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Problems of development of bamboo based industries in Jalpaiguri district, West Bengal

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Abstract

Bamboo provides the base for a broad range of rural and semi-urban cottage industries that provide livelihood for the rural poor, particularly home-based workers in the unorganized sector. By providing off-farm income generation options, these bamboo-based livelihood systems frequently absorb surplus agricultural workers - mainly the rural poor who do not have regular on-farm employment. These industries are mostly household based where the production of commodity takes place in the surroundings of homes and the workers, the so called labours are supplied by the family members only. The craftsmen himself is the proprietor in each unit and is assisted by his own family. An overwhelming number of bamboo-based industries are found in Jalpaiguri district, majority of which are located in the rural area. The industries are suffering from numerous problems. The prevalence of outdated mode of production has hampered the growth and development of the sector. The biggest impediment towards the bamboo based sector from developing has been the irregular supply of bamboo for entrepreneurial use. The study is based on 75 sample units drawn from 29 villages of the district through field survey. The objective the paper is to study the characteristic features of the industries and find out problems of the sector and suggest remedial measures for development.

Keywords: *1.Bamboo-based Industries, 2.Problems, 3.Development, 4.Policy.*

Introduction

Bamboo provides the base for a broad range of rural and semi-urban cottage industries that provide livelihood for the rural poor, particularly home-based workers in the unorganized sector. Such industries generate highly marketable products ranging from various utilitarian articles to various decorative articles (Bora et al., 2008). Bamboo-based post-harvest production and processing operations are a source of remunerative employment to poor women and other disadvantaged members of the rural society. They also lend support to domestic economy as well as the export sector of developing countries. By providing off- farm income generation options, these bamboo-based livelihood systems frequently absorb surplus agricultural workers - mainly the rural poor who do not have regular on-farm

A large number of bamboo-based industrial units are found in Jalpaiguri district. The industrial units produce baskets, bamboo-mat and various decorative articles. The enterprises are located both in rural and urban areas, though majority of the industrial units are found in the rural areas. These industries are mostly household based where the production of commodity takes place in the surroundings of homes and the workers, the so called labours are supplied by the family members only (Kasemi, 2013). The industries operate in the informal sector. The labour force engaged is largely unorganized. The machineries commonly used at homes, are utilized for the production of commodities. The craftsmen himself is the proprietor in each unit and is assisted by his own family. The skill is mainly hereditary. As scientific and technical knowledge is lacking due to illiteracy and poverty, the techniques of production remain inferior and the products lack standardization. As a result of this, the craftsmen do not make products of improved designs catering to the more refined markets. The products are generally marketed locally. Middlemen play a powerful role in marketing these indigenous products. They usually place order with the

artisan and purchase articles at less than the market price. The prevalence of outdated mode of production has hampered the growth and development of the sector. (Chhetri & Sao, 1995). The biggest impediment towards the bamboo based sector from developing has been the irregular and scant supply of bamboo for entrepreneurial use (Jamatia, 2013). These industrial units are continuing in spite of having loss or nominal profit due to lack of viable alternatives, lack of proper estimation cost (specially the value of family labour) and/or caste affiliation of the entrepreneurs with particular industrial activities (Sinha, 1988).

Objectives

The main objectives of the present study are-

- To analyze the characteristic features of the bamboo-based industries in the study area.
- To find out the problems of the industries and suggest suitable measures for development

Study Area

The district Jalpaiguri is bounded by 26° 16' N to 27° 00' N latitudes and 88° 04' E to 89° 53' E longitudes. The district, situated in the northern part of West Bengal has international borders with Bhutan and Bangladesh in the North and South respectively and borders with Assam and Darjeeling hills in the East, West and Northwest. As per the Census 2011, the district had a population of 3,869,675 of which male and female were 1,980,068 and 1,889,607 respectively. Average literacy rate of the district is 73.25 per cent. The economy is chiefly agrarian although the industrial belt is gradually attempting to expand its periphery.

Data Base and Methodology

The present study is based on a primary survey, designed to collect data on the general and economic performance of the bamboo-based industries. 75 sample units have been drawn from 29 villages of 13 community development blocks of Jalpaiguri district with simple random sampling method without replacement. The sampling has been done with the help of random number table (Random Sampling Number arranged by Tippet).

Characteristic Features of Bamboo-based Industries

Size of Production Units and Organisation of Labour According to Sex

The production unit is any individual or group of individuals engaged in or organized for the purpose of productivity. The unit of production is mainly family and the production

Table 1. Employment Size of Units

Size	No. of Units	Percentage
1	7	9.34
2	19	25.33
3	28	37.33
4	12	16.00
5	9	12.00
Total	75	100.00
Mean	2.98	
S.E. of Mean	0.18	
C.V.	47.58	

Source: Field Survey, 2013

Unit in terms of employment varies from 1 to 5, the average being 2.98 (Table. 1). Members of the family work in a systematic manner promoting division of labour related to production procedure (Sao, 2011). Both men and women are equally efficient to take part in all the phases of production. Organisation of labour does not show any segregation of either sex in

Table 2. Organisation of Labour According to Sex

Sex	Full-time	Part-time	Total
Male	89 (65.44)	46 (48.94)	132 (61.33)
Female	47 (34.56)	48 (51.06)	98 (38.67)
Total	136 (100)	94 (100)	230 (100)

Source: Field Survey, 2013 Figures in parenthesis are percentages

this activity. Out of the total workers male accounts 61.33 per cent and female 38.67 per cent. In the Full-time category 65.44 per cent workers are male and the rest 34.56 per cent are female. However, in the part-time category, female workers (51.06 per cent) outnumber male (48.94) in the sample.

Table 3. Age Structure in Different Categories of Skilled Workers

Workers	Age (years)					Total
	<15	15-30	30-45	45-60	>60	
Skilled	1 (0.68)	35 (23.65)	60 (40.54)	40 (27.03)	12 (8.11)	148 (100)
Partly-skilled	4 (6.25)	16 (25.00)	29 (45.31)	11 (17.19)	4 (6.25)	64 (100)
Un-skilled	2 (11.11)	7 (38.89)	7 (38.89)	2 (11.11)	00 (00.00)	18 (100)
Total	7 (3.04)	58 (25.22)	96 (41.74)	53 (23.04)	16 (6.96)	230 (100)

Source: Field Survey, 2013 Figures in parenthesis are percentages

Age Structure in Different Categories of Skilled Workers

Age is one of the important factors of an individual, which may be a determinant of their ability to work with zeal and drive. Table 3 shows that majority of the workers are within the age group of 30-40 (41.74 per cent) years followed by 15-30 (25.22 per cent) years age group. Only 3.04 per cent workers are less than 15 years of age. However, 90 per cent of the workers have age between 15-60 years. Categorisation of skill has been based on the length of experience and nature of involvement of the worker in the production process. No formal training or education of any sort, for skill formation is normally imparted to the beginners. The skill is generally passed from old generation to young generation informally. It is observed that out of the 230 workers, 64.35 per cent workers are found to skilled (Fig. 1). Partly skilled and Un-skilled workers comprise 27.83 per cent and 7.82 per cent workforce respectively. In the skilled and partly-skilled category, majority of the workforce fall between the ages of 15-45 years.

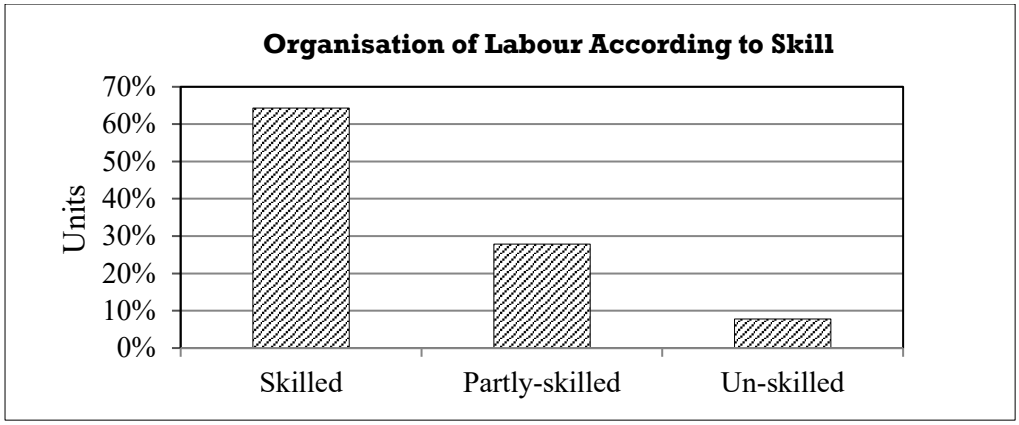

Fig. 1

Source: Field Survey, 2013

Literacy and Level of Education of the Workers

The distribution of the literacy percentage reveals that out of the total workers only 47.83 per cent is literate with different level of education and rest 52.17 per cent is illiterate. Educational level of the of the artisan workers (Fig. 2) depicts that in total workers 30.87 per cent are educated up to primary level, 10.43 per cent up to secondary level and 6.96 per cent up to higher secondary level. While graduation level of education is limited to only 4.51 per cent of the workers.

Raw Materials, Tools and Investment

Chief raw material is bamboo which is purchased from the nearby hats or from the surrounding villages. The craft making units use dyes, colours, iron pins etc. which they purchase locally. Tools used by the artisans are very simple and primitive – a few scythes, knives, iron rods, and few wooden slabs and investment on these are not considerable. The overall investment (exclusive of the value of buildings) at one end is Rs. 1775, the fixed and working capital being Rs.550 and Rs.1409 respectively and at the other Rs.9000 made up of a fixed capita of Rs. 2300 and working capital Rs. 8400 only. Table 4 depicts that 70 per cent of the sample has invested less than Rs. 5000 and another 20 per cent is in the range of Rs. 5000-8000. Only in 9 per cent the investment exceeds Rs. 8000. The smaller investment in a relatively large number of establishments may be ascribed partly to the part-time engagement of the craftsmen and partly to lack of effective and continuous demand. Besides, the artisan workers are poor, and also not in a position to secure easy credit. Practically, in majority of the units (84 per cent), the fixed capital at its installation value is Rs. less than Rs.2000. Only 16 per cent units have fixed capital between Rs. 2000-8000. The working capital, on the other hand, in 70 per cent of the sample units varies from Rs. 2000-5000. In 18 per cent units, it ranges within Rs. 5000-8000. The units having a working capital of Rs. less than Rs.2000 and above Rs.8000 are negligible. Therefore, the working capital forms a major share of the investment.

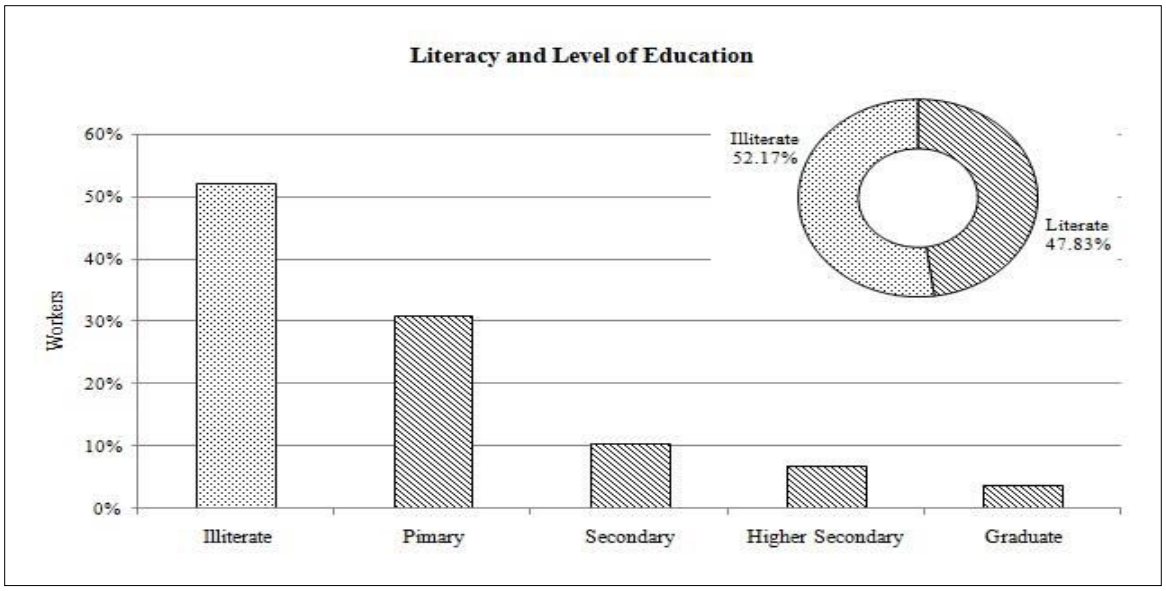

Fig. 2

Source: Field Survey, 2013

Table 4. Investment Structure

Investment in Rs.	Investment Structure (No. of Units)		
	Fixed Capital	Working Capital	Total
Less than 2000	63 (84.00)	6 (8.00)	6 (8.00)
2000-5000	9 (12.00)	53 (70.66)	47 (62.67)
5000-8000	3 (4.00)	14 (18.67)	15 (20.00)
Above 8000	Nil	2 (2.67)	7 (9.33)
Total	75 (100)	75 (100.00)	75 (100.00)

Source: Field Survey, 2013 Figures in parenthesis are percentages

Table 5. Pattern of Annual Turnover

Annual Turnover (Rs.)	No. of Units	Percentage
Less than 5000	Nil	Nil
5000-8000	15	20.00
8000-11000	53	70.67
11000-14000	4	5.33
Above 14000	3	4.00
Total	75	100

Source: Field Survey, 2013

Marketing Pattern of Annual Turnover

Market for the products of bamboo-based industries is mainly local and partly extended to the surrounding villages as well as to the urban areas. Demand of all the products is mostly seasonal. The price of the products also varies with varying demands. The turnover, therefore, varies from unit to unit depending partly on the output and partly on the prevailing prices. As revealed from the survey, the smallest turnover is Rs. 5100 for an aggregate capital investment of Rs. 1900 whereas the largest is Rs. 17000 for an investment of Rs. 8600.00. Ninety per cent of the sample has annual turnover between Rs. 5000-11000 and in the remaining units it ranges from Rs. 11000 to above Rs.14000 (Table 5).

Problems of Development of Bamboo-based Industries

The analysis has revealed that Bamboo-based industries in the study area have bright prospects of development though these are suffering from innumerable problems. The problems are not only numerous but also diverse in character. Some of the problems are very crucial and if these are not solved with appropriate and effective measures these industries are bound to decay. An attempt has been made in this section to study some of the important problems which hampered the growth and development of these industries in the study area.

Paucity of Funds

The scarcity of credit and finance is the major obstacle in the development of bamboo-based industries. The non-availability of adequate amount of credit and finance from the banks and financial institutions creates a situation of financial crisis in the household industrial sector and forces the small entrepreneurs to rely on other sources like money lenders who charge an exorbitant rate of interest

Problems of Raw Materials

Irregular supply of raw material is one of the major constraints for the development of household based industries (Malegawekar, 1973). The entrepreneurs purchase raw materials in small quantity from local retailers on payment in cash. At times the irregular of the required quality and quantity of the raw materials affect the quality and size of the output of industrial units. Because of their smallness and weak financial base and poor bargaining power the artisans utilize the services of middlemen to get raw materials on credit. Such an arrangement results in higher costs due to the high margins of the middlemen. Moreover, irregular supply of certain raw materials adversely affects their production schedules and delays in delivery.

Problems Associated with Marketing Mechanism

A good market for the products of household based bamboo-work industries is

important to promote the well-being of the artisans or small entrepreneurs. But marketing in this field has certain limitations. Firstly, due to the absence of any co-operative marketing organisations or government agency in sufficiently large numbers in most of the unit, selling of the finished products through middlemen has been a dominant feature. Secondly, the demand for the various products of these industries is largely seasonal and limited to the locality as majority of their products are substandard and do not conform to the required specifications. Thirdly, the competition from the mills as well as inter unit competition is keen. Thus, in the absence of any rational marketing organisation, the workers of various household industries are forced to sell the products to the local traders or middlemen who manage to get away with the major part of the profit.

Obsolete Technology

One of the daunting problems facing by small household industrial units is that of obsolete technology. Obsolete technology has a very important bearing on the productivity and cost aspects. The crude and obsolete tools chiefly operated by hand and the technique of production far below the standards have considerably affected the productivity and the quality of output of household industries. This primitive and inferior technique, which is partly due the illiteracy of the small entrepreneurs and partly to his sticking steadfast to traditional methods, involves much labour and time and has led to small output and substandard products.

Problems of Management

In an overwhelming majority of the units surveyed, the artisan is both an entrepreneur and labourer. They raise their own finance, purchase the raw materials and attend to production, marketing and controlling labourers. These multiple and varied activities by the artisans have limited specialisation and prevent them from securing the efficient techniques available to their counterpart, the large-scale manufacturer. Moreover, they have no systematic plans, spend more time in the production shop and pay less attention to marketing and finance. The chief management problems, therefore, are those of planning, coordinating and controlling the various activities, which increase the competitive efficiency of the small producer.

Lack of Diversification of Products

Lack of diversification of the product also accounts for slow growth of the bamboo-work sector. During slack season the artisans are forced to remain idle.

Lack of Training Facility

Prevalence of outmoded production techniques coupled with low traditional skill is the order of the day of the bamboo artisans in the study area. Even if some of the workers are interested to improve their efficiency through training hardly any training facility is provided to the workers. Though the majority of the workers are illiterate, some of them are educated and have done graduations too. However, none of the workers has formal training.

Lack of Research and Development Efforts

Adequate research and development efforts are needed to increase the output or find out the higher value alternative items for many of the products. Due to lack of this, bamboo-based industries could not develop in spite of their potentiality. There is no organisation or institution for introducing different designs or new articles in the processing of the raw materials and production process. Though artisans can produce various utilitarian articles, utilitarian cum decorative or decorative articles, there is no organisation to conduct various experiments required for development in this regard.

Policies for Development

In the light of the above findings the study suggests the following policy prescriptions and measures for the growth and development of bamboo-based industries in the study area.

- Industrial finance has been one of the most important problems of the bamboo-based industries therefore, require credit facilities and financial support for the purchase of raw materials, payments of wages and for meeting their business obligations. Besides the state governments, nationalized commercial banks and other financial organizations should come forward to finance the entrepreneurs providing short, medium and long term loans.
- Modernisation of the production technology is one of the basic prerequisite in order to increase productivity and efficiency of the production system. If capital investment is within the limits of the artisan workers and skill development could be met by training them, it is advisable to go for semi-automation for higher production. State industries department should step in and set up common facility workshops where facilities in the use of improved tools and appliances are easily available to the workers.
- For meeting the demand of better skill, which is a prerequisite for modernisation of production technology it is recommended to improve skill of the artisan workers through training and education of the workers in the related field. Managerial training should also be introduced for the management of the individual household units and cooperatives.

This will widen the artisan workers outlook, make them realise the necessity of basic plans on the factual data and thus promote the understanding of the principles and advantages of industrial management (Lakhsman, 1966).

- A good market for the products of household industries is important to promote the well being of the artisan workers or small entrepreneurs (Rao, 1989). Marketing support can be given to workers group through institutional arrangements or departmental support, so that the workers may get a better return. To facilitate this, an organization be set up which should be a no-profit no-loss body and should operate through hierarchical distribution collection centres.
- Apart from traditional products, new non-traditional goods should be introduced after examining the consumers' preferences, market orientation and type of skill available. Desired diversification of the products should be first worked out keeping in view the potential demand and subsequently steps should be taken to product and popularize the new items.
- Development of household industries like Bamboo-work is not possible unless measures are taken for its protection from organised sector. Government must enforce reservation of some items exclusively for the household industrial sectors.
- Cooperative societies should be established on this ground that they give a lead in the manufacture of the quality and standard products and make the artisans of the study area cooperative minded. These cooperative societies should take up the supply of raw material, purchase of finished goods from artisans, marketing and provision of credits.

Conclusion

Bamboo-based industries of Jalpaiguri district are characterized by small size of the units, family-based operation, predominance of skilled workers, use of primitive tools, and wide prevalence of illiteracy among the workers. The study reveals that development of bamboo-based industries Jalpaiguri district are hampered by many factors. The main constraints are availability of funds, irregular supply of required quality and quantity of the raw materials raw materials, absence of organized market mechanism, age-old method of production, lack of managerial ability of the workers, lack of diversification of products and lack of training facility for the workers. Besides, due to lack of research and development efforts, bamboo-based industries could not develop in spite of their potentiality. To survive and thrive the bamboo sector it is imperative to strengthen this sector with suitable policy measures. Adequate financial support and credit facilities, up-gradation of technology, marketing support, diversification of products, establishment of co-operative societies and other important issues should attract the officials and non-officials involved in the process of development of bamboo-based industries. The rapid growth, development and economic prosperity can be ensured by the careful implementation of these suggested measures.

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