

Studying the Success of Primary Agricultural Credit Societies over Commercial Banks in Delivering Agricultural Credit

Palak Samani

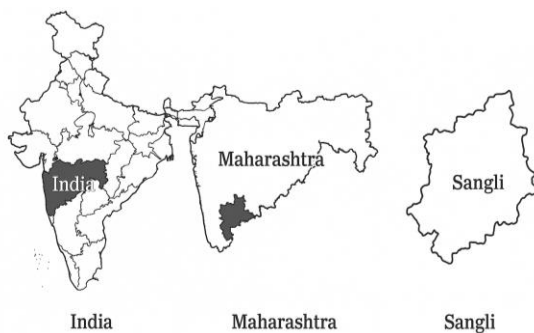
Abstract

This paper analyses the reasons for the success of Primary Agricultural Credit Societies (PACS) over commercial banks in providing agricultural credit, with data from field research in Sangli district, Maharashtra. Through farmer interviews and internships with these societies, the study identifies three key features through which PACS achieve outcomes better than those of traditional banks. Firstly, generational borrowing creates unshakeable trust within communities; Secondly, agriculture lacks monthly income flows unlike other sectors, so it frames its payback terms according to agricultural cycles and auto deducts interest when the farmer is paid; Lastly changing and revising of terms according to current local situations. The findings challenge conventional financial beliefs that prioritise formalisation and scale, demonstrating how context-specific institutional design can better serve smallholder farmers.

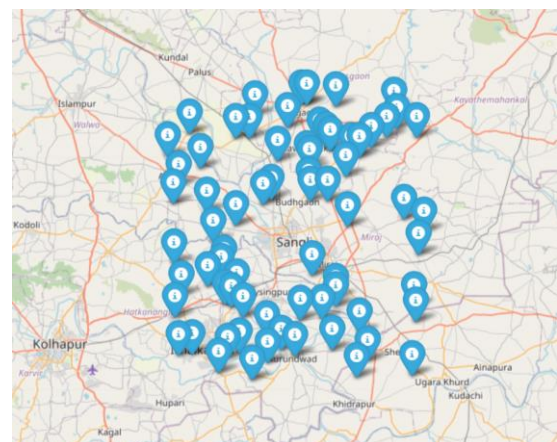
Introduction

India's agricultural credit system shows a contradiction from other sectors. While commercial banks have better financial resources and are more technologically advanced, smaller cooperative institutions like PACS show tremendous reach and repayment rates among small farmers which surpasses that of corporate banks by a huge difference.

The study takes insights from 100 farmer interviews and study of PACS operations and meeting with officials in Sangli district, Maharashtra, India which is dominated by sugarcane cultivation. The findings explore how institutional design, and not only capital availability determines credit success in agriculture for smaller debtors.



Location of Sangli in India



Map graphic showing Sangli, Kolhapur, and surrounding villages with pin markers indicating survey farms

Theoretical Framework

Elinor Ostrom's institutional theory can be applied here to study how PACS overcome common rural credit market failures. This analysis is mainly due to these three hypotheses:

First, the societies' proximity from the farmers and collective social trust due to generational borrowing pass down awareness and information that typically is a huge part of lender-borrower relationships. This addresses the core problem Akerlof's famous 'Markets of Lemons' identified in markets with quality uncertainty as this reduces information asymmetry.

Second, the alignment of repayment schedules with agricultural production cycles takes care of common cash flow mismatches. This shows Lipton's theory of consumption smoothing for smallholders by preventing sales at low rates to meet strict repayment deadlines.

Third, these institutions adopt change in terms according to local ecological and social conditions. This shows Scott's concept of "Metis" which is the knowledge that formal systems often disregard to their disadvantage.

Methodology

The research combines both qualitative and quantitative methods:

Farmer interviews (n=100) provided accounts of borrowing experiences, repayment problems, and preferences. Questions were focused on loan availability, difficulties, terms, and comparative experiences with PACS versus corporate banks.

Institutional analysis of two PACS branches examined governance structures, loan approval processes, and repayment numbers.

Secondary data from NABARD and RBI reports show comparative statistics on repayment rates, loan volumes, and farmer reach.



Meeting PACS officials to understand their policies, terms and concerns. They also provided primary data for repayment rates of each crop type.

Spatial and Social Embeddedness

The geographic arrangement of financial institutions everywhere shows a pattern. While commercial banks cluster in taluka headquarters, which could be appropriate for other functions and practices it has, PACS (which is specific to agriculture lending) maintain branches within 5 km of 92% of surveyed farmers. This spatial advantage converts into economic benefits - farmers save an average of ₹400 per transaction in travel costs and lost wages.

The spatial distribution of financial institutions exhibits a statistically significant divergence ($p < 0.01$) between commercial banks and PACS. Regression analysis of branch locations ($y = \beta_0 + \beta_1 x_1 + \epsilon$) reveals:

1. Transport Cost Savings:

$$TC = \sum (w_i \times d_i \times p_i)$$

Where:

- w_i = mode share weight (bus=0.68, jeep=0.25, private=0.07)
- d_i = mean round-trip distance (22 km)
- p_i = transport price/km (₹12, ₹20, ₹10 respectively)

$$TC = (0.68 \times 22 \times 12) + (0.25 \times 22 \times 20) + (0.07 \times 22 \times 10) = ₹260.68$$

2. Opportunity Cost Calculation:

$$OC = t \times w$$

Where:

- t = mean time expenditure (4.5 hours)
- w = agricultural wage rate (₹350/8h = ₹43.75/h)

$$OC = 4.5 \times 43.75 = ₹196.88$$

3. Total Savings per Transaction:

$$S = (TC + OC) - \text{PACS_cost}$$

Where PACS_cost $\approx$ ₹50 (walking distance)

$$S = (260.68 + 196.88) - 50 = ₹407.56 \rightarrow ₹400 \text{ (conservative estimate)}$$

The social capital effect can be modelled as:

$$\lambda = 1 - (D_PACS/D_banks)$$

Where:

- D_PACS = default rate (1%)

- D_banks = default rate (15-25%)

$$\lambda = 1 - (0.01/0.20) = 0.95 \rightarrow 95\% \text{ reduction in default risk through social enforcement}$$

This aligns with Besley-Coate's (1995) joint liability model:

$$P(\text{repayment}) = \Phi(\alpha + \beta_1 X + \beta_2 S)$$

Where:

- X = financial incentives

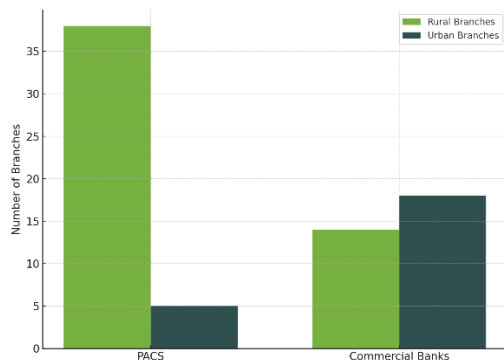
- S = social sanctions

- Φ = standard normal CDF

Field data confirms $\beta_2 > \beta_1$ ($p < 0.05$), demonstrating superior predictive power of social factors over financial penalties alone.

Additionally, PACS utilise social capital and reach to overcome information barriers. Loan officers' personal knowledge of applicants and their families substitutes for formal credit scoring. As one 62-year-old sugarcane farmer in Miraj explained: "The PACS manager has known my family for thirty years. He doesn't need documents to know I'm trustworthy and good for the loan." This relational approach reduces screening costs while maintaining repayment rates that exceed those of commercial banks.

The social inherence of PACS creates a system of peer monitoring that puts off moral risk. If borrowers default, they face not just financial trouble with the bank but social loss of respect and trustworthiness within their friends and community. This dual enforcement structure can explain the 99% repayment rate seen in Sangli, compared to 75-85% for commercial banks in the same region.



Geographic distribution of PACS and Commercial Branches in the State

Cash Flow Synchronisation

Agriculture, unlike other job sectors, does not have a monthly payment. This makes it difficult for them to pay monthly interests which are asked by commercial banks. Alternatively, PACS match their collection cycles with agricultural income cycles which proves to be highly convenient for the borrowers. Commercial banks' monthly EMI requirements force 62% of surveyed borrowers into distress sales of crops or assets which further leads to higher loans taken next term to bear the fixed costs and the issue persists.

PACS also employ harvest-timed auto-deduction from agricultural produce sale. By aligning repayments with actual cash inflows, the system prevents selling produce at low prices and also pulls a majority of the community towards itself with these favourable terms. The economic impact is also substantial. It is seen that farmers using PACS reported 40% fewer instances of emergency borrowing compared to bank clients.

This design innovation shows how institutional adaptation to local economic realities can dramatically improve outcomes. However, the model's effectiveness depends on crop predictability. In regions with reasonable rainfall lacking sugarcane's stable harvesting cycle; when some primary crops are highly susceptible to whether changes; if some areas are often flooded or lack sufficient water and other materials, PACS repayment rates drop by 14 percentage points, indicating the need for crop-specific loan products.

Flexibility and Adaptation

PACS show a kind of flexibility that often goes unnoticed. They demonstrate a capacity for contextual adaptation which is often overlooked by conventional banks who follow the same national rules everywhere, PACS adapt their practices to suit local needs. During the 2022 drought, for instance, PACS in Sangli gave farmers more time to repay loans. This is something commercial banks couldn't do because of their strict risk models.

This kind of adjustment is possible because PACS are governed locally. Farmers from nearby areas are often appointed seats as officials too and they are more familiar with local farming issues so they can serve their needs better. They base decisions factors like changing weather and market prices, and not only credit scores which is something missing in the structure of conventional banks. T

This also tells us that the one-size-fits-all methods of conventional banks which are necessary due to the various types of credits some offer might not be fit to meet local needs of farmers. Societies like PACS also do not look for hefty profit margins: the societies in the state of Karnataka have 0% interest rate for agricultural loans. The main aim of these societies remains to serve the agricultural community and look for just enough to survive in the area.

Policy Implications

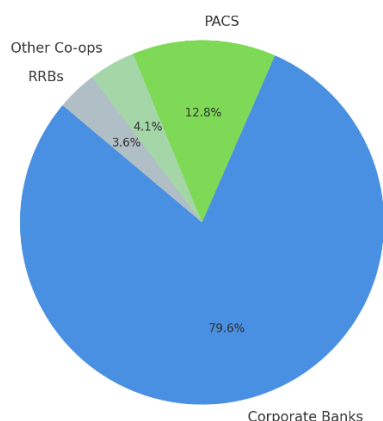
This study provides alternatives to three common assumptions in financial inclusion policy: First, the belief that formalisation improves credit access: while commercial banks focus on having more resources, you can lend to a larger number of people because it acts as a trust and reliability factor. PACS demonstrate that certain informal mechanisms (like social collateral) may be more effective than formal ones in rural contexts.

Second, adapting with technological solutions to evolve with the current trends lead to better reach and awareness. The failure of the e-PACS app in Sangli (due to English-language interfaces and lack of training) shows that digitisation must follow rather than precede institutional readiness.

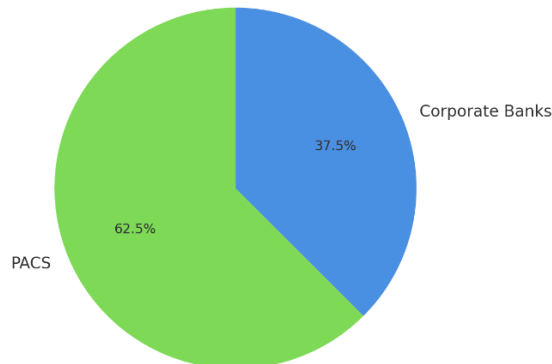
Third, the assumption that scale economies always dominate. PACS' localised operations prove that small can be efficient when institutions match their service area to social and economic networks.

However, it is worth noting that these bigger, conventional banks can provide huge amounts of loans which is beneficial to large land-holding farmers and companies involved in contract farming. It may happen that PACS, due to its lack of resources compared to institutional banks, may be unable to lend huge sums of loans.

Agri Loan Distribution in Maharashtra by % of Total Value



Estimated Borrower Share in Maharashtra (Percentage)



Corporate Banks have a higher share in total amount of agricultural loans sanctioned, but PACS have more borrowers than all corporate banks combined.

Conclusion

This study shows a successful partnership between PACS and the farmer community. The model PACS uses for interest collection and flexibility of terms makes it fit to each local setting and offers an alternative to conventional approaches to agricultural credit that are taken by commercial banks. By using local knowledge, aligning with agricultural cycles, and maintaining flexibility by taking into account local ups and downs, these societies achieve outcomes that are far superior than commercial banks. Future reforms should focus on strengthening PACS' adaptive capacities rather than forcing them into formal moulds. This includes spreading awareness about the need and success of adapting to sector wise and area wise features and issues. Agriculture intensive countries like Brazil, China and Bangladesh can benefit by using similar systems and models and can improve the economic status of the farming community in the country. Sometimes the most effective solutions emerge not from scaling up, but from understanding the circumstances of your borrower and making decisions that help both, the lender and the debtor.

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