



Problems Faced by Handicraft Artisans in Bihar: A case study of Kujapi Village of Gaya District

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Abstract

The handicraft sector in Bihar, especially in districts like Gaya, is a significant contributor to the state's economy and cultural heritage. Despite its importance, artisans face numerous challenges that impact their productivity and livelihoods. This study explores the primary issues confronting handicraft artisans in Gaya District, using the Garrett Ranking technique to rank and prioritize these challenges based on their severity as perceived by the artisans themselves. Through a survey of 100 artisans specializing in various crafts, key problems were identified, including limited market access, high raw material costs, inadequate government support, poor infrastructure, low profitability, and lack of skill development opportunities. The findings reveal that Low Wages and Profitability and Limited Market Access are the most pressing issues with artisans struggling to achieve a sustainable income due to limited demand and low pricing for their products. This paper also offers recommendations to enhance market access, provide affordable resources, and improve access to financial and policy support. The insights gained from this study can inform policymakers, non-governmental organizations, and other stakeholders about specific interventions needed to uplift the handicrafts sector in Bihar, fostering economic development and cultural preservation in Gaya and similar districts across India.

Keywords: Handicrafts, Garrett Ranking, Limited Market Access, Low Wages.

1. Introduction

The handicraft industry holds an irreplaceable position in the country's cultural and economic landscape, with artisans shaping products that reflect deep-rooted traditions and craftsmanship passed down through generations. In the state of Bihar, renowned for its diverse artistic heritage, handicrafts play a vital role in both the local economy and cultural identity [1-3]. Gaya, a city in Bihar known for its historical and spiritual significance, is also a thriving hub for traditional handicraft artisans. These artisans, who embody a legacy of skills passed down over generations, are integral to preserving the cultural heritage of the region. While Gaya attracts thousands of visitors for its association with the Buddhist pilgrimage and the iconic Mahabodhi Temple, the handicraft community in this area has its

unique story to tell. Stone carving in Gaya, for example, is not only an art but a spiritual expression. The region's carvers are known for their exquisite sculptures of the Buddha, intricately designed temple statues, and decorative items that reflect Buddhist and Hindu iconography [4]. This craft has thrived here due to the presence of abundant local stone and a historic association with Buddhist art, which traces back to the Mauryan Empire. Generations of stone artisans work with precision and patience, using traditional hand tools to carve intricate designs. Despite facing challenges from machine-based carving industries, these artisans continue to uphold their craft, with their work celebrated and sought after by both local and international visitors who value handmade religious sculptures and heritage items.

Handloom weaving is another significant craft in Gaya [5]. Known for producing high-quality cotton and silk fabrics, Gaya's weavers use traditional looms to create sarees, dupattas, and other textile products with Bihari motifs and patterns. Each piece of fabric is meticulously woven by hand, reflecting the deep-rooted artistry that characterizes Indian textile crafts. Although these artisans compete with mass-produced fabrics, there is a niche market that values the sustainability and authenticity of handloom textiles. With support from government initiatives aimed at promoting the handloom sector, Gaya's weavers are finding new opportunities to connect with buyers who appreciate handmade, eco-friendly fashion. Pottery and terracotta work also play a vital role in Gaya's artisan landscape. Using clay from local sources, potters craft a wide variety of items ranging from functional household items to decorative pieces [6-9]. The demand for terracotta lamps and religious idols rises during festival seasons, especially Diwali, making it a seasonal but vital source of income. Traditional clay crafting methods add a unique, rustic quality to each piece, attracting buyers interested in eco-friendly and handcrafted goods. Although pottery faces competition from plastic and metal products, a renewed interest in sustainable and biodegradable items is helping to keep this craft alive. In addition, Gaya is home to a skilled community of bamboo artisans who create practical and decorative items, such as baskets, mats, and furniture [10]. Bamboo craft, though less widely known, has a special place in the region's artisan traditions and is being recognized as an eco-friendly alternative to synthetic materials. These artisans are gaining new opportunities as the demand for sustainable products rises globally, yet they continue to face challenges due to limited resources and competition [11].

2. Review of Literature

According to Gupta (2019), handicrafts are an essential source of livelihood for millions and play a role in preserving cultural heritage [12]. In states like Bihar, handicrafts support local economies and strengthen rural development initiatives. Gupta further notes that challenges such as lack of market access and inadequate government support are

significant hurdles for artisans [13]. This study highlights the need for targeted support to boost artisan income and improve sector resilience. Reddy and Nair (2018) explore the influence of government policies on the handicrafts sector, examining initiatives such as the Handicrafts Development Scheme and ODOP (One District One Product) program. Although these schemes aim to uplift artisans, the study reveals that implementation challenges and limited awareness hinder their impact. Reddy and Nair suggest that effective outreach and monitoring could enhance these programs' effectiveness, ultimately benefiting artisans in underserved regions. Das (2020) highlights the role of NGOs in supporting artisans through capacity building, skill development, and market linkage programs. NGOs often step in where government support is insufficient, providing resources and training to help artisans improve product quality and marketability. The study underscores that NGO interventions have empowered many artisans, although challenges in funding and scalability persist. Sen and Sharma (2019) suggested that globalization has both positive and negative impacts on the handicrafts sector [14]. While it opens new markets and increases demand for unique products, it also intensifies competition from mass-produced goods. Sen and Sharma argue that artisans need to innovate and adopt quality standards to compete effectively. [15] Their study calls for more substantial efforts to promote Indian handicrafts on international platforms. Verma (2017) discusses the financial challenges faced by artisans, particularly the struggle to access affordable loans. The study notes that most artisans rely on informal credit sources with high-interest rates, leading to a cycle of debt. Verma advocates for the creation of artisan-focused financial schemes to address this gap, potentially increasing sector stability and profitability. Despite the identification of financial constraints, market access issues, limited raw materials, and low awareness of government schemes as significant challenges for artisans, there is limited research on tailored interventions specifically suited to the context of Gaya, Bihar [16]. Existing studies lack a

comprehensive examination of digital market integration and youth involvement as solutions. This gap highlights the need for focused research on sustainable, locally adapted solutions that can address these issues and support long-term growth in Bihar's handicraft sector.

3. Objectives of the Study

- To identify the main problems faced by handicraft artisans in Gaya District
- To rank these problems using the Garrett Ranking technique
- To provide recommendations for policymakers and stakeholders

4. Methodology of the Study

4.1 Sampling Technique and Sample Size

The study adopts a purposive sampling technique to select 100 artisans across various handicrafts, such as Madhubani painting, bamboo work, stone carving etc. Artisans are selected based on their active participation in the local handicrafts industry and their willingness to engage in the survey. A sample size of 100 is considered adequate for applying the Garrett Ranking technique.

4.2 Study Area

The current study was conducted in Kujapi Village in the Gaya district. Kujapi is situated in "Gaya Town C D Block" of Gaya district, Bihar. It is located 6 km from the district headquarters in Gaya and 6 km from the sub-district headquarters in Gaya Town C.D block. The Village occupies 313 hectares of land in total. According to the 2011 census, Kujapi has roughly 1,142 homes and 6,680 residents, of whom 3,513 are men and 3,167 are women. The literacy rate of village is 58.07%, with 48.91% of women and 66.33% of men being literate.

4.3 Data Collection Methods

4.3.1 Primary Data

A structured questionnaire (mentioned in Appendix I) is used to collect quantitative data on the challenges faced by artisans. Artisans rank various issues according to perceived severity, which is necessary for the Garrett Ranking calculation.

4.3.2 Secondary Data

Previous studies, reports, and government

publications are reviewed to understand common challenges in the handicrafts sector and the current state of government initiatives. Relevant documents on government schemes such as the ODOP (One District One Product) and Handicraft Development Scheme are examined to assess their reach and impact in Gaya District.

4.3.3 Technique

The Garrett Ranking technique is a method used to prioritize items based on respondents' rankings. It calculates the percentage score for each rank, which is then converted into Garrett scores using a standardized table. Respondents rank a set of items (such as challenges), and each item receives an average Garrett score based on the ranks given by all respondents. These scores allow researchers to identify the most critical issues, as perceived by participants. This technique is particularly useful for assessing subjective data, offering a systematic approach to rank problems or preferences, which can then inform decision-making or targeted interventions.

5. Data Analysis

Overview of Identified Problems

Previous studies, reports, and government publications are reviewed to understand common challenges in the handicrafts sector, the following key issues were commonly cited as barriers to their work (Table 1):

- **Limited Market Access** – Difficulty reaching customers beyond local markets.
- **High Cost of Raw Materials** – Rising prices of materials, affecting profitability.
- **Lack of Government Support** – Insufficient assistance in terms of subsidies and schemes.
- **Poor Infrastructure** – Issues such as lack of electricity, transport, and workspace.
- **Low Wages and Profitability** – Low returns on crafted products due to middlemen or low demand.
- **Skill Development Challenges** – Limited access to training and modern crafting techniques.

Table 1 Rankings of Problems given by Respondents

Serial no.	Problems	Rank Given by Respondents					
		1st	2nd	3rd	4th	5th	6th
1	Limited Market Access	48	21	12	8	6	5
2	High Cost of Raw Materials	40	19	15	12	8	6
3	Lack of Govt. Support	45	15	13	12	8	7
4	Poor Infrastructure	47	18	12	10	8	5
5	Low Wages and Profitability	54	22	12	7	4	1
6	Skill Development Challenges	37	23	18	12	6	4

Source: Own Calculation

6. Applying the Garrett Ranking Technique

To understand the most pressing issues, we applied the Garrett Ranking technique. Each respondent was asked to rank the above six problems from most to least significant. The ranks provided by respondents were then converted into Garrett Scores.

Step 1: Calculating Percentage Score

The formula for Percentage Score is:

$$\text{Percentage Score} = \frac{100 (R_{ij} - 0.5)}{N_j}$$

Where:

R_{ij} = Rank given for i^{th} item by j^{th} respondent

N_j = Number of items ranked by j^{th} respondent

Step 2: Converting Percentage Score to Garrett Score

Using a Garrett Conversion Table (shown in Appendix I), we assign scores to each Percentage Score (Table 2).

Table 2 Percentage Scores and Garrett Scores

Rank	$\frac{100 (R_{ij} - 0.5)}{N_j}$	Percentage Score	Garrett Score
1	$100 (1 - 0.5) / 6$	8.33	77
2	$100 (2 - 0.5) / 6$	25	63
3	$100 (3 - 0.5) / 6$	41.66	54
4	$100 (4 - 0.5) / 6$	58.33	46
5	$100 (5 - 0.5) / 6$	75	37
6	$100 (6 - 0.5) / 6$	91.66	23

Source: Own Calculation

Step 3: Calculating Average Garrett Scores for Each Problem

After assigning Garrett Scores, we sum the scores for

each problem across all respondents and calculate the average. This average gives us the Garrett Score for each issue.

Table 3 Total Score, Mean Score and Rank of the Problems

Problems	Rank Scores						Total Score	Mean Score	Rank
	1st	2nd	3rd	4th	5th	6th			
Limited Market Access	3696	1323	648	368	222	115	6372	63.72	2
High Cost of Raw Materials	3080	1197	810	552	296	138	6073	60.73	6
Lack of Govt. Support	3465	945	702	552	296	161	6121	61.21	5
Poor Infrastructure	3619	1134	648	460	296	115	6272	62.72	3
Low Wages and Profitability	4158	1386	648	322	148	23	6685	66.85	1
Skill Development Challenges	2849	1449	972	552	222	92	6136	61.36	4
Source: Own Calculation									

The table 3 presents a ranking of key challenges faced by artisans in Gaya District based on Garrett Ranking scores. Low Wages and Profitability stands out as the most critical issue, with the highest total score of 6,685 and a mean score of 66.85, indicating that financial instability significantly affects artisans' livelihoods. Limited Market Access, ranked second with a mean score of 63.72, points to significant barriers in reaching broader markets, which restricts artisans' income potential and growth opportunities. Poor Infrastructure, with a mean score of 62.72, ranks third, highlighting issues such as inadequate transportation and workspace facilities that impede artisans' productivity and accessibility to markets.

Skill Development Challenges is fourth with a mean score of 61.36, underscoring a need for targeted training and capacity-building programs to enhance artisans' skills and competitiveness. Lack of Government Support ranking fifth, with a mean score of 61.21, suggests that artisans perceive existing support as insufficient or inaccessible. Finally, High Cost of Raw Materials ranks sixth, with a mean score of 60.73, indicating that while material costs are a concern, artisans prioritize issues that directly impact their income and market reach. Addressing these ranked challenges in priority order can significantly improve artisans' economic sustainability and quality of life (Figure 10).

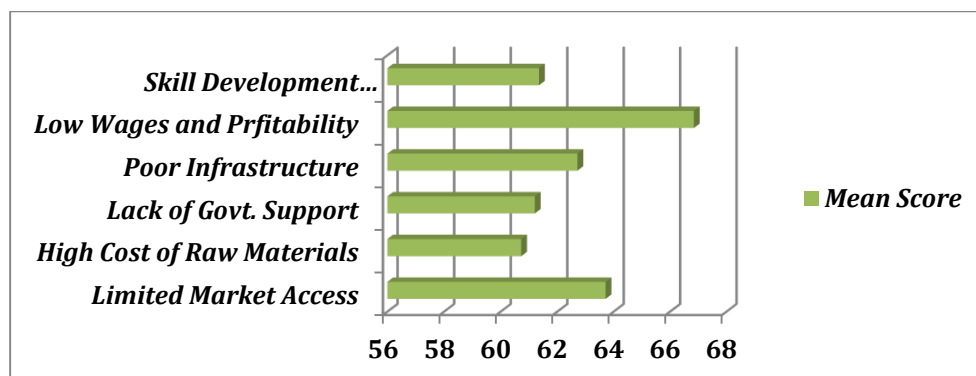


Figure 1 Problems and their Mean Scores

7. Recommendations

To address the challenges faced by handicraft artisans in Gaya, Bihar, several strategic measures are essential. Firstly, establishing dedicated financial support programs for artisans is crucial, including easy-access loans and subsidies to reduce their dependence on exploitative middlemen. Microfinance institutions can also play a role in offering affordable loans tailored to artisans' needs. Second, improving market access is vital; this can be achieved through the development of digital marketplaces and dedicated platforms where artisans can sell directly to consumers, both locally and internationally. Training programs in digital marketing and e-commerce can empower artisans to expand their customer base independently. Furthermore, ensuring a steady supply of affordable, high-quality raw materials will enable artisans to produce competitively priced, high-quality products. Collaborations between government and non-governmental organizations (NGOs) can help set up local material supply cooperatives. Government intervention is also needed to streamline bureaucratic

processes so that artisans can more easily access existing welfare schemes. Awareness campaigns and local workshops can educate artisans about these schemes. Lastly, promoting handicrafts in educational curricula and encouraging youth engagement can help preserve these skills, ensuring that traditional craftsmanship in Bihar is passed on to future generations.

8. Limitations of the Study

This study is limited by its focus on only one district, Gaya, which may not capture the full range of issues faced by handicraft artisans across Bihar. The sample size is restricted to a select group of artisans, which might not fully represent the diversity of handicraft practices and challenges in the region. Additionally, data collection relied heavily on interviews and self-reported information, introducing potential biases. Limited access to detailed government records and industry statistics also posed challenges, restricting a comprehensive evaluation of policy impacts. These limitations suggest a need for broader, multi-district studies in future research.

Appendix I
Garrett Ranking Conversion Table

Percentage	Score	Percentage	Score	Percentage	Score
0.09	99	20.93	66	80.61	33
0.20	98	22.32	65	81.99	32
0.32	97	23.88	64	83.31	31
0.45	96	25.48	63	84.56	30
0.61	95	27.15	62	85.75	29
0.78	94	28.86	61	86.89	28
0.97	93	30.61	60	87.96	27
1.18	92	32.42	59	88.97	26
1.42	91	34.25	58	89.94	25
1.68	90	36.15	57	90.83	24
1.96	89	38.06	56	91.67	23
2.28	88	40.01	55	92.45	22
2.69	87	41.97	54	93.19	21
3.01	86	43.97	53	93.86	20
3.43	85	45.97	52	94.49	19
3.89	84	47.98	51	95.08	18
4.38	83	50.00	50	95.62	17



4.92	82	52.02	49	96.11	16
5.51	81	54.03	48	96.57	15
6.14	80	56.03	47	96.99	14
6.81	79	58.03	46	97.37	13
7.55	78	59.99	45	97.72	12
8.33	77	61.94	44	98.04	11
9.17	76	63.85	43	98.32	10
10.06	75	65.75	42	98.58	9
11.03	74	67.48	41	98.82	8
12.04	73	69.39	40	99.03	7
13.11	72	71.14	39	99.22	6
14.25	71	72.85	38	99.39	5
15.44	70	74.52	37	99.55	4
16.69	69	76.12	36	99.68	3
18.01	68	77.68	35	99.80	2
19.39	67	79.17	34	99.91	1
				100.00	0

Questionnaire

Name _____
Age _____
Gender _____
Occupation _____

S.No.	Problems	Rank					
		1	2	3	4	5	6
1	Limited Market Access						
2	High Cost of Raw Materials						
3	Lack of Govt. Support						
4	Poor Infrastructure						
5	Low Wages and Profitability						
6	Skill Development Challenges						

Conclusion

In conclusion, the study underscores the multifaceted challenges encountered by handicraft artisans in Gaya District, with a clear ranking that highlights their priorities. Low Wages and Profitability and

Limited Market Access emerge as the top challenges, necessitating immediate attention from policymakers and stakeholders to enhance artisans' livelihoods. To address these issues, a multi-faceted approach is

recommended, focusing on improving market access through enhanced marketing strategies and e-commerce platforms, alongside initiatives aimed at increasing income stability. Additionally, investments in infrastructure and skill development programs are essential to empower artisans and elevate the quality of their crafts. Moreover, effective government support is crucial; awareness campaigns should be implemented to ensure that artisans are informed about available resources and initiatives. By addressing these challenges comprehensively, the handicraft sector in Gaya District can achieve sustainable growth, ultimately contributing to the overall economic development of the region.

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