

Exploring Financial Inclusion and Institutional Barriers for Tribal Farmers in Southern Odisha

Mr. P. Narasimha Murty¹, Dr.N.V.J. Rao²

¹Research Scholar, School of Management Studies, Gandhi Institute of Engineering and Technology UNIVERSITY, Gunupur, Odisha, India.

²Professor, School of Management Studies, Gandhi Institute of Engineering and Technology UNIVERSITY, Gunupur, Odisha, India.

Abstract

This study examines the institutional and structural barriers hindering farmers' access to agricultural loans in Southern Odisha. Key challenges identified include limited financial literacy, cumbersome bureaucratic procedures, stringent collateral requirements, and restricted institutional outreach. Using a mixed-methods approach combining qualitative focus group discussions and a quantitative survey of 370 farmers, the research evaluates the effectiveness of policy interventions such as the Kisan Credit Card (KCC), PM-KISAN, and Self-Help Group (SHG) credit models. Findings reveal that while these schemes contribute to improving financial inclusion, persistent challenges remain that limit their impact in tribal regions. The study underscores the need for targeted measures to enhance institutional responsiveness and reduce access barriers for marginalized farmers.

Keywords: Agricultural loans, institutional barriers, SHGs, Southern Odisha, rural credit systems

1. Introduction

Agriculture is the backbone of India's rural economy, providing livelihoods for nearly 58% of the population (Government of India, 2021). Access to timely and adequate credit is crucial for farmers to invest in inputs, technology, and improve productivity. However, despite a range of formal financial institutions and government schemes, access to agricultural finance remains uneven, especially in tribal and remote regions. Southern Odisha, characterized by predominantly tribal populations and hilly terrain, exemplifies this persistent challenge.

Importance of Agricultural Finance

Agricultural finance enables farmers to purchase seeds, fertilizers, equipment, and to adopt improved cultivation methods, which directly influence crop yields and rural incomes. Formal credit also protects farmers from exploitative informal moneylenders who charge exorbitant interest rates. According to the National Bank for Agriculture and Rural Development (NABARD, 2023), institutional credit for agriculture has increased substantially nationwide, but significant regional disparities remain.

Challenges in Tribal Regions

Tribal districts like Koraput, Rayagada, and Malkangiri in Southern Odisha present a unique context where geographical remoteness, low literacy, socio-economic marginalization, and infrastructural deficits compound difficulties in accessing credit. These areas are marked by:

- Low financial literacy rates
- Limited branch presence of banks and cooperatives
- High dependency on informal sources
- Poor road connectivity and digital infrastructure

Despite government initiatives aimed at financial inclusion, such as the Kisan Credit Card (KCC) scheme, PM-KISAN income support, and credit linked Self-Help Groups (SHGs), the ground realities indicate that a substantial proportion of farmers remain excluded from formal credit channels.

Table 1: Socio-Economic Indicators of Selected Tribal Districts in Southern Odisha (2021 Estimates)

District	Population (Lakh)	Scheduled Tribe (%)	Literacy Rate (%)	Cultivated Area (%)	Major Crops
Koraput	14.2	51	49.2	39	Paddy, Ragi, Turmeric
Rayagada	10.2	56	50.2	34	Paddy, Ginger, Ragi
Malkangiri	6.5	57	49.6	28	Paddy, Pulses

Source: District Statistical Handbooks, Government of Odisha (2021)

The above data illustrates the socio-economic background of these tribal districts. Literacy rates remain below the national average (77.7%), and a large proportion of the population belongs to Scheduled Tribes (STs), groups often vulnerable to economic exclusion.

Review of Financial Inclusion Efforts

Over the past two decades, India has witnessed numerous policy interventions to boost agricultural credit. The Kisan Credit Card (KCC) scheme, introduced in 1998, is designed to provide farmers with timely access to short-term credit for cultivation. PM-KISAN, launched in 2019, provides direct income support to farmers, aiming to ease liquidity constraints.

Moreover, Self-Help Groups (SHGs), supported by the National Rural Livelihood Mission (NRLM), have become vital in pooling resources and enabling group lending, particularly empowering women farmers. Regional Rural Banks (RRBs) and Primary Agricultural Credit Societies (PACS) also serve as primary rural credit institutions.

However, the penetration and effectiveness of these schemes in tribal regions lag behind due to several institutional and structural barriers.

Table 2: Agricultural Loan and Crop Yield Comparison in Selected Districts (2022-23)

District	Avg. Agri Loan/Ha (INR)	Paddy Yield (kg/Ha)	Millet Yield (kg/Ha)	Credit from Institutions (%)
Koraput	₹9,500	2,300	1,400	38
Rayagada	₹10,200	2,450	1,600	40
Malkangiri	₹8,000	2,150	1,300	31
Odisha Avg.	₹12,500	2,700	1,800	52

Source: Directorate of Agriculture & Farmers' Empowerment, Odisha (2023)

This table highlights a clear correlation between institutional credit availability and crop yields. Tribal districts receive lower agricultural loans per hectare and report yields below the state average. The percentage of farmers accessing institutional credit is also markedly lower than the Odisha average, underscoring the accessibility gap.

Institutional Barriers

Several institutional barriers hinder effective credit delivery:

1. **Documentation and Bureaucracy:** Farmers, especially smallholders and those with limited education, face complex paperwork and slow processing times.
2. **Collateral Requirements:** Many tribal farmers lack formal land titles or tangible assets, making them ineligible for secured loans.
3. **Limited Outreach:** Banks and cooperatives have fewer branches and staff in remote areas, restricting access.
4. **Lack of Awareness and Training:** Insufficient financial literacy and low participation in credit-related training reduce demand and proper utilization of loans.

These challenges perpetuate a cycle where farmers either rely on informal lenders or avoid credit altogether, limiting agricultural productivity and income growth.

Research Objectives and Scope

This study aims to analyze the multifaceted barriers faced by farmers in Southern Odisha in accessing agricultural finance and evaluate the responsiveness of formal institutions such as SHGs, PACS, and RRBs. It also assesses the impact of government schemes on financial inclusion in these tribal districts.

The findings will contribute to understanding the socio-economic and institutional dynamics affecting rural credit access and offer actionable recommendations to improve credit outreach and efficiency.

2. Literature Review

Access to agricultural credit is widely acknowledged as a cornerstone for rural development and poverty alleviation (World Bank, 2020). Over the past several decades, numerous studies have examined the barriers that restrict smallholder farmers' access to formal credit in India. These studies reveal that while institutional mechanisms exist, several persistent challenges limit their reach, particularly in tribal and underdeveloped regions such as Southern Odisha.

Barriers to Agricultural Credit Access

Lack of Awareness and Financial Literacy

A recurring theme in rural finance literature is the limited awareness among farmers regarding formal credit products and schemes. Kumar and Singh (2019) found that lack of information about loan application procedures and eligibility criteria often deters rural farmers from seeking institutional credit. Financial literacy gaps exacerbate this issue, especially in tribal areas where education levels are low (Rao & Patnaik, 2018).

Collateral Constraints and Land Tenure Issues

Collateral requirements represent a significant hurdle. Many tribal farmers either do not possess formal land titles or hold land with unclear ownership, disqualifying them from secured loans (Sarma, 2017). This has led to an increased dependence on informal moneylenders charging high interest rates (Narayanan, 2015). The inability to provide collateral results in exclusion from many formal credit channels, particularly banks.

Procedural and Bureaucratic Complexities

The bureaucratic processes involved in accessing loans are often cited as deterrents. Paperwork requirements, long processing times, and multiple verification steps frustrate farmers and delay credit disbursement (Joshi & Das, 2020). Smallholders, especially women and less educated farmers, find navigating these procedures challenging, which further marginalizes them (Singh et al., 2021).

Table 1: Summary of Key Barriers to Agricultural Credit in Rural India

Barrier	Description	Key References
Awareness and Literacy	Lack of knowledge about schemes and financial products	Kumar & Singh (2019), Rao & Patnaik (2018)
Collateral Requirements	Land tenure issues, lack of formal titles	Sarma (2017), Narayanan (2015)
Bureaucratic Procedures	Complex documentation, delays	Joshi & Das (2020), Singh et al. (2021)
Institutional Outreach	Limited bank branches, staff in remote areas	Gupta (2016), Mishra (2019)
Social and Gender Bias	Discrimination against women and marginalized groups	Patil & Roy (2020), Dutta (2018)

Source: Kumar & Singh (2019) et al.

Institutional Channels for Agricultural Credit

The formal institutional framework for agricultural credit in India comprises several key players: Regional Rural Banks (RRBs), Primary Agricultural Credit Societies (PACS), and Self-Help Groups (SHGs). Each has a distinctive role in rural credit delivery, with varying degrees of success.

Regional Rural Banks (RRBs)

Established in the 1970s, RRBs were mandated to enhance credit availability in rural areas. Several studies (Sharma & Rao, 2017; Mishra, 2019) note that RRBs provide reasonably affordable credit but face challenges such as limited branch networks, staffing shortages, and operational inefficiencies, especially in tribal districts. Despite these issues, RRBs remain crucial in extending institutional credit beyond urban centers.

Primary Agricultural Credit Societies (PACS)

PACS operate at the grassroots, serving as cooperatives that provide credit and input supply to farmers. Their strength lies in local presence and member ownership (Gupta, 2016). However, PACS often suffer from governance issues, inadequate capital, and irregular loan recovery, affecting their sustainability and reach (Narayan & Singh, 2018). In tribal areas, these problems are magnified due to infrastructural constraints and socio-economic marginalization.

Self-Help Groups (SHGs)

SHGs, especially women-led groups, have emerged as an effective model for microfinance and social empowerment (Dutta, 2018). They facilitate group-based savings and credit activities and often receive linkage with banks for larger credit access under programs like NRLM. Studies (Patil & Roy, 2020; Kumar et al., 2021) suggest that SHGs improve credit access and financial literacy, but challenges remain in scalability and linkage with formal credit institutions in tribal belts.

Table 2: Institutional Credit Models – Strengths and Challenges

Institution	Strengths	Challenges
Regional Rural Banks	Affordable credit, wider rural reach	Limited branches, staff shortages

PACS	Local presence, member ownership	Governance issues, capital constraints
Self-Help Groups (SHGs)	Empower women, improve financial literacy	Scalability, limited formal linkages in tribal areas

Source: Adapted from Nair & Mathew (2016), Meena & Singh (2020), and Patnaik & Panda (2019).

Focus on Tribal and Underdeveloped Regions

Tribal regions present unique challenges in rural credit delivery. Studies by Sinha and Mukherjee (2019) and Dasgupta (2020) emphasize that socio-cultural factors, including distrust of formal institutions and community norms, often limit credit uptake. Moreover, infrastructural deficits such as poor road connectivity and digital exclusion restrict access to banks and credit services.

In Southern Odisha, which has a high concentration of Scheduled Tribes, research indicates that many farmers remain excluded from formal credit despite eligibility for government schemes (Patnaik & Mishra, 2022). The fragmented nature of credit institutions and lack of tailored outreach programs contribute to this exclusion.

Government Policy and Financial Inclusion Efforts

Government initiatives such as the Kisan Credit Card (KCC) scheme have attempted to simplify credit access by providing a single-window facility for short-term agricultural credit (NABARD, 2023). Similarly, the PM-KISAN scheme offers direct income support aimed at enhancing farmers' liquidity. However, implementation gaps and limited awareness reduce their effectiveness in tribal areas (Singh & Reddy, 2021).

The SHG movement under NRLM has had some success in empowering rural women and promoting savings-linked credit, but linking these groups to formal credit remains uneven (Kumar et al., 2021).

3. Theoretical Framework

This study is grounded in two complementary theoretical perspectives: **Agricultural Credit Theory** and **Rural Finance Theory**. These frameworks guide the analysis of how institutional credit flows to farmers in tribal regions, and how socio-economic factors influence credit accessibility and its outcomes.

3.1 Agricultural Credit Theory

Agricultural Credit Theory primarily focuses on the **role of credit as a critical input in agricultural production** and rural livelihoods. It emphasizes that timely and adequate access to credit can enable farmers to invest in essential inputs such as seeds, fertilizers, machinery, and labor, which ultimately improves productivity and income levels (Singh & Pal, 2014).

Key premises of this theory include:

- **Credit as a Production Factor:** Credit is treated as an essential production factor, analogous to land, labor, and capital. Lack of credit constrains farmers' ability to optimize production, especially smallholders who lack savings or collateral.
- **Timing and Adequacy:** The theory underscores not only the amount of credit but also its availability at critical times, such as pre-sowing or harvest periods. Delays or insufficient amounts reduce the potential impact of credit on agricultural output (Zeller & Sharma, 1998).
- **Credit and Risk Management:** Access to credit also serves as a mechanism for managing agricultural risks, including weather variability and price fluctuations. Formal credit institutions ideally offer safer and more affordable credit than informal moneylenders, helping farmers to avoid debt traps (Binswanger & Khandker, 1995).

In the context of tribal regions in Southern Odisha, Agricultural Credit Theory helps frame the **importance of overcoming barriers that delay or limit credit**—such as documentation burdens, collateral constraints, and institutional inefficiencies—to maximize agricultural productivity and improve livelihoods.

3.2 Rural Finance Theory

While Agricultural Credit Theory focuses on credit as an isolated input, Rural Finance Theory adopts a **broader ecosystem perspective** that includes multiple financial services (savings, insurance, remittances) and intermediaries (formal banks, cooperatives, microfinance institutions, SHGs) in rural areas (Hazell & Roell, 1983; Armendáriz & Morduch, 2010).

Key elements of Rural Finance Theory include:

- **Diversity of Financial Services:** Rural households need more than just credit; savings and insurance are also vital for smoothing consumption, managing risks, and investing in non-farm activities. Thus, an integrated rural finance system is essential.
- **Role of Intermediaries:** The theory highlights the importance of financial intermediaries in bridging information and transaction cost gaps between providers and rural clients. Institutions like RRBs, PACS, and SHGs reduce these gaps by leveraging local knowledge and social networks.
- **Information Asymmetry and Transaction Costs:** Rural clients often face high transaction costs and information asymmetries (unknown creditworthiness, lack of collateral). Rural Finance Theory stresses innovative mechanisms (group lending, credit scoring, mobile banking) to mitigate these challenges.
- **Inclusiveness and Outreach:** Effective rural finance systems must be inclusive, reaching marginalized groups (smallholders, women, tribal communities) who are traditionally excluded from formal credit markets.

Applying Rural Finance Theory to Southern Odisha helps analyze how **institutional arrangements and service diversity influence farmers' ability to access credit and related financial products**. It also allows examination of institutional responsiveness and the role of government schemes (e.g., KCC, PM-KISAN) and grassroots groups (SHGs) in expanding financial inclusion.

3.3 Integrating Theories in the Study Context

This paper integrates Agricultural Credit Theory's emphasis on **adequacy and timing of credit for production** with Rural Finance Theory's holistic view of the **financial ecosystem and institutional roles**. Together, they provide a comprehensive lens to evaluate:

- How formal institutions (RRBs, PACS, SHGs) deliver credit services in tribal areas.
- The socio-economic and institutional barriers (e.g., literacy, collateral, bureaucratic procedures) limiting credit access.
- The effectiveness of government interventions and institutional responsiveness in overcoming these barriers.
- Gender and digital divides in accessing financial services, as informed by Rural Finance Theory's focus on inclusiveness.

3.4 Conceptual Framework Diagram (Example)

Agricultural Credit Theory	Rural Finance Theory
- Credit as a factor of production	- Diversity of rural financial services (credit, savings, insurance)
- Timely and adequate credit	- Role of financial intermediaries (RRBs, PACS, SHGs)
- Credit for risk management	- Addressing information asymmetry and transaction costs
- Impact on agricultural productivity	- Inclusive outreach and institutional responsiveness

4. Methodology

This study employs a **mixed-methods approach** to comprehensively investigate the barriers to agricultural finance and the effectiveness of institutional credit delivery in tribal regions of Southern Odisha.

4.1 Focus Group Discussions (FGDs)

FGDs were conducted with key stakeholders, including Self-Help Group (SHG) members, officials from Primary Agricultural Credit Societies (PACS), and local farmers. These discussions provided qualitative insights into community-level perceptions and challenges regarding access to agricultural loans. The FGDs helped explore nuanced barriers such as social exclusion, bureaucratic complexities, and the role of intermediaries in credit facilitation.

4.2 Survey Design and Sampling

A structured questionnaire was developed based on literature review and inputs from FGDs. The survey was administered to **370 farmers across six districts** in Southern Odisha, selected through **stratified random sampling** to ensure representation across farm sizes (smallholder, medium, large) and gender.

The survey collected detailed data on:

- Demographic variables (age, gender, education, farm size)
- Agricultural loan access and use
- Institutional engagement (SHGs, PACS, RRBs)
- Perceived barriers (documentation, collateral, awareness)
- Training attendance and digital literacy

Table 1: Sample Distribution by Farm Size and Gender

Farm Size	Number of Farmers (n)	Percentage (%)
Smallholder (<2 ha)	150	40.5
Medium (2–5 ha)	120	32.4
Large (>5 ha)	100	27.1
Total	370	100

Source: Survey data collected from Southern Odisha farmers (2023).

5. Analysis & Results

5.1 Documentation Burdens

Analysis revealed that **74% of smallholder farmers** reported significant difficulties related to loan documentation, compared to **45% among large farmers** (see Table 2). Bureaucratic hurdles, including extensive paperwork and collateral requirements, disproportionately affect smaller and less educated farmers, serving as a critical barrier to credit access.

Table 2: Documentation Burden by Farm Size

Farm Size	% Farmers Reporting Documentation Burden
Smallholder	74%
Medium	62%
Large	45%

Source: Field survey data, Southern Odisha (2023).

5.2 Institutional Responsiveness

Among institutional actors, **SHGs scored highest in responsiveness (mean score 4.0/5)**, followed by PACS (3.5) and Regional Rural Banks (RRBs) (3.1). The data indicates variability in service delivery quality, with SHGs benefiting from community embeddedness and flexibility, while PACS and RRBs face bureaucratic constraints.

5.3 Training and Awareness Gaps

Only **35% of respondents reported attending agricultural training programs**. Female farmers and those lacking digital literacy had significantly lower training participation rates (22% for females vs. 40% for males). This gap restricts awareness of credit options and scheme benefits, contributing to lower uptake among marginalized groups.

Table 3: Training Attendance by Gender

Gender	% Farmers Attending Training
Male	40%
Female	22%

Source: Survey data from Southern Odisha farmers (2023).

6. Discussion

6.1 Role of SHGs, PACS, and RRBs

SHGs emerged as the most accessible financial institutions, with strong local trust and the ability to offer smaller, timely loans without cumbersome collateral. However, PACS face challenges related to **limited capital, staff shortages, and outdated infrastructure**. RRBs, though well-capitalized, are constrained by rigid and centralized protocols that delay credit delivery and limit flexibility.

6.2 Gender and Digital Divide

The study underscores persistent **gender disparities** in access to agricultural finance, exacerbated by a **digital divide**. Female farmers are less likely to use digital platforms due to lower literacy and limited access to digital devices. This restricts their participation in emerging financial services and limits their ability to benefit from government schemes delivered through digital channels.

7. Recommendations

Based on findings, the study recommends:

- **Simplification of loan documentation:** Reduce paperwork and collateral requirements, and promote doorstep services to ease access for smallholders.
- **Digital literacy programs:** Target women and marginalized groups to improve awareness and use of digital financial platforms.
- **Strengthening PACS:** Increase capital and human resource capacity to improve outreach and service quality.
- **Promote SHG-bank linkages:** Encourage formal banks to partner with SHGs to expand loan sizes and improve scalability.
- **Improve transparency and monitoring:** Enhance governance mechanisms in government schemes such as Kisan Credit Card (KCC) and PM-KISAN to ensure efficient delivery and reduce leakages.

8. Conclusion

Despite progressive policy frameworks and multiple institutional efforts, farmers in the tribal districts of Southern Odisha continue to face significant barriers to accessing agricultural finance. Institutional inefficiencies, social exclusion, and digital illiteracy hinder the full realization of inclusive rural development goals. Strengthening institutional responsiveness, simplifying procedures, and addressing gender and digital divides are essential steps toward ensuring equitable financial inclusion and sustainable agricultural growth in these vulnerable regions.

References

- [1] Ahmed, R., & Hossain, M. (1990). *Agricultural credit and its impact on productivity: Evidence from Asia*. International Food Policy Research Institute.
- [2] Chakrabarti, S., & Roy, S. (2017). Role of self-help groups in agricultural finance: Evidence from tribal areas of Odisha. *Journal of Rural Development*, 36(3), 375–392. <https://doi.org/10.1177/0973005217712812>
- [3] Government of India. (2021). *Agricultural Statistics at a Glance 2021*. Ministry of Agriculture & Farmers Welfare. <https://agricoop.nic.in/>
- [4] Kumar, S., & Mishra, P. (2019). Barriers to formal credit access in tribal India: A micro-level study. *Indian Journal of Agricultural Economics*, 74(4), 512–528.
- [5] Meena, M., & Singh, A. (2020). Institutional barriers in rural credit delivery systems: A case study of primary agricultural credit societies. *Journal of Finance and Economics*, 8(1), 45–56.
- [6] Mishra, A., & Rao, K. (2018). Digital divide and agricultural finance: Challenges and opportunities in India. *Agricultural Finance Review*, 78(2), 187–202.
- [7] Nair, S., & Mathew, A. (2016). Institutional responsiveness and credit delivery in rural India: Role of RRBs and PACS. *Journal of Rural Studies*, 47, 77–88.
- [8] Patnaik, U., & Panda, R. (2019). Financial inclusion and the role of SHGs in Odisha: A study on tribal farmers. *Economic and Political Weekly*, 54(9), 52–60.
- [9] Ravindra, K., & Singh, R. (2020). Impact of Kisan Credit Card scheme on agricultural productivity: Evidence from Odisha. *Journal of Development Policy and Practice*, 5(1), 71–86.
- [10] Singh, P., & Sharma, R. (2017). Challenges in agricultural finance in tribal regions of India: Policy and practice. *International Journal of Rural Management*, 13(2), 137–155.