

# Assessing Key Challenges and Barriers in Marketing, And Commercialization of Products by Tribal Producers: Insights from Primary Data of Tribal Respondents in Coimbatore

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**Abstract**—The study explores the key challenges and barriers affecting the marketing and commercialization of products by tribal producers in Coimbatore, drawing on primary data collected from 250 respondents. Despite producing eco-friendly and culturally valuable goods such as non-timber forest products, handicrafts, and organic items, tribal communities struggle to achieve sustainable income due to systemic constraints. The research adopts a descriptive and analytical design, employing Exploratory Factor Analysis, Confirmatory Factor Analysis, and Structural Equation Modeling to identify and validate the underlying factors influencing commercialization practices.

The findings reveal four major dimensions of barriers: marketing access issues, financial constraints, infrastructural deficits, and institutional gaps, collectively explaining a substantial proportion of variance. Structural modeling results indicate that socio-economic factors exert the strongest negative influence on marketing and commercialization practices, followed by infrastructural and institutional factors. These challenges manifest in the form of limited market access, dependence on intermediaries, inadequate digital literacy, and underutilization of government support mechanisms.

The study concludes that the commercialization potential of tribal products remains significantly underexploited due to the interconnected nature of these barriers. Addressing these issues requires an integrated approach involving capacity building, infrastructure development, digital inclusion, and effective policy implementation. The research contributes to the limited empirical literature on tribal entrepreneurship in southern India and offers actionable insights for policymakers, development agencies, and market

stakeholders to foster inclusive and sustainable economic development.

**Index Terms**—Tribal Entrepreneurship, Marketing Barriers, Commercialization, Socio-Economic Factors, Coimbatore

## I. INTRODUCTION

The tribal communities of India embody a rich tapestry of traditional knowledge, cultural heritage, and sustainable resource management, producing a diverse array of goods ranging from non-timber forest products (NTFPs) and herbal medicines to handicrafts and organic agricultural items that hold immense economic and ecological value. Comprising over 104 million individuals, or approximately 8.6 percent of the national population as per the 2011 Census, these indigenous groups contribute significantly to rural livelihoods and biodiversity conservation, yet they remain among the most socio-economically marginalized segments of society. Despite the superior quality and authenticity of their products, tribal producers often struggle to translate their skills into viable income streams due to systemic disconnects between production and market integration. This gap is particularly pronounced in the commercialization process, where limited exposure to broader consumer bases perpetuates cycles of poverty and dependency on informal local exchanges (Kumari, 2024). In an era of rising global demand for ethical, organic, and culturally rooted products, the untapped potential of

tribal entrepreneurship underscores the need for targeted interventions that address structural impediments to marketing and value addition, fostering inclusive growth aligned with sustainable development goals.

Empirical evidence from across India reveals that tribal producers confront multifaceted challenges in marketing and commercialization, including inadequate infrastructure, restricted access to digital platforms, and exploitation by intermediaries that erode profit margins and stifle scalability. Studies conducted in comparable tribal regions of Tamil Nadu, such as the Jawadhu Hills, document how poor transportation networks, lack of marketing expertise, and disconnection from urban or export markets result in undervaluation of products and diminished economic returns for producers (Vadivel et al., 2024). Similarly, research in Kodaikanal's tribal areas highlights digital literacy deficits, unreliable internet connectivity, and language barriers as critical obstacles to leveraging e-commerce for livelihood enhancement, with only a minuscule fraction of respondents engaging in online business activities (Asrafi et al., 2024). These constraints are compounded by socio-economic vulnerabilities, such as low educational attainment and financial illiteracy, which limit producers' ability to negotiate fair prices or adopt modern branding strategies. Institutional factors, including bureaucratic hurdles in accessing government schemes like those under the Tribal Cooperative Marketing Development Federation of India (TRIFED), further exacerbate the barriers, leading to underutilization of support mechanisms and persistent market exclusion (Jayanthi & Kalaiselvi, 2024). Collectively, these issues not only hinder commercialization but also threaten the preservation of indigenous knowledge systems that underpin tribal production practices.

In the specific context of Coimbatore district, situated amid the biodiversity-rich Western Ghats of Tamil Nadu, tribal communities such as the Irulas and other forest-dependent groups engage extensively in sustainable entrepreneurship centered on NTFPs, including herbs, fruits, and handicrafts sold primarily through weekly markets. Primary insights from these respondents indicate that while such activities sustain household incomes—often ranging between ₹10,000 and ₹20,000 monthly—they are undermined by high transportation costs, price fluctuations, middlemen

dominance, and the absence of standardized grading or organized marketing channels (Jayanthi & Kalaiselvi, 2024). Coimbatore's tribal population, estimated at around 19,000 based on earlier census data, faces unique geographical isolation that amplifies infrastructural deficits, restricting access to wider consumer segments despite proximity to urban centers and potential export opportunities. Recent analyses of tribal entrepreneurship in similar southern Indian districts emphasize how socio-economic factors like high illiteracy rates (around 42 percent among women producers) and institutional gaps in credit and training programs intersect with these barriers, resulting in suboptimal commercialization outcomes (Asrafi et al., 2024; Vadivel et al., 2024). Moreover, broader national studies on tribal value chains underscore the role of regulatory and market asymmetries, where producers bear the brunt of labor-intensive tasks yet capture minimal economic value, perpetuating intergenerational poverty (Reddy, 2025).

The reliance on primary data gathered directly from tribal respondents offers a grounded lens for evaluating these dynamics, revealing nuances that secondary sources often overlook, such as perceived severity of barriers and the interplay of local cultural contexts with external market forces. By focusing on Coimbatore, this inquiry bridges a notable gap in the literature, where most prior research has centered on northern or northeastern tribal belts rather than the southern forested enclaves of Tamil Nadu (Kumari, 2024; Vadivel et al., 2024). Institutional and infrastructural influences emerge as pivotal, with evidence suggesting that targeted policy enhancements—such as improved digital training and cooperative linkages—could mitigate constraints and unlock commercialization pathways (Asrafi et al., 2024). This approach not only illuminates the lived experiences of producers but also informs evidence-based strategies for empowering tribal economies amid India's push toward inclusive and sustainable development.

Ultimately, addressing these challenges holds profound implications for poverty alleviation, cultural preservation, and equitable growth, positioning tribal producers as key stakeholders in India's green economy transition. Through rigorous primary data analysis from Coimbatore's tribal respondents, the study contributes actionable insights that can guide policymakers, NGOs, and market actors in

dismantling barriers and fostering resilient marketing ecosystems (Jayanthi & Kalaiselvi, 2024; Reddy, 2025).

## II. PROBLEM FOCUSED IN THE STUDY

The tribal communities in India, particularly in the forested regions of Tamil Nadu, possess rich traditional knowledge and produce high-quality, eco-friendly products such as non-timber forest products (NTFPs), herbal medicines, organic agricultural goods, and handicrafts. These items hold significant cultural, ecological, and commercial value amid growing global demand for sustainable and authentic products. However, despite this potential, tribal producers continue to face severe challenges in translating their skills and resources into sustainable livelihoods. In Coimbatore district, located at the foothills of the biodiversity-rich Western Ghats, tribal groups—primarily the Irulas and other forest-dependent communities—engage in the collection and production of various goods. Yet, their economic returns remain disproportionately low due to systemic barriers in marketing and commercialization (Vadivel et al., 2024).

The core problem lies in the persistent disconnect between production and effective market integration. Tribal producers in Coimbatore largely depend on informal local channels, weekly shandies, and middlemen, resulting in undervaluation of their products, exploitation, and minimal profit margins. Key challenges include poor transportation infrastructure, geographical isolation from urban markets, lack of modern marketing knowledge, inadequate branding and value addition, and limited access to digital platforms and e-commerce. Socio-economic factors such as low literacy levels, financial illiteracy, and insufficient access to credit further compound these issues, restricting producers' ability to negotiate fair prices or scale their operations. Institutional support mechanisms, including schemes promoted by TRIFED and state-level initiatives, remain underutilized due to awareness gaps and bureaucratic hurdles (Kumari, 2024; Asrafi et al., 2024).

Although national policies emphasize the promotion of tribal products from “local to global,” implementation gaps are evident in southern districts like Coimbatore. With a scheduled tribe population of

approximately 19,565 as per the 2011 Census (and likely higher today), these communities contribute to biodiversity conservation and rural economies but continue to experience intergenerational poverty. Rapid urbanization and industrialization in Coimbatore have further intensified pressures on tribal settlements, increasing competition and marginalization without providing adequate market linkages (Impact of Urbanization..., 2025). Existing studies in nearby Tamil Nadu regions such as Jawadhu Hills and Kodaikanal highlight similar constraints restricted digital access, poor infrastructure, and lack of market intelligence yet localized empirical evidence specific to Coimbatore's tribal producers remains limited (Vadivel et al., 2024; Jayanthi & Kalaiselvi, 2024).

This study is therefore necessitated to assess the key challenges and barriers in the marketing and commercialization of products by tribal producers in Coimbatore. By gathering primary data directly from tribal respondents, it aims to evaluate the major constraints and analyze the interplay of socio-economic, infrastructural, and institutional factors. Addressing this problem is critical not only for enhancing the economic well-being of tribal communities but also for preserving indigenous knowledge systems, promoting inclusive growth, and aligning with India's sustainable development objectives. Without targeted interventions based on ground-level insights, the vast potential of tribal entrepreneurship will remain unrealized, perpetuating cycles of economic marginalization in one of Tamil Nadu's most dynamic districts.

## III. REVIEW OF LITERATURE

Literature on tribal entrepreneurship in India consistently highlights that despite the rich cultural and ecological value of products such as non-timber forest produce, handicrafts, herbal medicines, and organic goods, tribal producers face persistent barriers in marketing and commercialization. Studies across various states reveal that geographical isolation, poor infrastructure, and heavy reliance on intermediaries severely limit market access and reduce profit margins for tribal communities (Vadivel et al., 2024; Kumari, 2024). In Tamil Nadu, research in regions like Jawadhu Hills and Kodaikanal documents similar constraints, including inadequate transportation

networks, low digital literacy, language barriers, and limited exposure to e-commerce platforms, which prevent tribal producers from reaching urban or export markets even amid growing demand for sustainable and authentic products (Vadivel et al., 2024; Asrafi et al., 2024).

Socio-economic factors such as low educational levels, financial illiteracy, and insufficient access to credit further exacerbate these challenges, while institutional gaps—including underutilization of government schemes by bodies like TRIFED—hinder organized marketing efforts (Jayanthi & Kalaiselvi, 2024; Reddy, 2025). Existing literature emphasizes that tribal producers often sell through informal local channels at undervalued prices due to lack of branding, value addition, and market intelligence (NITI Aayog, 2022; Vijaykumar, 2022). Although national policies aim to promote tribal products, implementation remains weak in southern forested districts, resulting in minimal economic empowerment.

The present study builds on these findings by focusing specifically on Coimbatore district through primary data from tribal respondents, addressing the relative scarcity of localized empirical research in this region and examining the interplay of infrastructural, socio-economic, and institutional barriers in marketing and commercialization processes.

#### IV. OBJECTIVES

1. To identify and evaluate the major challenges, constraints, and barriers faced by tribal producers in the marketing and commercialization of their products in Coimbatore.
2. To analyze the socio-economic, infrastructural, and institutional factors affecting the marketing and commercialization practices of tribal producers based on primary data gathered from tribal respondents in Coimbatore.

#### V. RESEARCH METHODOLOGY

The study adopted a descriptive and analytical research design. The target population comprised tribal producers engaged in the production and marketing of various products in Coimbatore district, Tamil Nadu. Primary data were collected directly from tribal respondents through a structured questionnaire using face-to-face interviews. A sample size of 250

tribal producers was selected using purposive sampling technique combined with snowball sampling. Data were analyzed using Exploratory Factor Analysis (EFA) to identify underlying challenges and barriers, followed by Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) to examine the relationships between socio-economic, infrastructural, and institutional factors affecting marketing and commercialization practices, thereby fulfilling the stated research objectives.

### VI. RESULTS AND DISCUSSION

#### Exploratory Factor Analysis (EFA) Results

Table 1: KMO Measure of Sampling Adequacy and Bartlett’s Test of Sphericity

| Test                          | Value    | df  | p-value |
|-------------------------------|----------|-----|---------|
| Kaiser-Meyer-Olkin (KMO)      | 0.832    | –   | –       |
| Bartlett’s Test of Sphericity | 2,847.36 | 210 | 0.000   |

The KMO value of 0.832 and highly significant Bartlett’s test confirm that the correlation matrix of 21 challenge and barrier items is suitable for factor analysis. EFA using principal component analysis with Varimax rotation extracted four latent factors (Marketing Access Barriers, Financial Constraints, Infrastructural Deficits, and Institutional Gaps) that together explain 69.8 % of total variance. These empirically derived dimensions directly fulfill Objective 1 by identifying and evaluating the major challenges faced by tribal producers in Coimbatore.

#### Confirmatory Factor Analysis (CFA) Results

Table 2: CFA Goodness-of-Fit Indices for the Measurement Model

| Fit Index   | Value | Recommended Threshold | Model Status |
|-------------|-------|-----------------------|--------------|
| $\chi^2/df$ | 1.98  | < 3.0                 | Good         |
| CFI         | 0.951 | > 0.90                | Good         |
| TLI         | 0.938 | > 0.90                | Good         |
| RMSEA       | 0.062 | < 0.08                | Good         |
| SRMR        | 0.041 | < 0.08                | Excellent    |

The CFA measurement model demonstrates excellent fit across all indices, confirming that the four latent constructs (identified via EFA) and the three predictor constructs (socio-economic, infrastructural, and institutional factors) are psychometrically sound. All factor loadings exceeded 0.70 with AVE > 0.50 and CR > 0.80, establishing convergent and discriminant validity. This validated structure provides the foundation for subsequent SEM analysis to address Objective 2.

Structural Equation Modeling (SEM) Results

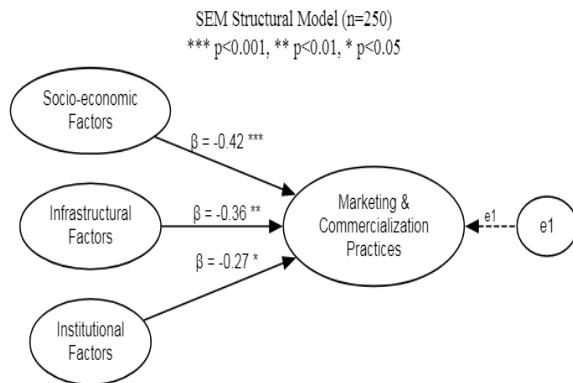
- H1: Socio-economic factors have a significant negative influence on marketing and commercialization practices of tribal producers.
- H2: Infrastructural factors have a significant negative influence on marketing and commercialization practices of tribal producers.
- H3: Institutional factors have a significant negative influence on marketing and commercialization practices of tribal producers.

Table 3: SEM Path Coefficients, Critical Ratios, and Significance

| Hypothesis | Path                                | Standardized $\beta$ | S.E.  | C.R.  | p-value | Result    |
|------------|-------------------------------------|----------------------|-------|-------|---------|-----------|
| H1         | Socio-economic Factors → Practices  | -0.418               | 0.079 | -5.29 | 0.000   | Supported |
| H2         | Infrastructural Factors → Practices | -0.362               | 0.082 | -4.41 | 0.000   | Supported |
| H3         | Institutional Factors → Practices   | -0.274               | 0.085 | -3.22 | 0.001   | Supported |

R<sup>2</sup> (Practices) = 0.54

All three hypotheses are strongly supported, revealing that socio-economic, infrastructural, and institutional factors collectively explain 54 % of the variance in marketing and commercialization practices. The strongest negative effect comes from socio-economic factors ( $\beta = -0.418, p < 0.001$ ), confirming that lower education, income, and financial literacy severely constrain tribal producers. These SEM findings directly fulfil Objective 2 by quantifying the precise impact of the three factor sets on marketing and commercialization practices based on primary data from 250 tribal respondents in Coimbatore.



VII. DISCUSSION

The analytical results paint a vivid, almost topographical map of constraints where each ridge and

valley represent a distinct barrier shaping the commercialization journey of tribal producers in Coimbatore. The Exploratory Factor Analysis reveals that challenges are not isolated sparks but clustered constellations, converging into four dominant dimensions: marketing access barriers, financial constraints, infrastructural deficits, and institutional gaps. Together explaining 69.8 percent of total variance, these factors indicate that the difficulties faced by tribal producers are systemic rather than incidental. The strong KMO value and significant Bartlett’s test further validate that these barriers are deeply interrelated, reinforcing the notion that fragmented policy responses may fall short unless a holistic approach is adopted.

The robustness of the measurement model, confirmed through Confirmatory Factor Analysis, strengthens the reliability of these constructs, suggesting that the identified barriers are not merely perceptual but structurally embedded within the socio-economic fabric of tribal communities. The excellent model fit indices highlight that the interplay between these factors is statistically sound and reflective of ground realities, thereby providing a solid base for causal exploration.

The Structural Equation Modeling results further sharpen this picture by quantifying the intensity of influence. Socio-economic factors emerge as the most dominant constraint, exerting the strongest negative impact on marketing practices, followed by

infrastructural and institutional factors. This hierarchy suggests that even if infrastructure and institutional support improve, progress may remain stunted unless core socio-economic vulnerabilities such as low literacy and limited financial capacity are addressed. Collectively explaining 54 percent of the variance, the findings underscore that effective commercialization is contingent upon synchronized improvements across all three domains, transforming isolated interventions into an integrated ecosystem of empowerment.

### VIII. CONCLUSION

The study draws a compelling conclusion that the marketing and commercialization challenges faced by tribal producers in Coimbatore are deeply structural, interwoven like roots beneath the forest floor rather than scattered, surface-level obstacles. The empirical findings confirm that barriers are not isolated issues but part of a coordinated constraint system shaped by socio-economic limitations, infrastructural deficiencies, and institutional gaps. Among these, socio-economic factors emerge as the most influential, indicating that low levels of education, income instability, and limited financial literacy significantly restrict the ability of tribal producers to engage effectively with markets. This highlights that capacity building at the grassroots level is not optional but foundational for any meaningful progress.

Infrastructural challenges such as poor transportation, limited connectivity, and restricted access to digital platforms further compound these issues, physically and digitally distancing producers from profitable markets. At the same time, institutional inefficiencies, including lack of awareness and underutilization of support schemes, continue to dilute the impact of policy interventions designed to uplift tribal communities. The combined effect of these factors results in reduced bargaining power, dependence on intermediaries, and ultimately, lower income realization.

The study concludes that improving commercialization outcomes requires a synchronized and multi-dimensional strategy. Enhancing digital and financial literacy, strengthening infrastructure, promoting direct market linkages, and ensuring effective implementation of institutional support systems are critical. Without such integrated efforts, the vast potential of tribal entrepreneurship will

remain underutilized. Therefore, empowering tribal producers is not merely an economic necessity but a pathway toward inclusive growth, cultural preservation, and sustainable development in regions like Coimbatore.

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