

SUSTAINABILITY OF THE AGE-OLD BELL METAL CRAFT: CAN MARKET ORIENTATION BE THE GAME- CHANGER?

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ABSTRACT

The sustainability of any craft form cannot be thought of without considering the economic security of the artisan community. This depends to a large extent on their behaviour in understanding the different market participants to stay informed about the market dynamics. The present study examines the various challenges faced by the bell metal industry in Assam, which is one of the traditional craft forms practised by artisans for several decades. It also highlights how the different dimensions of Market Orientation as evidenced from the extant literature can help in mitigating those problems and help in achieving sustainability. The present study is based on both primary and secondary data. The findings reveal that incorporating different dimensions of market orientation into the different stages of operation in the bell metal industry helps with positive outcomes like: regular production, improved productivity, more goodwill, a larger customer base, financial assistance, boosting connectivity, etc. which would in turn contribute towards increased revenue of the industry and subsequently ensure the sustainability of the bell metal craft.

Keywords: Sustainability, Bell Metal Craft, Market Orientation

1. INTRODUCTION

Craft is one of the aspects which have over time been an important part of people's lives and evidence of the great history that continues to glorify the present generation. It is the practice of utilizing the resources found around in a way that apart from portraying the identity of the cultural beliefs that an individual or a group holds, it also contributes to meeting the diverse needs of the people. Craft comes in many forms: the pattern of clothes worn, hand-stitched embroidery to give an

aesthetic appeal to the clothes worn, jewellery symbolising the cultural identity, items used as home decor like carpets, mats, *charpai* (a traditionally woven bed from jute used for rest) etc, different art forms carved on stones and found in the architecture of the historical monuments, idols or other items made of clay or mud, bamboo products etc. It is also a major contributor towards the generation of income for the artisan community found in the rural areas and the small towns. A unique trait of the crafts practised by the community is their reliance on traditional methods of production by utilizing traditional tools and techniques. However, in the face of the global competition brought by globalisation after 1991, the artisan community in a hush to compete with machine-made items tends to compromise with the traditional process of the craft forms. This has been objected to by a few scholars as they believe that the traditional craft forms affected by the market dynamics brought by the capitalist perspective will result in the deterioration of their social meanings [Wolff \(1981\)](#) in [Chutia and Sarma \(2017\)](#). Nevertheless, sustainability which is mainly conceived as the art of conserving and preserving the heritage that has been conferred on us by our ancestors in a way that our future generation can witness and reap benefits from can be achieved only when the different crafts can generate substantial income for their producers while also keeping their cultural grace intact. So, there is a somewhat complex relationship between sustaining both the social meanings of a craft form as well as meeting the economic needs of the artisan community. Many traditional industries are on the verge of extinction mainly due to their inability to balance between these two important aspects. The present paper explores whether market orientation can be a viable solution in bringing sustainability to one of the age-old crafts practised in Assam.

2. STATEMENT OF THE PROBLEM

Bell metal craft is one of the age-old crafts where generations of a group of Assamese community are engaged in making utility as well decorative items made of bell metal which is an alloy formed by the combination of two metals: Copper and Zinc in different ratios. The art which occupies an integral part of the Assamese culture and which has its existence since the 7th century A.D., has been the major source of income for a large section of the local community residing in and around Sarthebari. In recent times, the usage of Bell metal items has been drastically reduced. The products which are believed to portray a symbol of status and possess health benefits are still not used in a large number of households in everyday lives, causing a reduction in demand. This has affected not only the income of the local artisans but has also posed a threat to the sustainability of the craft form. What are the problems that have hindered the sustainability of the bell metal craft? In line with this, timely acquisition and utilization of market knowledge have been the need of the hour for businesses to not only prosper but also sustain for a longer period [Kumar and Singh \(2023\)](#). Can market orientation be a viable solution in achieving sustainability of the bell metal craft of Assam as well? The present study aims to answer these questions.

3. OBJECTIVES OF THE STUDY

The present study attempts to fulfil the following two objectives:

- To investigate the problems deterring the sustainability of the bell metal craft.

- To find out whether Market Orientation can be a viable solution in achieving sustainability of the bell metal craft.

4. RESEARCH METHODOLOGY

The present study is both descriptive and exploratory. It is based on both primary and secondary data. Primary data are collected by interviewing Mr Monoj Bhuyan, Secretary of Assam Cooperative Bell Metal Utensils Manufacturing Society Limited (ACBMUMSL) and Mr Dhanjit Deka, President of Assam Konhar Silpi Sangha, Sarthebari. The secondary data are collected by undertaking an extensive review of the literature of the related papers accessed from Google Scholar.

4.1. PROBLEMS DETERRING THE SUSTAINABILITY OF THE BELL METAL CRAFT

India, a land which has to its credit different regions, each having its speciality of unique topography, demography, history and economic scenario believes in "Unity in Diversity". The reason behind this unity is mainly the love and respect that its people have for each other and their cultural beliefs. This love and respect are attributed to the heritage that our ancestors have left for us in the form of folklore, stories, music as well as the different craft forms practised in almost every nook and corner of the country. After 1991, globalisation brought with it many benefits in terms of easy movement of capital and products, simplification of trade laws, enhanced foreign investment strengthening the infrastructure of the country, unveiling of the Indian economy as well as its culture to the foreign countries etc, it has also brought with it many innovative products which could fulfill the diverse needs of the people in less time and at cheaper price. With the growing tendency of today's generation to achieve many tasks in less time, the use of sophisticated products like Washing machines, Refrigerators, microwaves, non-stick utensils and packaged food items has been on the rise. Today, utensils made of clay, iron, bamboo, brass as well as bell metals are rarely seen in any household. Their use is limited only to some occasions in the family or in some exclusive restaurants which are in the process of reviving the authenticity of the Indian culture among today's generation. If the present trend continues, it will be a loss for future generations as they will not be able to witness the glorified history that our ancestors have left for us. This would ultimately impact the sustainability of the different craft forms forcing its producers to shift to other occupations.

Assam, which is home to many craft forms such as bamboo products, pottery, products made from jute and water hyacinth, traditional jewellery, brass and bell metal products etc. is also gripping with similar problems. One of the craft forms most affected is the bell metal craft. Sarthebari in Bajali District has been associated with this craft form for many decades. Youths generally the male section of society are engaged in producing bell metal products like *Kahi, Taal, Bati, Banbati, Bata, Lota (Kalah), Bankahi, Khutitaal, Juritaal, Bhortaal etc.* following the same traditional practices learnt from the senior male members of their family. Earlier items such as *Xorai, Gilas, Ban Gilas, etc.* were produced but owing to their less demand, in today's time, these products are no longer produced and now products like *wall hangings, trays, wall clocks, showpieces* as well as *idols of Gods* have replaced them (Source: Field Survey). However, the number of units producing such products is very limited. Irrespective of being credited as the major producer of bell metal products in Assam, the growth of this age-old cottage industry has not been satisfactory, forcing many artisans to leave this profession. A number of problems

are responsible for the slow growth of this industry. Quite a number of studies have focussed on finding the problems associated with the bell metal industry of Assam. The section below mentions the different problems highlighted by different scholars in their studies.

Table 1

Table 1 Problems Faced by the Bell Metal Industry of Sarthebari

Sr. No.	Problems faced	Source (s)
1	Increasing price of raw materials	Das (2018), Devi (2017), Roy (2014)
2	Financial problems of artisans	Bharali et al. (2023) , Das (2018), Deka (2022), Devi (2017), Roy (2014)
3	Lack of product diversification	Chutia and Sarma (2017), Devi (2017)
4	Lack of promotion (marketing system)	Chutia and Sarma (2017), Das (2018), Devi (2017)
5	Bad working environment	Bharali et al. (2023), Deka (2022), Devi (2017)
6	Transportation problem	Devi (2017), Roy (2014)
7	Availability of cheap substitutes	Bharali et al. (2023), Chutia and Sarma (2017), Deka (2022), Devi (2017)
8	Paucity of raw materials (including charcoal)	Kumar and Singh (2023), Das (2018), Deka (2022), Devi (2017)
9	Limited market	Devi (2017), Roy (2014)
10	Outdated techniques of production	Bharali et al. (2023), Chutia and Sarma (2017), Deka (2022)
11	Frequent power failure	Bharali et al. (2023)
12	Hefty tax	Bharali et al. (2023)
13	Inadequate technical education for artisans.	Bharali et al. (2023), Das (2018), Roy (2014)
14	Reliance on middlemen	Chutia and Sarma (2017)

Source: Compiled from Review of Literature

From [Table 1](#), it can be seen that the bell metal industry of Sarthebari is gripped with a number of problems. On analysing the available literature, it has come to the fore that the bell metal industry suffers from the main problems of: paucity of raw materials along with its increasing price, financial problems of artisans (including inadequate capital), availability of cheap substitutes, lack of proper marketing facilities, lack of product diversification, bad working environment, transportation problem, use of outdated methods of production, inadequate technical knowledge and limited market for its products [*problems cited in two or more studies are considered as major problems*].

Overview of Market Orientation

The needs of human are unlimited and their capacity to produce everything they need is limited. So, to satisfy their needs humans have been dependent on each other for ages. The initial mechanism which involved purchasing goods in exchange for other goods faded in due course of time and got replaced by money which served as a medium of exchange between the producer and the consumer of goods. Here, the needs of both parties were mutual: the producers needed money to procure other goods while the consumers needed goods for their consumption. However, the recent developments in the market mechanisms no longer require both parties to remain in close proximity, rather now anything can be procured from anywhere both within and outside the territorial boundary of a nation. This has been made possible by a number of intermediaries who work continuously to reduce the time,

place and possession gap for the consumers. Information technology has further increased the number of suppliers of a particular product. In all these contexts, what remains common is the initiative taken by the suppliers to ensure the timely distribution of their products through the help of a number of well-chalked-out plans. The coordinated mechanism of the activities undertaken by different parties for the fulfilment of their respective needs, by regulating the process of production and consumption, guided by the market forces of demand and supply constitute the concept of a market.

The increasing complexity in the nature of the market has placed importance on the behaviour of a firm in their interactions with the customers, competitors and other external parties in creating value propositions [Varadarajan \(2010\)](#). Market Orientation entails that producers properly understanding the functioning of the different market participants and devising appropriate strategies before making an offer to the customers. It is an efficient marketing strategy aimed to achieve two main objectives: (i) Shaping the behaviour of the customers towards acquiring the firm's offer and (ii) adding value in the entire process. So, what remains crucial is shifting the outlook of the firms: from focusing only on customers and competitors to adopting a holistic approach by diversifying their interest on the other market participants that play an important role in influencing the entire process of production and consumption. Additionally, they also have to analyze their inherent capabilities and resources to ensure that they are in a position to reap benefits from the information generated.

The initial literature on market orientation which focussed mainly on customers and competitors failed to incorporate other aspects influencing the market function. Accordingly, several scholars tried to give a comprehensive view on market orientation incorporating additional dimensions like: Distributor orientation [Lado et al. \(1998\)](#), [Siguaw et al. \(1998\)](#), Supplier orientation [Baker and Sinkula \(1999\)](#), Learning orientation [Baker and Sinkula \(1999\)](#), Technology orientation [Gatignon and Xuereb \(1997\)](#), Environmental orientation [Lado et al. \(1998\)](#), [Mitchell et al. \(2010\)](#), Social orientation [Mitchell et al. \(2010\)](#) and Economic orientation [Mitchell et al. \(2010\)](#).

A brief explanation of the different dimensions involved in market orientation:

- 1) **Customer Orientation (CO):** Behavior of a business concerned with understanding the expressed and latent needs of its present and prospective customers [Narver and Slater \(1990\)](#).
- 2) **Competitor Orientation (CoO):** Behavior of a business concerned with keeping track of its key competitors; and understanding their strengths, weaknesses, capabilities and strategies adopted by them [Narver and Slater \(1990\)](#).
- 3) **Distributor Orientation (DO):** Behavior of a business concerned with carefully assessing the trustworthiness of the resellers in terms of aspects like credibility, cooperation and commitment to ensure timely distribution of products to customers without any incidence of channel conflict [Siguaw et al. \(1998\)](#).
- 4) **Supplier Orientation (SO):** Behavior of a business concerned with understanding the supplier's actions in terms of aspects like trust, commitment, cooperation and satisfaction to ensure timely delivery of raw materials without any incidence of channel conflict [Baker and Sinkula \(1999\)](#).

Both Supplier and Distributor orientation form the basis of backward and forward linkages of a business to ensure the smooth conduct of its supply chain management.

- 5) **Learning Orientation (LO):** The knowledge-producing behaviour of a business which requires a shared vision, openness and commitment to continuous learning on the part of its members to cope with the market dynamism [Baker and Sinkula \(1999\)](#).
- 6) **Technological Orientation (TO):** The willingness and capacity of a business to adopt a strong technology background in its organisation and use it in the creation and satisfaction of customer's needs [Gatignon and Xuereb \(1997\)](#).
- 7) **Environmental orientation (EnvO):** The responsiveness of a business to norms governing environmental management by incorporating ecological ways of production and marketing to meet market expectations through the judicious application of environmental resources [Mitchell et al. \(2010\)](#).
- 8) **Social orientation (SoO):** The importance a business places on conformity to social norms and building long-term social relationships with different stakeholders like local communities, regulators, NGOs and the society at large to ensure that it receives favourable support from the society in the form of a good image and greater demand for its products [Mitchell et al. \(2010\)](#).
- 9) **Economic Orientation (EO):** Behavior of a business concerned with understanding the different ways of generating positive cash flows through optimum use of its resources to ensure that it remains profitable at any market condition. Aspects like financial management, profitability and efficiency are given importance by the business [Mitchell et al. \(2010\)](#).

4.2. INTERVENING ROLE OF MARKET ORIENTATION IN BRINGING SUSTAINABILITY TO BELL METAL CRAFT

Market orientation is linked to better performance in terms of profitability [Narver and Slater \(1990\)](#), customer satisfaction [Haugland et al. \(2004\)](#), [Njeru and Kibera \(2014\)](#), marketing performance [Alrubaiee \(2011\)](#), [Chin et al. \(2013\)](#), financial performance [Chin et al. \(2013\)](#), [Raju et al. \(2000\)](#) and new product success [Cheng and Chen \(2017\)](#), [Ledwith and O'Dwyer \(2009\)](#). So, a business adopting the practice of market orientation tends to improve its performance and subsequently increases its chances of survival over a longer period of time. In the context of the bell metal industry of Assam which is predominantly operated by artisans using traditional tools and techniques, incorporation of the practice of market orientation would reap substantial benefits for the artisans and help in the sustainability of the age-old bell metal craft of Sarthebari.

The different problems hindering the sustainability of the bell metal craft can be mitigated by incorporating market orientation in different stages of its operation. The section below provides a detailed description of the intervening role of market orientation in bringing sustainability to the bell metal craft of Sarthebari.

- 1) **Financial Problems of Artisans:** The Bell metal industry is run by 1881 artisans operating 370 units in the Sarthebari town and its adjoining villages (Source: Field Survey). Each unit is headed by a

master artisan known as *Kohar* employing other 4 5 artisans assisting him in producing only one category of product. The units operate manually using traditional tools like hammer, file, tong and niyari (local name of a tool) [Saloi and Barman \(2020\)](#). The earning of a unit is based on a wage rate system where a unit receives a predetermined sum of money per kg of product produced. However, the wage rate varies with the category of product produced by a unit. The application of traditional tools deters the units from producing bell metal products in bulk quantity resulting in the units receiving only a small amount as their earning. Further, the amount received by a unit is distributed among the artisans employed in the unit which leaves a small amount in the hands of the individual artisans. By incorporating the dimensions of technology orientation and economic orientation, the productivity of the unit can be enhanced as well and production can be carried on resulting in more output and more earnings for its producers.

- 2) **The paucity of Raw Materials and their Increasing Price:** Bell metal products in Sarthebari are produced from scrap bell metal supplied to the bell metal units by the Assam Cooperative Bell Metal Utensils Manufacturing Society Limited (ACBMUMSL), the local traders (Mahajans) and the visiting traders also known as *Arabdaris*. The Arabdaris also supply charcoal to the units necessary for burning the furnaces. These scrap bell metals are procured by ACBMUMSL and the local traders from places such as Moradabad, Kolkata and Delhi. In addition to Sarthebari, places like Odisha, Kerala and Murshidabad of West Bengal are also the producers of different bell metal products. So, on a number of occasions, ACBMUMSL and the other suppliers face shortages in the supply of raw materials prompting them to purchase it at a high price. By incorporating the dimension of supplier orientation, ACBMUMSL and the other suppliers could ensure the availability of scrap bell metals on a regular basis and at an optimum price.
- 3) **Competition from Substitutes:** The bell metal industry suffers from intense competition from products made from aluminium, stainless steel, fibre, glass and plastic. Today the use of bell metal units is limited to a few Assamese households and on a few occasions. This can be attributed to the problems faced by its consumers in terms of its price, difficulty in maintenance and its bulky nature. This has in turn resulted in a decrease in the sales of the products. By incorporating the dimensions of customer orientation, competitor orientation and technology orientation the bell metal units would be in a position to design and develop products in accordance to the needs of the market and achieve a competitive edge.
- 4) **Lack of Proper Marketing Facilities:** The bell metal industry is operated mainly by the local traders and ACBMUMSL who sell the products through its 15 branches situated in different parts of Assam. However, with limited avenues for tourism facilities and because of its distance from the capital city of Assam, the knowledge of these products is limited to only a section of the society. This is a major hindrance to the growth of this industry. By incorporating the dimensions of social and environmental orientation, this industry would be able to associate with different social groups like the local communities, the NGOs and the regulators to receive financial assistance for the growth of the industry and also promote the usefulness of the products in terms of its

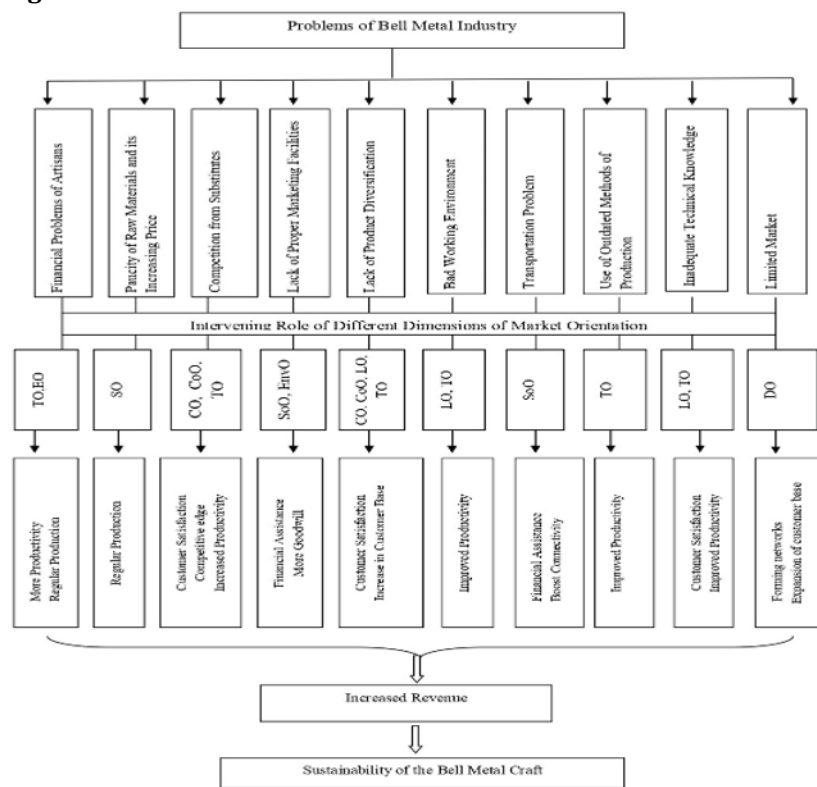
medicinal properties and emphasis placed by the industry in recycling the waste bell metal products.

- 5) **Lack of Product Diversification:** Only limited categories of traditional products like *Kahi, Taal, Bati, Banbati, Bata, Lota(Kalah), Bankahi, Khutitaal, Juritaal, Bhutiyataal, Bhortaal etc.* are produced by the bell metal units. The assortment of modern products produced by the units is further limited and is restricted to a few items like *wall hangings, trays, wall clocks, showpieces* as well as *idols of Gods*. These products fail to fulfil the diverse needs of the customers. This opportunity is squeezed by its competitors who produce a wide assortment of products in accordance with the customer's needs. By incorporating the dimensions of customer orientation, competitor orientation, learning orientation and technology orientation, the units would be able to cater to the changing needs of the customers and generate a loyal customer base.
- 6) **Bad working environment:** The bell metal units are mostly operated traditionally. The artisans work in a very congested environment, moulding the moulded bell metal into the desired shape by burning it in a furnace. Traditional tools are used to give the final shape to the products. So, the working environment is not very favourable for the artisans and prolonged exposure to dust and fumes makes them suffer from different lung and heart-related health issues. By incorporating the dimension of technological orientation, the bell metal artisans would be in a position to replace traditional tools with new machines thereby reducing the time taken by them to produce the products.
- 7) **Transportation problem:** Sarthebari is situated at a distance of about 70 km from the capital of Assam [The Hindu \(2025\)](#). Also, the provisions of tourists stay around Sarthebari are very less, prompting them to stay at a nearby town of Barpeta Road which is at a distance of about 42 km from the place. Further, the railway and road connectivity to this place is poor. This poses a serious issue for people especially other businesses to connect to these units. By incorporating the dimension of social orientation, this industry could collaborate with different social groups to seek their assistance in establishing tourist stays and upgrading the connectivity to this place.
- 8) **Use of Outdated Methods of Production:** The Bell metal units mainly rely on traditional tools and methods to produce products and are mainly operated manually Use of machinery is restricted only to a limited number of units producing modern products. This affects the productivity of the firms and subsequently the earnings of the artisans. By incorporating learning and technological orientation, the units would be in a position to enhance their knowledge of advanced methods of production and utilize them to increase their productivity.
- 9) **Inadequate Technical Knowledge:** Lack of technical knowledge makes the units rely on the age-old methods learned by the artisans from the senior male members of their family to produce the bell metal products. So, there has not been any upgradation in the design and assortment of products produced by them. The artisans do not take the risk of making modifications to the traditional products due to fear of financial loss. By incorporating the dimensions of learning and technological orientation, the units would be able to learn about the

market and technological developments and use this knowledge to make design and structural modifications to the products in accordance with the needs of the market.

10) Limited Market: The market of bell metal products is mostly confined to the state. Outside Assam, these products are supplied to other states like West Bengal and Delhi and items like *Bhutiyataal* are exported to international markets like Nepal, Bhutan Choudhury (2020) and China. Though there remains ample potential for these products on both the national and international front owing to their aesthetic appeal and medicinal properties, at present this industry is not able to capture markets beyond the places mentioned. By incorporating the dimension of Distributor orientation, this industry would be able to form networks with intermediaries operating in the national and international markets, resulting in the expansion of the customer base.

Figure 1



Source: Developed by the authors

Figure 1 Intervening Role of different Dimensions of Market Orientation in Bringing Sustainability to Bell Metal Craft

Figure 1 highlights the applicability of different dimensions of Market Orientation to mitigate different problems deterring the sustainability of the Bell Metal craft of Assam. Incorporating different dimensions of market orientation into different stages of operation could generate positive outcomes like: regular production, improved productivity, more goodwill, a larger customer base, financial assistance, boosting connectivity, etc. which would in turn contribute towards increased revenue of the industry and subsequently ensure the sustainability of the bell metal craft.

5. CONCLUSION

The sustainability of any craft form depends on the willingness and capacity of its producers to carry it forward to future generations. This further depends on the economic security that the producers expect to receive from the craft form. The bell metal industry which has been in existence for a longer period of time has been the only source of income for a section of the population residing in and around Sarthebari. However, in the last few years, this industry has been gripped with various problems which pose a serious challenge for its artisan community to continue with this profession. This has resulted in a major setback for the sustainability of the bell metal craft. Through extensive analysis of the available literature on the benefits of different dimensions of market orientation, it has been found that application of the dimensions of market orientation would not only help to mitigate the major problems faced by the industry but could also help to generate positive outcomes contributing to the sustainability of the bell metal craft of Assam. Educating the artisan community on the benefits of adoption of market orientation is the need of the hour which can be possible by the coordinated approach of the Government, the Cooperative, local bodies, educational institutions, and the industry partners.

CONFLICT OF INTERESTS

None.

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