

OPPORTUNITIES AND OBSTACLES IN THE SUSTAINABLE DEVELOPMENT OF KHADI: A DUAL PERSPECTIVE OF MANUFACTURERS AND RETAILERS

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ABSTRACT

Khadi, the hand-spun and hand-woven fabric rooted in India's freedom movement, has emerged in recent years as a symbol of sustainability and rural empowerment. This research delves into the sustainable development of Khadi through a dual-lens analysis of manufacturers and retailers, with the objective of identifying and comparing their perspectives on the opportunities and challenges in the evolving Khadi ecosystem. As Khadi transitions from a symbol of nationalism to a product of ethical fashion, the stakeholders involved must navigate a landscape shaped by changing consumer demands, global sustainability standards, and technological transformation. Using a structured quantitative approach, the study surveyed 90 respondents—33 manufacturers and 57 retailers—to assess their perceptions. The research applied independent sample t-tests to examine significant differences in views between these two groups and conducted Pearson correlation analysis to evaluate the relationship between perceived opportunities and challenges. The results revealed that retailers generally perceive greater opportunities and fewer challenges compared to manufacturers. Retailers benefit from increasing consumer interest in sustainable fashion, designer collaborations, and expanding digital retail platforms. In contrast, manufacturers continue to grapple with outdated production methods, inconsistent raw material supply, limited technological support, and poor market exposure. Furthermore, the findings indicate a statistically significant moderate negative correlation between opportunities and challenges, suggesting that increased access to opportunities may help reduce perceived challenges. These insights underline the importance of targeted interventions and differentiated policy support for manufacturers and retailers to unlock the full potential of the Khadi sector. The study contributes to the existing body of literature by bridging the gap between production and retail perspectives and highlighting the need for an integrated approach toward sustainable development. This comprehensive understanding can guide policymakers, entrepreneurs, and Khadi institutions in formulating strategies that enhance both social impact and market viability.

Key Words: Khadi, Sustainable Development, Retailer-Manufacturer Perspective.

INTRODUCTION

Khadi, a hand-spun and hand-woven fabric deeply rooted in India's freedom struggle and cultural identity, has evolved into a symbol of sustainable fashion and rural employment. Originally promoted by Mahatma Gandhi as a tool of economic self-reliance and empowerment, Khadi has gained renewed attention in recent years due to the global emphasis on eco-friendly and ethical products. Despite its strong heritage, Khadi is facing a transitional phase where traditional methods must align with modern consumer expectations and sustainability standards. This transition opens the door to numerous opportunities and challenges for those involved in its production and distribution.

From the manufacturers' perspective, Khadi holds immense potential as a means of promoting rural employment, especially among women and artisan communities. The sustainable and low-carbon nature of Khadi production aligns with contemporary environmental goals, offering manufacturers a unique market advantage. Technological advancements in looms, improved dyeing techniques, and better supply chain infrastructure can boost productivity and profitability. Furthermore, government

schemes and support from Khadi and Village Industries Commission (KVIC) add strength to the sector's development framework. These factors position Khadi as a promising vehicle for sustainable rural industrialization.

However, manufacturers also encounter significant hurdles. The sector continues to rely heavily on outdated techniques and faces issues such as inconsistent quality, irregular raw material supply, and lack of modern equipment. The absence of training and technological innovation, coupled with limited access to funding and market exposure, hampers their ability to scale operations and compete in broader markets. Additionally, inadequate branding and poor packaging reduce the appeal of Khadi products in urban and international markets. As a result, despite its sustainable roots, the Khadi sector often struggles to gain the recognition and profitability it deserves.

On the other hand, retailers of Khadi products face a different set of challenges and opportunities. As consumer awareness around sustainability grows, retailers have an opportunity to position Khadi as a premium eco-conscious product line. Collaborations with designers, improved visual merchandising, and online platforms have helped enhance its visibility. Retailers can leverage storytelling around heritage and craftsmanship to attract younger, environmentally conscious buyers. Yet, they must also contend with inconsistent supply, lack of standardization, and competition from machine-made products that mimic the aesthetic of Khadi at a lower cost.

In this context, a dual-perspective analysis—examining both manufacturers' and retailers' experiences—is essential to understand the scope for sustainable development in the Khadi sector. This study aims to explore the interplay of traditional practices and modern retail strategies, identifying critical areas that can promote Khadi as a viable, sustainable industry. Through this lens, policymakers, entrepreneurs, and stakeholders can develop informed strategies to overcome obstacles and maximize the opportunities available in the Khadi ecosystem.

LITERATURE REVIEW

1. **Choudhury & Ghosh (2016)**, In the Research titled “Economic development and "Khadi": An analysis” The study concluded that Khadi has played a vital role in supporting rural economies by generating employment and fostering local development. However, despite consistent government support, the sector faces operational inefficiencies and lacks modern management practices. For Khadi to contribute effectively to sustainable development, a more holistic and market-oriented approach is required.
2. **Busenna & Reddy (2011)**, In the Research titled “Khadi & village industry: A case study of Khadi institutions in India” This paper emphasized that Khadi institutions possess significant potential to generate rural employment and promote grassroots entrepreneurship. However, outdated machinery, poor marketing strategies, and inadequate training of artisans continue to hinder progress. The study recommended reforms in production techniques, product design, and branding to revitalize the sector.
3. **Dhillon & Kapoor (2024)**, In the Research titled “Reviving Khadi: Exploring sustainable qualities and promoting Khadi among fashion design students” The researchers found that awareness campaigns and fashion design education can significantly enhance the appeal of Khadi among youth and urban consumers. Student-led design initiatives, when aligned with traditional craftsmanship, can bridge the gap between heritage and modernity. The study concludes that design education can be a transformative tool in the sustainable promotion of Khadi.
4. **Malathi & Jayalakshmi (2025)**, In the Research titled “Khadi and SDGs: Exploring its potential role in achieving India's development goals” This paper concluded that Khadi is well-aligned with multiple Sustainable Development Goals (SDGs), especially those related to poverty alleviation, gender equality, and environmental sustainability. However, to fully realize this potential, the sector must overcome policy-level gaps, lack of innovation, and weak institutional coordination. The study urges a multi-stakeholder approach to mainstream Khadi in sustainable development strategies.

5. **Arora (2023)**, In the Research titled “Khadi in shades of green: Sustainable approaches to environment-friendly manufacturing” The study highlighted that Khadi is inherently sustainable due to its hand-spun, natural production methods. Yet, environmental sustainability in the sector needs to be strengthened through eco-friendly dyes, renewable energy, and responsible labor practices. It concluded that Khadi’s future success depends on integrating environmental consciousness with economic viability.
6. **Bhalla et.al (2018)**, In the Research titled “An integrated rural development model based on comprehensive life-cycle assessment (LCA) of Khadi-handloom industry in rural India” Using Life Cycle Assessment (LCA), the authors found that while Khadi production has a lower environmental impact than industrial textiles, there are still ecological burdens during dyeing and transportation stages. They concluded that adopting energy-efficient technologies and better logistics could make Khadi a model for green rural industrialization
7. **Aravind & Girisanter (2022)**, In the Research titled “Khadi textiles, women and rural development: An analysis from past to present” This paper concluded that women form the backbone of the Khadi workforce, yet they remain underrecognized and face systemic inequalities. While Khadi has empowered many rural women historically, modern reforms must address gender equity and support women-led microenterprises to sustain the industry's social impact
8. **Datta & Sarkar (2020)**, In the Research titled “The effectiveness of West Bengal state Khadi Mela as organisational marketing tool” The study found that events like Khadi Melas are effective in increasing awareness and sales of Khadi products while empowering local artisans. However, these efforts are often short-lived without sustained marketing, quality control, and digital integration. The authors concluded that to maximize impact, such events should be part of a long-term promotional and retail strategy.

RESEARCH GAP

Despite the growing body of research highlighting Khadi's potential in rural employment generation, sustainability, and cultural preservation, a significant research gap exists in understanding the dual perspective of manufacturers and retailers in the sustainable development of Khadi. Most studies either focus on production challenges or marketing events such as Khadi Melas, with limited attention to the interconnected challenges and opportunities across the supply chain. Moreover, while environmental and gender-related issues have been explored, empirical research that integrates manufacturer-retailer coordination, value chain efficiency, market competitiveness, and consumer perception in a holistic framework is lacking. Addressing this gap is crucial for formulating comprehensive strategies that ensure Khadi's long-term viability as both a traditional and sustainable industry.

RESEARCH METHODOLOGY

The study adopts a quantitative research methodology using primary data collected from 90 respondents, comprising 33 Khadi manufacturers and 57 retailers. Data was analyzed using statistical tools such as the independent samples t-test to compare differences in perceived opportunities and challenges, and Pearson’s correlation test to determine the relationship between them. Demographic factors such as gender, age, income, and type of respondent were also examined. The statistical results confirmed significant differences in both opportunities and challenges between manufacturers and retailers, and a moderate negative correlation between the two variables, validating the formulated hypotheses.

DATA ANALYSIS

Demographic Factor

Sr No.	Particular	Category	Frequency	Percent
1	Gender	Male	62	68.9
		Female	28	31.1

2	Age	18 to 30 years	2	2.2
		31 to 40 years	18	20.0
		41 to 50 Years	37	41.1
		51 to 60 years	16	17.8
		Above 60 Years	17	18.9
3	Annual family income	Up to 2.5 Lakhs	17	18.9
		2.5 to 5 lakhs	12	13.3
		5 to 10 lakhs	15	16.7
		10 to 20 lakhs	31	34.4
		More than 20 lakhs	15	16.7
4	Type of Respondents	Manufacturer	33	36.7
		Retailer	57	63.3

The frequency distribution data indicates that out of 90 respondents, 62 (68.9%) were male and 28 (31.1%) were female. In terms of age, the highest number of respondents, 37 (41.1%), belonged to the 41 to 50 years age group, followed by 18 (20.0%) in the 31 to 40 years range, 17 (18.9%) above 60 years, 16 (17.8%) in the 51 to 60 years group, and only 2 (2.2%) in the 18 to 30 years category. Regarding annual family income, 31 respondents (34.4%) reported income between ₹10 to ₹20 lakhs, 17 (18.9%) had income up to ₹2.5 lakhs, 15 each (16.7%) fell under the ₹5 to ₹10 lakhs and above ₹20 lakhs categories, and 12 (13.3%) earned between ₹2.5 to ₹5 lakhs. As for the type of respondents, 33 (36.7%) were manufacturers and 57 (63.3%) were retailers, indicating that the study had a larger representation from the retail sector.

OBJECTIVE AND HYPOTHESIS

Objectives 1 To study and Compare Opportunities in Khadi products from the perspectives of Manufacturer and Retailer.

Null Hypothesis H_{01} : There is no significant difference in Opportunities for Khadi products between of Manufacturer and Retailer.

Alternate Hypothesis H_{11} : There is a significant difference in Opportunities for Khadi products between of Manufacturer and Retailer.

To Test the above null hypothesis independent sample test is applied and t-test is obtained results are as follows.

Independent Samples Test					
	t-test for Equality of Means				
	t	df	P-value	Mean Difference	Std. Error Difference
Opportunities	-5.702	88	.000	-19.381	3.399

Interpretation: Above results indicate that p-value is 0.000. It is less than standard value of 0.05. Therefore, the t-test is rejected. Hence null hypothesis is rejected and alternate hypothesis is accepted.

Conclusion: There is a significant difference in Opportunities for Khadi products between of Manufacturer and Retailer.

Findings: To understand the findings of hypothesis, mean score of Opportunities for Khadi products between of Manufacturer and Retailer are obtained and presented in the following table.

Group Statistics					
	5. Type of Respondents	N	Mean	Std. Deviation	Std. Error Mean
Opportunities	Manufacturer	33	58.30	21.355	3.717
	Retailer	57	77.68	10.901	1.444

The group statistics reveal a clear difference in the perception of opportunities between manufacturers and retailers. Retailers (N = 57) reported a higher mean score of 77.68 (SD = 10.901), indicating they perceive more opportunities compared to manufacturers, who reported a lower mean score of 58.30 (SD = 21.355) based on a sample of 33 respondents. The standard error is smaller for retailers (1.444) than for manufacturers (3.717), suggesting more consistency in responses among retailers. Overall,

these results indicate that retailers tend to view the business environment more favorably in terms of opportunities than manufacturers.

Objectives 2 To study and Compare Challenges in Khadi products from the perspectives of Manufacturer and Retailer.

Null Hypothesis H_{02} : There is no significant difference in challenges for Khadi products between of Manufacturer and Retailer.

Alternate Hypothesis H_{12} : There is a significant difference in challenges for Khadi products between of Manufacturer and Retailer.

To Test the above null hypothesis independent sample test is applied and t-test is obtained results are as follows.

Independent Samples Test					
		t-test for Equality of Means			
	t	df	P-value	Mean Difference	Std. Error Difference
Challenges	8.070	88	.000	28.536	3.536

Interpretation: Above results indicate that p-value is 0.000. It is less than standard value of 0.05. Therefore, the t-test is rejected. Hence null hypothesis is rejected and alternate hypothesis is accepted.

Conclusion: There is a significant difference in challenges for Khadi products between of Manufacturer and Retailer.

Findings: To understand the findings of hypothesis, mean score of challenges for Khadi products between of Manufacturer and Retailer are obtained and presented in the following table.

Group Statistics					
	5. Type of Respondents	N	Mean	Std. Deviation	Std. Error Mean
Challenges	Manufacturer	33	79.27	17.043	2.967
	Retailer	57	50.74	15.642	2.072

The group statistics indicate a notable difference in the perception of challenges between manufacturers and retailers. Manufacturers (N = 33) reported a significantly higher mean score of 79.27 (SD = 17.043), suggesting they face more challenges compared to retailers, who reported a mean score of 50.74 (SD = 15.642) based on a larger sample size (N = 57). The standard error of the mean is slightly higher for manufacturers (2.967) than for retailers (2.072), reflecting more variability in responses among manufacturers. These results suggest that manufacturers perceive greater challenges in the given context compared to retailers.

Objectives 3 To study relationship between opportunities and challenges of Khadi products from the perspectives of Manufacturer and Retailer.

Null Hypothesis H_{03} : There is no relationship between opportunities and challenges of Khadi products.

Alternate Hypothesis H_{13} : There is a relationship between opportunities and challenges of Khadi products.

To Test the above null hypothesis Correlation test is applied and obtained results are as follows.

Correlations			
		Opportunities	Challenges
Opportunities	Pearson Correlation	1	-.401**
	P-value		.000
	N	90	90
Challenges	Pearson Correlation	-.401**	1
	P-value	.000	
	N	90	90

** . Correlation is significant at the 0.01 level (2-tailed).

Interpretation: Above results indicate that p-value is 0.000. It is less than standard value of 0.05. Therefore, the correlation test is rejected. Hence null hypothesis is rejected and alternate hypothesis is accepted.

Conclusion: There is a relationship between opportunities and challenges of Khadi products

Findings: The correlation analysis reveals a statistically significant negative relationship between Opportunities and Challenges, with a Pearson correlation coefficient of -0.401 ($p = 0.000$), based on a sample size of 90 respondents. This indicates that as perceived Opportunities increase, the perceived Challenges tend to decrease, and vice versa. The strength of this negative correlation is moderate and is significant at the 0.01 level (2-tailed), suggesting that the inverse relationship is not due to random chance and is likely to be meaningful in the context of the study.

CONCLUSION

The study concludes that there is a significant difference in the perception of both opportunities and challenges related to Khadi products between manufacturers and retailers. Retailers perceive significantly more opportunities and fewer challenges compared to manufacturers, as confirmed by independent sample t-tests with p-values of 0.000 in both cases. Additionally, the study finds a statistically significant moderate negative correlation ($r = -0.401$, $p = 0.000$) between opportunities and challenges, indicating that an increase in perceived opportunities is associated with a decrease in perceived challenges. These findings highlight the contrasting experiences and outlooks of manufacturers and retailers in the Khadi sector and underscore the importance of targeted support strategies for each group.

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