

A Thematic Analysis of Socio-Economic Factors Influencing Cotton Farmers' Marketing Strategies in Kalahandi and Balangir Districts of Odisha

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Abstract:

Cotton cultivation provides an important source of livelihood for farmers in Western Odisha, particularly in Kalahandi and Balangir districts. However, socio-economic conditions, market access, and institutional support influence farmers' marketing decisions and price realisation. This study examines the socio-economic factors affecting cotton marketing strategies, compares marketing practices between the two districts, and identifies major marketing constraints. A descriptive qualitative research design was adopted, based on primary data collected through face-to-face structured interviews with 30 cotton farmers, comprising 15 farmers from each district. Purposive (judgmental) sampling was employed, and the data were analysed thematically. Findings indicate that education, landholding size, financial capacity, access to credit and market information, transportation, and participation in Farmer Producer Organisations influence marketing decisions. Balangir farmers generally reported better access to markets and institutional support, while Kalahandi farmers showed greater dependence on local traders. Major constraints included price fluctuations, quality deductions, inadequate storage, delayed payments, high transportation costs, and intermediary dependence. Strengthening FPOs, market infrastructure, formal credit, procurement facilities, and farmers' negotiation skills can improve market efficiency and livelihood sustainability.

Keywords: Cotton cultivation, Cotton farmers, Marketing strategies, Socio-economic factors, Market access, Kalahandi, Balangir, Western Odisha, Price realisation

1. Introduction:

While cotton is a key economic activity in Western Odisha, the farmers of Kalahandi and Balangir districts face systemic weaknesses due to the uncertainty and volatility of climatic conditions and market conditions (Padhy et al., 2024). Most of them are very small and marginal landowners and face structural challenges in accessing formal value chains and the ability to take advantage of lucrative markets (Behera et al., 2022). Marketing constraints faced

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by these farmers are aggravated by the high dependency on intermediaries and less bargaining power, which frequently leaves farmers unable to take advantage of price volatility and reduces the farmers' income security (Kale et al., 2025). Farmers, of course, also must deal with the problem of capital limits and high input prices, which often tie them into informal credit-market links that determine the outlets for their sales (Priya et al., 2025; Rout et al., 2024). This reliance on informal agents may make it difficult for the government to implement its price support programs, because of the urgency of cashing out short-term rather than waiting for longer-term price realisation (Saunshi, 2024). These socio-economic constraints thus generate a cycle of dependence that makes farmers unable to market the produce on better terms because they are compelled to accept the worst terms given to them due to their financial need (Kanwal et al., 2025, p.590). This structural limit signifies a pressing need to examine the role played by different socio-economic profiles in the decision-making process and the choice of channels of agricultural producers (Bhunia & Singh, 2025; Srilatha et al., 2023). It is of fundamental importance to understand these constraints, especially considering the evidence that household resource endowments and social capital are important factors influencing the choice of marketing channels (Chauhan et al., 2023). The purpose of this study is to fill this gap in knowledge by evaluating the interaction between institutional barriers and household-level constraints affecting farmers' choice of marketing outlets (Murty, 2024; Villacis et al., 2024). The study will seek to offer a blueprint for effective policy interventions to reduce intermediary exploitation and improve equitable market access by identifying specific determinants of these market choices (Kishor et al., 2025). This analysis is of crucial importance because available empirical evidence on the relationship between the socio-economic status of the households and the choice of channels is limited in the agrarian landscape of Western Odisha (Thakur et al., 2023, p.2). Ultimately, the lack of coordination between smallholders and the high transaction costs that result are significant constraints to realising productivity improvements into long-term economic well-being (Arumugam et al., 2022, p.2). These challenges call for serious consideration of the ways that imbalances of market power and an absence of organizational cohesion continue to create cycles of vulnerability (Ali et al., 2026, p. 530; Ma et al., 2024). Lack of local market information and poor infrastructure further increase the transaction costs of these small farmers, sometimes resulting in harvesting suboptimal channels (Degefa et al., 2022, p. 1497). Relying on informal, inefficient networks requires a detailed evaluation of the elements – spanning resource endowment to transaction costs – that determine whether producers can effectively shift toward more profitable, formalised market outlets (Chelang'a, 2021, p. 79). It is crucial to examine these dynamics, as the choice of suitable market outlets is primarily influenced by factors like proximity to infrastructure, availability of extension services, and household labour access (Alam et al., 2025; Legesse et al., 2024, p. 2). Moreover, current approaches to assessing market efficiency often overlook the producer's viewpoint, instead concentrating on aggregate margins while ignoring the fact that farmers frequently receive minimal benefits despite the complexity of the chosen channel (Abad et al., 2024, p. 149). Thus, it is crucial to clarify these decision-making processes, as identifying the determinants of outlet selection is fundamental to establishing policy interventions that effectively enhance farm income (Ashebir et al., 2025, p.). A multi-pronged strategy needs to be adopted to examine the connection among factors like education, credit availability, and

infrastructure and the specific marketing channels chosen by these farming households (Melese et al., 2018, p. 34).

2. Literature Review:

2.1. Based on the socio-economic profile of cotton farmers:

Mishra, A., & Das, D.T.K. (2018). This paper states that the tribal farmers in Lanjigarh, Kalahandi, are rapidly adopting organic cotton. It contributes to SDG 2 (Zero Hunger). Education, landholding, farm power, assets, social participation, and knowledge were the significant factors that influenced adoption, while age, family type, size, and occupation had no significant influence on adoption.

Hashmi, M. S., Kamran, et al. (2016). This study showed that farm size and farming practices are the most influential factors towards the efficiency of cotton farms. The efficiency was highest for part-time farmers and those who used rented land. Social factors such as age, education, and experience were insignificant, but a general observation is that marginally higher efficiency is observed for older, educated, and more experienced farmers. Thus, the conclusion is that economic and managerial factors affect the efficiency of cotton farms more than social factors.

In this research by Padaliya, D. A., Rathod, et al. (2023) most of the cotton farmers were middle-aged with a medium level of education and semi-medium landholding with average income. Farmers generally expressed a medium level of commitment to environmental and sustainability-related issues. High percentages of farmers were scientifically oriented and innovative. Most of the growers had a moderate level of exposure to mass media and other information sources.

Salihu, A., & Singh, H.P. (2020). This paper discussed the yield gap between potential and actual cotton yield in Maharashtra: its major determinants, including education, farm size, variation in seed rates, and location of the farmers. In addition, the findings revealed that more years of schooling, larger fields, or being of a certain gender could not guarantee increased cotton yield. According to the authors, farmers should be better guided on optimal utilisation of inputs to reduce the yield gap and increase productivity.

2.2. Based on identifying the socio-economic factors influencing farmers' marketing strategies.

In this study, Njanji, M., & Parwada, C. (2024) show that the only factor that significantly influences a smallholder farmer's decision to sell seed cotton in Zimbabwe is their experiences in cotton production. Household labour availability and access to market information are the major determinants of the quantities sold. Other important marketing determinants include sources of input and membership in marketing associations. However, market price did not influence either a household's decision to sell or the amount sold. The authors emphasise the need to improve market access as a means of encouraging more buyers to enhance participation in cotton marketing.

Atieno, O.R.A. (2024) This paper found that the education level of farmers, access to credit, farm size, and access to extension services significantly influence the production of sustainable cotton in Kisumu County. Greater access to improved inputs and market information also led to better diffusion of farming practices. However, irrigation, pests, inadequate finance, and poor market linkage remained concerns. It was recommended that institutional support be enhanced, along with better access to inputs and credit, to enhance the sustainability of the initiative.

Mehmood, H.Z. et al. (2022) The results indicated that farmers tend to adopt sustainable cotton production when they have a higher level of education, training, and good communication with workers or BCI employees. Larger farm sizes, secure land tenure, and irrigation tool availability like water pumps contribute to a greater likelihood of adoption. Generally, the socioeconomic status of farmers, farm attributes, and access to information determine their adoption of sustainable cotton practices.

2.3. Based on an examination of the major challenges faced in the marketing of cotton.

In the study by Mekuria, M. (2024), it was noted that cotton production in Ethiopia faces serious setbacks, which range from low yields, pest and disease issues, poor seed quality, to lack of irrigation and extension services. Poor harvest, processing, and ginning further lower the quality of the cotton fiber. The authors conclude that seed systems, irrigation methods, technology use, and post-harvest handling need to be improved to ensure a better outlook for the future of the cotton sector.

This work conducted by Ashraf, S., & Ashraf, I. (2024) identified seven main issues influencing cotton production in Punjab: environmental stress, high-cost and low-quality inputs, severe pest and disease attacks, marketing problems, lack of education among farmers, financial constraints, and inadequate institutional support. Climatic issues and those associated with inputs were found to be the major contributors to the decrease in production. The authors recommended strengthening research work on climate-resilient varieties along with ensuring quality inputs, enhancing extension services, and promoting stability in the cotton market as factors that are necessary to restore cotton productivity.

This paper by Malamsha, K.C. et al., (2024) finds that instability characterising the cotton market, brought about by non-seasonal price fluctuations, poor production, input supply, and weather conditions, negatively impacts the operations of AMCOS at the primary level. Instability reduces incomes for farmers, affects the financial position of cooperatives, and lowers the quality of cotton. The authors recommend improvement in input supply systems, farmer education, and policy measures for stabilisation of the cotton market.

This study by Rutto, D.K. L., Auma, E.O. et al. (2022) highlights that the findings from their research show the cotton industry in Kenya faces several big problems. These include low yields, poor-quality seeds, old ginning facilities, and weak market structures. Farmers are offered low purchase prices and receive little to no extension services. As a result, they don't have much reason to keep producing cotton. The authors suggest that fixing this industry requires a few key steps. Ginneries need a fresh start, and seed systems should be improved. Strengthening cooperatives is also important, along with encouraging people to add value to

their products (like processing cotton further). These actions are seen as essential for bringing life back into the cotton sector.

2.4.To suggest measures for improving market efficiency and price realisation in cotton marketing strategies:

In this study by Ghambi, D.M. (2015), the research indicates that growing cotton in Malawi is financially rewarding, particularly for those farmers who are actively engaged in cotton markets and receive benefits from government subsidy initiatives. Active participation in the market greatly enhances both crop yields and farmer income, whereas elements like household traits, availability of subsidies, and access to extension services have a significant impact on the levels of participation and overall profitability.

In the research conducted by Birla, H., Meena, et.al. (2014), findings show that most cotton cultivators in Khargone market their produce through merchants and commission agents mainly due to limited market information availability and weak bargaining capabilities. High transportation costs, price fluctuations, insufficient storage facilities and dependence on middlemen reduce the farmers' total earnings. The authors suggest that enhancing market access, improving infrastructure, and reinforcing farmer organisations could boost farmers' income and increase marketing efficiency.

According to the research conducted by Arshad, M. U. et al. (2022), the total cotton production in Pakistan has declined over the years due to causes including pest attacks, poor quality seed varieties, climate variability and insufficient farm management practices. Key elements like fertiliser application, availability of irrigation, improvements in seed technology and timely pest control are crucial in influencing cotton yield outcomes. The authors emphasise that enhancing the quality of inputs, embracing superior technologies, and improving extension services are vital for increasing cotton productivity in developing nations.

3. Objectives of the study: -

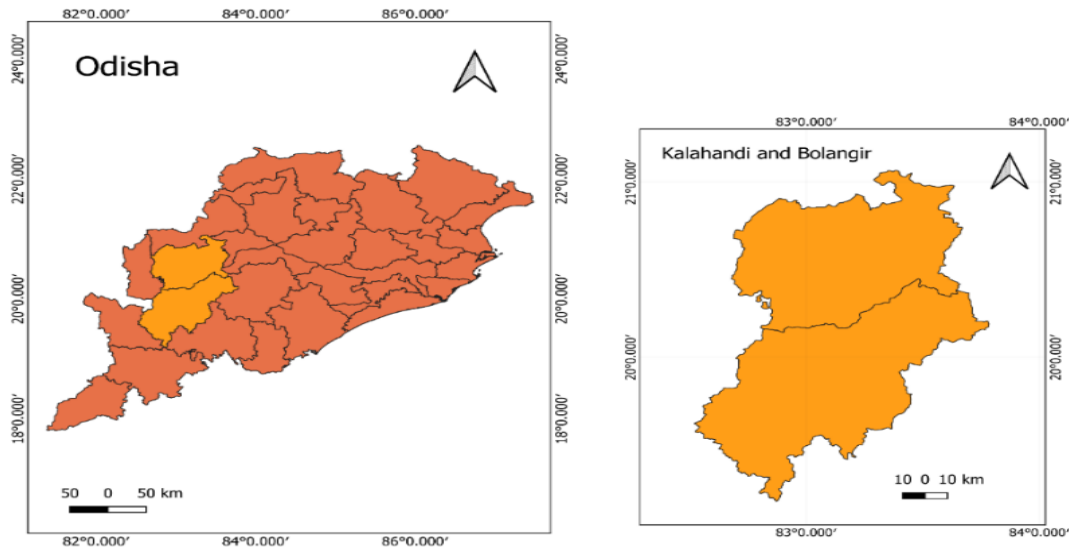
- Study the socio-economic profile of cotton farmers in Kalahandi and Balangir districts.
- Identify the socio-economic factors that influence farmers' marketing strategies.
- Compare marketing practices between the two districts.
- Examine the major challenges in cotton marketing.
- Suggest ways to improve market efficiency and price recovery.

4. Methodology

A descriptive and qualitative research design was used to understand the perceptions, experiences and marketing decisions of cotton farmers. Thirty farmers (15 from Kalahandi and 15 from Balangir districts) were selected using purposive (Judgmental) sampling. Primary data were collected using face-to-face structured interviews with a 10-question interview schedule comprising questions related to socio-economic background, awareness about markets,

marketing channels, access to credit and transportation, market challenges, and institutional participation in FPOs/ cooperatives. Interviews were conducted on the farms, village centres, and local mandis.

4.1.Study Area



Source: Made by Author through the QGIS Mapping

4.2.Data Analysis

A thematic approach was employed. Steps followed:

a. Coding of responses

- Farmers from Kalahandi (n = 15)

Farmers	Edu	Land	Credit	Market info	Transport	Selling Place	Negotiation	Main Problem	FPO Member
K1	1	S	ML	Trader	No	Trader	No	LP	NM
K2	0	S	ML	Trader	No	Trader	No	QC	NM
K3	1	S	SHG	Trader	Rent	Haat	Sometimes	LT	NM
K4	2	M	Bank	Mobile	Rent	Mandi	Sometimes	DP	SH
K5	0	S	ML	Trader	No	Trader	No	LP	NM
K6	1	S	ML	Trader	No	Trader	No	NMI	NM
K7	2	M	PACS	Mobile	Rent	Haat	Sometimes	QC	SH
K8	1	S	SHG	Trader	No	Trader	No	LP	NM
K9	0	S	ML	Trader	No	Trader	No	LT	NM

K10	2	M	PACS	PACS	Rent	Mandi	Yes	DP	SH
K11	1	S	ML	Trader	No	Trader	No	LP	NM
K12	2	M	SHG	Mandi	Rent	Haat	Sometimes	QC	SH
K13	1	S	ML	Trader	No	Trader	No	LT	NM
K14	3	M	Bank	Mobile	Own	Mandi	Yes	DP	SH
K15	1	S	ML	Trader	No	Trader	No	LP	NM

• Farmers From Balangir (n = 15)

Farmers	Edu	Land	Credit	Market info	Transport	Selling place	Negotiation	Main Problem	FPO Member
B1	2	S	SHG	Mobile	Rent	Haat	Sometimes	QC	SH
B2	3	M	Bank	Mobile	Own	Mandi	Yes	DP	VH
B3	2	M	PACS	FPO	Own	Coop	Yes	LP	SH
B4	4	L	Bank	Mobile	Own	Mandi	Yes	DP	VH
B5	1	S	SHG	Trader	Rent	Haat	Sometimes	LT	NM
B6	2	M	PACS	Mandi	Own	Mandi	Yes	QC	SH
B7	3	L	Bank	Mobile	Own	Mill	Yes	DP	VH
B8	2	S	None	Mobile	Rent	Haat	Sometimes	LP	NM
B9	3	M	Bank	FPO	Own	Own	Yes	DP	SH
B10	4	L	Bank	Mobile	Own	Mandi	Yes	QC	VH
B11	1	S	SHG	Trader	Rent	Haat	Sometimes	LT	NM
B12	2	M	PACS	Mobile	Own	Mndi	Yes	DP	SH
B13	1	S	ML	Trader	Trader	Trader	No	LP	NM
B14	3	M	Bank	Mobile	Mobile	Coop	Yes	QC	SH
B15	2	S	SHG	Mobile	Mobile	Haat	Sometimes	LT	NM

- b. Grouping codes into categories such as education, credit, market awareness, and institutional support.
- c. Theme development
- d. Interpretation with district-wise comparison

4.3.Data Analysis and Discussion (Thematic Analysis)

The study identified five important themes that reflect how socio-economic factors affect cotton farmers' marketing decisions in practice.

4.3.1. Theme 1: Education Plays a Key Role in Market Awareness and Decisions

Farmers in Balangir typically achieved higher levels of education, with many finishing secondary and higher secondary schooling. This allowed them to utilise mobile phones, mandi announcements, and channels through Farmer Producer Organisations (FPOs) to verify prices prior to selling their cotton. Conversely, farmers in Kalahandi, who had comparatively lower educational levels and less exposure to the market, depended more on local traders for price information and decisions related to marketing.

Interpretation: More education → More knowledge → Better marketing strategy

4.3.2. Theme 2: Landholding Size and Financial Capacity Shape Farmers' Bargaining Power

Farmers with medium and large landholdings in Balangir had greater financial flexibility, allowing them to delay the sale of cotton in anticipation of better pricing. In contrast, small farmers in both districts, particularly in Kalahandi, were often compelled to sell immediately, sometimes at unfavourable prices, due to urgent cash needs and limited quantities of produce.

Interpretation: Greater land area → Increased yield → Increased bargaining power

4.3.3. Theme 3: Transport Facilities Determine Market Access

Balangir farmers had more access to transportation, enabling them to sell in mandis or cooperatives, but Kalahandi farmers were forced to sell to local traders at the rates provided due to a lack of transportation facilities.

Interpretation: transport access = higher market participation and better prices.

4.3.4. Theme 4: Support from FPOs Improves Market Efficiency

Balangir showed higher FPO membership. FPOs provided:

- Collective selling
- Standardised weighing
- Reduced quality-based education
- Better knowledge of prices and ginning mills. Kalahandi farmers showed minimal FPO involvement.

Interpretation: Institutional membership → Higher income and transparency.

4.3.5. Theme 5: Common Challenges Reduce Farmers' Income Potential

Farmers informed of persistent problems such as:

- Price fluctuation
- Quality cuts by traders/mandis
- Lack of storage
- Delayed payments
- Inadequate market information

- High transportation costs
- Kalahandi showed more severe concerns due to poor infrastructure.

5. Suggestion

- Marketing FPOs and stronger cooperatives can help farmers sell together and earn better prices.
- Improving rural transport, especially in Kalahandi, will help farmers reach markets more easily.
- Providing real-time market prices through SMS, mobile apps, and mandi displays can help farmers make better selling decisions.
- Expanding access to formal credit through PACS, SHGs, and banks can help farmers avoid distress sales.
- When procurement centres are located nearer to villages, farmers save time and transport costs and get timely payments.
- When farmers are trained in grading, storage, price negotiation, and quality checking, they are better prepared to sell their produce confidently.

6. Conclusion

The study emphasises that the socio-economic properties of cotton farmers significantly affect their marketing approaches and choice of channels in Kalahandi and Balangir districts, Odisha. Key factors include education, landholding size, financial capacity, access to credit and market information, transportation, and engagement in Farmer Producer Organisations (FPOs) or cooperatives. Farmers in Balangir generally have good access to market information, mandis, cooperatives, and organisational support, which improves their bargaining power and allows them to use additional favourable marketing channels. Conversely, farmers in Kalahandi, particularly small and marginal ones, face inadequate transport, poor market information, financial difficulties, and weak organised banking, making them more reliant on local traders. The study classifies major barriers in cotton marketing such as value fluctuations, quality-based deductions, lack of storage facilities, late payments, high transportation costs, and dependency on intermediaries. These issues often force farmers into distress sales, limiting their ability to secure fair prices.

To address these challenges, the study recommends:

- Strengthening Farmer Producer Organisations (FPOs) and cooperatives
- Improving rural transport and market infrastructure
- Expanding access to formal credit
- Providing timely market-price information
- Establishing village-level procurement centres
- Enhancing farmers' skills in grading, storage, and price negotiation

To lessen market reliance, improve bargaining power, and promote sustainable, fair livelihoods for cotton cultivators in Kalahandi and Balangir districts, it is essential to strengthen farmers' institutional and economic capabilities.

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