



Analyze the Linkages Between the Processing and Working Marketing Challenges of Tribal Woollen Textile Garhwal Uttarakhand

Surendra Kumar¹ • Shubham Goswami Giri¹ • Anil Chaudhary² • Manoj Rawat³

¹Department of Business Management, H.N.B. Garhwal Central University, Srinagar (Garhwal), Uttarakhand, India

²Jaipur Rugs Company Pvt.Ltd. Industrial area Rajasthan

³Faculty of School of Management and Commerce Studies Shri Guru Ram Rai University, Dehradun

*Corresponding Author's Email Id: ksurendra02@gmail.com

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Abstract: The handicraft industry in India plays a very vibrant part in the economic progress of rural people. Moradabad, Jaipur, Garhwal, Jodhpur, Saharanpur, and Narsapur are the major handicraft places in India. Overall, this industry employed more than 1 million people in India. Exporters of Handicrafts from the India have a superiority over competitors' countries like Malaysia, Philippines, China, etc. who mostly occupied by machine, whereas handmade products/items of India are widespread all over the world, courtesy, their unique designs with the talented workmanship. When it comes to the Garhwal region, it has a legendary history in wool. Wool is considered as sacred and people's life revolves around wool. This Paper focus on In order to measure the relationship between processing and working marketing challenges facing Uttarakhand's traditional textile manufacturers. This is also necessary to ensure active participation of local residents in traditional textile industry of Garhwal Uttarakhand through employment, entrepreneurship and economic motivation. There is enormous scope for Research and Development about traditional textile industry of Uttarakhand. This research would encourage towards the same.

Keyword: Textile Industry • Working challenges • Processing challenges • Marketing challenges

Introduction

Indian handlooms form one of the world's largest traditional industrial sectors and stand as the second-largest source of livelihood in India after agriculture. The handloom industry sustains 43.32 lakh people directly and indirectly, including 36.33 lakh rural and 6.98 lakh urban workers. Of the 38.47 lakh individuals engaged in weaving and allied activities, an overwhelming 77.90% are women. Socially, the sector includes 10.13% Scheduled Tribes, 18.12% Scheduled Castes, 45.18% Other Backward Classes, and 28.57% from other groups, reflecting its deep integration across diverse communities (Handloom Census 2013). Handloom weaving itself is a highly skilled craft, transmitted meticulously from one generation to another (Kumar 2022). Yet historically, artisans have suffered exploitation under rigid social hierarchies. Their marginalized position was further eroded during British rule, when

colonial free-trade policies devastated indigenous weaving traditions and pushed artisans into socio-economic distress (Kumar 2022). Despite expectations of reform after independence, improvement in their status has remained gradual.

In the Himalayan region of Uttarakhand, particularly among the Bhotiya tribes, handloom weaving and wool-based trade have constituted an essential cultural and economic lifeline. Woollen garments are crucial for survival in the severe mountain climate, and the Bhotiya community has traditionally traded fine wool and woollen products with Tibet for centuries. Women, especially, have woven intricate woollen items on small handlooms—*pithachan*—creating products such as *pattu*, *thulma*, blankets, chutka, carpets, shawls, *lava*, *asan*, *gudma*, *pankhi* and more (Kumar 2017). Trade relationships between the Bhotiyas and Tibetans were not merely commercial but ritualized through



centuries-old ceremonies. As documented by Chatopadhyaya (1953), the “Gamyā” trade agreement was formalized through the *serch-mulchhu* ceremony, where both parties consumed water from Mansarovar mixed with powdered gold and silver, symbolizing eternal trust and friendship (Chawla 1996).

Bhotiyas were historically resilient traders, traversing long, treacherous routes across mountains to reach wholesale markets in Tibet (S. Kumar 2022). Their courage, skill, and mountaineering expertise shaped their reputation as formidable merchants (S. Kumar et al. 2021). Limited transportation facilities and harsh terrain created natural trade monopolies that allowed them to exchange goods such as gold, borax, salt, animal skins, wool, mules, goats, and sheep for Indian grains, cloth, spices, jaggery, iron, saffron, shawls, ponies, and medicinal herbs (Kumar & Choudhary 2023). Barter was the dominant mode of transaction, and trade relations persisted through generations. However, the 1962 Indo-China conflict abruptly ended cross-border exchanges, cutting off the supply of the highest-quality wool and severely affecting Bhotiya weaving traditions (Kumar et al. 2021).

In recent years, handmade products have experienced a global revival (Kumar 2020). The rise of craft markets, along with increasing criticism of mass-produced consumer culture, reflects a shift toward “mindful” or sustainable consumption (Brewer 2017; Martindale & McKinney 2018; Mohammad et al. 2021). Consumers increasingly prefer artisanal clothing as an expression of ethical values, quality consciousness, and individuality (Hatcher & Tu 2017; Zhang 2018; Chatterjee 2016). As a result, handmade markets are expanding, and competition among artisanal producers is also growing (Cheng 2018; Marc 2020). Understanding consumer motivations has therefore become essential for the success of handmade textile enterprises.

The Garhwal region of Uttarakhand is especially renowned for its woollen handicrafts, a legacy born from deep interaction with nature and mountain life (Shukla & Kumar 2016). From woollen carpets and blankets to *thulmas*, baskets, copperware, and the ritual folk art *Aipan*, the region’s crafts bear a distinct imprint of its natural surroundings (Kumar 2021). Despite this rich heritage, artisans face multiple challenges—poor quality raw materials, infrastructural gaps, lack of market access, outdated designs, and limited training opportunities (Kumar et al. 2021). Many artisans, especially women and those with low formal education, struggle to adapt to modern market demands.

The textile industry in India, after agriculture, remains one of the largest sectors employing both skilled and unskilled workers. Contributing 0.7% to India's GDP and forming 13% of the textile and apparel market, the industry presents immense potential for expansion. Technological textile consumption in India remains only 5–10%, far lower than the 30–70% seen in developed nations, signaling a large unmet demand. The fabric manufacturing sector significantly influences national production, employment, and foreign exchange earnings (Mohan & Chatterjee 1993). Rural livelihood studies further highlight how regional factors—asset distribution, accessibility, education, and health—impact household well-being in Uttarakhand (Kumar et al. 2023; Ghosh & Ghosal 2021). According to Uchikawa, India’s expanding middle-income population by 2030 will create enormous opportunities for textile growth, particularly if industries embrace technological advancement and strategic collaboration (Kumar et al. 2021b).

The historical trajectory of textile development in India reflects both progress and setbacks. The late 19th century saw rapid cotton mill expansion, with 178 mills operating by century’s end. However, by 1900, economic downturns forced many mills in Bombay and



Ahmedabad to shut down due to unfavorable market conditions (Saha 2006). In contemporary times, globalization and reduced trade barriers (Confederation of Indian Fabric Producing Industry) have strengthened the sector's competitiveness. From the earliest experiments of humans twisting fibers of grass and flax (Amsden & Alice 2001) to today's hand-woven masterpieces, Indian textiles represent an enduring legacy of craftsmanship. Yet despite global admiration, many hill artisans continue to struggle with low incomes and limited market reach (Chaudhary 2005). Creative and handmade industries are increasingly recognized for their socio-economic benefits, including job creation, income generation, entrepreneurship, and preservation of traditional knowledge (Kumar 2011). Growing demand for sustainable textiles has elevated handloom products within the fashion industry, supported by fair trade practices, eco-friendly materials, and cultural value. As Wanniarachchi et al. (2020) argue, strategic policy support can foster sustainable innovation in the handloom sector.

To overcome present marketing challenges, state governments and NGOs must step in with targeted assistance, including financial support, improved infrastructure, and better market linkages (Kumar & Tiwari 2021). Such interventions can help artisans reduce production costs, enhance competitiveness, and access new markets—ultimately strengthening the rural economy. Yet despite the growing popularity of handmade garments, consumer motivations remain insufficiently understood. Many manufacturers promote their products as “handmade” without fully leveraging this attribute in their marketing strategies.

Research suggests that consumers value handmade clothing for its perceived quality, authenticity, and emotional connection to the maker (Kumar 2017). In a crowded and competitive marketplace, producers can build powerful relationship-based marketing strategies by emphasizing craftsmanship,

cultural heritage, and the personal stories behind products (LM van der Westhuizen et al. 2023).

Traditional Technique of Woollen Processing Method

Woollen handicraft weaving in Uttarakhand is a traditional and culturally rooted skill that has evolved in response to the region's mountainous climate and cold environment. The practice dates back several centuries and has always relied heavily on the expertise and labour of women, who continue to play a central role in every stage of wool processing and weaving (S. Kumar & Choudhary 2023b). Uttarakhand's high-altitude climate is ideal for rearing sheep, Angora rabbits and pashmina goats, providing the region with naturally high-quality wool. This abundance of raw material has historically offered excellent opportunities for producing premium woollen products.

Shearing was traditionally carried out manually using scissors, a method that was both labour-intensive and time-consuming (S. Kumar 2020). Tribal shearers typically sheared their animals twice a year—once in spring and again in autumn—taking advantage of the seasonal cycles when rain and temperature changes made the process more manageable (S. Kumar et al. 2023). After shearing, the wool was graded according to its fineness, length and texture. Fine, long wool was reserved for garments, while coarser wool was used to make carpets, blankets and quilts (Dantiyagi 1983).

The Bhotiya tribes traditionally processed wool using sustainable and environmentally friendly methods. Their craft followed a sequence of shearing, grading, scouring, carding, spinning and dyeing to produce high-quality yarn. In the warm-water scouring method, wool fibres were soaked in lukewarm water to allow deeper penetration and loosening of dirt, grease and stains (S. Kumar et al. 2023). Natural agents like *reetha* were added to break down oils and impurities, while gentle beating with wooden sticks further



loosened embedded dirt. The wool was then washed thoroughly in lukewarm water and dried in the sun to ensure complete removal of residues.

Although scouring improved the colour, softness and overall aesthetic quality of the wool, it also required considerable time and labour. Sun-drying typically took five to seven days, especially because teasels and other impurities were removed by hand. Only after thorough washing and drying could the wool be carded effectively. In cases of heavily soiled wool, a small amount of lotion was added to boiling water to aid cleaning before the fibres were stripped and beaten to prepare them for further processing.

Current scenario of wool processing

It has been observed that the traditional method of wool processing among the Bhotiya tribal community has changed. The in-grades used in wet processing are mostly non-biodegradable. For the scouring/washing process, detergents have replaced rettha nuts, while synthetic dyes have largely replaced natural dyes in conventional methods.

The Bhotiya tribe mainly used natural dyes for dyeing woollen yarn, although few natural dyes were used among them for wool colouring. Another subgroup began dyeing wool yarn with synthetic dyes. The availability of detergents and synthetic dyes at a low price and their ease of application led to an increase in the use of these products for scouring and dyeing in the past. This process resulted in no treatment of effluent, which was released directly into the streams and rivers as a result. The extensive use of detergents and synthetic dyes was primarily motivated by their affordability and facile application during scouring and dyeing. Unfortunately, in both operations, the effluent was dumped untreated directly into aquatic bodies. Synthetic dyes were particularly required for the dyeing process. (Rawat, H. et al. 2019).

Research Methodology

The purpose of the research is to identify the marketing challenges faced by the Bhotiya

community while marketing their handloom textiles. The data utilized for conducting the research was primary in nature. The collected data was analyzed using required statistical tools according to the objectives framed for the research. Nature of the study warranted collection of primary data. The data was collected using survey method. The data was collected using a self-administered questionnaire. Majority of the respondents were literate, but were unable to understand the questionnaire. Due to this hurdle, the researcher used schedules for data collection. Human interaction method (HIM) was implemented so that the data from respondents who were distant can be also collected from representatives of the researcher. Considering the nature of the research, employing a combination of both qualitative and quantitative research methods is justified. The research is descriptive and exploratory in nature. It is helpful in understanding the requirement of the research. Which is challenges faced by Bhotiya community. It also explores. The respondents of the study are the stakeholders involved in manufacturing handlooms. The study is conducted to identify challenges faced and opportunities for Bhotiya community.

Research instrument

Research instrument was self-designed. It was bilingual (Hindi & English). Initially, it was developed in English, but it was translated in Hindi so make respondents easily understand the questions. It recorded the responses using five-point Likert type scale

Research spatial data analysis tools “R”

The contribution combines spatial data analysis in R and learning how an open-source community of analysts and infrastructure has reached critical mass to share knowledge and tools from the R project. We will see if and how far we can contribute to R (and other projects) in 2003 at the Distributed Statistical Computing workshop. Statistical and data analysis communities challenge perceived barriers between open source and commercial



software in order to achieve better, more timely, and more professional analyses. It is a workbench for exploring alternative implementation issues and bug reports, contributions and criticism are much appreciated. SPDEP demonstrates the internal workings of an R package. Several Canonical data sets, including real and lattice data, will be used to provide clear comparisons to the literature (Wilson 2008).

Result and Discussion

Research questionnaires were used by the researcher to collect and analyze primary data. As a result of the researcher's work, the following research design was adopted: prepared research questionnaire in order to measure the perception and satisfaction level of woolens handicraft textile manufactures. In order to measure the relationship between processing and working Traditional textile manufacturers in Uttarakhand face marketing challenges (Kumar, S., Kumar, S., & Rawat, M. 2021). This research investigates these challenges. Objective and hypothesis have been formulated:

- Uttarakhand tribal woollen textile manufacturers face a number of marketing challenges, which can be analyzed through

a relationship between processing techniques and marketing challenges.

- **H₀₁** There is no significant Uttarakhand tribal woollen textile manufacturers face a number of marketing challenges, which can be analyzed through a relationship between processing techniques and marketing challenges. For testing the proposed null hypothesis “**H₀₁** There is no significant relationship between processing and working marketing challenge faced by tribal woollen textile manufactures of Uttarakhand” and for achieving its corresponding objective “To measure the relationship between processing and working marketing challenge faced by tribal woollen textile manufactures of Uttarakhand”, Researcher calculated that Pearson correlation coefficients, R² coefficients, and independent share coefficients were significant. In order to determine whether tribal woollen textile manufacturers in Uttarakhand are facing significant marketing challenges in processing and working with traditional textile manufacturers, these are computed as follows. 1.

Table 1 presents the summary statistics of the co-efficient of correlation between while processing tribal woollen textiles in Uttarakhand, tribal textile manufacturers’ face marketing challenges and working with traditional textile industry

Group	Independent Variable	Dependent Variable	Correlation	Coefficient of Determination R ²	Share of I.V
Manufacturers	Processing challenges	Working Challenges	0.106**	0.011	1.1%

** Statistically significant at the 0.01 level.

Primary Data

In Table 1 we present a Pearson correlation coefficient "r" based on the number of tribal woolens textile producers of Uttarakhand who are facing marketing challenges as a result of working with traditional textile industries in the study area and the marketing challenges they are experiencing as it depicts that value of Co-efficient of correlation, $r=0.106$, between perception and satisfaction of manufacturers towards marketing challenge faced by them

while processes and working with traditional textile industry in Uttarakhand which is significant at 0.01 level of significance. The table 1 also shows the coefficient of determination, $R^2 = 0.011$ (Square of correlation coefficient, r) tells the amount of variability in the marketing challenges being faced by textile manufactures while processing and working with traditional textile industry in Uttarakhand and after converting this value into percentage we can say that marketing



challenges related to process of manufacturing cause only 1.1% variance in marketing challenges related to working in the traditional textile industry of Uttarakhand.

Therefore, the proposed null hypothesis “**H₀1** There is no significant relationship between processing and working marketing challenge faced by tribal woollen textile manufactures of Uttarakhand” has been rejected and its corresponding objective “To measure the relationship between processing and working marketing challenge faced by tribal woollen textile manufactures of Uttarakhand” was also achieved.

According to OSA theory, consumers use their internal standards associated with handmade clothing consumption to express themselves through the consumption of handmade cloth. Thus, self-expression can lead to positive behaviour if a consumer's expectations are met

based on their internal standards, which in turn leads to positive behaviour. Conversely, if a consumer does not find a piece of handmade clothing to meet his or her internal standards, inconsistency may result, resulting in a negative behavioural outcome. India has been notable for her fabric producing products meanwhile exceptionally from primeval times. The outmoded fabric producing industry of India was essentially rotted throughout the British colonial system, (Rao & Das 1993). In any case, the contemporary fabric producing industry appropriated birth in India in the mid nineteenth century when the main fabric producing plant in the nation was set up at post gloster area which was close to Calcutta in 1818. Both processing and marketing challenges are important to understand the overall challenges being faced by the industry.

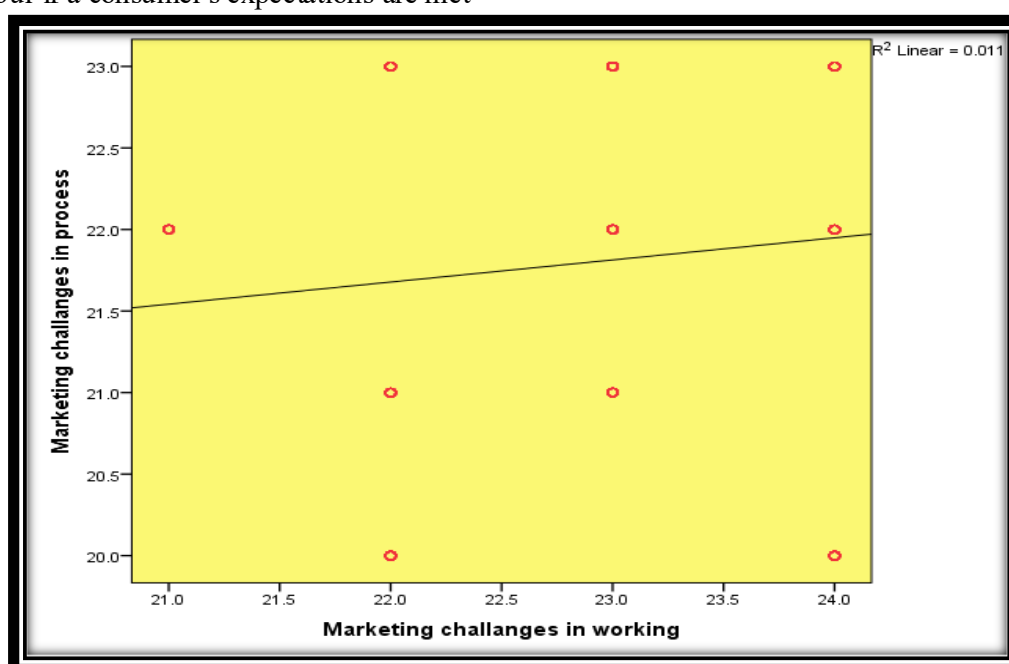


Fig 1 Scatter plot of manufacturer’s perception and satisfaction towards marketing challenges related to processing and working with tribal textile industry

The Figure 1 it is clear that there is very low positive correlation between processing and working marketing challenges are being faced by the traditional tribal manufacturers of Uttarakhand (Kumar 2022). As both the challenges are related to different areas of the industry.

Conclusions

The study reveals a nuanced understanding of the interrelationship between working and processing–marketing challenges faced by traditional tribal textile manufacturers in Uttarakhand. The statistical analysis indicates a very low yet positive correlation (0.106)



between these two sets of challenges, significant at the 0.001 level. This implies that even a slight increase in working-related marketing difficulties is likely to raise processing and marketing challenges by approximately 1.1 percent, and vice versa. Although the correlation is weak, both dimensions are interconnected and exert considerable influence on the overall functioning of the textile sector.

Given these findings, it becomes essential for the State Government, NGOs, and associated stakeholders to address either processing or working-related marketing barriers, as improvement in one area will naturally support progress in the other. Strengthening Self-Help Groups (SHGs), cooperative structures, and federations—as highlighted by Bharti (2020)—remains crucial for building self-sustaining institutional support for tribal artisans.

To safeguard and promote indigenous textile products, the establishment of efficient marketing channels and a structured distribution network is urgently required. Many local weavers struggle to access markets due to inadequate infrastructure and limited market exposure. Additionally, financial constraints and lack of technological resources are compelling traditional manufacturers to abandon their crafts and migrate to the plains in search of alternative livelihoods. Hence, targeted financial aid, technological support, and credit facilities must be extended by the state.

Capacity-building initiatives such as training, teaching programmes, and workshops should be conducted regularly to help artisans integrate traditional skills with modern production techniques. Ensuring the active engagement of local residents through employment, entrepreneurship, and economic incentives will further strengthen the traditional textile industry in Garhwal.

The Bhotiya community, in particular, requires support in embracing new technologies, improving quality, adopting innovative designs, and developing strong brand identities to compete in domestic and international markets. Enhancing production infrastructure, skill development, and market-oriented design adaptation will significantly uplift textile output and quality.

Overall, the study highlights the vast potential for research and development in the traditional textile sector of Uttarakhand. A comprehensive documentation of natural textile fibres, traditional practices, and artisan profiles can serve as a valuable resource for policymakers, traders, and emerging entrepreneurs. Such efforts will not only help preserve the region's textile heritage but also promote sustainable economic growth for tribal communities.

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