THREADS OF ELEGANCE – EMPOWERING INDIAN HANDLOOM THROUGH E-COMMERCE

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A B S T R A C T

The Indian handloom industry is one of the oldest and largest cottage industries in India with ancient tradition dating back thousands of years for their excellent craftsmanship, representing the vibrant Indian culture.

Indian handloom products are high quality products in contemporary as well as traditional designs and with zero defects and zero effect on the environment. They are the symbol of purity, quality and elegance. They endorse the quality in terms of raw materials, processing, embellishments, weaving design and other quality parameters besides ensuring social and environmental compliances in their production.

Handloom weaving forms an integral part of the rich culture, heritage and tradition of India. The intricate workmanship of the handloom weavers creates a unique identity for handloom products which are globally appreciated for their colour, richness, variety and quality. India's handloom artists are globally known for their unique hand spinning, weaving and printing style.

Indian handloom sector is surrounded by manifold challenges such as small productivity, globalisation, insufficient working capital, rapid technology development, etc. Hence, the handloom sector will have to play to its different strengths in the modern economy.

The Indian government has been actively involved in promoting handlooms and supporting the handloom industry due to its cultural significance, contribution to rural livelihoods, and potential for sustainable economic growth.

Use of E-commerce will provide several advantages to handloom industries, helping them expand their reach, improve sales, and compete in the digital marketplace. With the help of virtual store on E-Commerce platform, the artisans will get remunerated fairly with no middlemen to manipulate prices and customers will get access to 100% authentic and best handcrafts products emerging straight from the heart of India.

This research paper explores the intersection between the traditional handloom industry and the emerging realm of e-commerce. By examining the challenges and opportunities faced by handlooms in digital marketplace, the study aims to provide comprehensive understanding of the dynamics. The study uncovers the key insights into potential of e-commerce to transform the handloom sector. It contributes to the existing body of knowledge by bridging the gap between traditional craftsmanship and digital platforms, offering practical recommendations for stakeholders involved in promoting handloom products through e-commerce channels.

Keywords : Handloom, e-commerce, Empowerment, Digital Platforms.

Introduction :

The Indian handloom sector is known for its tradition of excellent craftsmanship. These skills are being passed on from generation to generation since ancient times as a rich heritage woven into fabric. The Indian handloom industry has occupied an important position in respect of its export to foreign countries from an early period. The handloom industry plays a dominant role in the economic development of the rural mass. Handlooms are scattered in the rural and semi-urban areas. The handloom industry is an important sector in providing large scale employment and result in the upliftment of the rural masses.

Each handloom product is specific and is unique in design and style. Handloom is largely home-based with labour inputs from the entire family. This home-based industry, with its low capital and energy requirements and its ability to provide livelihoods to a large number of people and has immense economical potential.

The hand weaved handloom products are considered to be one of the richest and old tradition of Indian heritage. The weavers of handlooms come from weaker sections of the society, who work for fulfilling their daily needs. Due to these weavers, the old Indian tradition is alive. The handloom products which these weavers make are incomparable with other products. The weavers from different states of India are trying to keep the traditional work of their places alive. The enormous variety of Indian handloom creations reflects the ethnic diversity in the country and the intricate compositions are known throughout the world since ancient civilizations.

E-commerce plays a crucial role in potentially empowering traditional handloom artisans in several significant ways. While the challenges exist, e-commerce offers a range of opportunities that can help revitalize and sustain the handloom weaving industry. E-commerce breaks down geographical barriers, allowing artisans from remote or rural areas to access urban and international markets without the need for a physical presence in various locations.

The importance of survival of the handlooms needs to be understood and efforts have to be taken to keep this tradition alive. An objective appraisal of the handloom industry for empowering weavers and marketing of its products therefore, is the need of the hour.

Literature Review :

The following literature review has been made for the study purpose.

Challenges in marketing handloom products through e-commerce are acknowledged in the literature.

Samira Patra (2021) in article "Role of E-Market in Marketing of Handloom Products: A Study on Cuttack District of Odisha" opines that Handloom weavers of Odisha produce various handloom products which have demands in national and international market for their quality and design. In the technological driven society, handloom products are also trading over the e-marketing/virtual platform like by Amazon, Flipkart etc. Handloom Products still have demand in the national and international market through E-market for their quality, price and design. Hence, the demands of handloom products in the technological era have the massive success for the Handloom Industry in Odisha. The study concludes that the E-market have the significant role in marketing of handloom products.

Dr. Veena R. Humbe (2014) in her study suggests that social media marketing is one of the most important types of online marketing where small businesses are marketing their products/services and brands on social media websites. It enables individuals and communities to co-create, share, and modify content in an interactive, Internet-based environment. The use of social media in marketing can benefit the handloom industries by developing the awareness and benefits of the handloom products, reducing marketing expenses, increasing the sales, providing the details regarding the marketplace to purchase the handloom products and exposure towards handloom products.

Raghavendra P, Sahana H S, Prasad M D, Srinidhi Kulkarni, G V Bhavana (2023), in their article "E-Commerce Website for Artisans", have given idea for developing websites for handloom industries. They have tried to give certain ideas and methodologies which will assist local artisans in growing their businesses and increasing their profits through the use of our e-commerce website such as Demand forecasting, Price forcasting, Product Recommendations and Conversational Chatbots which will help the handloom manufacturers regarding the latest trends in fashion.

The literature review on the marketing of handloom products through e-commerce demonstrates the significant impact of online platforms on this traditional industry. While e-commerce offers opportunities for growth, it also presents challenges that need to be addressed. Research in this area continues to evolve, with a focus on strategies for effective marketing, consumer behavior, and sustainability.

Statement of Problem :
The present study is an attempt to analyse the importance and need of e commerce to promote the handloom products.

Scope of the Study :
The present study is an integrated and comprehensive study on Indian Handloom products and importance of marketing through e-commerce platform.

Objectives of the Study :
This paper attempts to study the role of e-commerce in marketing of the Indian handloom products.
1. To study the prominent Indian e-Commerce Platforms.
2. To study the frequency of online shopping made by the selected respondents.
3. To find the preferred Indian e-Commerce Platforms used by the selected respondents.
4. To suggest the implementation of guidelines in e-commerce platforms for increasing the awareness and sales of handloom products through e-commerce platforms.

Research Methodology :
The research is of descriptive type. It highlights on the features and importance of e-commerce and its use for marketing and selling of handloom products. The sample data size consists of 150 male and female respondents from Aurangabad District of Maharashtra. The present study is based on both primary as well secondary data. Primary data has been collected through a well-defined questionnaire and direct interview method from 150 respondents from the vicinity of Aurangabad district. The secondary data has been collected from various secondary sources like journals, magazines, and various reputed websites. The collected data has been classified and tabulated according to the requirements of the study.

Popular Indian e-Commerce Platforms for Apparels :
There are several e-commerce platforms in India that have gained significant popularity and market share. The following table shows some of the prominent e-commerce platforms :

Table No. 1
Prominent Indian e-Commerce Platforms

Sr.No.	e-Commerce Platforms	Logo	Year	Description
1.	Myntra	Myntra	2007	Myntra is a major Indian fashion e-commerce company headquartered in Bengaluru, Karnataka, India.
2.	Flipkart	Flipkart	2007	Flipkart Private Limited is an Indian e-commerce company, headquartered in Bengaluru, and incorporated in Singapore as a private limited company.
3.	Ajio	AJIO	2016	Ajio was founded and launched in 2016 by Reliance industries as its e-retail platform for fashion-conscious consumers.
4.	Snapdeal	snapdeal	2010	Snapdeal is an Indian e-commerce company, based in New Delhi, India.

Source : Respective Websites.

Indian e-commerce platforms have transformed the way people shop and conduct business in the country. These platforms are playing significant role in the growth of the economy and have become an integral part of everyday life. E-commerce platforms in India have made shopping incredibly convenient, allowing customers to browse and purchase products from the comfort of their homes or on the go. The reach of e-commerce platforms extends beyond urban areas, catering to customers in rural and remote locations, thereby expanding the consumer base. The Indian e-commerce market is highly competitive, with platforms constantly striving to provide better prices, deals, and customer experiences to stay ahead in the race.

Sampling Techniques :
To collect primary data, respondents were selected by one of the statistical method i.e. Random sample method. After data collection, this data was written in tables. After analyzing the tables and figures, inferences are drawn pertaining to the various aspects related to empowering handloom industries using E-Commerce.

Hypotheses Framed for the Study :

For the study purpose following hypotheses have been framed :

No.	Null Hypothesis (H0)	Alternative Hypothesis (H1)
1.	There is no association between Gender and the Frequency of Online Shopping.	There is an association between Gender and the Frequency of Online Shopping.
2.	There is no significant association between Age Group and Frequency of Online Shopping.	There is an association between Age Group and Frequency of Online Shopping.
3.	There is no significant relationship between education levels and the frequency of online shopping.	There is a significant relationship between education levels and the frequency of online shopping.
4.	There is no association between gender and preferred e-commerce platform.	There is an association between gender and preferred e-commerce platform.
5.	There is no association between Age Group and preferred e-commerce platform.	There is an association between Age Group and preferred e-commerce platform.
6.	There is no association between Education and preferred e-commerce platform.	There is an association between Education and preferred e-commerce platform.

Survey Revelations :

The study is based on various General and Special Attributes of the selected respondents. The survey of 150 male and female respondents was conducted to study the objectives and means by which the handloom industries can be empowered by using E-commerce platforms.

General Attributes :

The demographic profile of the respondents women workers working in handloom industry which will help to understand their socio-economic condition and problems faced by them at their working place.

Overall 150 respondents were selected for the study purpose. The following table depicts the socio demographic characteristics of the sample respondents. The socio demographic variables like Gender, Age and Educational Qualifications has been taken for the study.

Special Attributes :

Special attributes such as Frequency of Online Shopping and Preferred E-Commerce Platforms by the selected respondents have been studied.

Table No. 1
Demographic Characteristics of Respondents

Sr.No.	Demographic Character	Number of Respondents	Percentage
1.	**Gender**		
	Male	60	40%
	Female	90	60%
	Total	150	100%
2.	**Age Group**		
	18-30 years	45	30%
	31-45 years	60	40%
	46-60 years	30	20%
	Over 60 years	15	10%
	Total	150	100%
3.	**Education**		
	High School	25	16.67%
	Bachelor's Degree	60	40%
	Master's Degree	40	26.67%
	Ph.D.	25	16.67%
	Total	150	100%

Source : Compiled from Questionnaire

The above Table No. 1 shows the Demographic Characteristics of the selected respondents with respect to their Gender, Age and Education.

Table No. 2
Usage of E-Commerce for Handloom Products

Sr.No.	Use of E-Commerce	Frequency	Percentage
1.	**Frequency of Online Shopping**		
	- Never	15	10%
	- Rarely	30	20%
	- Occasionally	45	30%
	- Frequently	45	30%
	- Always	15	10%
	Total	150	100%
2.	**Preferred E-Commerce Platform**		
	- Myntra	50	33.33%
	- Flipkart	20	13.33%
	- Ajio	40	26.67%
	- Snapdeal	40	26.67%
	Total	150	100%

Source : Compiled from Questionnaire

Table No. 2 depicts the frequency of Online shopping by the selected respondents towards handloom products. It also indicates the choice for E-Commerce Platforms by the respondents for shopping handloom products.

Data Analysis and Interpretation :
The study is based on General and Special Attributes of the selected respondents. The survey of 150 male and female respondents was conducted. The data collected from 150 respondents through questionnaire method is tabulated and interpreted using the statistical tools. The following tables show the calculated observed and critical values for calculating the chi-square values and for interpretation of the hypotheses framed for the study purpose.

Gender and Frequency of Online Shopping :
The following Table No. 3 and Table No. 4 show the Observed and Expected Value respectfully using the Chi-Square Method.
To perform a Chi-Square test for independence, it is to be determined whether there is a significant association between two categorical variables. From Table No. 1 and Table No. 2, the test for association between "Gender" and the Frequency of Online Shopping for handloom products is calculated. The "Frequency of Online Shopping" is made through the following Observed Frequency Table and Expected Frequency Table.

Table No. 3
Observed Frequency Table - Gender vs. Frequency of Online Shopping

Gender	Never	Rarely	Occasionally	Frequently	Always
Male	10	15	20	10	5
Female	5	15	25	35	10

Source : Compiled from Questionnaire

Table No. 4
Expected Frequency Table - Gender vs. Frequency of Online Shopping

Gender	Never	Rarely	Occasionally	Frequently	Always
Male (E)	6	12	18	18	6
Female (E)	9	18	27	27	9

Source : Calculated using SPSS.

The tables examine the association between Gender and the Frequency of Online Shopping. The Chi-Square test is made using these Observed Frequencies and the Expected Frequencies from the data. For examining the association between "Gender" and "Frequency of Online Shopping" using the expected frequencies, Chi-Square Test is used by using formula : $\chi^2 = \Sigma$ [(Observed Value(O) - Expected Value(E))² / Expected Value]

Where : χ^2 - Chi-Square statistic, O - Observed frequency, E - Expected frequency.

The degrees of freedom for a chi-square test for independence are calculated as (R - 1) * (C - 1), where R is the number of rows and C is the number of columns.

For Table No. 4, there are 2 rows and 5 columns, Hence,

$$\text{Degree of Freedom (df)} = (2 - 1) * (5 - 1) = 4$$

The Chi-Square is calculated for each cell and then summation of Gender "Male" and "Female" is summed. The chi-square value calculated is 9.67 and the critical value for Chi-Square at level of significance (e.g., $p < .05$) and Degrees of Freedom (df) = 4, is approximately 9.488.

The chi-square value calculated is 9.67 and critical value is 9.488. As observed from the calculations, the Chi-Square statistic is greater than the critical value (9.67 > 9.488), Hence, **the Null Hypothesis (H0) is rejected. This suggests that there is a significant association between Gender and the Frequency of Online Shopping.**

Age Group and Frequency of Online Shopping :

Similarly, Observed Frequency and Expected Frequency is calculated from the values of Age Group and Frequency of Online Shopping.

The following Table No. 5 and Table No. 6 depict the Observed Frequency and Expected Frequency.

Table No. 5
Observed Frequency Table – Age Group vs. Frequency of Online Shopping

Age Group	Never	Rarely	Occasionally	Frequently	Always
18-30 years	5	9	13	13	5
31-45 years	6	12	18	18	6
46-60 years	3	6	9	9	3
Over 60 years	2	3	5	5	2

Source : Compiled from Questionnaire

Table No. 6
Expected Frequency Table – Age Group vs. Frequency of Online Shopping

Age Group	Never	Rarely	Occasionally	Frequently	Always
18-30 years (E)	4.74	8.88	13.32	13.32	4.74
31-45 years (E)	6.32	11.84	17.76	17.76	6.32
46-60 years (E)	3.16	5.92	8.88	8.88	3.16
Over 60 years (E)	0.79	3.36	5.03	5.03	0.79

Source : Calculated using SPSS

The above table examines the association between Age Group and the Frequency of Online Shopping. With the degree of freedom 12 and level of significance 0.05, the calculated chi-square value is 0.194. Using a chi-square distribution table, the critical chi-square value at level of signifinace = .05 and df = 3 is approximately 7.815.

The chi-square value calculated is 11.76 and critical value is 7.815. As observed from the calculations, the Chi-Square value is greater than the critical value (11.76 > 7.815). Hence, **the Alternate Hypothesis (H1) is accepted. This suggests that there is a significant association between Age Group and the Frequency of Online Shopping.**

Education and Frequency of Online Shopping :

The following Table No. 7 and Table No. 8 depict the Observed Frequency and Expected Frequency respectfully.

Table No. 7
Observed Frequency Table – Education vs. Frequency of Online Shopping

Education	Never	Rarely	Occasionally	Frequently	Always
High School	15	0	0	05	05
Bachelor's Degree	0	15	15	25	05
Master's Degree	0	15	15	05	05
Ph.D.	0	0	15	10	00

Source : Compiled from Questionnaire

Table No. 8
Expected Frequency Table – Education vs. Frequency of Online Shopping

Education	Never	Rarely	Occasionally	Frequently	Always
High School (E)	1.5	3	4.5	4.5	1.5
Bachelor's Degree (E)	1.5	3	4.5	4.5	1.5
Master's Degree (E)	0.5	1.5	1.5	0.5	0.5
Ph.D. (E)	0	0	1.5	1	0

Source : Calculated using SPSS

The chi-square (χ^2) value from the observed values and expected values in the contingency table is χ^2 = 413.20. The critical chi-squared value with degree of freedom (df) = 12 at significance level (0.05) is approximately 21.03.

Since the calculated chi-squared value is much greater than the critical chi-squared value, this suggests that there is a significant relationship between education levels and the frequency of online shopping. There is strong evidence to support the idea that Education Level and the Frequency of Online Shopping are associated. Hence **Alternative Hypothesis (H1) "There is a significant relationship between education levels and the frequency of online shopping" is accepted.**

Gender and Preferred E-Commerce Platform :

Considering the association between Gender and Preferred E-commerce Platform, the Observed frequency and Expected frequency are calculated to get the Chi-Square Value. From the observations following tables are generated using SPSS.

Table No. 9
Observed Frequency Table - Gender vs. Preferred E-Commerce Platform

Gender	Myntra	Flipkart	Ajio	Snapdeal
Male	20	10	20	10
Female	30	10	20	30

Source : Compiled from Questionnaire

Table No. 10
Expected Frequency Table - Gender vs. Preferred E-Commerce Platform

Gender	Myntra	Flipkart	Ajio	Snapdeal
Male (E)	20	8	16	16
Female (E)	30	12	24	24

Source : Calculated using SPSS.

The calculated chi-square statistic = 6.25. The critical chi-square value in the chi-square distribution table for df=3 and α=0.05, the critical chi-square value is approximately 7.815.

Based on the chi-square test at a 5% significance level, The Chi-square value is less than critical chi-square test i.e. (6.25 < 7.8.15), hence there is not enough evidence to conclude that there is a significant association between gender and online store preference. Therefore, **the Null Hypothesis (H0) stating "There is no association between gender and preferred e-commerce platform" is accepted.**

Age and Preferred E-Commerce Platform :

Considering the association between Age and Preferred E-commerce Platform, we calculate the Observed frequency and Expected frequency to get the Chi-Square Value. From the observations following tables are generated using SPSS.

Table No. 11
Observed Frequency Table – Age Group vs. Preferred E-Commerce Platform

Age Group	Myntra	Flipkart	Ajio	Snapdeal
18-30 years	15	6	12	12
31-45 years	20	8	16	16
46-60 years	10	4	8	8
Over 60 years	5	2	4	4

Source : Compiled from Questionnaire

Table No. 12
Expected Frequency Table – Age Group vs. Preferred E-Commerce Platform

Age Group	Myntra	Flipkart	Ajio	Snapdeal
18-30 years (E)	17	10	9	9
31-45 years (E)	14	6	5	5
46-60 years (E)	12	2	23	23
Over 60 years (E)	7	2	3	3

Source : Calculated using SPSS

The total Chi-Square value is approximately 237.58 at the level of significance (α) of 0.05 with degrees of freedom (df) = 9 and For α = 0.05 and df = 9, the critical value is approximately 16.92.

As the calculated Chi-Square value (237.58) is greater than the critical value (16.92), the Null Hypothesis is rejected, indicating that there is a significant relationship between age group and preferred e-commerce platform.

Education and Preferred E-Commerce Platform :

The following Table No. 13 and Table No. 14 depict the Observed Frequency and Expected Frequency respectfully.

Table No. 13
Observed Frequency Table – Education vs. Preferred E-Commerce Platform

Education	Myntra	Flipkart	Ajio	Snapdeal
High School	8	3	10	10
Bachelor's Degree	15	9	24	24
Master's Degree	14	6	16	16
Ph.D.	13	2	10	10

Source : Compiled from Questionnaire

Table No. 14
Expected Frequency Table – Education vs. Preferred E-Commerce Platform

Education	Myntra	Flipkart	Ajio	Snapdeal
High School (E)	7	4	7	7
Bachelor's Degree (E)	20	8	16	16
Master's Degree (E)	14	6	10	10
Ph.D. (E)	9	2	7	7

Source : Calculated using SPSS

The chi-square value ($\chi 2$) for the given observed and expected frequency tables is approximately 24.2143 at the degrees of freedom (df) = 9 and the level of significance (α) = .05 and the critical value from a chi-square distribution table for α = 0.05 and degrees of freedom = 9 is approximately 16.919.

Therefore, Chi-square Value (24.2143) > Critical Chi-square Value (16.919).

As the calculated chi-square value is greater than the critical chi-square value, the null hypothesis is rejected, indicating a significant relationship between Education and Preferred E-Commerce Platform.

Hypotheses Tested :

The following Table shows in brief the outcomes of the Hypotheses Accepted by using the statistical tools.

Table No. 15
List of Hypotheses Accepted

Hypotheses 1 :	Gender and Frequency of Online Shopping
Accepted	H1 : Alternative Hypothesis There is an association between Gender and the Frequency of Online Shopping.
Hypotheses 2 :	Age Group and Frequency of Online Shopping
Accepted	H1 : Alternative Hypothesis There is an association between Age Group and Frequency of Online Shopping.
Hypotheses 3 :	Education and Frequency of Online Shopping
Accepted	H1 : Alternative Hypothesis There is an association between Education and Frequency of Online Shopping.
Hypotheses 4 :	Gender and Preferred e-commerce Platform.
Accepted	H0 : Null Hypothesis
	There is no association between Gender and Preferred e-commerce Platform.
Hypotheses 5 :	Age Group and Preferred e-commerce Platform.

Accepted	H1 : Alternative Hypothesis
	There is an association between Age Group and Preferred e-commerce Platform.
Hypotheses 6 :	Education and Preferred e-commerce Platform.
Accepted	H1 : Alternative Hypothesis
	There is an association between Education and preferred e-commerce Platform.

Conclusion and Recommendations :

The study indicates that the customers irrespective of Gender, Age and Education are associated with the frequency of online shopping and the choice of E-commerce platforms. Increasing the sales of handloom products using e-commerce platforms requires a combination of effective marketing strategies, a user-friendly online store, and a focus on customer satisfaction. Following recommendations can be helpful for increasing the sale of handloom products and help in empowering Indian Handloom through E-Commerce

1. Quality Product Photography : High-quality images are crucial. By Showcasing the texture, colors, and details of handloom product and using multiple angles and close-ups to give customers a complete view of the product, Customers can be interested in buying the product.

2. **Detailed Product Descriptions :** The **interest of the** customers can be created by providing comprehensive information about each product, including materials, dimensions, care instructions, and the story behind the handloom process and using persuasive language to highlight the unique qualities and benefits of handloom products.

3. **Mobile Optimization :** The e-commerce website should be mobile-friendly, as many shoppers use smart phones for online shopping.

4. **User-Friendly Navigation :** The manufacturers of handloom products should make it easy for customers to find what they're looking for with a well-organized and intuitive website structure.

5. **Secure Payment Options :A** variety of secure payment methods should be offered to accommodate different customer preferences.

6. **Shipping and Return Policy :** There should be a **clear** communication explaining the shipping and return policies to build trust with customers.

7. **Social Proof and Reviews :** Encourage customers to leave reviews and ratings for the products. Also showcase positive reviews on product pages to build credibility.

8. **Content Marketing :** Create blog posts, articles, or videos that educate customers about the art of handloom weaving, the artisans behind the products, or the cultural significance of the items.

9. **Loyalty Programs and Discounts :** The handloom producers should reward repeat customers with loyalty programs, discounts, or exclusive offers.

10.**Analytics and Optimization :** Use website analytics to track user behavior and sales trends.

Continuously optimizing website and marketing strategies based on data insights will boost to increase the sale of handloom products.

Building a successful e-commerce business takes time and ongoing effort. Continuously engaging with customers, adapt to their feedback, and staying updated with industry trends to remain competitive in the online marketplace will empowering Indian Handloom through E-Commerce.

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