REVIEW OF RESEARCH

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AN EMPIRICAL STUDY ON PROBLEMS AND OPPORTUNITIES OF CARPENTRY OF ALIPURDUAR DISTRICT, WEST BENGAL

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ABSTRACT

   Rural small household based industries contribute significantly to economic development. Despite their prospects, these tiny industries across the country face many challenges that need timely planned interventions to propel them on the path of sustainable growth and development. This article is based on a study conducted in the problems and opportunities of carpentry in the district Alipurduar, West Bengal. Through a case study approach, both primary and secondary data were gathered to examine the prospects and challenges facing a sampled 56carpentry units in the area. The study revealed that the main challenges of carpentry units are irregular supply of raw materials, lack of finance and credit, obsolete tools and lack of diversification of products. The sector has vast potentials for development in the study area. It goes without saying that realization of policies will need very efficient and committed functionaries. If policies are properly planned and implemented, these will ensure the growth and development of the sector.

KEYWORDS: _Carpentry, Problems, Opportunities, Policy, Alipurduar._

INTRODUCTION:

   Carpentry is an ancient craft and it caters not only to the needs of agriculturists but also of the aristocratic class (Lakhsman, 1966). It is an age-old occupation which is spread all over the country. Though the industry is scattered everywhere in the district it is well organised in some areas like the study area. Though some units are managed by capitalistic proprietors, majority of the units are run by the artisan who is both a worker and an entepreneur.

   The industry is managed by a single artisan, sometimes with the help of one or two workers The artisans use very simple, outdated tools. The equipment is available locally and no technical knowledge or skill is needed to operate it. The skill of the artisan is hereditary. As scientific and technical knowledge is lacking due to illiteracy and poverty, the techniques of production remain inferior and the products lack standardization. The products of carpentry units are many. The rural units make agricultural implements, door, window frames, shutters, and a variety of unfurnished wooden furniture which they sell in mostly in rural hats. The urban units, on the other hand have specialised in furniture and artitistic pieces of work known for beauty and utility.The demands for the products and the services of the artisans are mainly local, and the income of the majority of the artisans is the wage they earn. These industries are interwoven with village life and use traditional technology based on local resources and skills, catering mostly to the local needs (Chadha, 1993).

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These small industries contribute significantly to the economic development. It occupies a definite and important place in the upliftment of the economy, especially the rural economy. In developing countries like India the artisanal industries like carpentry are especially important in the context of employment opportunities(Kasemi, 2013).They provide immediate employment, and facilitate effective mobilization of resources of capital and skill which might otherwise remain unutilized. West Bengal is famous for its artistic household based industries, which manifest the rich tradition of such works in the state.A large number of carpentry industrial units are found in the district of Koch Bihar in the state of West Bengal in India.They are exploited by usurious middlemen, contractors and master artisans; they do not have the benefit of an organized market and depend on private marketing system. All these factors have severely handicapped the development of the sector in the study area.

OBJECTIVES

The main objectives of the present study are-
(i)   To analyze the characteristic features of the carpentry units of the study area.
(ii)   To find out the problems and opportunities of these industries.
(iii)   Suggest recommendations to boost the economy of such industries of the study area.

STUDY AREA

The study was carried out in some selected villages of Madarihat-Birpara block of Alipurduar District. Madarihat-Birpara block is one of the six blocks of Alipurduar District in West Bengal. It is bounded by 26°37'19" N to 26°54'39" N latitude and 89° 08'09" E to 89°22'01" E longitude with a geographical area of 380.96 sq. km. It has total population of 2,02,026 persons as per the 2011 census. The economy of the district is chiefly agrarian. The widely extended tea gardens are the major assets of this district. Other important agrarian products are jute, paddy, potato, etc. From these crops significant amount of revenue is earned. Forest resources of the district constitute another major resource.

DATA BASE AND METHODOLOGY

In order to achieve the objectives of the present study required both primary and secondary data. Accordingly, a field study has been conducted to obtain primary data adopting a simple random survey without replacement. A total 56 units have been surveyed from 7 villages of the district. The secondary data is mainly congregated from published and unpublished works on the related topics. Cobb-Douglass production function method is used to study the nature of production function of carpentry industry.

RESULTS AND DISCUSSIONS
BASIC INDUSTRIAL CHARACTERISTICS OF CARPENTRY INDUSTRY

The carpentry industry of the study area is characterised by smaller unit size (average 2.76 with coefficient of variation 37.48. per cent). Both men and women are involved in the production process. They are equally efficient. Production of the commodity takes place in the homes. Size of the unit is very small being2.98 with a very low co-efficient of variation (32.41 per cent). More than 50 per cent of the industrial units have employment between 2-3 workers(Table. 2). Out of the total workers male accounts 71.92 per cent and female 28.08 per cent (Table 3). Table. 2 reveals the predominance of male workers Full-time category comprising 64.34 per cent and 35.66 per cent workers respectively. There are no female workers in part-time category. For an individual, age is an important factor, which may be a determinant of their working ability with zeal and drive. Table 4 shows that majority of the workers (42.46 per cent) are within the age group of 30-45 years followed by 15-30 years age group (31.51 per cent). Only 2.74 per cent workers are less than 15 years of age. However, 99 per cent of the workers fall within the age of 15-60 years. Categorisation of skill has been on the basis of the length of experience and nature of involvement of the worker in the production process. It is observed from Table. 4 that out of the 146 workers, 69.60 per cent are skilled. Remaining 21.60 per cent and 8.80 per cent are partly-skilled and un-skilled respectively. Around

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71.28 per cent skilled workers are found within 30-60 years of age. Percentages of skilled workers below 15 and above 60 years of age are negligible. Majority of the units covered in the survey suffered from low productivity, displayed slow growth of production and exhibited no diversification in the production system. The units also suffered from non-availability of credit, financed their capital needs including day to day operation from home generated savings and of crucial importance, they have no transactions with government or formal sector.

Table 2: Size of the Units in Terms of Employment

Size of the Units					Total Units	Mean	S.E. of Mean	C.V
1	2	3	4	5				
5 (8.93)	16 (22.86)	23 (28.57)	9 (16.07)	3 (5.36)	56 (100)	2.76	0.19	37.48

Figures in parenthesis are percentage

Table 3: Organization of Labour According to Sex

Sex	Full-time		Part-time			Total	
Male	74	(64.34)	31	(100)	105	(71.92)
Female	41	(35.66)	--	(00)	41	(28.08)
Total	115	(100)	31	(100)	146	(100)

Figures in parenthesis are percentages

Table 4: Age Structure of the Workers

Category	Age (years)					Total
	<=15	>15-<=30	>30-<=45	>45-<=60	>60	
Skilled	2(2.18)	24(25.53)	41(43.62)	26(27.66)	1(1.09)	94(100)
Partly-skilled	2(5.88)	11(32.35)	17(50.00)	4(11.76)	--	34(100)
Un-skilled	--	11(61.11)	4(22.22)	3(16.66)	--	18(100)
Total	4(2.74)	46(31.51)	62(42.46)	33(22.61)	1 (0.68)	146(100)

Figures in parenthesis are percentages
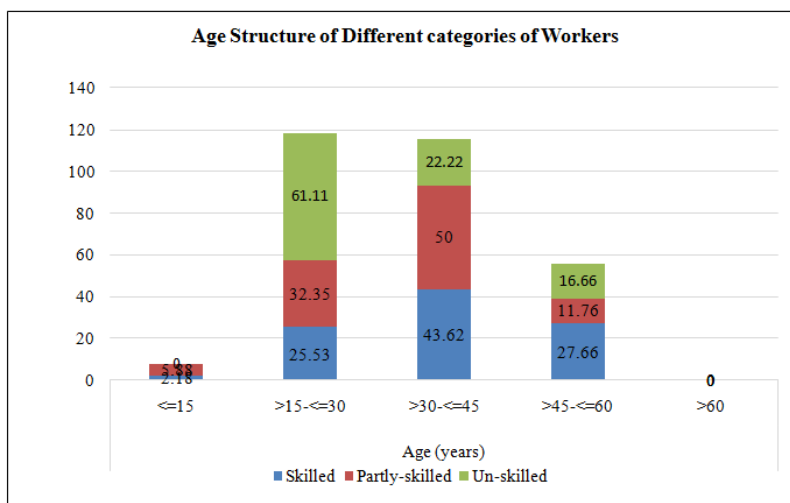
Fig. 1.

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PROBLEMS OF DEVELOPMENT OF CARPENTRY INDUSTRY

The problems of carpentry sectors can be grouped into two categories: Primary problems and Subsidiary cum Secondary problems. The primary problems consist of raw material finance, organization and technology. While the subsidiary- cum-secondary problems are made up of infrastructural, marketing and social problems.

Firstly, major raw material for carpentry units is wood log. Irregular supply of raw material is one of the major constraints for the development of household based industries (Pandey, 2013). 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. Secondly, the finance problem derives from the fact that the bulk of the funds available to it originates from the owner of the enterprise. Majority of the units are suffering from shortage of finance and lack of credit facilities. The non-availability 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. Thirdly, the organization problem is an outcome of the small size of the units and the consequent and ignorance of the workers about accounting and management. Most artisan enterprises lack the requisite managerial and technical expertise. The units suffer from poor planning and execution programmes. Fourthly, the issue of technology goes hand in hand with those of entrepreneurship and management. Obsolete technology is another daunting problems facing by small industrial units of carpentry. 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. Fifthly, household industries like carpentry in the study area are confronted with the problem of inadequate infrastructural facilities such as electricity, workshop, storage facility, water supply, communication etc. This inadequacy of infrastructure has constrained the growth and development of the sector. Finally, 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. The demand for the various products are limited to the locality as majority of their products are substandard and do not conform to the required specifications. 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 (Kasemi, 2014).

OPPORTUNITIES

Opportunities for carpentry units are numerous. Firstly, these industries are practised based on the local available raw materials. Raw materials are available though in some seasons supply becomes irregular. Secondly, these are less capital intensive. Thirdly, the industries require very simple tools, and requirement of fixed capital is, therefore, also less. Fourthly, low to medium skill are required for operation. Fifthly, these industries are highly demanded in the market both for utilitarian as well as decorative purpose. Sixthly, these industries have high employment generation potentialities. Lastly, Government has taken certain measures for the development and promotion of these industries.

COBB-DOUGLASS PRODUCTION FUNCTION

For the analysis the nature of production function of carpentry industries, Cobb-Douglas production function method is chosen. A two variable Cobb-Douglas type production function analysis shows the relative contributions of capital and labour factors in the production system (Jamil and Chattopadhyaya, 1979).

The form of production function is as follows:

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$$Q = A\ L^{\alpha}\ K^{\beta}$$

Where, Q = Output

L = Labour input

K = Capital input

The parameters α and β measures the elasticity of output with respect to labour and capital respectively and are known as labour and capital coefficient, while A is the efficiency parameter of the jute-based industry. The result besides representing the contributions of different factors in the production indicates the scale of return in pottery industry as well. By definition of the Cobb-Douglass system, $\alpha + \beta = 1$ means a constant return to scale, $\alpha + \beta > 1$ indicates increasing return to scale, whereas, $\alpha + \beta < 1$ indicates the decreasing return to scale.

The function has provided a good fit for the data which is evident from the high R^2 value. ($R^2 = 0.689$ and F = 0.672). The R squared reveals that 68.9 per cent of the variation of output has been explained by the two factors of production i.e., labour and capital. The computed value of α and β is 0.445** (S.E. 035) and 0.389** (S.E. 043) respectively. Smaller coefficient value of labour factor in carpentry is a cause of concern as this sector is traditionally use skilled labour. However, greater contribution of capital factor could be due to the increase of price of essential raw materials requiring higher investment (Sao, 2011). The sector exhibits decreasing returns to scale as $\alpha + \beta = 0.834$.

POLICY RECOMMENDATIONS

The study reveals that jute-based industrial sector of the study area suffered has from numerous problems. The following policy measures are recommended for the development of the industry and make it economically viable. Firstly, industrial finance has been one of the most important problems of the jute-based household industries; therefore, require credit facilities and financial support for the purchase of raw materials, payments of wages and for meeting their business obligations. The state governments, nationalized commercial banks and other financial institution should come forward to finance the entrepreneurs providing credit facilities and financial support. Secondly, a good market for the products of household industries is important to promote the well being of the artisan workers or small entrepreneurs. Marketing support can be given to workers group through institutional arrangements or departmental support, so that the workers may get a better return. Thirdly, cooperative societies should be established which should take up the supply of raw material, purchase of finished goods from artisans, marketing and provision of credits. Finally, a comprehensive study is needed for the overall policy formulation covering a wide range of research activities including data collection on the production and marketing aspects.

CONCLUSION

The present study shows that the carpentry sector is suffering from irregular supply of raw materials, inadequate capital, good marketing facilities, infrastructure problems etc. Use of outdated technology and lack of managerial ability of the workers are the other important factors that hampered the development of the sector in the study area. The Government and non-government initiatives can solve the problem and develop the industries at its best level. The need of capital for increased productivity of the sector is clearly recognized from Cobb-Douglas production analysis. There is immediate need to set up co-operative societies which may take up the issue of supply of raw materials, purchase of finished goods from artisans and provisions of credits. The sector has vast potentials for development in the study area. It goes without saying that realization of policies will need very efficient and committed functionaries. If policies are properly planned and implemented, these will ensure the growth and development of the sector.

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REFERENCES

Chadha, G.K. (1993): Policy Support for Non-farm Development in Rural India – Some Issues; paper presented at the National Seminar on Policy and Environment for Rural Non-farm Sector in India, Institute of Development Studies, Jaipur, 10-11, pp. 2-3.

Jamil, M.I. and Chattopadhyaya, R.N. (1979): Production Relations for Industries in a Metropolis: A Case Study of Delhi. Indian Journal of Regional Science, Vol. XI, No. 1. 86-88.

Kasemi, N. 2013: Influence of Socio-economic Factors on the Productivity of Household Industry: A Case Study of Bamboo-work Industry in Jalpaiguri District, West Bengal; Geo-Analyst, Vol. 3 No. 1. 42-49.

Kasemi, N. (2014). Policies for the Development of Household Industrial Sector: Case Study of Rope-making Industry in Jalpaiguri District, West Bengal. *Indian Journal of Landscape Systems*. Vol. 34 No.1. 94-102.

Pandey, V. (2013). Trends, Opportunities & Challenges in Small Scale and Cottage Industries in Uttar Pradesh. *Asian Journal of Technology & Management Research*, Vol. 03 – Issue: 02. Sited at http://www.ajtmr.com/papers/vol3issue2/TREND-OPPORTUNITIES-AND-CHALLENGES.pdfaccessed on 30.04.14.

Lakshman, T.K. 1966: Cottage and Small Scale Industry in Mysore; Rao and Raghavan, Prince of Wales Road, Mysore. 114-128.

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