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Research Paper

From Craft to Confidence: Women's Economic Empowerment through Bamboo Jewellery Making in Barpeta District, Assam

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Abstract	Manuscript Information
The present study explores the role of bamboo jewellery making in fostering women's economic and social empowerment in Barpeta District, Assam. Rooted in the traditional bamboo craft culture of the region, this enterprise has increasingly emerged as a sustainable livelihood option for rural women. The study aimed to examine the relationship between women's engagement in bamboo jewellery making and their empowerment status. Primary data were collected from 150 women artisans across selected villages of Barpeta using a structured questionnaire. A descriptive and analytical research design was adopted, incorporating statistical tools such as the chi-square test and t-test to test the stated hypothesis. The findings revealed substantial improvements in women's income, decision-making power, mobility, and social participation after joining bamboo jewellery production. The average monthly income of respondents rose from ₹1,800 to ₹5,400, while participation in household decision-making increased from 45% to 82%. The Empowerment Index indicated that 56.7% of respondents achieved a high level of empowerment. Statistical analysis confirmed a significant relationship between duration of involvement and empowerment levels ($\chi^2 = 18.42$, $p < 0.05$), leading to the rejection of the null hypothesis. The study concludes that bamboo jewellery making not only enhances women's financial independence but also strengthens their self-confidence and social visibility. It recommends targeted training, credit access, and market linkages to promote the craft as a viable model for gender-inclusive rural development in Assam.	▪ ISSN No: 2583-7397 ▪ Received: 20-03-2024 ▪ Accepted: 29-04-2024 ▪ Published: 30-04-2024 ▪ IJCRM: 3(2); 2024:235-241 ▪ ©2024, All Rights Reserved ▪ Plagiarism Checked: Yes ▪ Peer Review Process: Yes
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KEYWORDS: Bamboo jewellery, Women empowerment, Handicrafts, Rural livelihood, Economic development.

1. INTRODUCTION

The use of bamboo as a sustainable raw material has been deeply rooted in Assam's cultural and economic landscape. Among its many uses, bamboo-based handicrafts—particularly jewellery—have emerged as a source of livelihood and creative expression for rural artisans. (Singh & Phukan, 2017) ^[15] In recent years, the craft of bamboo jewellery making has gained attention for its eco-friendly appeal and potential for women's entrepreneurship. Barpeta District of Assam, known for its skilled artisans and traditional craft communities, has witnessed a gradual rise in women engaging in bamboo jewellery production, often as part of self-help groups (SHGs) or micro-enterprises. (UNDP, 2021) ^[16]

Women's participation in such livelihood activities contributes not only to household income but also to broader dimensions of empowerment, such as decision-making ability, social mobility, and self-esteem. Prior studies (Baruah, 2020) (Das & Deka, 2021) ^{[2][6]} indicate that handicraft-based enterprises can promote economic independence among women. Yet, challenges such as limited market access, lack of design innovation, and insufficient institutional support persist. The bamboo jewellery sector in Barpeta presents an important case for examining how traditional skills can be transformed into pathways for empowerment in rural Assam.

This study seeks to assess the economic and social empowerment of women artisans engaged in bamboo jewellery making, analyse the constraints they face, and explore strategies for the sustainable development of this craft-based industry. By doing so, it aims to provide empirical insights that could inform both local entrepreneurship programs and gender-inclusive development initiatives in the region.

RATIONALE OF THE STUDY

Bamboo, an abundant and renewable resource in Assam, plays a vital role in rural livelihoods and traditional craftsmanship. In recent years, bamboo jewellery making has emerged as a niche enterprise that combines cultural heritage with sustainable income generation. In Barpeta District, a growing number of women artisans have adopted this craft as a means of livelihood diversification and self-reliance. However, their potential for economic empowerment is often constrained by limited access to markets, inadequate institutional support, low levels of skill development, and minimal financial returns.

The present study, *"From Craft to Confidence: Women's Economic Empowerment through Bamboo Jewellery Making in Barpeta District, Assam,"* seeks to examine how engagement in bamboo jewellery production contributes to women's economic and social empowerment. It also aims to identify the socio-economic and institutional factors that influence their participation and success in the sector.

This study is significant as it bridges the gap between traditional craft practices and women's entrepreneurship in Assam. By highlighting the empowerment outcomes and challenges faced by women artisans, the research will provide insights for policymakers and development agencies to strengthen bamboo-

based enterprises and promote inclusive, gender-sensitive rural development.

2. OBJECTIVES OF THE STUDY

1. To study the socio-economic profile of women engaged in bamboo jewellery making in Barpeta District.
2. To examine the extent of economic and social empowerment achieved through their participation in bamboo jewellery enterprises.
3. To identify the challenges and constraints faced by women artisans in production, marketing, and financial access.

HYPOTHESIS

H₀: There is no significant relationship between women's participation in bamboo jewellery making and their level of economic and social empowerment.

3. RELATED LITERATURE

Ahmed (2018) ^[1] explored the marketing constraints faced by bamboo craft producers in Lower Assam. Through structured interviews, the study revealed that poor infrastructure, absence of organized markets, and dependency on middlemen reduced artisans' profit margins. Women artisans were particularly disadvantaged due to mobility constraints. The study implies that developing cooperative marketing networks and digital promotion channels can improve women's earnings from bamboo jewellery.

Borah and Kalita (2019) ^[3] investigated the livelihood contribution of bamboo and cane crafts to rural women in Assam. Using a descriptive design, they found that women artisans earned a steady income from bamboo-based crafts, which significantly supported household expenditure and self-reliance. However, they faced market instability and competition from machine-made substitutes. The implication is that strengthening local value chains and product diversification can promote women's sustainable empowerment.

Barman (2019) ^[4] examined the role of traditional bamboo crafts in promoting women's entrepreneurship in Assam. The study emphasized that while bamboo work provided a vital source of livelihood, the lack of innovation and exposure to contemporary jewellery design limited business scalability. Barman concluded that skill diversification and design training are crucial for converting bamboo artisans into successful entrepreneurs.

Chakraborty (2020) ^[5] analyzed women's participation in handicrafts in Northeast India, focusing on empowerment outcomes. The study indicated that involvement in crafts increased women's confidence, decision-making power, and financial independence. Nevertheless, gender disparities in access to training and marketing persisted. The findings suggest that bamboo jewellery-making initiatives should include women-led cooperatives and capacity-building programs to enhance empowerment.

Das and Deka (2021) ^[6] conducted an empirical study on the socio-economic profile of bamboo artisans in Barpeta District. The research highlighted that most artisans belonged to

economically weaker sections and that women formed a substantial portion of the workforce. Despite their skills, women artisans lacked formal recognition and exposure to wider markets. The implications point toward the need for policy support, branding, and training to formalise women's contributions in bamboo jewellery making.

Khataniar (2017) ^[12] conducted a detailed analysis of cane and bamboo-based industrial clusters in Assam, focusing on profitability and vulnerability. The study revealed that artisans, especially women, were predominantly engaged in household-based informal enterprises with limited capital, low profit margins, and minimal institutional support. It highlighted that inadequate marketing and credit access hindered women's ability to scale production. The findings imply that empowering women in bamboo crafts requires targeted financial and marketing interventions.

Kalita and Saikia (2022) ^[12] studied the impact of self-help groups (SHGs) on the empowerment of bamboo craftswomen in Assam. The research showed that women associated with SHGs experienced enhanced income security, leadership roles, and social recognition. Training programs on bamboo jewellery design improved both product quality and confidence levels. The implication is that collective organisation through SHGs is a key driver for women's empowerment in the bamboo craft sector.

International Finance Corporation (2021) ^[10] assessed the opportunities and constraints faced by women-owned small enterprises in India's handicraft sector. The study found that limited access to formal credit, lack of digital literacy, and inadequate policy support restricted growth potential. For bamboo jewellery artisans in Assam, the findings suggest that inclusive financial products, digital training, and market-linkage programs could significantly enhance empowerment outcomes. The reviewed literature reveals that bamboo-based enterprises contribute significantly to rural livelihoods and women's empowerment, yet most studies emphasise production and marketing over the empowerment dimension. Limited research exists on women artisans in Assam, particularly in bamboo jewellery making. Hence, the present study addresses this gap by examining how bamboo jewellery making in Barpeta District fosters women's economic independence, confidence, and social empowerment within the broader framework of sustainable livelihood development.

4. RESEARCH METHODOLOGY

4.1. Research Design

The present study adopts a descriptive and analytical research design. The descriptive component aims to document the demographic, socioeconomic, and occupational characteristics of women engaged in bamboo jewellery making. The analytical component seeks to examine the relationship between women's participation in bamboo jewellery enterprises and various dimensions of economic empowerment such as income generation, decision-making, and self-confidence. This combination is appropriate for capturing both the factual and interpretative aspects of empowerment.

4.2. Study Area

The study is conducted in Barpeta District, located in lower Assam, India. Barpeta is known for its thriving bamboo and cane craft clusters. Specifically, the research focuses on five villages under the Chakchaka Development Block—Raipur, Bhaluki, Dhupguri, Joshihatigaon, and Joshihatichar—where bamboo- and cane-based craft activities are actively practised under the cluster programme supported by the Khadi and Village Industries Commission (KVIC). Women in these villages are increasingly engaged in bamboo jewellery making, often operating from their households or within self-help groups.

4.3. Universe and Sampling

The universe of the study includes all women artisans engaged in bamboo jewellery making within the selected villages of Barpeta District. A disproportionate stratified sampling technique is used to select respondents who are directly involved in the craft. A total of 150 women artisans are chosen from the five villages, ensuring representation from each locality.

Table 1: Sample selected

Village	Sample Selected
Raipur	40
Bhaluki	30
Dhupguri	35
Joshihatigaon	25
Joshihatichar	20
Total	150

Source: Field survey (2023)

4.4. Data Collection Methods

Both primary and secondary data are utilised for the study.

- **Primary Data:** Collected through a structured questionnaire, personal interviews, and focus group discussions (FGDs) with women artisans. The questionnaire includes sections on demographic information, income, work patterns, household decision-making, mobility, access to training, and perceived empowerment.
- **Secondary Data:** Obtained from government reports, District Industries and Commerce Centre (DICC) publications, MSME cluster documents, and relevant research studies, journals, and official websites.

4.5 Data Collection on Empowerment Indicators

Data on social and economic empowerment were gathered through a structured questionnaire from women artisans engaged in bamboo jewellery enterprises. Respondents recalled their situation *before* joining and described their status *after* participation, allowing a comparative "before–after" analysis. Social indicators included confidence, decision-making, mobility, and group membership, while economic indicators covered income, savings, credit access, and contribution to household expenses. Responses were expressed in percentages to show the proportion of women reporting improvement across each indicator.

4.6. Tools and Techniques of Data Analysis

Data collected are coded, tabulated, and analyzed using both quantitative and qualitative techniques.

- **Descriptive statistics** (percentage, mean, standard deviation) are applied to describe the socioeconomic profile of respondents.
- **Inferential statistics** such as the Chi-square test and t-test are employed to test the hypotheses and determine the significance of relationships between participation in bamboo jewellery making and empowerment indicators.
- An **Empowerment Index** is constructed using composite scores on variables such as income control, decision-making, mobility, and self-confidence.
- Qualitative responses from FGDs are thematically analysed to capture narratives of change, challenges, and aspirations.



Source: Field Survey (2023)

5. FINDINGS AND DISCUSSIONS

5.1. Socio-Demographic Profile of Respondents

A total of 150 women artisans from five villages of Barpeta District participated in the study. Among them, a majority (74%) were married, while 18% were unmarried and 8% were widowed. Educational attainment was moderate, with 58% having studied up to the secondary level. The average household size was five members, indicating moderately sized family structures. Most respondents (64%) belonged to nuclear families, reflecting a shift from traditional joint family systems toward smaller household units.

Some pictures of bamboo Jewellery

5.2. Economic Empowerment

Table 2: Economic Indicators

Indicator	Before joining craft	After joining craft	% Increase
Average monthly personal income	₹1,800	₹5,400	+200%
Women having personal savings	38%	82%	+44%
Women with control over own earnings	41%	76%	+35%
Women contributing to household expenses	52%	89%	+37%

Source: Field Survey (2023)

A comparison of pre- and post-engagement economic indicators showed significant positive change. The average monthly personal income of respondents increased from ₹1,800 to ₹5,400, indicating a threefold rise. The proportion of women having personal savings rose from 38% to 82%, and those exercising control over their earnings increased by 35%.

Furthermore, 89% of the respondents now contribute to household expenditures compared to 52% before participation. These findings affirm that bamboo jewellery making has enhanced women's financial independence and improved their contribution to household economic security.

5.3 Social Empowerment

Table 3: Social Empowerment Indicators

Indicator	Before participation	After participation	% Increase
Confidence in interacting with officials/customers	28%	78%	+50%
Participation in household decision-making	45%	82%	+37%
Freedom to travel for market/training	34%	71%	+37%
Membership in SHG/cooperative	39%	67%	+28%

Source: Field Survey (2023)

Engagement in this craft has also contributed to substantial social transformation among women artisans. Before their participation, only 28% of respondents felt confident interacting with buyers or local officials; this proportion rose to 78% after participation. Similarly, participation in household decision-

making increased from 45% to 82%, and freedom to travel for training or marketing rose by 37%. The percentage of women affiliated with self-help groups (SHGs) also grew from 39% to 67%. These trends suggest that the craft not only provides

income but also strengthens women's voice, agency, and participation in community networks.

5.4. Empowerment Index

An Empowerment Index was constructed combining 10 key variables (income control, decision-making, mobility, savings, self-confidence, etc.).

Table 4: Empowerment Index (Composite Score)

Empowerment Category	No. of Respondents	Percentage
High Empowerment (score 4–5)	85	56.7%
Moderate Empowerment (score 3)	52	34.7%
Low Empowerment (score 1–2)	13	8.6%
Total	150	100%

Source: Field Survey (2023)

More than half (56.7%) of the respondents fell under the “high empowerment” category, 34.7% under “moderate,” and only 8.6% under “low.” The mean empowerment score (3.98, SD = 0.71) indicates that most women experienced substantial improvement in both economic and social dimensions of empowerment.

5.5. Statistical Analysis and Hypothesis Testing

(a) Chi-Square Test: Association between participation duration and empowerment level

Table 5: Participation duration and empowerment level

Duration of Involvement	High Empowerment	Moderate	Low	Total
< 2 years	10	18	7	35
2–4 years	25	15	4	44
5–7 years	30	12	2	44
>7 years	20	7	0	27
Total	85	52	13	150

Source: Field Survey (2023)

The chi-square test was used to examine the association between the duration of involvement in bamboo jewellery making and the level of empowerment. The calculated χ^2 value (18.42, df = 6, $p < 0.05$) exceeded the critical value (12.59). Since $18.42 > 12.59$,

the null hypothesis is rejected, indicating a significant association.

(b) t-Test: Comparing empowerment scores between SHG members and non-members

Table 6: Empowerment scores between SHG members and non-members

Group	N	Mean Empowerment Score	SD
SHG members	90	4.12	0.64
Non-members	60	3.74	0.79

Source: Field Survey (2023)

Furthermore, a t-test comparing SHG members and non-members showed that SHG members had a higher mean empowerment score ($M = 4.12$) than non-members ($M = 3.74$), with the calculated t-value (3.25) exceeding the critical value (1.98). Since $3.25 > 1.98$, the difference is significant. Women associated with SHGs exhibit higher empowerment levels. These results confirm that participation in bamboo jewellery making—and particularly in group-based production models—has a statistically significant positive impact on women's empowerment.

Summary of Findings

The analysis clearly demonstrates that bamboo jewellery making has emerged as an important livelihood option fostering women's economic and social advancement in Barpeta. Increased income, greater control over resources, enhanced mobility, and participation in social networks collectively

signify empowerment. The findings align with previous research (e.g., Baruah, 2020; Das & Nath, 2022) that highlights the transformative role of craft-based microenterprises in rural Assam.

Consequently, the null hypothesis (H_0)—that there is no significant relationship between women's engagement in bamboo jewellery making and their empowerment—is rejected. The study highlights the potential of bamboo-based enterprises to promote gender-inclusive rural development and recommends expanding training, credit, and market-linkage support for women artisans.

6. CONCLUSION

The study revealed that bamboo jewellery making has become an effective instrument for promoting both economic and social empowerment among rural women in Barpeta District, Assam. Through their participation in this craft, women have transitioned from unpaid household contributors to independent

income earners and decision-makers within their families and communities. The analysis of data showed significant improvements in income levels, savings habits, decision-making ability, and social mobility.

Statistical tests confirmed that the relationship between women's engagement in bamboo jewellery making and their empowerment is significant. The chi-square and t-test results demonstrated that longer participation and collective involvement through self-help groups (SHGs) are strongly associated with higher levels of empowerment. Beyond income, the activity has instilled confidence, enhanced women's social recognition, and strengthened their bargaining power within the household and community. Therefore, the craft represents not just a livelihood but also a pathway toward gender equality and sustainable rural development.

7. RECOMMENDATIONS

1. **Skill Development and Design Training:** Regular hands-on workshops and exposure visits should be organized to help women artisans acquire advanced skills in bamboo jewellery design, finishing, and marketing. Collaboration with institutions like the North Eastern Handicrafts and Handloom Development Corporation (NEHHDC) and local NGOs can ensure quality improvement and product diversification.
2. **Market Linkages and Branding:** Creating direct market linkages through e-commerce platforms, trade fairs, and exhibitions can enhance visibility and profitability. Establishing a collective brand identity—such as "*Barpeta Bamboo Creations*"—could further strengthen the local identity of these products.
3. **Access to Finance and Infrastructure:** Many women artisans still face challenges in accessing credit for purchasing raw materials or upgrading tools. Microfinance institutions and SHGs should offer low-interest loans and savings schemes tailored to bamboo craft entrepreneurs. Setting up community-based production units and common facility centers will also improve efficiency and output.
4. **Institutional and Policy Support:** Government departments should integrate bamboo jewellery making into rural livelihood programs under schemes like NRLM and PMEGP. Formal recognition through artisan registration, certification, and inclusion in local development plans will ensure long-term sustainability.
5. **Promotion of Women's Collectives:** Encouraging women's cooperatives and federations can strengthen collective bargaining, reduce exploitation by intermediaries, and foster leadership among artisans. Such groups can also facilitate peer learning, capacity building, and mutual support networks.

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Conflict of Interest

The author declares no conflict of interest. The study was conducted solely for academic purposes, and no financial or personal relationships influenced the research design, data interpretation, or presentation of results.

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