

## **BELL METAL INDUSTRY OF ASSAM IN THE CONTEMPORARY MARKET ENVIRONMENT: A VIABILITY ASSESSMENT**

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### **Abstract:**

Handicraft industries are highly labor intensive cottage based industry spread all over the country. North-Eastern region of the country is also rich in craft works. Out of states of N-E region, in Assam there exist various types of crafts work like silk, bamboo and cane, terra-cotta, metal craft etc. Bell metal is the second largest handicraft of Assam. This industry had a glorious past, but now it faces stiff competition from cheap substitutes, machine made products etc. So a question arises whether this age-old, high employment generating, culturally important industry has a viable future or not in the contemporary market environment . Viability implies the ability to survive . In business sense, it relates to financial performance and position . So for assessment of economic and financial viability of bell metal industry, gross profit margin of the production units and income of the artisans associated with it are determined. For this study primary data are collected from the randomly selected sample at Sarthebari region where the bell metal craft of Assam is confined. From the result it is found that opportunities of bell metal industry is not ended till now, but there is lack of initiative for upliftment of it.

**KEY WORDS: Economic viability, financial viability, gross profit margin**

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## 1. INTRODUCTION:

Handicraft industries are highly labor intensive cottage based industry spread all over the country. North-Eastern region of the country is also rich in craft work. Out of states of N-E region; the people of Assam also have traditionally been craftsmen from time immemorial. Though Assam is mostly known for its exquisite silk and bamboo and cane products, several other crafts also made here. Different regions of Assam are known for their different forms of art and handicraft. In Assam bell metal is the second largest handicraft. It is one of the most popular type of metal used to produce variety of articles for utilitarian and aesthetic purposes. Bell metal craft is an important handicraft which is related to religious and cultural activities of the Assamese society. Initially this craft was flourished all over the state; but now-a-days it confined only at Sarthebari along with nine adjoining villages. But this industry plays an important role in providing livelihood to a large number of families in this region. According to a project report (Directorate of Economics and Statistics; 2014) total number of families related to production and marketing of bell metal product are 1640. Again according to 2011 census total number of families are 4757 in Sarthebari region. Thus 34.48% of total household in this region are depend on bell metal industry. This industry has a glorious past but in the contemporary market environment it has to face stiff competition from cheap substitutes.

Market environment comprises the political, economic, geographical and cultural framework in which all business operates. The market environment is subject continual change and the business if is to survive must learn to adopt this changes (Holloway, Plant, 1990). Controlled economic regime of post independent India also undergone through the phases of liberalization that initiated in 1980 and got new momentum in 1990s influenced the industrial sector that developed under protected market environment. Small and cottage sector is the worst sufferer due to their lesser operational linkage and flexibility. The bell metal and brass metal is also not an exception. Though liberalization on the other hand open avenues to market the unique bell and brass metal product of the state in front of global audience, lack of marketing channel, infrastructure and strategy act as a barrier in this regard (Deka, 2013). Middlemen collect the raw materials at a lower cost and sell at a higher price to the artisans. All this leads to higher cost of production. Thus a simple product produce from cottage industry will cost much higher than the same product produce by the large scale sector and here come the consumer behavior of

choosing substitute product at lower price than the cottage products (Choudhury, 2012). A project report( Directorate of Economics and Statistics,2014) states that in case of some bell metal product has to face stiff competition from its substitutes like aluminum, stainless steel etc. The products made of stainless steel are much cheaper than the bell metal product. Thus the bell metal products become a symbol of prestige of rich. Generally people purchase bell metal items only for religious and cultural activities. A study, (Roy, 2014) states that bell metal product is facing competition from those of made in machine and high equipments since their price is low as compared to those of manually. So implementation of machine and technology is needed in order to cope with the market. As the prices of the materials are rising at a faster rate which make it hard to check the price of the product and thus is losing the market. Again in an article (Deka, 1995) states that an important challenge of bell metal industry of Sarthebari and its adjoining villages that have to face competition from machine made products specially in case of dish, bowl etc. from Uttar Pradesh and other parts of India The design of the products are imitate and produce in machine outside Assam at a lower cost. These products are imported by some middlemen and sold by hawkers moving door to door in Assam in the name of bell metal product of Sarthebari at a very lower price. It is a serious threat for the bell metal industry of Sarthebari region. Now-a-days various attractive products are available in the market. In this situation modernization and product diversification of this industry is necessary to increase demand for the products in the market. Due to lack of modern technique of production, less education of bell metal artisans, they become expert only in the production of traditional items. If some artisans produce new items, they do not get appropriate remuneration according to their hard work since the produced items are not that much attractive. So it is very important to adopt modern technology in production and also necessary to have knowledge of bell metal artisans about tastes and preferences of the consumers in the present market (Deka, 2009). In the era of globalization various colorful and attractive items are available in the market at lower price. It will reduce the demand for the bell metal product in day to day life and as gift since the price of the bell metal product is very high. To satisfy all the customers training for the artisans are necessary for the quality improvement of the product (Choudhury, 2009).

Existing literature explained various problems of bell metal industry and competition face by it from cheap substitutes and threat from duplicate product and also explained the necessity of

product diversification and modernization. It is also found from the literature that, this industry plays an important role in employment generation and in contribution to gross district domestic product. Now it is an important question, whether this valuable industry has viability in the contemporary market environment. So this study is undertaken for viability assessment of bell metal industry of Assam in the contemporary market environment.

## **2. OBJECTIVES:**

- To assess the viability of bell metal industry of Assam.
- To analyze the main problems of this industry.

## **3. DATA SOURCE AND METHODOLOGY:**

The study was conducted from 1<sup>st</sup> June 2015 to 30<sup>th</sup> July 2015 at Sarthebari region of Barpeta district of Assam where the bell metal industry of Assam is mainly confined. This study is based on both primary and secondary data. Primary data are collected from randomly selected sample. There are 300 bell metal industrial units at Sarthebari town and nine adjoining villages, viz Namshala, Gomurah, Lachima, Karakuchi, Batia, Palla, Amrikhowa and Hilepara. Again there exist 41 bell metal shop at Sarthebari bazar and 30 traders in this region. For this study 30 industrial units that constitute 10% sample, 20 bell metal shops that constitute approximately 50 % sample and 10 traders that constitute 33.3% sample is selected for the study. Simple random sampling method is used in selection of sample from the universe. For collection of primary data pre-tested questionnaire is used. Secondary data are collected from books, articles, research paper, govt. report and Assam Co-operative Bell Metal Utensil Manufacturing Company Ltd.

Viability is defined as the ability to survive. In a business sense, that ability to survive is ultimately linked to profit. So in this study for viability assessment of bell metal industry profit of the production units and income of the artisans are determined. For analysis of profitability gross profit margin technique is used. Gross profit margin (gross margin) is the ratio of gross profit to sales revenue. Gross margin reveals how much a company earns taking in to consideration the costs that it incurs for producing its products or services. It is usually expressed as percentage. The higher the percentage, the more the company retains on each sales to service its other cost and obligations. In other words, it shows how profitable a product is.

### Gross Profit Margin= Revenue- cost of goods sold/ Revenue

In calculation of gross profit margin only direct costs are included. Here relevant direct costs include charcoal, chemical cost, food and cost of rolling machine. Generally revenue is calculated by multiplying market price and total output produced. In this industry for calculation of revenue making charge of the product is used for price and yearly total output produce by the artisans are determined.

#### 4. RESULT AND DISCUSSION:

Cost structure is almost same for all the production units. Making charge is different for different products. Determination of one making charge for a product is difficult since quality wise and size wise making charge is different for the same product also. Making charge for the product is estimated by adjusting the making charge determined by 'Assam Kanhar Silpi Sangstha' and information got in field survey. It is a rough idea of cost and revenue of the production units. Out of 30 production units 9 units produce dish, 8 units produce bowl, 2 units produce cymbal, 2 units of *bata*, 4 units of *baan kahi*, 2 units of *baan bati* and 2 units of *lota*. In the following table product wise gross profit margin is shown:

#### 4.1 PRODUCTWISE GROSS PROFIT MARGIN IN THE BELL METAL INDUSTRY:

Table 1

Products	Output (in kg yearly)	Price (making charge)	Cost (yearly)	Gross profit margin (in %)
Dish (general)	7000	250	3,30,102	81
Bowl	3500	280	2,24,000	77.1
Cymbal	6400	380	3,90,400	84
<i>Baan kahi</i>	2400	400	1,94,400	79.8
<i>Baan bati</i>	1000	520	1,06,920	79.4
<i>Lota</i>	600 piece	1200 per piece	2,56,800	64

Source: Field survey, 2015

From the analysis of gross profit margin of production units, it is seen that in all production units retain a good gross profit margin, i.e. they retain a large amount of sales revenue after cost of

goods; to incur interest cost and for maintaining their income. Major costs of production are cost of charcoal, scraped bell metal, food and chemical cost. But scraped bell metal are provided by middlemen to the artisans and the artisans produced product by using this metal and final products are given to the middlemen from whom they collect scraped metal. Artisans get only making charge for the product. They are not related to market. Only cost incur by the production units are charcoal, food and chemical cost. So they are able to maintain a large amount of revenue after direct cost of production. Gross profit margin is highest in cymbal and dish production and lowest in production of *lota*. Higher the output produced higher will be the gross profit margin. In production of dish and cymbal rolling machine is used and manual work is less compared to other products. So artisans are produced more in each day. But in production of *lota* entire work is done manually. So in a day by working 10 to 12 hours artisans are able to produce one or two piece of the product. Higher the capital intensive production process higher will be the output, gross profit margin and income of the artisans.

#### 4.2 INCOME OF THE ARTISANS:

Profits of production are distributed among the artisans as income. So more important thing for this industry; what is the income of the artisans with this profit level. In the following table product wise income of head artisans of bell metal industry of Sarthebari region is shown-

##### 4.2.1 AVERAGE ANNUAL INCOME OF HEAD ARTISANS:

**Table 2**

SL NO	ITEM PRODUCED	AVERAGE ANNUAL INCOME OF HEAD ARTISANS
1	<i>Kahi</i>	336911
2	<i>Bati</i>	241060
3	<i>Baan kahi</i>	271793.50
4	<i>Baan bati</i>	180320
5	<i>Taal</i>	4,36,681

6	<i>Bata</i>	162682
7	<i>Lota</i>	122015

SOURCE: FIELD SURVEY, 2015

Average annual income of head artisans producing *taal* is Rs.4,36,681 and thus their monthly income will be Rs.36390. Annual income is highest of this artisans producing *taal*. Average annual income of artisans producing *kahi* is Rs.3,36,911 and thus their monthly income will be Rs.28,075 . The head artisan producing *bati* earn average annual income of Rs. 2,41,060 and thus their monthly income will be 20,000. Average annual income of head artisans producing *baan bati*, *baan kahi*, *bata*, *lota* are 1,80,320, 2,71,793.50, 1,62,682, 1,22,015 and thus their monthly income will be 15,026, 22,649, 13,556 and 10,167 respectively.

#### 4.2.2 AVERAGE ANNUAL INCOME OF SUPPORTING ARTISANS:

There is a complex division of labor in this industry and thus income of all the artisans are not same. Income of the supporting artisans engaged in production of various bell metal items are shown in the following table-

TYPES OF WORKER	DISH	BOWL	BAAN KAH	BAAN BATI	BATA	CYMBAL	LOTA
Who help in the head artisan's work	224607	160707	181195	120213	108455	3,00000	81343
Who check the shape of the product(maithner)	224607	160707	181195	120213	108455	3,00000	81343
Who clean the product(kataniar)	168456	120530	135896	90160	81341	2,28,000	61000
Who help the other artisans(jogali)	56152	40165	45298.50	26560	25114	85,900	20335

SOURCE: FIELD SURVEY, 2015

Supporting artisans who help the head artisan and who give the correct shape of the product have same income. This artisan engage in production of *taal* are of the highest average annual income i.e Rs.3,00,000 and their monthly income will be Rs. 25,000. *Gureiler* and *Maithner* engaged in production of *kahi* earn average annual income of Rs.2,24,607 and occupy second position in earning income and this artisans engaged in production of *bati* earn average annual income of Rs1,60,707. and thus their monthly income will be Rs. 18,717. Average annual income of *gureiler* and *maithner* engaged in production of *bata*, *baan bati*, *baan kahi*, *lota* earn Rs.1,08,455, Rs.1,20,213, Rs.1,81,195, and Rs.81,343 respectively and thus their monthly income will be Rs. 9,038, Rs.10,018, Rs.15,099 and Rs.6,778 respectively.

Again supporting artisans who clean the product referred to as *Kataniar* , engaged in the production of *taal* earn highest average annual income i.e Rs.2,28,000 and again this artisans engaged in production of *kahi* occupy second position in earning of income and earn Rs1,68,456 as average annual income and the artisans engaged in production of *bati* earn average annual income Rs.1,20,530. Their monthly income will be Rs.19,000, Rs.14,038 and Rs.10,044 respectively. Average annual income of artisans engaged in production of *baan bati*, *bata*, *baan kahi*, *lota* are Rs.90,160, Rs. 81,341, Rs.1,35,896 and 61,000 and thus their monthly income Rs.7,513, Rs.6,778, Rs.11,324 and 5,083 respectively.

Supporting artisans, helper (*jogali*) engaged in production of *taal* earn highest average annual income which is Rs.85,900 and thus their monthly income will be Rs.7158 . Artisans engaged in production of *kahi* occupy second position in earning average annual income of Rs.56,152 and artisans engaged in production of *bati* earn average annual income of Rs.40,165 and thus their monthly income will be Rs. 4679 and Rs.3347 respectively. The artisans engaged in production of *baan kahi*, *baan bati*, *bata*, *lota* earn average annual income Rs.45,298, Rs. 26,500, Rs.25,114 and Rs. 20,335 respectively and thus their monthly income will be Rs.3774, Rs.2208, Rs.2092 and Rs.1694 respectively. All the artisans except helper earn such an income through which they can maintain their livelihood well.



## 5. MAJOR PROBLEMS OF THIS INDUSTRY:

Major problems associated with this industry are-

- i) Scarcity of raw materials: Main raw materials are scraped bell metal and charcoal. Sometimes scarcity of this raw materials create problem for this industry.
- ii) Financial problems of artisans: Because of financial problem artisans have to depend on middlemen.
- iii) Lack of product diversification: Only traditional items like dish, bowl, cymbal etc. are produced in this industry. No steps are undertaken for product diversification.
- iv) No advertisement: No steps are taken to advertise the product.
- v) Bad working environment: Due to bad working environment most of the artisans have to suffer from headache, fever etc. which reduces their working efficiency.
- vi) Transportation problem: Transportation problem also hamper in the development of this industry. Only mode of transportation is road transport; but the condition of road is also not good.
- vii) No trade mark: There is no trade mark for the products produced in this industry.
- viii) Availability of cheap substitutes and duplicate products in the market create problem for this industry.
- ix) Increasing price of raw materials and final product: Increasing price of raw materials leads to increase in price of final product. Because of higher price of bell metal product; people reduces use of it in day to day use.
- x) Limited market: Most of the products produced in this industry are sold within the country mainly in Upper Assam. Only some items like cymbal, *dafala kahi*, *dafala bati* are export to Bhutan, Nepal, Arunachal Pradesh etc.

## 6. CONCLUSION:

Though various cheap substitutes are available in the market; even then bell metal industrial units are able to earn profit. But more important thing for this industry ;what is the income of the artisans with this profit level since profit of the industrial units distributed among the artisans as income. So income of the head and supporting artisans are determined. From this analysis it is found that industrial units are able to earn profit and most of the artisans meet their livelihood well by doing this work. From this point of view production units are not unviable. Opportunity

of bell metal industry is not ended till now. Some steps like training to the artisans to produce diversified product that can satisfy the consumers, to reduce cost of production, to give trade mark for the product, development of proper marketing channel to expand the market; help in further expansion of this industry. But no effective steps are undertaken till now in this regard. If proper steps are undertaken to develop; it has a future prospect, otherwise it may be extinct or survive only with a very few number of artisans who have no other opportunity to earn their livelihood or who do this work as proud without give any importance on profit.

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