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An Analytical Study on the financial Constraints of Primary Weaver's, Co-operative Societies (PWCSs) in state of Odisha

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Abstract: The handloom industry, being the second-largest provider of rural employment behind agriculture, has significant socio-economic importance in India. Notwithstanding its cultural richness and heritage, the sector encounters several operational, financial, and administrative obstacles that impede the viability of Weavers' Cooperative Societies (WCSs), especially in Odisha. This research seeks to examine and analyze these restrictions using a mixed-method approach that incorporates primary data from 182 weavers, proportionately recruited from coastal and non-coastal regions of Odisha. The research reveals considerable regional discrepancies using frequency distribution, descriptive statistics, and independent sample t-tests. Research indicates that weavers in non-coastal regions have more severe difficulties pertaining to inadequate sales performance, restricted access to financing, diminished profitability, obsolete manufacturing infrastructure, and insufficient management acumen. The findings reveal statistically substantial disparities ($p < 0.001$) in perceptions across all five constraint dimensions, hence refuting the null hypothesis that geographical variations do not influence operating circumstances. The research indicates that a fragmented structure of institutions, inadequate understanding of governmental programs, and inconsistent access to financial services intensify these issues. Based on the results, essential recommendations are presented for both the government and cooperative societies, including the augmentation of financial literacy, decentralized training initiatives, encouragement of young engagement, modernization of equipment, and enhanced market connections. The research indicates that a region-specific policy framework, along with enhanced institutional cooperation, is essential for fostering equitable development and resilience of WCSs.

Keywords: Financial Crises, Primary Weavers Co-operative Society (PWCS), Handloom Sector, Regional Disparities, Odisha.

INTRODUCTION

From the Indus Valley Civilization, when archeological finds of spinning tools and colorful cotton garments revealed, the handloom industry in India has a long and culturally important past (Mishra&Das Mohapatra, 2020). With historical trading ties to ancient civilizations like Rome, Egypt, and China (Karmwar&Thakran, 2024), Indian handwoven textiles have attracted worldwide attention for their quality and craftsmanship millennia ago. The Indian government established many institutional supports after independence, including cooperatives, handloom boards, and Khadi groups. While the founding of the Khadi and Village

Industries Commission (KVIC) in 1956 was a noteworthy policy accomplishment, the 1948 Industrial Policy was vital in institutionalizing assistance for village businesses (Meena et al., 2021). The handloom industry is second only to agriculture in its economic importance for rural employment. It sustains the livelihoods of almost 3 million persons and accounts for around 22% of India's textile output (Soundarapandian, 2002). The industry significantly contributes to export revenues, with handloom items sent to more than 20 countries, including the USA, UAE, UK, France, and Australia. In FY24, handloom exports were ₹ 1,146 crore (US\$ 138.45 million), with the USA continuing as the primary importer for eight

consecutive years. The industry is crucial for gender inclusion, with women constituting 72% of the workforce, highlighting its significance in promoting the economic involvement of rural women.

The 4th All India Handloom Census (2019–20) offers a detailed analysis of the demographic and employment framework of the industry. The industry, with 25.45 lakh weaver households—87.4% of which are rural—and 26.73 lakh weavers, highlights its integral position in India's traditional economy. According to a study of labor conditions, 1.957 million weavers work independently; just 0.168 million are linked to cooperatives and 0.508 million works under master weavers. This fractured framework emphasizes the necessity of intentional interventions targeted on inclusive and sustainable development as it denotes a limited efficacy of institutional and cooperative structures.

Many scientists have looked at the general dynamics of the Indian handloom and textile sector. Emphasizing the significance of strengthening cooperative groups, Teki et al. (2020) looked at the socioeconomic issues affecting East Godavari District weavers. Examining the relationship between capital structure and financial performance indicators like the debt-equity ratio and return on capital used, Ramachandran and Madhumathy (2016) found Deep and Narwal (2014) advanced this strategy by looking at the link between intellectual capital and financial performance in India's textile industry. De et al. (2024) also looked at the performance of micro-enterprises within different institutional structures, showing how much cooperative businesses and private stores influence the entrepreneurial outcomes of weavers. Dey et al. (2023) investigated Assamese company performance in relation to social, financial, and human resources.

Research conducted in other rising Asian nations offers a global viewpoint. While Chowdhury et al. (2018) assessed the impacts of intellectual capital in Bangladesh, Asif et al. (2022) examined how sustainable energy affected liquidity and financial performance in Pakistani enterprises. While Zhou et al. (2022) looked at the effects of technological innovation on environmental and financial performance in China's textile sector, Ullah et al. (2020) looked at the capital structure of textile businesses listed on the Pakistan Stock Exchange. Although thorough research on the financial situation of Indian and comparable

countries' textile companies exists, there is still a great gap in the literature on the specific financial difficulties faced by weaving communities, especially in the state of Odisha. Though Odisha has a rich legacy of indigenous handloom crafts such as Sambalpuri, Bomkai, and Berhampuri, it suffers from restricted access to institutional financing, poor financial literacy, and poor integration into formal marketing channels. While overlooking the grassroots financial

limitations on cooperative weavers, most current research mostly on socioeconomic conditions or macro-level industrial performance. Furthermore, not enough research has been done on the regional variations and the different effectiveness of institutional structures like cooperatives in Odisha. To address this gap, the study proposes the following research questions:

RQ1: What are the key financial, operational, and managerial constraints affecting the performance of Weavers' Cooperative Societies (WCSs) in Odisha?

RQ2: Do the perceptions of these constraints differ significantly between WCSs in coastal and non-coastal districts?

RQ3: How effective are current institutional mechanisms and cooperative frameworks in mitigating these challenges faced by weavers?

RQ4: What policy measures can be formulated to enhance the financial sustainability and performance of WCSs across diverse regions of Odisha?

The objective of this paper is to perform an analytical study on the financial constraints faced by weaving societies in Odisha, with the aim of identifying operational, financial, and managerial barriers that impede financial sustainability and providing policy recommendations to enhance these essential rural enterprises. Further, this study will also aim at statistically examine the differences in operational efficiency, financial constraints, and managerial issues between WCSs located in coastal and non-coastal regions of Odisha. This study aims to provide evidence-based insights that may assist policymakers, financial institutions, and cooperative leaders in formulating targeted measures to rejuvenate the sector. The study begins with a literature review, followed by a description of the research methodology, presentation and interpretation of empirical data, and finishes with practical solutions to mitigate the financial restrictions faced by weaving societies in Odisha.

Literature Review

Challenges In the Weaving and Textile Sector.

Global competition and local policy inefficiencies have always presented structural issues for the textile and weaving industries in developing countries. Nigeria's textile industry has been consistently neglected and receives less costly imports largely from East Asia. Attributed to policy mismanagement and foreign dumping operations, the 1999 evaluation of the Central Bank of Nigeria revealed a significant drop in output, large-scale plant closures, and a clear decline in capacity use (Muhammad et al., 2018). Similarly, global value chains are piling pressure on Vietnam's textile and clothing sector, a key component of its export-driven expansion plan. Particularly in light of growing competition from nearby China and changing trade rules, Khalid et al. (2004) pointed

out that businesses must constantly improve product quality, lower costs, and follow strict labor and environmental standards. Similar challenges are evident in Ethiopia, where Getachew et al. (2025) found that women engaged in weaving traditional clothing in Bahir-Dar face many constraints. This covers limited access to premium natural resources, outdated technologies, and firmly ingrained sociopolitical challenges. Notwithstanding these obstacles, the study underlined the possibility for institutional support, skill development, and income generating to empower women in this field. Several studies conducted in India have shown comparable limitations experienced by weavers. Mahajan (2021) discovered that Paithani weavers in Maharashtra's income sustainability is much hampered by the absence of direct-to-consumer platforms and too much reliance on middlemen. The findings emphasize the importance of enhancing B2C marketing infrastructure to preserve and advance this 2200-year-old weaving legacy. According to Khan and Qayum (2024), Kashmir's

carpet weavers suffer dangerous working conditions and suffer several health issues including musculoskeletal and respiratory problems. The study called for quick infrastructural improvements, improved working conditions, and strong worker protection laws. Women weavers in Udupi noted by Ashalatha and Devadiga (2024) face gender-specific obstacles including limited demand, poor material availability, insufficient institutional assistance, and continuous health issues. These components significantly affect their ongoing viability in the sector and socioeconomic empowerment. Likewise, Teki et al. (2015) found in their East Godavari District of Andhra Pradesh research that weavers suffer low earnings, declining intergenerational engagement, and insufficient institutional resources access. According to their studies, a small percentage of weavers have bank accounts; many chose inactivity because of poor pay and a lack of regular job opportunities.

Although the socio-economic situation of individual weavers and the larger textile sector has been well studied in existing literature, there is a notable void in targeted studies addressing the institutional-level difficulties faced by Weavers' Cooperative Societies (WCSs), particularly in relation to Odisha? Research mostly focuses on household-level livelihood concerns or macroeconomic studies of textile performance, therefore leaving a major knowledge vacuum on operational inefficiencies, budgetary restrictions, and management failings endangering the sustainability of WCSs. Given Odisha's significant handloom tradition and the vital function cooperatives play in rural industrial

development, this paper seeks to investigate the main elements affecting the performance and long-term survival of WCSs. This method provides a strategic framework for creating focused legislative and managerial interventions meant to improve cooperative governance and the resilience of grassroots businesses.

Factors affecting financial performance

Scholars have paid close study to the interactions among capital structure, innovation, sustainability, and organizational effectiveness in the textile sector. Because of their preference for dividends rather than reinvestment, Higgins et al. (2003) undertook a historical study of the Lancashire cotton textile sector and found that ingrained ownership structures— especially local shareholder syndicates— posed a more major obstacle to firm restructuring than banks. Zhou et al. (2020) broadened this conversation to the modern textile sector of China, showing how technical innovation enhanced financial performance and simultaneously yielded positive environmental effects. Examining Romanian textile companies, Orzan et al. (n.d.) found that by improving organizational efficiency and execution, internet marketing methods significantly affected financial results. Influenced by increased employee satisfaction, customer loyalty, and environmental responsibility, Phan et al. (2020) underlined the vital relevance of sustainable development strategies in improving the financial performance of textile companies in Vietnam. With business size functioning as a moderate moderator, Asif et al. (2022) showed that in Pakistan sustainable energy supply favorably affects both liquidity and financial performance. Debt-to---equity and debt-to--total funds ratios show that Asad, Iftikhar, and Jafary (2019) found a favorable relationship between capital structure and financial performance in Pakistani textile companies. Chowdhury et al. (2018) showed that whilst human capital had a negligible impact, in Bangladesh the structural and physical components of intellectual capital greatly improved company profitability.

Within the Indian setting, Ramachandran and Madhumathy (2016) looked at the dynamics of textile sector capital structure. Their results show that, despite the sector's major economic contribution, it still struggles to decide an ideal capital mix mostly because of different investment and finance choices. Deep and Narwal (2014) underlined the strategic relevance of non-financial assets by finding a noteworthy association between intellectual capital— especially physical capital— and the profitability of Indian textile companies. Gupta (2020) looked at financial crisis in Indian textile industry and underlined the need of turn-around plans to revive failing businesses in the controlled sector. Evaluating the

financial situation of textile companies in Haryana, Darji and Dahiya (2023) noted clear inefficiencies in both public and private companies and recommended targeted legislative changes and improved input management. Dey et al. (2023) evaluated Assamese handloom businesses at the micro-enterprise level and concluded that human, financial, and social capital favorably influence company performance; innovation and technology are thus very important for sustainability and expansion. While these studies provide valuable insights into capital structure, sustainability, innovation, and strategic financial management in the textile sector, a clear disparity exists in understanding the operational, financial, and managerial difficulties faced by Weavers' Cooperative Societies (WCSs) in Odisha. Current studies mostly concentrate on macro-level industrial structures or private companies, therefore ignoring the unique governance, financing, and performance issues that cooperative models bring about. Moreover, little research has been done on how these cooperatives handle administrative inefficiencies, get funding, control market uncertainty, and build skills.

Financial constraints in the Handloom Sector

Financial restrictions constantly impede the handloom industry in underdeveloped countries, therefore limiting sustainability and output. Researchers Zhang, Moorman, and Ayele (2011) looked at rural Ethiopian weaving groups and found that weavers mostly depended on unofficial trade credit systems to meet their working capital needs in the lack of robust banking institutions. Though necessary, the informal plans usually restrict long-term development and investment possibilities. Many studies conducted in the Indian setting underline the continuous financial struggle handloom villages experience. According to Singh and Naik (2009), illiteracy and little government support cause great financial problems for Banarasi silk weavers, therefore impeding their socio-economic development. Limited access to institutional financing, lack market intelligence, and poor education were found by Faruque and Guha (2023) as main causes motivating rural Assamese handloom businesses. Ansari and Tripathi (2024) underlined how the absence of timely and reliable financial and market data limits the capability of Banarasi weavers to make educated choices regarding product offers, price, and investment, therefore restricting company scalability. Srivastava (2014) brought attention to the Jharkhand weavers, pointing out that poor capital and bad policy decisions compromise their financial viability and hence compromise their cultural value. Khan et al. (2023) noted in identifying similar trends and mentioned that low income and financial stress negatively impact the lives of women

craftsmen in Srinagar's handcraft industry. Whereas, rising raw material expenses and declining profit margins cause great difficulties for Guledgudda Khana weavers (Shahapur and Hegde, 2025), therefore endangering the survival of their ancient art. Although a lot of research highlights the financial difficulties faced by handloom and handicap communities in India and several developing nations, there is a dearth of thorough, region-specific study on Weavers's Cooperative Societies (WCSs) in Odisha.

Research Methodology

The current research is to investigate the main operational, financial, and managerial issues influencing the sustainability and performance of Weavers' Cooperative Societies (WCSs) in Odisha. We have used primary and secondary data sources in order to reach this. Direct primary data were gathered from weavers, members of society, and management staff connected to different WCSs in particular Odisha. Published government papers, handloom census records, yearly reports of cooperative organizations, and policy books from pertinent departments emphasizing textile development and rural empowerment provided secondary data. Closed-ended and Likert-scale questions combined in a structured questionnaire made up the data collecting instrument. The questionnaire was meant to gather information on the daily activities, financial management strategies, managerial skills, apparent difficulties, and long-term sustainability issues of the societies. The instrument was pilot-tested to guarantee construct validity and dependability before major implementation. Using Cochran's sample size formula—which is generally accepted for computing sample size when the population is limited and known—was how the lowest necessary sample size was found. Originally determined using Cochran's method for an infinite population, the sample size of 384 was then changed to reflect the finite population of 343 Weavers' Cooperative Societies by use of the Finite Population Correction (FPC) calculation. By use of the equation, the final needed sample size was found to be 182, guaranteeing statistical representativeness and thereby avoiding oversampling.

$$n = \frac{n_0}{1 + \left(\frac{n_0 - 1}{N}\right)} = \frac{384}{1 + \left(\frac{384 - 1}{343}\right)} \approx \frac{384}{2.116} \approx 182$$

Given the regional heterogeneity across Odisha and the geographical dispersion of Weavers' Cooperative Societies (WCSs), proportionate stratified random sampling was employed to ensure fair representation from different ecological zones. The state was initially divided into two primary strata based on geographic

characteristics: the Coastal Zone and the Non-Coastal Zone. The population distribution across these two zones was as follows: the Coastal Zone consisted of 143 WCSs, which accounted for approximately 41.78% of the total, while the Non-Coastal Zone comprised 200 WCSs, representing about 58.22% of the total 343 WCSs. Using the method of proportional allocation, the sample size for each stratum was calculated accordingly. The Coastal Zone, with 41.78% of the population, was allocated a sample size of 76, whereas the Non-Coastal Zone, with 58.22% of the population, was allocated 106 respondents, yielding a total stratified sample size of 182. At the district level, each of these two main zones may be sub-stratified if further regional understanding was needed. Under such circumstances, simple random sampling would be used inside each zone to choose the final responders while the assigned sample from each zone would be proportionately dispersed across the corresponding districts. This stratified sampling method guarantees that the sample sufficiently reflects regional variety and offers a statistically viable basis for extending the results to the larger population of WCSs in Odisha. Descriptive and inferential statistics both were used in data analysis. Responses were compiled using descriptive tools including frequencies, percentages, and mean scores; inferential analyses including independent sample t-tests, ANOVA, and regression analysis were then used to ascertain the significance of relationships and variations across variables and categories of WCSs. Using IBM SPSS Statistics (Version 26), the statistical analysis was performed under preliminary coding and tabulation done in Microsoft Excel. This all-encompassing approach creates the basis for evidence-based suggestions and offers a strong structure to examine the multi-dimensional problems influencing WCSs.

Data Analysis & Interpretation

Data analysis encompasses three distinct analyses: frequency distribution tables for categorical data, descriptive statistics for variables measured on a Likert scale, and an independent sample t-test to evaluate the differences in opinions between weavers in coastal and non-coastal districts. This section presents the data analysis, outlining the methodologies and findings pertinent to the research objectives.

The analysis of a sample comprising 182 weavers from Odisha indicates notable trends in their demographic and socio-economic profiles (refer table 1). A higher proportion of male weavers (53.30%) was recorded compared to female weavers (46.70%). The majority of respondents are within the productive age groups of 36– 45 years (27.47%) and 46– 55 years (30.22%), indicating that weaving is predominantly practiced by middle-aged adults. A significant percentage of individuals

possessed at least secondary education (21.98%) or were graduates (21.98%), while 13.74% had no formal education.

Table 1: Profile of weaves and the distribution of weaving-related variables

Variable	Category	Frequency	Percentage
Gender	Male	97	53.30
	Female	85	46.70
Age Group	Below25	15	8.24
	26-35	40	21.98
	36-45	50	27.47
	46-55	55	30.22
	Above55	22	12.09
Educational Qualification	NoFormal Education	25	13.74
	Primary	35	19.23
	Secondary	40	21.98
	Higher Secondary	30	16.48
	Graduate	40	21.98
	Postgraduate	12	6.59
Yearsof Experience in Weaving	Lessthan5 years	20	10.99
	5to10yrs	45	24.73
	11-15yrs	60	32.97
	Morethan 16yrs	57	31.32
Family Size	1 to3	30	16.48
	4 to6	110	60.44
	Morethan6 members	42	23.08
Isweaving a family tradition?	Yes	120	65.93
	No	62	34.07
Doanyother family members engagein weaving?	Yes	130	71.43
	No	52	28.57
Separate workspace	Yes	105	57.69
	No	77	42.31
Awareness ofGovt schemes	Yes	110	60.44
	No	72	39.56
Assistant from Society	Financial Support	69	27.47
	Raw Material Supply	42	19.78
	Marketing Assistance	27	14.84
	Training	35	16.48

Programs		
No Assistance	9	21.43

	Total	182	100.00
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In terms of occupational experience, 32.97% possessed 11– 15 years of weaving experience, whereas 31.32% had more than 16 years, indicating a significant commitment to the craft. A majority of households (60.44%) were medium-sized, consisting of 4 to 6 members. Additionally, 65.93% reported that weaving is a family tradition, with 71.43% indicating the involvement of other family members, suggesting generational continuity in the profession. Regarding operations, 57.69% possessed a designated workspace for weaving, potentially enhancing productivity. 60.44% percent of respondents were aware of government schemes, suggesting adequate outreach with potential for enhancement. In terms of support from societies, 27.47% received financial assistance, 19.78% benefited from raw material supply, and 16.48% participated in training programs. Nonetheless, 21.43% indicated that they received no assistance, underscoring the inconsistent or limited support from cooperative societies.

Next, the descriptive analysis in this study was conducted to explore the key operational, financial, and managerial challenges faced by Weavers' Cooperative Societies (WCSs) in Odisha. Variables measured using a 5-point Likert scale (1 = Highly disagree to 5 = Highly agree) were grouped under thematic dimensions such as poor sales performance, insufficient funds for expansion, lower profit earning, poor production base, and poor managerial talent. For each dimension, mean and standard deviation values were computed to assess the level of agreement or disagreement among respondents and the variability of their responses.

Poor managerial talent was identified as the primary concern, exhibiting the highest overall mean (M = 3.60). Respondents indicate notable inefficiencies in leadership, especially attributed to non-technical office bearers (M = 3.08) and insufficient financial incentives and professional engagement for managers (M = 3.47). The relatively low interest of educated youth in joining weaving societies (M = 3.52) indicates a significant generational disconnect and suggests that the sector is perceived as an unattractive career option, potentially due to lower financial incentives and restricted opportunities for advancement. Lower Profit Earning received a high score (M = 2.92), indicating significant financial constraints. High

operating expenses (M = 3.91) and interest on loans from private money lenders (M = 3.13) were the main factors, significantly affecting net earnings and sustainability. The low mean score for turnover (M = 1.69) supports the notion that, despite significant costs, the return on investment remains minimal, thus questioning the economic sustainability of these societies. Poor sales performance exhibited an average mean of 2.88, with significant bottlenecks identified, including insufficient advertisement and sales promotion (M = 3.30) and inadequate response from younger generations (M = 2.73). Interestingly, the highest agreement was on competition from giant millers (M = 4.00), reflecting a perception of market pressure from larger, mechanised producers which diminishes the market reach and visibility of cooperative products. Insufficient funds for expansion (M = 2.72) emerged as a significant concern, particularly attributed to the lack of adequate seed money from the government (M = 3.60) and insufficient working capital (M = 2.43). The findings highlight the restricted access to institutional finance, which limits the ability of WCSs to expand operations or modernize. The most significant issue identified was Poor Production Base, which exhibited the lowest overall mean (M = 1.86). The absence of weavers (M = 1.52) and insufficient modernization (M = 2.04) indicate a systemic decline in production capacity. This may be due to labor migration to other sectors, insufficient youth engagement, and limited technological intervention.

Table 2: Descriptive Statistics of Key Constraints

Key Constraint s	Parameter	Mean	S.D	Overall mean
Poor Sales Performance	Inefficient channels of marketing	2.17	1.07	2.88
	Few numbers of outlets	2.21	0.99	

	Lack in advertisement and sales promotion	3.3	0.70	
	Poor response from new generations	2.73	0.91	
	Competition from giant millers	4.00	0.95	
Insufficient funds for expansion	Insufficient fixed capital	2.08	1.12	2.72
	Minimum or no provision of seed money from the government	3.6	0.65	
	Inadequate working capital to meet the	2.43	0.78	

	larger production			
Lower profit earning	Higher interest rate on loan from private money lenders	3.13	1.17	2 . 9 2
	High operating expenses	3.91	0.84	
	No economies in production	2.95	0.47	
	Lesser turnover	1.69	0.97	
Poor production base	Non-availability of weavers	1.52	0.67	1 . 8 6
	Lack in modernisation of mechanism	2.04	0.88	
	Poor supply of raw materials (Cotton Threads and others)	2.04	0.93	
Poor managerial talent	Non-technical office bearers and managers	3.08	0.60	3 . 6 0
	Improper financial attractions for the managers	3.47	0.59	
	Lesser interest among the educated young to join in	3.52	0.73	

At last, the independent sample t-tests presented in Table 3 were conducted to examine whether perceptions of key operational, financial, and managerial constraints differ significantly between Primary Weavers' Cooperative Societies (PWCSs) located in coastal and non-coastal districts of Odisha. The following null hypotheses were tested:

H_{01} : There is no significant difference in the perception of poor sales performance between weavers in coastal and non-coastal districts.

H_{02} : There is no significant difference in the perception of insufficient funds for expansion between weavers in coastal and non-coastal districts.

H_{03} : There is no significant difference in the perception of lower profit earning between weavers in coastal and non-coastal districts.

H_{04} : There is no significant difference in the perception of poor production base between weavers in coastal and non-coastal districts.

H_{05} : There is no significant difference in the perception of poor managerial talent between weavers in coastal and non-coastal districts.

Table: T -Test for perception towards Key constraints in weaver's cooperative between and coastal and non-coastal districts of Odisha

Key Constraints	t-test for Equality of Means		
	t	d.f.	Sig. (2-tailed)
Poor Sales Performance	5.072	181	0.000
Insufficient funds for expansion	4.860	181	0.000
Lower profit earning	5.195	181	0.000
Poor production base	8.513	181	0.000
Poor managerial talent	10.573	181	0.000

Source: Primary Data

The t-test results reveal statistically significant differences across all five dimensions ($p < 0.001$), thus leading to the rejection of all five null hypotheses. These findings confirm that the geographic context—coastal versus non-coastal—significantly influences the challenges perceived by the weavers. The analysis reveals statistically significant differences across all five dimensions ($p < 0.001$), indicating that the geographic context plays a crucial role in shaping the challenges experienced by these societies. Weavers from non-coastal districts reported significantly higher concerns regarding poor sales performance compared to their coastal counterparts ($t = 5.072$, $p < 0.000$). This may be attributed to better infrastructure, access to urban markets, and stronger promotional networks available in coastal areas, which reduce sales-related barriers. In contrast, non-coastal societies often operate in remote areas with limited market linkages, fewer retail outlets, and less exposure to modern marketing channels. A significant difference was also observed in perceptions related to funding constraints ($t = 4.860$, $p < 0.000$). Non-coastal WCSSs perceive greater difficulty in accessing institutional finance or government seed money for scaling operations. This can be explained by the concentration of financial institutions, cooperatives, and microfinance bodies in more economically active coastal zones, whereas remote and tribal-dominated non-coastal areas often remain underserved. The perception of reduced profit margins was significantly higher in non-coastal regions ($t = 5.195$, $p < 0.000$). This may result from higher production costs, including transport of raw materials and finished goods, as

well as dependence on informal credit sources charging high interest rates. Additionally, poor economies of scale and limited bargaining power further erode profitability for weavers in these districts. The most pronounced difference emerged in the perception of constraints related to the production base ($t = 8.513$, $p < 0.000$). Non-coastal districts face acute shortages of skilled weavers, outdated production techniques, and poor supply of raw materials. These issues are compounded by limited access to mechanisation and infrastructural bottlenecks. Coastal regions, benefitting from better educational and institutional penetration, appear to be relatively more resilient in maintaining their production ecosystems. The largest disparity was found in the domain of managerial competence ($t = 10.573$, $p < 0.000$). Respondents from non-coastal WCSs expressed significantly stronger concerns regarding the lack of skilled and technically trained office bearers. The managerial gap may stem from low attraction of educated youth to join these societies in interior regions due to poor remuneration and limited professional growth. In comparison, coastal societies may have better access to skilled human resources and exposure to training programs conducted by NGOs and government agencies.

- Practical implications
- The study's findings yield several practical suggestions for the government and the

Weavers' Cooperative Societies (WCSs) to tackle the primary challenges confronting the weaving sector in Odisha. Due to the notable differences in perceptions between coastal and non-coastal districts, it is imperative to implement targeted policy and operational interventions. The government should prioritize the expansion of formal credit facilities, especially in non-coastal regions, by establishing dedicated banking desks for weavers and improving the outreach of microfinance and cooperative institutions. Furthermore, it is essential to establish specialized financial schemes featuring low interest rates and streamlined procedures to address the distinct capital requirements of rural weavers. WCSs must develop internal financial management capabilities, ensure transparency in accounting, and engage in partnerships with NGOs and SHGs to enhance creditworthiness and diversify funding sources. The problem of inadequate sales performance, particularly pronounced in non-coastal regions, underscores the necessity for government-backed market access initiatives, such as digital marketplaces, national exhibitions, and branding support for regional textiles. Societies should prioritize enhancing marketing practices, investing in member training for online selling platforms, and investigating collective sales strategies to access broader markets. To enhance profitability, both

parties should focus on reducing input costs via bulk procurement of raw materials and improving infrastructure, including transportation and storage. The deficiency of managerial talent requires government-sponsored training programs for cooperative office bearers, and societies must recognize and develop younger members for prospective leadership roles. Production constraints may be addressed through the provision of modern looms, technical training, and enhanced access to raw materials.

CONCLUSION

This study analysed the primary operational, financial, and managerial challenges impacting the performance and sustainability of Weavers' Cooperative Societies (WCSs) in Odisha, comparing coastal and non-coastal districts. The results indicated that geographical location has a significant impact on perceptions of constraints in multiple areas, such as sales performance, access to funding, profit generation, production capabilities, and managerial expertise. Weavers from non-coastal districts reported elevated levels of concern in all five constraint areas, highlighting their relative disadvantage in terms of infrastructural support, market connectivity, and access to institutions. Financial constraints, such as restricted access to formal credit and insufficient funding for expansion, were a primary concern. Non-coastal societies similarly experience weaker production ecosystems and inadequate managerial capacity, which further impacts their operational efficiency and strategic adaptability. Coastal societies appear to experience advantages in terms of institutional support, access to marketing platforms, and availability of skilled human resources. The research emphasized the significance of targeted interventions, both policy-driven and community-led, to rectify these disparities. Government initiatives, including the enhancement of rural credit delivery, the training of cooperative managers, and the facilitation of market linkages, are essential. WCSs must concurrently enhance managerial competence, integrate technology, and bolster member engagement. The sustainability of the handloom sector in Odisha relies on collaborative efforts between the state and WCSs. Identifying regional disparities and formulating location-specific strategies is crucial for revitalizing this traditional industry, improving livelihood security, and safeguarding the cultural fabric of rural Odisha. The study provides valuable insights; however, it has limitations. The data were collected via a structured survey, potentially constraining the depth of subjective understanding of weavers' lived experiences. The research predominantly utilized self-reported data, which could be influenced by recall bias or social desirability bias. The sample was

limited to specific districts in Odisha, potentially lacking full representation of all WCSs throughout the state or in other regions of India. Future research may investigate the performance of WCSs through a mixed-method approach, enabling the analysis of both quantitative patterns and qualitative narratives. Longitudinal studies facilitate the understanding of the evolution of weaver societies over time and their responses to policy changes or market disruptions. Future studies may examine the influence of digital inclusion, women's participation, and generational shifts on the future of handloom weaving in India.

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