

FROM CRAFT TO CLICK: HANDICRAFT IN THE DIGITAL INDIA ERA

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Abstract:

The Indian handicraft sector, a vital part of the country's cultural heritage and rural economy, is experiencing a significant transformation driven by the Digital India initiative. As India intensifies its push toward e-commerce and digital public infrastructure, notably via initiatives like India Handmade and ONDC, handicraft artisans gain novel opportunities to bypass intermediaries and access broader markets (Kalshetti, 2024). Yet despite these advances, fewer than 1% of handloom weavers and craftspeople currently engage in online selling, indicating wide gaps in adoption (Gupta, 2023).

This paper aims to evaluate the level of awareness among artisans regarding digitalization and explore its diverse effects on the industry. Through a mixed-methods approach, the study will investigate how digital tools such as e-commerce platforms, social media, digital payments, and design software are adopted by artisans. It will identify key benefits like wider market access, better supply chain management, increased brand recognition, and direct customer interaction, all contributing to higher income and visibility for artists. At the same time, the study will examine challenges such as limited digital literacy, lack of affordable technology and reliable internet, resistance to change, and the need for skills in digital marketing and online business. Highlighting these factors, the paper aims to offer valuable insights for policymakers, industry stakeholders, and artisans to build a more inclusive and thriving digital environment for India's handicraft industry, balancing traditional crafts with modern technology.

Primary data will be collected from artisans through structured surveys and interviews to assess their digital awareness, skills, and attitudes toward digital platforms. The collected data will then be statistically analysed using SPSS software to uncover patterns in adoption levels, demographic differences, and correlations between awareness and uptake.

Keywords: Digital India, Handicraft, Awareness, Artisan Empowerment

INTRODUCTION

The Handicraft Industry (HI) in India represents a vital link between cultural heritage, creativity, and sustainable livelihoods. For centuries, artisans have preserved indigenous skills while contributing significantly to rural employment and the nation's soft power. With globalization and rapid digital transformation, the industry is undergoing a shift where traditional methods are increasingly being complemented by modern technological tools, reshaping how artisans create, market, and sell their products.

Digital adoption has become a key driver in this transformation. Platforms such as e-commerce marketplaces, social media, online stores, digital payment systems, and Computer-Aided Design (CAD) tools have enabled artisans to connect directly with wider markets, bypass middlemen, and engage more effectively with consumers. This integration offers numerous opportunities, including global market expansion, preservation of traditional crafts through documentation, and increased economic viability and sustainability of the sector.

At the same time, artisans face notable challenges in embracing digital tools. While benefits include market access, improved profit margins, and stronger customer engagement, barriers such as a lack of digital literacy, high costs of technology, unreliable internet connectivity, and competition from mass-produced goods hinder full integration. Against the backdrop, the present study aims to assess the extent of digital adoption, identify opportunities for integration, and analyse both benefits and challenges, thereby providing insights into how the handicraft sector can leverage digitalization for sustainable growth and empowerment of artisans.

REVIEW OF LITERATURE

The study (Ghosal & Prasad, 2019) highlights the critical decline of India's handloom and handicraft market, a sector vital for the nation's cultural heritage and the livelihoods of many rural communities. The primary cause identified is insufficient sales promotion and advertising, leading to low customer awareness. The research proposes that online portals offer a promising solution to boost both sales and customer engagement. Focusing on online buyers in Kolkata, the study uses 'Z' analysis to investigate if online advertising influences customer awareness and if online markets can transform buying motives. The findings aim to provide strategies for the sustainable growth of the handicraft industry through digitalization, particularly in West Bengal where artisans struggle to get fair prices for their unique products.

The research (Yadav, Sood, Tripathi, Grima, & Yadav, 2023) explored how small Indian handicraft businesses utilized digital innovation and entrepreneurship to navigate economic downturns, particularly during the COVID-19 pandemic. Through qualitative interviews with 50 online handicraft business owners, the study found that while internal and external factors encouraged a shift to digital platforms, significant obstacles such as a lack of quality digital infrastructure, market concerns, and insufficient IT skills hindered their progress. The findings emphasize the crucial role of digital technology for survival and growth in this family-based industry, which contributes significantly to India's GDP and employs numerous rural workers. The study's insights offer a foundation for policymakers to develop targeted skill development programs and aid initiatives, fostering resilient entrepreneurship and ensuring the long-term sustainability of the handicraft sector in future economic crises.

Exploring (Gulati & Mathur, 2017) the evolving relationship between traditional Indian handicrafts and modern computational tools, emphasizing how CAD/CAM technologies are revolutionizing the design and manufacturing of artisanal products. It highlights that while industrial CAD tools lack traditional craft integration, there's significant potential in developing craft-specific CAD tools that allow for hybrid approaches: either customizing CAD for traditional manufacturing processes or merging traditional handcrafting with digital fabrication. This integration offers new avenues for designers, from novices to experts, to enhance creativity and preserve traditional skills without replacing them. Ultimately, the goal is to enhance creativity and preserve traditional skills without replacing them. Ultimately, the goal is to provide accessible digital tools that empower craftspeople, enabling them to compete with machine-made goods and expand their possibilities while ensuring the unique essence of traditional crafts is maintained and even enhanced through technological convergence.

This paper (Yadav, Tripathi, Yadav, & Tripathi, 2022) advocates for the creation of a Global Handicraft Index to address challenges faced by the handicraft sector, particularly in the wake of economic downturns and increasing competition from machine-made goods. The proposed index would measure various parameters and indicators-such as skill development, entrepreneurship, market competitiveness, and socio-economic welfare for artisans-with the ultimate goal of fostering sustainable livelihoods, preserving traditional heritage, and promoting eco-friendly consumption patterns. By providing a framework for global comparison and strategy development, the index aims to empower artisans, especially women and rural communities, to become entrepreneurs, enhance their skills, increase employment,

and contribute significantly to national GDPs while encouraging a global shift towards sustainable, locally-produced goods.

The research (Agrawal & Agarwal, 2019) examines the potential of digital marketing strategies to revitalize India's handicraft industry, a significant source of income for over 7 million rural artisans, particularly women and marginalized communities. Currently, artisans are overly reliant on middlemen due to limited literacy and market access. The study highlights that while many handicrafts exporters utilize social media, their understanding of broader digital marketing, including SEO, is limited, often leading to a perception that digital marketing is expensive and yields poor returns. The paper concludes that a more aggressive and informed adoption to diverse digital marketing tools, beyond social media, can empower artisans to directly reach global markets, reduce dependence on intermediaries, and ultimately foster financial self-sustainability within this vital sector.

This paper (Singh, 2022) investigates how the COVID-19 pandemic accelerated the adoption of digital platforms within India's largely informal handicraft industry, particularly in the North-East region. Through qualitative research, including pre-lockdown fieldwork and post-lockdown online interviews, the study found a rapid shift towards online businesses mediated by social media and e-commerce platforms. While this digitalization offered economic and personal benefits to artisans, it also raised concerns about new dependencies on digital players, the integration of "branding" into traditional craft, and the emergence of self-entrepreneurship challenges like multitasking and time management. The research emphasizes the need for further study into working conditions, remuneration, and the evolving relationship between online and offline sales, cautioning against a purely deterministic view of digital tools and advocating for continued focus on how artisans within the broader political economy truly appropriate these technologies.

OBJECTIVES

1. To analyse the current status and potential of integrating the handicraft sector with the Digital India initiative.
2. To access the level of digital adoption.
3. To identify opportunities for digital integration.

RESEARCH METHODOLOGY

The present study adopts a descriptive research design to analyze the current status and potential of integrating the handicraft sector with the Digital India Initiative. The purpose is to assess the level of digital adoption among artisans, evaluate the platforms and tools they use, and examine the perceived benefits and challenges of the transition. The study relies on both primary data collected from handicraft artisans through structured questionnaires and secondary data sourced from government reports, policy documents, published research, and industry statistics.

Sampling Design and Respondents

The target population of the study comprises handicraft artisans actively engaged in the production and marketing of craft items across selected regions of Bengaluru. A purposive sampling technique was adopted to ensure inclusion of artisans who have at least some level of exposure to digital platforms. A total of 100 responses were collected through face-to-face interviews. The questionnaire was designed with both closed-ended and multiple-response items, covering aspects such as awareness of Digital India, extent of digital adoption, platforms/tools used, proficiency levels, benefits, and challenges.

Data Collection Tools

The primary instrument for data collection was a structured questionnaire, pre-tested for clarity and reliability. Questions were based on nominal and ordinal scales, allowing respondents to indicate their awareness, adoption level, and experiences with digital platforms. Multiple-response questions captured the variety of tools/platforms used, while Likert-scale items measured perceived benefits and challenges.

Data Analysis

Data was coded and analyzed using SPSS software. Descriptive statistics such as frequencies and percentages were used to assess awareness and adoption levels. Multiple Response Analysis was employed to evaluate the range of digital platforms/tools used by artisans. Further, cross-tabulation and Chi-square tests were conducted to examine variations in adoption levels. The findings were then interpreted in light of the research objective, with implications drawn for policy and practice in enhancing digital integration of the handicraft sector.

DATA ANALYSIS AND INTERPRETATION

Analysis 1: Awareness and adoption of digitalization in the Handicraft Industry

The objective of the study is to assess the extent to which awareness of the Government of India's "Digital India" initiative influences the adoption of digital tools within the handicraft sector. To examine this, a cross-tabulation was conducted between respondents' awareness levels and their reported adoption of digital technologies over the past five years. This comparison provides insights into how policy-level awareness translates into practical implementation among artisans and stakeholders.

Null Hypothesis (H0): There is no significant association between awareness of the "Digital India" initiative and the "level of adoption of digital tools" in the handicraft sector.

Alternative Hypothesis (H1): There is a significant association between awareness of the "Digital India" initiative and the "level of adoption of digital tools" in the handicraft sector.

Awareness of "Digital India" * "Adoption of digital tools"

Crosstabulation

		Adoption of digital tools in the last 5 years				Total
		No adoption	Limited adoption	Moderate adoption	Significant adoption	
Awareness of "Digital India"	No, not aware	18	0	0	0	18
	Yes, somewhat aware	0	28	26	0	54
	Yes, very aware	0	4	14	10	28
Total		18	32	40	10	100

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	131.667	6	.000
Likelihood Ratio	123.658	6	.000
Linear-by-Linear Association	62.552	1	.000
N of Valid Cases	100		

Analysis:

The results of the crosstabulation highlight a clear relationship between awareness and adoption. Respondents who reported no awareness of Digital India (18) showed no adoption of digital tools at all. In contrast, those who were somewhat aware predominantly demonstrated limited (28) and moderate (26) levels of adoption, while respondents who were very aware showed greater adoption, including 10 cases of significant adoption. The chi-square test ($\chi^2 = 131.667$, $df = 6$, $p < .001$) confirms that this association is statistically significant. These findings suggest that a higher awareness of the Digital India initiative is strongly linked to increased levels of digital adoption, underscoring the need for awareness-building initiatives to accelerate digital integration in the handicraft sector.

Interpretation and Implications:

The analysis reveals that increased awareness of the Digital India initiative is associated with higher adoption of digital tools among handicraft artisans. This suggests that awareness drives and digital literacy programs can play a crucial role in bridging the adoption gap. Strengthening training and outreach under Digital India will help artisans expand market access, improve competitiveness, and ensure sustainable growth of the handicraft sector.

Analysis 2: Access the level of digital adoption

Digital adoption in the handicraft sector is a key indicator of how artisans and entrepreneurs are integrating technology into their business practices. Platforms such as e-commerce, social media, and digital payments provide vital opportunities to expand market access, streamline operations, and connect directly with customers. Assessing the extent of usage of these tools helps in understanding the readiness of the handicraft sector for digital transformation.

		Platforms Frequencies	
		Responses	
		N	Percent
Uses	Uses E-commerce platforms	42	19.6%
	Uses Social Media for sales/marketing	62	29.0%
	Has own website/online store	12	5.6%
	Uses digital payment methods	78	36.4%
	Uses Online design/CAD software	8	3.7%
	Uses Digital marketing tools	12	5.6%
Total		214	100.0%

Analysis:

The frequency distribution shows that digital payment methods (95.1% of cases) are the most widely adopted tool, followed by social media platforms (75.6%) and e-commerce platforms (51.2%). In contrast, the adoption of more advanced tools such as own websites (14.6%), digital marketing tools (14.6%), and online design/CAD software (9.5%) is much lower. This indicates that while basic digital tools for transactions and marketing are widely used, higher-level digital integration remains limited.

Interpretation:

The results imply that artisans are primarily leveraging easily accessible and low-cost digital solutions such as payments and social media but are yet to fully embrace advanced tools that could further enhance competitiveness. This suggests the need for targeted training, technical support, and affordable access to advanced platforms to encourage deeper digital integration in the handicraft sector.

Analysis 3: Upliftment of Handicraft through Digitalization

The study examines the relationship between awareness of the Digital India initiative and the perception that it uplifts the handicraft industry. Understanding this linkage is crucial to assessing how digital adoption is influenced by awareness and how artisans perceive its role in improving their industry.

Null Hypothesis (H0): There is no significant association between awareness of Digital India and the perception that it uplifts the handicraft industry.

Alternative Hypothesis (H1): There is significant association between awareness of Digital India and the perception that it uplifts the handicraft industry.

Awareness of "Digital India" * "Digital India - Uplift" of HI Crosstabulation

		Digital India - Uplift of HI			Total
		Strongly agree	Agree	Neutral	
Awareness of "Digital India"	No, not aware	2	12	4	18
	Yes, somewhat aware	22	32	0	54
	Yes, very aware	18	10	0	28
Total		42	54	4	100

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	28.188	4	.000
Likelihood Ratio	25.121	4	.000
Linear-by-Linear Association	18.294	1	.000
N of Valid Cases	100		

Analysis:

The crosstabulation indicates that respondents who are more aware of Digital India are more likely to strongly agree or agree that it uplifts the handicraft industry. The Chi-square test result ($\chi^2 = 28.188$, $df = 4$, $p < .001$) confirms a statistically significant association between awareness and perception, meaning the null hypothesis is rejected.

Implication:

The findings imply that higher awareness of Digital India initiatives positively shapes artisans' perceptions of its benefits for the handicraft industry. This underscores the importance of policy-driven awareness campaigns and training programs to encourage wider adoption of digital practices, thereby improving competitiveness and sustainability.

Analysis 4: Opportunities for Digital Integration

The handicraft industry in India faces challenges of competitiveness, visibility, and sustainability. With the increasing penetration of digital technologies, identifying opportunities for digital integration can help in expanding markets, preserving traditions, empowering artisans, and modernizing production.

Significant opportunity for the Indian HI

	Frequency	Cumulative Percent
Global market expansion	28	28.0
Preservation of traditional crafts through digital documentation	16	44.0
Direct empowerment of artisans	22	66.0
Innovation in design and production processes	22	88.0
Increased economic viability and sustainability of the sector	12	100.0
Total	100	

Analysis:

The survey findings reveal multiple perceived opportunities for digital integration. The most frequently

cited opportunity was *global market expansion* (28%), followed by *direct empowerment of artisans* (22%) and *innovation in design and production processes* (22%). Preservation of traditional crafts through digital documentation accounted for 16%, while *increased economic viability and sustainability* received 12%. These results highlight diverse areas where digital tools can transform the handicraft sector.

Implication:

The results indicate that digital adoption can open new market avenues, preserve cultural heritage, empower artisans, and improve innovation and sustainability in the handicraft industry. Stakeholders and policymakers should prioritize digital training, infrastructure development, and awareness initiatives to leverage these opportunities effectively.

Result of Hypothesis:

Since the analysis identifies multiple opportunities for digital integration, the **alternative hypothesis is accepted**. This demonstrates that digital adoption holds substantial potential for strengthening and sustaining the handicraft industry.

Analysis 5: Benefits of Getting Digitalization

Benefits Frequencies		Responses	
		N	Percent
Benefits	Increased market access	68	17.2%
	Better pricing/profit margins	54	13.6%
	Enhanced visibility and branding	52	13.1%
	Direct interaction with customers	48	12.1%
	Reduced middleman dependency	68	17.2%
	Streamlined order processing	56	14.1%
	Access to new design inspirations/trends	50	12.6%
Total		396	100.0%

Analysis:

The analysis of benefits shows that digital adoption significantly enhances opportunities for the handicraft industry. The most cited advantages are *increased market access* (17.2%) and *reduced middlemen dependency* (17.2%), both highlighted by 68% of respondents. These benefits directly empower artisans by connecting them with a wider customer base and ensuring better profit margins. Other important advantages include *streamlined order processing* (14.1%), *better pricing/profit margins* (13.6%), *enhanced visibility and branding* (13.1%), and *access to new design inspirations/trends* (12.6%). The relatively lower but notable benefit is *direct interaction with customers* (12.1%), which helps artisans establish stronger customer relationships and build trust.

Interpretation:

The results indicate that artisans recognize digital platforms as a strong enabler of independence and economic growth. By reducing middlemen and increasing visibility, artisans can achieve better profitability and control over their craft. The emphasis on market access also highlights that digital tools are bridging geographical limitations, allowing local crafts to reach global markets. These benefits suggest that digital adoption is not only enhancing income opportunities but also fostering innovation, sustainability, and customer engagement in the handicraft industry.

Analysis 6: Challenges in Adoption of Digitalization

		Challenges Frequencies	
		Responses	
		N	Percent
Challenges	Lack of digital literacy/skills	48	9.6%
	High cost of technology/internet access	70	13.9%
	Lack of reliable internet connectivity	54	10.8%
	Difficulty in managing online orders/logistics	48	9.6%
	Fear of online fraud/cybersecurity concerns	74	14.7%
	Limited access to technical support/training	56	11.2%
	Product photography/listing challenges	54	10.8%
	Competition from mass-produced goods online	48	9.6%
	Language barriers on digital platforms	50	10.0%
Total		502	100.0%

Analysis:

The challenges reveal critical barriers that hinder smooth digital integration. The most significant issues are *fear of online fraud/cybersecurity concerns* (14.7%) and *high cost of technology/internet access* (13.9%), both limiting trust and affordability of digital adoption. Other major challenges include *limited access to technical support/training* (11.2%), *lack of reliable internet connectivity* (10.8%), and *product photography/listing challenges* (10.8%). Additionally, *language barriers on digital platforms* (10%), *difficulty in managing online orders/logistics* (9.6%), *competition from mass-produced goods* (9.6%), and *lack of digital literacy/skills* (9.6%) further restrict artisans from fully capitalizing on digital opportunities.

Interpretation:

The findings suggest that while artisans are aware of digital opportunities, structural and skill-based challenges hinder their full participation. The dominance of cybersecurity concerns and high costs indicates a lack of confidence in digital platforms and affordability issues. Moreover, practical barriers such as poor connectivity, language issues, and listing challenges reflect the need for localized and user-

friendly digital solutions. Without targeted interventions in training, infrastructure, and digital literacy, artisans may struggle to sustain digital adoption, reducing the long-term impact of digital integration.

FINDINGS

- The majority of artisans were aware of the Digital India initiative, though the depth of awareness varied
- Extent of adoption: only a limited proportion reported significant adoption; most showed moderate or basic integration of digital tools
- Most used digital tools/platforms: Digital payments, Social media for marketing/sales, E-commerce platforms.
- Proficiency levels: majority rated themselves at basic to moderate, while few considered themselves proficient or expert.
- Benefits identified: wider market access, improved customer reach, transparency in payments, and better income opportunities.
- Challenges reported: lack of digital literacy, inadequate training, high costs, poor internet connectivity, and strong competition from mass-produced goods.

CONCLUSION

The study highlights that the Indian handicraft sector is gradually embracing digital adoption, with artisans showing strong preference for easily accessible tools such as digital payment methods and social media platforms, which directly support sales and customer engagement. However, advanced tools like e-commerce websites, CAD software, and digital marketing applications remain underutilized, reflecting gaps in skills, resources, and awareness.

While artisans acknowledge the tangible benefits of digital adoption—such as enhanced market access, transparency in financial transactions, and improved income opportunities—they continue to face critical challenges, including limited digital literacy, inadequate training support, high costs of adoption, and infrastructural barriers. These findings suggest that the sector is at a transitional stage, where artisans are willing to adopt digital platforms but require sustained institutional, policy, and training support to fully realize the potential of the *Digital India* initiative.

Therefore, it can be concluded that the integration of the handicraft sector into the digital ecosystem holds immense promise, but its success depends on addressing existing challenges through capacity-building programs, affordable access to technology, and inclusive policies that empower artisans to compete effectively in the digital marketplace.

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