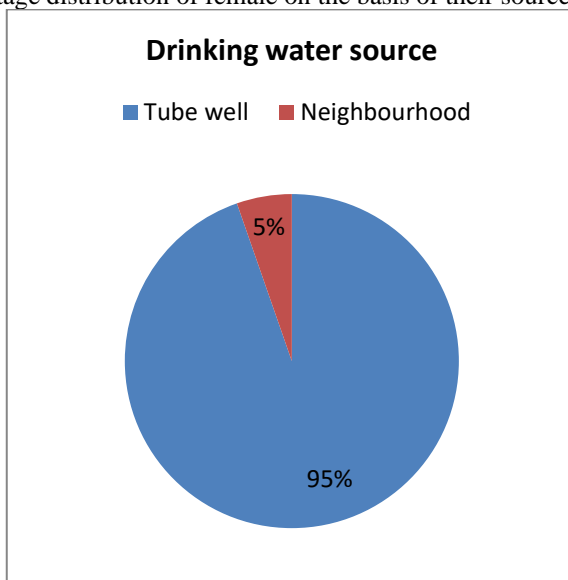
Table 6 Percentage distribution of female on the basis of their source of drinking water

Source of drinking water	In percent
Tube well	94.66
Neighbour	5.33
Running	0
Government	0
Buying	0

Source: Author’s own calculation from field survey

Almost for all people of the village, tube well is the main source of drinking water.

Figure 6 Percentage distribution of female on the basis of their source of drinking water



Source: Author’s own calculation from field survey

Table 7 Percentage distribution of female on the basis of their type of cooking fuel

Type of fuel	In percent
LPG	2.66
Traditional	58.66
Both	38.66

Source: Author’s own calculation from field survey

In case of cooking fuel, the female of the village are seen to use LPG. Half of them are utilizing both LPG and traditional practices for cooking purpose.

Figure 7 Percentage distribution of female on the basis of their type of cooking fuel

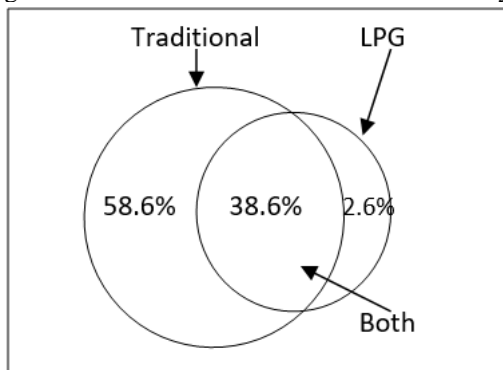


Table 8 Percentage distribution of female on the basis of their type of medical treatment

Type of treatment	In percent
Private	41.33
Government	24
Both	34.66

Source: Author’s own calculation from field survey

For treatment purpose, they are seemed to be advanced to some extent in comparison to the other factors. Most of them prefer private institutions in case of medical treatment.

Figure 8 Percentage distribution of female on the basis of their type of medical treatment

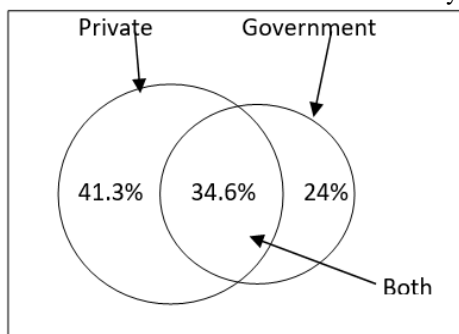


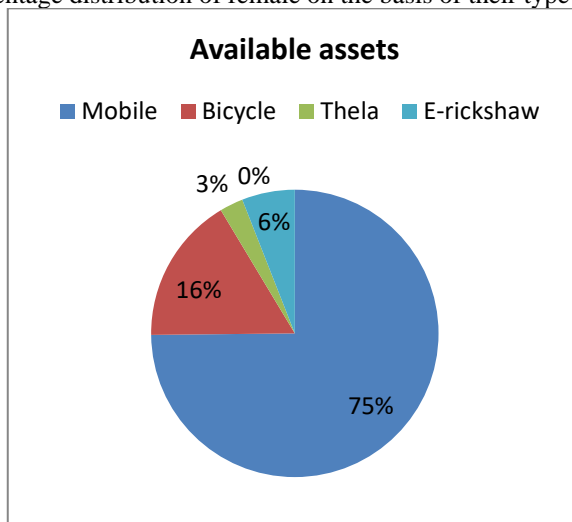
Table 9 Percentage distribution of female on the basis of their type of owned assets

Assets	In percent
Mobile	75.33
Bicycle	16.66
Thela	2.66
TV	0
E-rickshaw	6
Refrigerators z	0
Computer	0
Scooty	0
Bike	0
AC	0

Source: Author’s own calculation from field survey

The working female of the village are living a very simple lifestyle that they don’t using any electronic assets except mobile and most of them even don’t have their individual mobile. 16.66 percent of female have bicycle in their houses. 2.66 percent and 6 percent of them are having thela and e-rickshaw respectively that belong to their father, brother or husband.

Figure 9 Percentage distribution of female on the basis of their type of owned assets



Source: Author’s own calculation from field survey

Table 10 Percentage distribution of female on the basis of their social participation

Social Participation	In percent
Yes	24.66
No	75.33

Source: Author’s own calculation from field survey

24.66 percent of artisan female are socially active. They have mainly membership in Self help groups and Bandhan Banks from which they use to take loan.

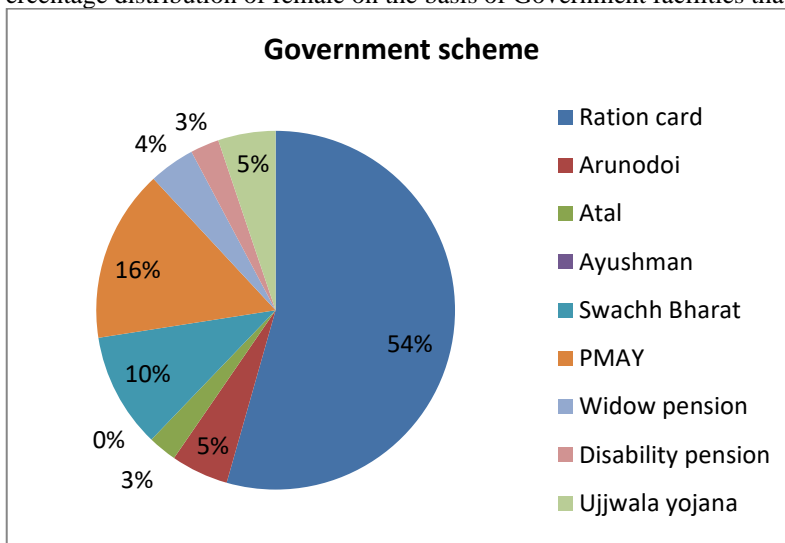
Table 11 Percentage distribution of female on the basis of Government facilities that they receive

Government Scheme	In percent
Ration card	70
Arunodoi	6.66
Atal	3.33
Ayushman	0
Swachh Bharat	13.33
PMAY	20
Widow pension	5.33
Disability pension	3.33
Ujjwala yojana	6.66

Source: Author’s own calculation from field survey

As an active manufacturer of the village, those females are still deprived of the Developmental schemes of Government. They are only able to avail the utility of ration card. Only 6.6 percent of them are receiving arunodoi achoni. Only 6.6 percent are able to gel LPG and gas burner under Ujjwala yojana. It is very strang to know that most of them even don’t aware of that such type of polity from Government are available for them.

Figure 10 Percentage distribution of female on the basis of Government facilities that they receive



Source: Author’s own calculation from field survey

5. Conclusion and Policy Implication:

The study contributes to the existing literature by analyzing the socio-economic condition of bamboo mat producing female artisans. This paper reveals that though the market of bamboo mat product of Kuriha village is expanding rapidly in local, national and international level, but the economic and living status of the female artisans are still lagging behind. The socio-economic status of such females is below the average level. Most of them are illiterate, lack of basic housing, sanitation and pure drinking water. They are not able to avail the Government facilities due to the lack of knowledge of how to approach for them. They are deprived of modern technologies due to which they are not able to get market related information, lagging behind in communication skills. Increased role of intermediaries give rise to the problem of proper pricing of product, wages, employment, etc. that make the artisans deprived of their actual economic benefits.

Therefore it is suggested that Government and other organizations together should take initiatives to provide basic formal and technical education and training programs to such female artisans in order to remove their communication gap and to increase the production and marketing skills. Government should also take care of its schemes so that those are easily available for the producers. It is also expected that easy credit facilities can improve the economic conditions

of artisans. At last reducing the role of intermediaries can hopefully help the artisans to get their reasonable labour payment.

By analyzing the problems of the female artisans of bamboo mat manufacturing, this study will be considered as beneficial for the bamboo based enterprises. Providing solution to the artisans will lead to the rapid expansion of the bamboo based industry or business that can create larger employment opportunities for future especially for female in rural areas of Assam.

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