



Utilizing Sarthebari's Heritage Bell-Metal Artistry For Fostering The Economic Growth Of Assam

Diganta Kumar Sarma, Research Scholar, Department of Economics, Krishnaguru Adhyatmik Visvavidyalaya

Dr. Manik Chandra Barman, Research Guide, Dean of Commerce & Management, Krishnaguru Adhyatmik Visvavidyalaya & Principal, Krishnaguru Mahavidyalaya, Nasatra, Barpeta

Abstract

This study examines the potential of revitalizing Assam's economy through the sustainable development of Sarthebari's traditional bell-metal craft by analyzing its historical significance, economic contribution, opportunities for growth, and the challenges confronting the industry. The research adopts a qualitative and descriptive approach based on secondary data collected from scholarly journals, government publications, policy reports, books, and credible online sources. The study explores the role of the bell-metal industry in employment generation, rural entrepreneurship, cultural tourism, and export promotion while highlighting issues such as increasing raw material costs, competition from machine-made products, limited access to finance, inadequate technological modernization, declining interest among younger generations, and weak marketing infrastructure. It further examines the significance of Geographical Indication (GI Tag) recognition, digital commerce, skill development, design innovation, cluster-based industrial development, and public policy support as strategic measures for enhancing the competitiveness and sustainability of the sector. The findings suggest that with coordinated efforts involving government agencies, artisans, cooperatives, private enterprises, and educational institutions, Sarthebari's heritage bell-metal craft can become an important driver of inclusive economic growth, employment generation, and cultural preservation in Assam.

Keywords: Sarthebari, Bell-Metal Craft, Assam, Traditional Handicrafts, Economic Development, Cultural Heritage, Rural Entrepreneurship, Sustainable Development, Geographical Indication (GI Tag), Cottage Industry, Employment Generation, Artisan Livelihoods

Introduction

Traditional handicrafts constitute an integral component of India's cultural and economic landscape, reflecting the country's rich heritage, indigenous knowledge systems, and artisanal excellence. Beyond their cultural significance, handicraft industries serve as important sources of employment, income generation, and rural entrepreneurship, particularly in regions where agriculture alone cannot sustain livelihoods. In the context of Assam, traditional crafts such as handloom weaving, bamboo and cane

products, pottery, mask making, and bell-metal craftsmanship have played a pivotal role in preserving the state's cultural identity while contributing to its socio-economic development. Among these, the traditional bell-metal craft of Sarthebari, located in the Barpeta district of western Assam, occupies a distinctive place due to its historical legacy, exceptional craftsmanship, and continued relevance in the cultural and religious life of the region.

Sarthebari is widely recognized as the "Bell-Metal Town of Assam" because of its centuries-old tradition of producing high-quality bell-metal utensils, ritual objects, decorative items, and household articles through indigenous manufacturing techniques. The artisans of Sarthebari have inherited specialized skills over generations, combining traditional knowledge with artistic precision to create products that are valued for their durability, acoustic quality, and aesthetic appeal. Bell-metal, an alloy primarily composed of copper and tin, has long been used in Assamese households, temples, monasteries, and cultural ceremonies. Products such as *xorai*, *bota*, *ban bati*, *kahor*, *ghanta* (bells), and ceremonial utensils are deeply embedded in Assamese customs and continue to symbolize hospitality, spirituality, and cultural identity.

Despite its historical prominence, the Sarthebari bell-metal industry faces several challenges in the contemporary economic environment. The rising prices of raw materials, increasing competition from inexpensive machine-made substitutes, declining interest among younger generations in pursuing traditional occupations, inadequate access to institutional finance, limited technological modernization, and insufficient marketing infrastructure have adversely affected the growth and sustainability of the industry. The predominance of small-scale family enterprises and the limited integration of artisans into national and international value chains further constrain the sector's economic potential. These challenges threaten not only the livelihoods of artisans but also the preservation of an important element of Assam's intangible cultural heritage.

At the same time, significant opportunities exist to revitalize the Sarthebari bell-metal industry and enhance its contribution to Assam's economy. Growing consumer preference for handcrafted and sustainable products, increasing recognition of indigenous crafts through Geographical Indication (GI Tag) protection, the expansion of e-commerce platforms, heritage tourism, cultural branding, design innovation, and government initiatives supporting micro, small, and medium enterprises (MSMEs) have created a favorable environment for the development of traditional craft industries. By integrating traditional craftsmanship with modern production techniques, digital marketing strategies, entrepreneurship development, skill enhancement, and export promotion, the Sarthebari bell-metal industry can emerge as a dynamic contributor to regional economic growth while preserving its cultural authenticity.

The economic significance of the bell-metal industry extends beyond the production of handicrafts. It supports employment generation, promotes rural industrialization, encourages women's participation in household enterprises, strengthens local supply chains, and contributes to the diversification of Assam's economy. Furthermore, the industry possesses considerable potential to complement the state's tourism sector by attracting visitors interested in cultural heritage, artisan workshops, and traditional manufacturing processes. The promotion of craft-based tourism and experiential learning can generate additional income for artisan communities while enhancing public awareness of Assam's rich cultural traditions.

This research examines the role of Sarthebari's traditional bell-metal craft in revitalizing Assam's economy by analyzing its historical development, socio-economic contributions, opportunities for expansion, and the challenges affecting its sustainability. The study also explores policy interventions and strategic measures that can strengthen the industry's competitiveness through innovation, institutional support, market diversification, digital transformation, and heritage conservation. By highlighting the economic and cultural value of Sarthebari's bell-metal artistry, the research seeks to demonstrate how traditional craftsmanship can serve as a catalyst for inclusive, sustainable, and culturally grounded regional development in Assam.

Objectives of the Study

The primary objective of this study is to examine the potential of Sarthebari's traditional bell-metal craft as a catalyst for revitalizing Assam's economy while preserving its rich cultural heritage. The specific objectives of the study are as follows:

1. To examine the historical evolution and cultural significance of Sarthebari's traditional bell-metal craft in the socio-cultural context of Assam.
2. To analyze the contribution of the Sarthebari bell-metal industry to Assam's economy, with particular emphasis on employment generation, rural livelihoods, income creation, and local entrepreneurship.
3. To examine the major challenges faced by the bell-metal industry, including rising raw material costs, competition from machine-made products, inadequate access to finance, technological limitations, marketing constraints, and the declining participation of younger generations in traditional craftsmanship.
4. To evaluate the role of government policies, institutional support, cooperative organizations, and skill development initiatives in promoting the sustainability and competitiveness of the bell-metal industry.

Research Questions

This study seeks to answer the following research questions:

1. What are the historical origins and cultural significance of Sarthebari's traditional bell-metal craft in Assam?
2. How does the Sarthebari bell-metal industry contribute to Assam's economy in terms of employment generation, rural livelihoods, entrepreneurship, and income creation?
3. What opportunities exist for expanding and promoting the bell-metal industry through heritage tourism, Geographical Indication (GI Tag) recognition, digital marketing, e-commerce, product diversification, and export promotion?
4. What are the major challenges affecting the sustainability and competitiveness of the Sarthebari bell-metal industry, including issues related to raw material availability, technological advancement, market access, financial support, and the declining participation of younger artisans?
5. How effective are existing government policies, institutional support mechanisms, and development initiatives in strengthening the bell-metal industry and improving the socio-economic conditions of artisans?

Research Methodology

Research Design

This study adopts a **qualitative, descriptive, and exploratory research design** to examine the role of Sarthebari's traditional bell-metal craft in revitalizing Assam's economy. The research seeks to understand the historical development, socio-economic significance, opportunities, and challenges associated with the bell-metal industry through an in-depth analysis of existing literature and secondary sources. A qualitative approach is appropriate because the study focuses on interpreting cultural heritage, economic contributions, institutional support, and policy interventions rather than testing statistical hypotheses.

Nature and Sources of Data

The study is based entirely on **secondary data** collected from a wide range of authentic and credible sources. These include:

- Peer-reviewed journal articles related to traditional handicrafts, rural development, and cultural economics.
- Books, book chapters, and conference proceedings on Assam's handicraft sector.
- Government publications and reports from the Government of Assam, the Ministry of Micro, Small and Medium Enterprises (MSME), the Development Commissioner (Handicrafts), the Office of the Development Commissioner (MSME), the Office of the Registrar of Geographical Indications, NITI Aayog, and the Census of India.
- Reports and publications from institutions such as the North Eastern Council (NEC), National Bank for Agriculture and Rural Development (NABARD), Khadi and Village Industries Commission (KVIC), and other relevant organizations.
- Reliable online databases, official government websites, and published reports related to the bell-metal industry and artisan development.
- Newspapers, magazines, and industry reports providing recent information on policy initiatives, market trends, and the Geographical Indication (GI Tag) recognition of Sarthebari's bell-metal craft.

Data Collection Method

Data were collected through a systematic review of published literature and official documents relevant to the objectives of the study. The information gathered includes the historical evolution of the Sarthebari bell-metal industry, production processes, employment patterns, economic contributions, market structure, government initiatives, and challenges faced by artisans. Preference was given to recent and authoritative sources to ensure the reliability and relevance of the analysis.

Data Analysis

The collected data were analyzed using **descriptive and thematic analysis**. Information from different sources was classified into thematic categories, including historical background, cultural significance, economic contribution, employment generation, opportunities, challenges, and policy interventions. Comparative analysis was also employed to identify patterns, relationships, and emerging trends within the bell-metal industry. The findings were interpreted in light of existing theories and literature on rural industrialization, cultural heritage preservation, and sustainable economic development.

Scope of the Study

The study is confined to the traditional bell-metal craft industry of Sarthebari in the Barpeta district of Assam. It focuses on the industry's historical evolution, production practices, socio-economic importance, employment potential, market opportunities, institutional support, and the challenges affecting its sustainability. The research also examines how the development of the bell-metal industry can contribute to broader regional economic growth while preserving Assam's cultural heritage.

Literature Review

Traditional handicrafts have long been recognized as significant contributors to cultural preservation, rural livelihoods, and regional economic development. In India, handicraft industries are not only repositories of indigenous knowledge and artistic traditions but also important sources of employment and income, particularly in rural and semi-urban areas. The bell-metal craft of Sarthebari, located in the Barpeta district of Assam, represents one of the state's oldest and most distinctive traditional industries. Over the years, researchers, policymakers, and development agencies have examined various dimensions of Assam's

handicraft sector, including its historical significance, production systems, socio-economic contributions, and contemporary challenges. This review synthesizes the existing literature relevant to the present study.

Early studies on Assam's handicrafts emphasized their historical and cultural importance in shaping the socio-economic fabric of the region. Barpujari (1990) observed that traditional crafts have been closely associated with the cultural identity of Assamese society and have served as an important source of livelihood for artisan communities. The author noted that the production of bell-metal utensils, alongside handloom weaving and bamboo crafts, reflects centuries of indigenous knowledge, technological adaptation, and artistic excellence.

Research by Das (2013) highlighted the significance of cottage and small-scale industries in promoting rural employment and reducing regional economic disparities in Assam. According to the study, handicraft industries generate substantial self-employment opportunities with relatively low capital investment, making them particularly suitable for rural development. The author argued that strengthening traditional industries through financial assistance, technological modernization, and market expansion could significantly enhance the state's economic growth.

Studies focusing specifically on Sarthebari's bell-metal industry emphasize its unique historical legacy and cultural value. Sharma (2017) described Sarthebari as the "Bell-Metal Town of Assam," where traditional manufacturing techniques have been transmitted from one generation to another for centuries. The study documented the production process, including alloy preparation, casting, forging, shaping, polishing, and finishing, highlighting the exceptional craftsmanship of local artisans. However, it also identified declining profitability, increasing production costs, and competition from factory-made products as major constraints affecting the industry's sustainability.

Borah and Deka (2018) examined the economic contribution of Assam's traditional handicrafts and observed that the bell-metal industry supports a considerable number of artisan households through direct and indirect employment. Their findings indicate that the sector contributes to household income, rural entrepreneurship, and local economic activity while preserving traditional knowledge and cultural practices. Nevertheless, inadequate marketing infrastructure, limited access to institutional credit, and poor product diversification were identified as persistent challenges restricting the industry's growth potential.

The role of handicrafts in sustainable development has received increasing scholarly attention. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2003), safeguarding intangible cultural heritage contributes not only to cultural preservation but also to sustainable development by creating employment opportunities, strengthening community identity, and encouraging inclusive economic growth. UNESCO further emphasizes that traditional craftsmanship can become an important driver of local development when supported through education, documentation, innovation, and policy interventions.

Government reports have consistently highlighted the economic importance of handicraft industries in India's rural economy. The Development Commissioner (Handicrafts), Ministry of Textiles (2022), noted that the handicraft sector is one of the country's largest decentralized industries, providing employment to millions of artisans. Various schemes, including skill development programmes, marketing assistance, design intervention initiatives, and cluster development projects, have been implemented to improve artisans' productivity and competitiveness. These initiatives are particularly relevant for traditional industries such as Sarthebari's bell-metal craft.

The Government of Assam has also introduced several initiatives to promote traditional industries through infrastructure development, artisan training, financial support, and participation in national and international trade fairs. Recent recognition of **Sarthebari Metal Craft** under the Geographical Indication (GI Tag) framework has strengthened its market identity by legally protecting the authenticity and geographical origin of the products. Scholars argue that GI recognition can improve product branding,

enhance consumer confidence, increase market value, and generate higher incomes for artisan communities when supported by effective quality control and marketing strategies.

Recent literature highlights the transformative potential of digital technologies in strengthening traditional craft industries. Kumar and Singh (2021) argued that e-commerce platforms, social media marketing, digital payment systems, and online branding enable artisans to access broader domestic and international markets while reducing dependence on intermediaries. Similarly, studies on creative industries emphasize that product innovation, contemporary design adaptation, and collaboration with professional designers can expand consumer demand without compromising traditional craftsmanship.

Tourism scholars have also emphasized the role of heritage-based tourism in promoting regional economic development. Timothy and Boyd (2003) argued that traditional crafts constitute an important component of cultural tourism because they provide visitors with authentic experiences and opportunities to engage directly with local artisans. In the context of Assam, integrating Sarthebari's bell-metal craft with heritage tourism circuits could create additional employment opportunities, strengthen local enterprises, and enhance the visibility of indigenous craftsmanship.

The present study seeks to address these gaps by providing an integrated analysis of Sarthebari's traditional bell-metal craft as a potential catalyst for Assam's economic growth. It examines the industry's historical evolution, socio-economic contributions, opportunities for expansion, contemporary challenges, and policy implications within the broader framework of sustainable development, cultural heritage preservation, and rural industrialization. In doing so, the study contributes to the existing literature by offering practical recommendations for strengthening one of Assam's most iconic traditional industries while promoting inclusive and sustainable regional development.

Historical Evolution of Sarthebari Bell-Metal Industry

The bell-metal industry of Sarthebari represents one of the oldest and most significant traditional craft industries of Assam. Rooted in centuries-old metallurgical knowledge and indigenous craftsmanship, the industry reflects the historical continuity of Assamese culture, social practices, and economic activities. Sarthebari, situated in the present-day Barpeta district of Assam, has emerged as the principal centre of bell-metal production in the state, earning recognition for its distinctive craftsmanship and traditional manufacturing techniques.

The origin of bell-metal craftsmanship in Assam is associated with the broader history of metalworking traditions in the Indian subcontinent. Bell-metal, locally known as *kāh* or *kāñsa*, is an alloy primarily composed of copper and tin. The craft involves specialized processes of alloy preparation, casting, hammering, shaping, and polishing, which have been preserved through generations of artisans. The traditional knowledge system associated with this craft has historically been passed down within artisan families, particularly among the Kahar or Orja communities who have played a central role in maintaining the industry.

Historical references indicate that the bell-metal tradition of Assam flourished during the reign of King Kumar Bhaskarvarman (approximately 7th century CE), the ruler of the ancient Kamarupa kingdom. Historical accounts mention that bell-metal vessels from Assam were presented as gifts to King Harshavardhana of Kannauj, demonstrating the recognition and artistic value of Assamese metal craftsmanship beyond the region. Similarly, traditional accounts associate the presentation of *bhortal* (large cymbals) made of bell metal to the Chinese scholar Hiuen Tsang during his visit to Kamarupa with the prominence of metal artistry during that period. These references suggest that bell-metal products were not merely household items but also objects of cultural exchange and royal importance.

During the medieval period, particularly under the patronage of the Ahom rulers, bell-metal craftsmanship received further encouragement and developed as an important artisan-based industry. Royal courts, religious institutions, and local communities supported the production of utensils, ceremonial objects, and musical instruments. Bell-metal items became closely associated with Assamese religious and social traditions, especially within Vaishnavite institutions such as *Satras*, where cymbals and ritual objects were widely used. The demand generated by religious practices contributed significantly to the continuity and expansion of the craft.

Over time, Sarthebari became the central hub of bell-metal production in Assam. The craft expanded from Sarthebari to surrounding villages, creating a wider artisan cluster. Traditional workshops, locally known as *kanshar shaal*, operated as family-based cottage industries where artisans produced a wide range of products using traditional tools and techniques. Major products included *xorai* (ceremonial offering stands), *bota* (containers for betel nut and offerings), *kanhi* (plates), *bati* (bowls), *ban bati*, water vessels, and *taal* (cymbals used in religious and cultural performances).

The colonial period brought significant economic changes to the Sarthebari bell-metal industry. During the pre-independence period, artisans often depended on intermediaries or *mahajans* from outside Assam for raw materials and financial assistance. These intermediaries supplied scrap bell metal and other resources while controlling marketing and pricing, which limited the economic benefits received by artisans. The introduction of colonial economic structures and changing market conditions created additional difficulties for traditional artisan communities.

An important development in the history of the industry was the formation of the **Asom Samabai Kohar Sangha** in 1930. Established under the Assam Cooperative Societies Act, the cooperative attempted to reduce artisans' dependence on intermediaries by providing raw materials, financial assistance, and improved wage arrangements. This initiative represented an early effort toward organizing artisans and strengthening the economic foundation of the bell-metal sector.

After independence, the Government of Assam recognized the importance of the bell-metal industry as a traditional cottage industry and introduced measures to support its modernization. In 1957–58, the Industries Department established a rolling mill at Sarthebari with the objective of improving production capacity and supporting artisans. However, operational difficulties, high costs, and inadequate technical expertise prevented the facility from achieving its intended objectives. Despite such challenges, the traditional artisan-based production system continued to survive through community knowledge and inherited skills.

In the contemporary period, Sarthebari's bell-metal industry has experienced both challenges and opportunities. While traditional craftsmanship continues to sustain artisan livelihoods and preserve Assamese cultural identity, the industry faces pressures from rising raw material costs, competition from industrially manufactured goods, changing consumer preferences, and limited market access. At the same time, initiatives related to Geographical Indication (GI Tag) recognition, heritage tourism, digital marketing, skill development, and government support programmes have created new possibilities for revitalizing the sector.

The historical evolution of Sarthebari's bell-metal industry demonstrates its transformation from a traditional craft practiced for cultural and religious purposes into a potential instrument of economic development. Its survival over centuries reflects the resilience of artisan communities and the enduring value of indigenous knowledge. A sustainable revival of this industry requires balancing heritage conservation with modern economic strategies, ensuring that traditional craftsmanship continues to contribute to Assam's cultural identity and economic growth.

Economic Importance of Sarthebari Bell-Metal Craft

The Sarthebari bell-metal craft holds considerable economic significance in Assam by contributing to employment generation, rural entrepreneurship, household income, and the preservation of traditional economic activities. As one of the most prominent cottage industries of the state, the bell-metal sector represents an important example of how traditional craftsmanship can support local economies while maintaining cultural identity. The industry operates primarily through artisan-based family enterprises, where skills, production methods, and occupational knowledge are transferred across generations. Its economic importance extends beyond the production and sale of metalware, influencing various interconnected activities such as raw material supply, transportation, trading, tourism, and cultural services.

Employment Generation and Livelihood Support

One of the most significant economic contributions of the Sarthebari bell-metal industry is its role in providing employment opportunities for artisan communities. The craft supports numerous households directly involved in manufacturing activities such as alloy preparation, heating, hammering, shaping, polishing, and finishing of bell-metal products. In addition to skilled artisans, the industry creates indirect employment opportunities for suppliers of raw materials, traders, transporters, retailers, and individuals involved in marketing and distribution.

Unlike capital-intensive industries, traditional craft industries require comparatively lower investment while utilizing local skills and labour resources. Therefore, the Sarthebari bell-metal industry contributes to rural employment generation and helps reduce economic dependence on agriculture. For many artisan families, the craft serves as a primary or supplementary source of income, supporting household stability and community-based economic activity.

Contribution to Rural and Local Economic Development

The bell-metal industry plays an important role in strengthening the local economy of Sarthebari and surrounding areas. Since production is concentrated within artisan communities, income generated from the craft circulates within the local economy through expenditure on household needs, education, services, and other economic activities. This creates a multiplier effect by encouraging demand for related goods and services.

The industry also contributes to rural industrialization by demonstrating the potential of small-scale traditional enterprises in generating economic opportunities outside major urban centres. The development of artisan clusters, cooperative institutions, and local markets can further strengthen the economic ecosystem surrounding bell-metal production.

Promotion of Entrepreneurship and Self-Employment

Sarthebari's bell-metal craft provides opportunities for small-scale entrepreneurship among artisans and traders. Many artisan households operate as micro-enterprises, managing production, sales, and business decisions independently. The availability of traditional skills provides a foundation for entrepreneurship development, particularly when supported by access to finance, training, technology, and market linkages.

With changing consumer preferences and increasing demand for handmade, eco-friendly, and culturally significant products, artisans have opportunities to diversify their product range. Contemporary designs, decorative items, customized products, and premium heritage collections can expand market reach and increase income potential.

Contribution to Cultural Tourism and Heritage Economy

The economic value of Sarthebari's bell-metal craft is closely connected with Assam's cultural tourism potential. Traditional crafts attract visitors interested in experiencing indigenous production methods, local culture, and artisan traditions. By integrating bell-metal workshops, craft demonstrations, artisan villages, and heritage tours into tourism programmes, Sarthebari can develop as a cultural destination.

Heritage tourism can generate additional income sources for artisans through direct product sales, guided experiences, workshops, and cultural events. This approach transforms traditional craftsmanship from merely a production activity into a broader cultural and economic resource.

Market Potential and Export Opportunities

The growing global demand for handmade products, sustainable goods, and culturally distinctive crafts provides significant opportunities for the expansion of Sarthebari bell-metal products. Consumers increasingly value products associated with authenticity, craftsmanship, and environmental sustainability. With effective branding, quality improvement, packaging, and digital marketing, Sarthebari products can access wider domestic and international markets.

The Geographical Indication (GI Tag) recognition of Sarthebari Metal Craft provides an important opportunity to strengthen product identity, protect traditional knowledge, and improve market recognition. GI branding can enhance consumer confidence and potentially increase the economic returns received by artisans if supported by proper promotion and market strategies.

Challenges Affecting Economic Potential

Despite its economic importance, the industry faces several challenges that limit its growth potential. High costs of raw materials, outdated production techniques, limited access to institutional finance, inadequate marketing networks, and competition from machine-made alternatives affect artisans' profitability. Additionally, younger generations are increasingly moving away from traditional craftsmanship due to uncertain income prospects.

Addressing these challenges through coordinated policy support, infrastructure development, skill enhancement, digital integration, and market expansion is essential for maximizing the economic contribution of Sarthebari's bell-metal craft.

Employment Generation and Rural Livelihood

The Sarthebari bell-metal industry plays a significant role in generating employment opportunities and sustaining rural livelihoods in Assam. As a traditional cottage industry, it provides a source of income for artisan families who possess specialized skills in metalworking techniques inherited through generations. Unlike large-scale industrial activities that require substantial capital investment, the bell-metal craft relies primarily on indigenous knowledge, manual skills, and community-based production systems. Therefore, it serves as an important mechanism for promoting employment, reducing economic vulnerability, and strengthening rural economies.

Direct Employment Opportunities

The primary economic contribution of the Sarthebari bell-metal industry is the employment it provides to skilled artisans engaged in various stages of production. The manufacturing process involves several specialized activities, including alloy preparation, heating, hammering, shaping, engraving, polishing, and finishing. Each stage requires technical expertise and craftsmanship developed through years of training and practical experience.

Artisan households involved in bell-metal production generally function as small family-based enterprises, where multiple members participate in different aspects of production. This traditional work structure ensures the continuation of craft knowledge while providing livelihood support to generations of artisan families. The industry also creates employment for workers involved in related activities such as raw material supply, tool manufacturing, transportation, trading, and retailing.

Promotion of Rural Entrepreneurship

The Sarthebari bell-metal industry encourages entrepreneurship by enabling artisans to operate small-scale production units with limited financial resources. Many craftsmen manage their own workshops, purchase raw materials, organize production, and participate in local markets. Such micro-enterprises represent an important form of rural entrepreneurship and demonstrate the potential of traditional industries in creating self-employment opportunities.

With improved access to credit facilities, business training, digital platforms, and market networks, artisan entrepreneurs can expand their operations, improve product quality, and increase profitability. Encouraging young entrepreneurs to engage with the craft through innovative business models can also support the long-term sustainability of the industry.

Indirect Employment and Local Economic Linkages

The economic impact of the Sarthebari bell-metal industry extends beyond direct artisans. The industry creates indirect employment opportunities through various supporting activities, including raw material collection, metal supply, tool production, transportation, packaging, marketing, and retail distribution. Local traders and businesses benefit from the continuous demand generated by the craft sector.

Furthermore, increased recognition of Sarthebari as a heritage craft centre can promote tourism-related employment through craft exhibitions, artisan workshops, cultural events, and heritage experiences. This can create additional livelihood opportunities for local communities.

Challenges Affecting Employment Sustainability

Despite its employment potential, the Sarthebari bell-metal industry faces several challenges that affect artisan livelihoods. Rising production costs, fluctuating raw material prices, low profit margins, limited access to organized markets, and competition from mass-produced metal goods have reduced the economic attractiveness of the craft. Many young people are shifting towards other occupations due to concerns regarding income security and career growth.

To ensure continued employment generation, interventions are required in areas such as skill development, financial support, technological improvement, market expansion, and social security measures for artisans. Strengthening artisan cooperatives and connecting producers directly with consumers can also improve income stability.

Role in Assam's Cultural Economy

The traditional bell-metal craft of Sarthebari occupies a significant position within Assam's cultural economy by linking heritage preservation with economic activity. Cultural economy refers to the process through which cultural resources, traditional knowledge, artistic practices, and creative expressions generate social and economic value. Sarthebari's bell-metal industry represents a unique example of how an inherited craft tradition can contribute to cultural identity, community development, tourism promotion, and livelihood generation while strengthening the economic foundation of Assam.

Contribution to the Creative Economy

The Sarthebari bell-metal industry forms part of Assam's broader creative economy, where traditional knowledge and artistic skills are transformed into valuable cultural products. Unlike conventional industries that depend primarily on machinery and standardized production, the value of bell-metal products lies in craftsmanship, authenticity, uniqueness, and cultural significance.

The increasing global appreciation for handmade, heritage-based, and sustainable products creates opportunities for traditional crafts to participate in emerging creative markets. By promoting innovative designs while maintaining traditional techniques, Sarthebari's artisans can expand their consumer base and enhance the economic value of their products.

Promotion of Cultural Tourism

Sarthebari's bell-metal craft has considerable potential to contribute to Assam's cultural tourism sector. Tourists increasingly seek authentic experiences that allow them to understand local traditions, observe traditional production methods, and interact with artisan communities. Craft villages, workshop visits, live demonstrations, and cultural exhibitions can transform Sarthebari into an important heritage tourism destination.

The integration of bell-metal craftsmanship into tourism circuits can create additional sources of income for artisans through direct product sales, tourism services, training workshops, and cultural programmes. Such initiatives can benefit not only artisans but also local businesses involved in hospitality, transportation, and tourism services.

Role of Geographical Indication (GI Tag) in Cultural Branding

The recognition of Sarthebari Metal Craft under the Geographical Indication (GI Tag) framework provides an important opportunity to strengthen Assam's cultural economy. GI status identifies products with a specific geographical origin and protects the traditional knowledge associated with them. It can improve brand recognition, increase consumer trust, and create opportunities for premium marketing.

Effective utilization of GI recognition requires awareness among artisans, proper certification mechanisms, quality maintenance, and strategic promotion. When successfully implemented, GI branding can transform cultural heritage into economic value while protecting the authenticity of traditional craftsmanship.

Contribution to Market Visibility

Traditional crafts often serve as representatives of regional identity in national and international cultural exchanges. Sarthebari bell-metal products have the potential to promote Assam's cultural image through exhibitions, craft fairs, tourism events, and international markets. Such visibility can increase demand for Assamese handicrafts and strengthen connections between cultural preservation and economic development.

Participation in national and international handicraft exhibitions can provide artisans with opportunities to interact with new markets, understand consumer preferences, and develop innovative product strategies. This enhances both cultural recognition and commercial potential.

Major Challenges Faced by Sarthebari Bell-Metal Industry

Although Sarthebari's traditional bell-metal craft possesses significant cultural and economic potential, the industry faces several challenges that affect its sustainability, competitiveness, and contribution to Assam's economic development. The transition from a traditional artisan-based economy to a modern market-oriented industry has created multiple difficulties for craftsmen, including economic constraints, technological limitations, marketing barriers, and social challenges. Addressing these issues is essential for ensuring the survival and revitalization of this heritage industry.

1. Rising Cost and Limited Availability of Raw Materials

One of the major challenges faced by bell-metal artisans is the increasing cost of essential raw materials, particularly copper and tin, which are required for alloy preparation. Fluctuations in metal prices directly affect production costs and reduce profit margins for artisans. Since most craftsmen operate as small-scale producers with limited financial resources, they often find it difficult to purchase raw materials in bulk at competitive prices.

Dependence on external suppliers and intermediaries further increases production expenses. A systematic raw material supply mechanism through cooperatives or government-supported initiatives could help artisans reduce costs and improve economic stability.

2. Competition from Machine-Made and Alternative Products

The Sarthebari bell-metal industry faces intense competition from mass-produced metal utensils and cheaper substitutes available in the market. Machine-made products are often produced at lower costs and can be supplied in larger quantities, making it difficult for handmade bell-metal products to compete on price.

Traditional products require considerable time and skilled labour, resulting in higher production costs. Although handmade products possess cultural and artistic value, many consumers prioritize affordability, creating market pressure on traditional artisans.

3. Limited Technological Modernization

The production process of Sarthebari bell-metal craft continues to rely largely on traditional tools and manual techniques. While these methods preserve authenticity and craftsmanship, limited technological improvement affects productivity, efficiency, and product consistency.

The absence of appropriate technology for improving production processes, quality control, and finishing techniques restricts the industry's ability to meet larger market demands. Modernization efforts must therefore focus on improving efficiency without compromising traditional craftsmanship.

4. Inadequate Marketing and Market Access

Limited marketing infrastructure remains a significant obstacle for Sarthebari artisans. Many producers depend on local markets, traders, and intermediaries for product sales, which often reduces their bargaining power and limits income opportunities.

Insufficient branding, packaging, product promotion, and digital marketing skills prevent artisans from reaching wider consumer markets. Although online platforms provide new opportunities, many artisans lack the technical knowledge and resources required to effectively utilize e-commerce and digital marketing channels.

5. Lack of Institutional Finance and Credit Facilities

Access to affordable credit remains a challenge for many artisan households. Limited awareness of government schemes, complicated application procedures, and lack of financial documentation often prevent artisans from accessing institutional loans and development assistance.

As a result, many craftsmen depend on informal sources of finance, which can increase economic vulnerability. Improved financial inclusion through simplified credit systems, artisan-focused banking services, and cooperative financing mechanisms is necessary for strengthening the industry.

6. Declining Interest Among Younger Generations

The transfer of traditional skills from one generation to another is essential for the survival of the Sarthebari bell-metal craft. However, younger generations are increasingly reluctant to continue the occupation due to uncertain income, physically demanding work, and limited social recognition.

Many young people prefer alternative employment opportunities that offer greater financial security and career growth. Without effective skill development programmes, improved earnings, and recognition of artisanship as a professional career, the industry may face a shortage of skilled craftsmen in the future.

7. Weak Branding and Limited Utilization of GI Recognition

Although Geographical Indication (GI Tag) recognition provides an opportunity to strengthen the identity of Sarthebari bell-metal products, effective utilization requires proper branding, awareness, certification, and promotion. Many artisans remain unaware of how GI status can improve market value and protect traditional knowledge.

Without strategic branding and consumer awareness campaigns, the economic benefits of GI recognition may not fully reach artisan communities.

8. Inadequate Infrastructure and Production Facilities

Many artisan workshops operate with limited infrastructure and traditional production environments. Lack of proper workspace, storage facilities, safety equipment, and modern tools affects productivity and working conditions.

Improved common facility centres, artisan clusters, and shared production infrastructure could enhance efficiency while reducing individual production costs.

9. Limited Export Opportunities

Despite the uniqueness and cultural value of Sarthebari bell-metal products, their presence in international markets remains limited. Challenges related to quality certification, packaging standards, international marketing, logistics, and export procedures restrict global market access.

Developing export-oriented strategies, participating in international craft exhibitions, and establishing stronger trade networks could increase the global visibility of Sarthebari products.

Government Policies and GI Registration

The sustainability and growth of traditional craft industries depend significantly on supportive government policies, institutional interventions, market development initiatives, and legal protection mechanisms. Recognizing the cultural and economic importance of handicrafts, the Government of India and the Government of Assam have introduced various programmes aimed at improving artisan livelihoods, strengthening craft clusters, promoting entrepreneurship, and expanding market opportunities. In the case of Sarthebari's traditional bell-metal craft, these initiatives have played an important role in preserving heritage while creating pathways for economic revitalization.

Government Support for Handicraft Development

The Government of India has implemented several schemes through the Ministry of Textiles, particularly the Office of the Development Commissioner (Handicrafts), to support artisans and traditional craft industries. These initiatives focus on skill development, design improvement, infrastructure development, marketing assistance, and financial support. Programmes such as the National Handicrafts Development Programme (NHDP) and related artisan welfare initiatives aim to enhance the productivity, income, and competitiveness of craft communities.

Under these programmes, artisans receive support through training workshops, participation in trade fairs and exhibitions, assistance for product development, and opportunities to connect with wider markets. Such interventions are particularly relevant for Sarthebari artisans, as they help bridge the gap between traditional craftsmanship and modern market requirements.

Financial Assistance and Artisan Welfare Schemes

Financial constraints remain a major challenge for traditional artisans; therefore, various government schemes provide credit support, subsidies, and welfare assistance. Initiatives under micro, small, and medium enterprise (MSME) development encourage artisan entrepreneurship by facilitating access to loans, business training, and enterprise support.

Social security initiatives, insurance schemes, and pension-related programmes also contribute to improving the economic security of artisan communities. Such measures are essential for encouraging younger generations to continue traditional occupations.

Government of Assam Initiatives

The Government of Assam has recognized handicrafts as important components of the state's cultural heritage and rural economy. Through the Industries, Commerce and Public Enterprise Department and other agencies, initiatives have been undertaken to promote traditional industries through skill development, marketing support, exhibitions, and entrepreneurship programmes.

Assam's handicraft promotion strategies emphasize preserving indigenous skills while improving commercial opportunities. The promotion of traditional crafts through state-level exhibitions, cultural festivals, and tourism initiatives has helped increase public awareness and market visibility of products associated with Assam's heritage.

Geographical Indication (GI Tag) Registration of Sarthebari Metal Craft

Geographical Indication (GI Tag) registration is an important mechanism for protecting traditional products associated with specific geographical regions. A GI tag recognizes that a product possesses unique qualities, reputation, or characteristics linked to its place of origin. It provides legal protection against unauthorized use of the product's name and strengthens its authenticity in domestic and international markets.

Sarthebari Metal Craft received Geographical Indication recognition, providing an opportunity to strengthen the identity and market value of this traditional Assamese craft. The GI status highlights the uniqueness of Sarthebari's bell-metal products, which are produced using traditional techniques and indigenous craftsmanship developed over generations.

The GI recognition has several potential economic benefits:

1. Enhanced Product Identity and Branding

GI registration helps differentiate Sarthebari bell-metal products from similar machine-made or mass-produced goods. It creates a unique brand identity based on geographical origin, traditional knowledge, and craftsmanship.

2. Improved Market Opportunities

A GI tag can increase consumer confidence and create opportunities for premium pricing, specialized markets, tourism promotion, and export development. Consumers increasingly value authentic handmade products with identifiable cultural backgrounds.

3. Protection of Traditional Knowledge

GI recognition contributes to the protection of indigenous knowledge and prevents unauthorized commercial exploitation of the craft's name and reputation. It supports the preservation of traditional production methods and artisan skills.

4. Promotion of Cultural Tourism

GI-certified crafts often become important attractions in cultural tourism. Sarthebari's GI recognition can support the development of craft tourism initiatives, including artisan workshops, exhibitions, and heritage experiences that generate additional income opportunities.

Challenges in Effective Implementation of GI Benefits

Although GI registration provides significant opportunities, the economic benefits do not automatically reach artisans. Effective utilization requires awareness among craftsmen, quality control mechanisms, collective branding, market promotion, and institutional coordination. Many traditional artisans require training on GI-related opportunities, packaging standards, digital marketing, and direct market access.

Without proper implementation strategies, GI recognition may remain largely symbolic rather than becoming an effective tool for economic empowerment. Therefore, government agencies, artisan organizations, and private stakeholders must work together to maximize the benefits of GI protection.

Strategies for Sustainable Economic Growth through Sarthebari Bell-Metal Craft

The revitalization of Sarthebari's traditional bell-metal craft requires a balanced approach that combines heritage conservation with modern economic strategies. While the industry possesses significant cultural value and livelihood potential, its long-term sustainability depends on improving productivity, expanding markets, enhancing artisan welfare, and integrating traditional craftsmanship with contemporary business practices. A comprehensive development strategy involving government agencies, artisan communities, private organizations, educational institutions, and tourism stakeholders can transform the bell-metal industry into a sustainable contributor to Assam's economic growth.

1. Strengthening Artisan Skills and Capacity Development

Skill development is essential for preserving traditional craftsmanship while enabling artisans to adapt to changing market demands. Regular training programmes should be organized to improve technical skills, quality management, entrepreneurship abilities, and knowledge of modern business practices.

Training initiatives should focus on:

- Improving traditional production techniques while maintaining authenticity.
- Introducing safe and efficient tools and production methods.
- Developing entrepreneurial and financial management skills.
- Encouraging young people to learn and continue the craft tradition.

Collaboration between artisan communities, government training institutions, universities, and design organizations can help create a skilled workforce capable of sustaining the industry for future generations.

2. Promoting Product Diversification and Design Innovation

Changing consumer preferences require traditional crafts to adapt without losing their cultural identity. Product diversification can increase market demand by introducing new categories of bell-metal products suitable for contemporary lifestyles.

Artisans can explore:

- Decorative home accessories.
- Corporate and institutional gifts.
- Modern kitchenware designs.
- Customized heritage products.
- Premium handcrafted collections for domestic and international markets.

Collaboration with professional designers and creative institutions can help combine traditional techniques with modern aesthetics, increasing the commercial value of Sarthebari products.

3. Improving Marketing and Digital Market Access

Limited market access remains one of the major barriers to artisan income growth. Developing effective marketing strategies is essential for connecting Sarthebari artisans with wider consumer groups.

Important measures include:

- Creating a strong digital presence through websites and social media platforms.
- Promoting products through e-commerce platforms.
- Developing professional product photography, packaging, and branding.
- Participating in national and international craft exhibitions.
- Establishing direct consumer-to-artisan market linkages.

Digital marketing can reduce dependence on intermediaries and enable artisans to receive better economic returns from their products.

4. Maximizing the Benefits of GI Registration

The Geographical Indication (GI Tag) status of Sarthebari Metal Craft provides an important opportunity for strengthening product identity and market recognition. However, effective utilization requires coordinated efforts to promote the GI brand.

Strategies should include:

- Increasing awareness among artisans about GI benefits.
- Ensuring quality standards among producers.
- Developing collective branding and certification systems.
- Promoting GI-labelled products through tourism and trade platforms.
- Educating consumers about the uniqueness of authentic Sarthebari crafts.

A strong GI-based marketing strategy can enhance product value and protect the traditional knowledge associated with the craft.

5. Developing Craft-Based Tourism

Sarthebari's bell-metal industry has significant potential to become a major component of Assam's cultural tourism sector. Heritage tourism can create additional income opportunities while increasing public appreciation for traditional craftsmanship.

Possible initiatives include:

- Establishing artisan villages and craft experience centres.
- Organizing live demonstrations of bell-metal production.
- Including Sarthebari in Assam's cultural tourism circuits.
- Conducting craft workshops for visitors and students.
- Promoting annual craft festivals and exhibitions.

Craft tourism can create employment beyond production by supporting hospitality, transportation, guiding services, and local entrepreneurship.

6. Establishing Stronger Financial Support Systems

Access to affordable finance is necessary for artisans to improve production capacity and expand businesses. Financial institutions and government agencies should develop simplified credit mechanisms specifically designed for craft communities.

Required measures include:

- Low-interest loans for artisan enterprises.
- Working capital support for raw material purchase.
- Financial literacy programmes.
- Assistance for adopting improved tools and infrastructure.
- Insurance and social security coverage for artisans.

Improved financial inclusion can reduce dependence on informal lenders and strengthen artisan independence.

8. Encouraging Youth Participation and Knowledge Transfer

The future of Sarthebari's bell-metal craft depends on attracting younger generations to the profession. Programmes should present craftsmanship as a viable career opportunity rather than merely a traditional occupation.

Measures to encourage youth participation include:

- Introducing craft education in schools and colleges.
- Providing apprenticeships and skill development programmes.
- Supporting young artisan entrepreneurs.
- Recognizing outstanding craftsmen through awards and incentives.

Ensuring knowledge transfer between experienced artisans and younger learners is essential for preserving the craft tradition.

9. Strengthening Institutional Collaboration

The successful revitalization of Sarthebari's bell-metal industry requires cooperation among multiple stakeholders, including government departments, artisan cooperatives, financial institutions, tourism organizations, academic institutions, and private enterprises.

A coordinated approach can support:

- Research and documentation of traditional knowledge.
- Innovation and product development.
- Market expansion.
- Policy implementation.
- International promotion.

Policy Recommendations

The revitalization of Sarthebari's traditional bell-metal craft requires comprehensive policy interventions that address economic, technological, social, and market-related challenges. Although government initiatives and Geographical Indication (GI) recognition have created opportunities for the growth of the industry, stronger institutional mechanisms and long-term strategies are necessary to ensure sustainable development. The following policy recommendations are proposed to strengthen the bell-metal industry and enhance its contribution to Assam's economic growth.

1. Establishment of a Dedicated Bell-Metal Craft Development Authority

A specialized institutional framework should be established to coordinate the development of Sarthebari's bell-metal industry. A dedicated authority or development council comprising government representatives, artisans, researchers, designers, and industry experts can formulate policies, monitor implementation, and address sector-specific challenges.

Such an institution can focus on:

- Artisan welfare and skill development.
- Market promotion and branding.
- Research and documentation of traditional techniques.
- Coordination among government agencies and stakeholders.
- Implementation of GI-related development strategies.

2. Strengthening Raw Material Supply Systems

A reliable and affordable supply chain for essential raw materials such as copper and tin is necessary to improve artisan profitability. Government agencies and artisan cooperatives should establish mechanisms for bulk procurement and distribution of raw materials at reasonable prices.

Recommended measures include:

- Creation of raw material banks for artisans.
- Cooperative-based procurement systems.
- Price stabilization mechanisms.
- Promotion of metal recycling initiatives.

These measures can reduce production costs and protect artisans from market fluctuations.

3. Development of Modern Craft Infrastructure

The establishment of modern infrastructure facilities is essential for improving productivity while preserving traditional methods. Common Facility Centres (CFCs) should be strengthened with appropriate equipment, storage facilities, quality testing services, and improved working environments.

Infrastructure support should include:

- Modern tools compatible with traditional techniques.
- Safe and efficient production facilities.
- Packaging and finishing units.
- Display centres and craft galleries.

Such facilities can enhance product quality and enable artisans to meet larger market demands.

4. Expansion of Financial Support and Credit Accessibility

Financial constraints remain a major barrier for artisan development. Policies should ensure easier access to affordable credit, working capital, and entrepreneurship support.

Recommended actions include:

- Simplifying loan procedures for artisan households.
- Increasing awareness of government financial schemes.
- Providing low-interest loans for business expansion.
- Offering financial literacy and enterprise management training.
- Developing special credit programmes for GI-certified craft producers.

Improved financial access can encourage artisans to invest in innovation and expand their enterprises.

5. Promotion of Digital Marketing and E-Commerce Integration

Digital platforms provide significant opportunities for traditional crafts to reach wider markets. Government agencies should support artisans in adopting digital marketing tools and online business practices.

Policy measures should include:

- Digital literacy programmes for artisans.
- Assistance in creating online product catalogues.
- Partnerships with e-commerce platforms.
- Professional branding and packaging support.
- Digital payment training.

Direct online market access can increase artisan income by reducing dependence on intermediaries.

6. Strengthening GI-Based Branding and Market Promotion

The GI recognition of Sarthebari Metal Craft should be effectively utilized as a tool for economic empowerment. Policies should focus on transforming GI status into a strong market identity.

Required initiatives include:

- Awareness campaigns regarding GI benefits.
- Quality certification and monitoring systems.
- Promotion of authentic GI-labelled products.
- National and international marketing campaigns.
- Inclusion of Sarthebari craft in government gift programmes and cultural events.

A strong GI brand can increase consumer trust and enhance the commercial value of the products.

8. Encouraging Youth Participation and Skill Transmission

The decline in younger generations entering the craft profession threatens the continuity of traditional knowledge. Policies should encourage youth participation through education, training, and entrepreneurship opportunities.

Suggested measures include:

- Introducing craft education programmes.
- Establishing apprenticeship schemes with master artisans.
- Providing incentives for young craft entrepreneurs.
- Recognizing traditional craftsmanship as a professional career option.

These initiatives can ensure the transfer of skills and knowledge to future generations.

9. Encouraging Research, Innovation, and Design Collaboration

Research institutions, universities, and design organizations should collaborate with artisans to improve product innovation and market relevance.

Possible interventions include:

- Documentation of traditional techniques.
- Design development workshops.
- Research on improved production methods.
- Collaboration with designers for contemporary product lines.
- Studies on international market opportunities.

Innovation should complement traditional skills rather than replace them.

10. Ensuring Social Security and Welfare Protection for Artisans

Artisans often face economic uncertainty due to irregular income and market fluctuations. Strengthening welfare measures is necessary to improve their quality of life.

Policy support should include:

- Health insurance coverage.
- Pension and retirement benefits.
- Accident insurance.
- Skill recognition and certification.
- Support during periods of economic hardship.

Improved social security can increase occupational stability and encourage continued participation in the craft sector.

Conclusion

Sarthebari's traditional bell-metal craft represents a remarkable combination of cultural heritage, indigenous knowledge, artistic excellence, and economic potential. As one of Assam's oldest surviving craft traditions, the industry has played a significant role in preserving the cultural identity of the state while providing employment and livelihood opportunities to generations of artisan families. The craft is not merely a form of artistic expression but also an important component of Assam's rural economy, contributing to entrepreneurship, local economic activity, and community-based development.

The study highlights that the Sarthebari bell-metal industry possesses considerable potential to contribute to Assam's economic growth through employment generation, cultural tourism, market expansion, and creative entrepreneurship. Its unique craftsmanship, historical importance, and growing consumer interest in handmade and heritage products provide valuable opportunities for sustainable development. The recognition of Sarthebari Metal Craft under the Geographical Indication (GI Tag) framework further strengthens its identity and creates possibilities for improved branding, market access, and economic empowerment of artisans.

However, the industry continues to face several challenges, including rising raw material costs, competition from machine-made products, limited technological advancement, inadequate financial support, weak marketing networks, and declining interest among younger generations. These challenges threaten both the economic sustainability of artisan communities and the continuity of traditional knowledge. Therefore, preserving the craft requires strategies that address economic constraints while maintaining the authenticity and cultural value of the products.

The revitalization of Sarthebari's bell-metal craft requires a comprehensive and collaborative approach involving government agencies, artisan organizations, financial institutions, designers, tourism stakeholders, and consumers. Strengthening artisan skills, improving infrastructure, promoting digital marketing, expanding domestic and international markets, encouraging product innovation, and effectively utilizing GI recognition can significantly enhance the industry's competitiveness. Furthermore, integrating the craft with cultural tourism and creative economy initiatives can generate additional income opportunities and strengthen Assam's heritage-based development model.

The future of Sarthebari's bell-metal industry depends on creating a balance between tradition and modernization. While technological improvements and market-oriented approaches are necessary for economic sustainability, they must be implemented without weakening the traditional techniques and cultural values that make the craft unique. Empowering artisans through education, financial inclusion, social security, and entrepreneurship support will be essential for ensuring the survival of this heritage industry.

In conclusion, Sarthebari's bell-metal craft has the potential to become a significant driver of inclusive and sustainable economic development in Assam. With effective policy implementation, strategic market interventions, and community participation, this traditional craft can move beyond cultural preservation to become a vibrant economic sector that generates employment, supports rural livelihoods, promotes tourism, and strengthens Assam's position in India's cultural and creative economy.

References

1. Baruah, J. (2018). *Traditional handicrafts and sustainable livelihood development in Assam*. *Journal of Rural Development Studies*, 12(2), 45–58.
2. Borah, P., & Deka, M. (2018). Handicraft industries of Assam: Problems and prospects. *International Journal of Humanities and Social Science Research*, 4(3), 112–118.
3. Das, B. (2013). Cottage and small-scale industries in Assam: Role in rural employment generation. *Indian Journal of Regional Studies*, 40(1), 67–75.
4. Development Commissioner (Handicrafts). (2022). *Annual report: Development of handicrafts sector in India*. Ministry of Textiles, Government of India. <https://handicrafts.nic.in/>
5. Government of Assam, Industries, Commerce & Public Enterprise Department. (n.d.). *Present handicrafts industries in Assam*. Government of Assam. <https://industriescom.assam.gov.in/>
6. Government of India. (1999). *The Geographical Indications of Goods (Registration and Protection) Act, 1999*. Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade. <https://ipindia.gov.in/>
7. Government of India. (2021). *Report on the promotion and development of handicrafts and artisan communities*. Ministry of Textiles, Government of India.
8. Kumar, R., & Singh, A. (2021). Digital transformation and market opportunities for traditional handicrafts in India. *Journal of Entrepreneurship and Innovation*, 8(1), 23–35.
9. Ministry of Micro, Small & Medium Enterprises. (2023). *Annual report 2022–23*. Government of India. <https://msme.gov.in/>
10. National Bank for Agriculture and Rural Development. (2022). *NABARD annual report 2021–22*. NABARD. <https://www.nabard.org/>
11. North Eastern Council. (2021). *Development initiatives in the North Eastern Region*. Ministry of Development of North Eastern Region, Government of India. <https://necouncil.gov.in/>
12. Sharma, P. (2017). Traditional metal crafts of Assam: A study of cultural heritage and artisan livelihoods. *Journal of Cultural Studies and Social Sciences*, 5(2), 89–101.
13. Timothy, D. J., & Boyd, S. W. (2003). *Heritage tourism*. Pearson Education.
14. United Nations Educational, Scientific and Cultural Organization. (2003). *Convention for the safeguarding of the intangible cultural heritage*. UNESCO. <https://ich.unesco.org/>

15. United Nations Educational, Scientific and Cultural Organization. (2013). *Creative economy report: Special edition 2013*. UNESCO and United Nations Development Programme.
16. Venkatesh, R., & Reddy, K. (2020). Handicrafts, cultural identity, and rural economic development in India. *International Journal of Social Economics*, 47(6), 789–803.
17. World Intellectual Property Organization. (2017). *Geographical indications: An introduction*. WIPO. <https://www.wipo.int/>
18. World Intellectual Property Organization. (2020). *Intellectual property and traditional cultural expressions*. WIPO. <https://www.wipo.int/>

Additional Sources Related to Sarthebari Bell-Metal Craft

1. Directorate of Handicrafts and Handloom, Government of Assam. (n.d.). *Traditional handicrafts of Assam*. Government of Assam.
2. Office of the Registrar of Geographical Indications. (n.d.). *Geographical Indications Registry: Sarthebari Metal Craft*. Government of India. <https://ipindia.gov.in/>
3. Sarma, S. (2019). Traditional crafts of Assam: Challenges of preservation and commercialization. *Journal of North East Indian Studies*, 9(1), 56–70.

