



Primary Agricultural Cooperative Societies (PACS) as Catalysts for Achieving Sustainable Development Goals: A Pathway to Viksit Bharat 2047

Dr. Gayathri Devi. A

Professor, Department of Commerce and Management, Field Marshal K. M Cariappa College, Madikeri,
Kodagu District

Chaithra B. N

Research Scholar, Department of Post Graduate Studies and Research in Commerce, Mangalore
University, Mangalagangothri, Mangalore- 574199

DOI : <https://doi.org/10.5281/zenodo.20067102>

ARTICLE DETAILS

Research Paper

Accepted: 02-04-2026

Published: 25-04-2026

Keywords:

PACS, SDGs, Viksit Bharat 2047, Rural Development, Financial Inclusion, Cooperatives

ABSTRACT

Primary Agricultural Cooperative Societies (PACS) form the grassroots foundation of India's rural cooperative credit system and play a vital role in promoting agricultural development, financial inclusion, and rural livelihoods. In the context of the vision of Viksit Bharat 2047, this study examines the role of PACS in advancing key Sustainable Development Goals (SDGs) in the Kodagu district of Karnataka. The study is based on both primary and secondary data, with primary data collected from 100 respondents, including PACS members and officials by using random sampling method. The findings reveal that PACS significantly contribute to poverty reduction, food security, agricultural productivity, and financial inclusion, thereby supporting rural development. However, their role in gender equality and climate resilience remains limited. The study also identifies major challenges such as financial inefficiencies, rising non-performing assets (NPAs), weak governance, limited technological adoption, and low member participation. Despite these constraints, PACS play an important role in promoting rural credit access and agricultural modernization. The study concludes that strengthening PACS through



digitalization, capacity building, and governance reforms can enhance their effectiveness. With appropriate policy support, PACS can act as key catalysts in achieving SDGs and realizing the vision of an inclusive and developed Viksit Bharat by 2047.

Introduction

India's cooperative sector has long been recognized as a critical pillar of socio-economic development, particularly in rural areas where a large proportion of the population depends on agriculture and allied activities for their livelihood. Within this sector, Primary Agricultural Cooperative Societies (PACS) constitute the grassroots-level institutions that form the backbone of the cooperative credit system. Established to provide timely and affordable credit, PACS cater primarily to small and marginal farmers who often face challenges in accessing formal banking services. In addition to credit provision, PACS play a multifaceted role by supplying agricultural inputs such as seeds, fertilizers, and equipment, as well as facilitating storage, marketing, and distribution services. These functions collectively contribute to enhancing agricultural productivity, reducing dependency on informal moneylenders, and improving rural livelihoods (Yashoda, 2017).

In recent years, the global development agenda has been shaped by the adoption of the Sustainable Development Goals (SDGs), which aim to address pressing challenges such as poverty, hunger, inequality, and environmental degradation by 2030. India has actively aligned its national development policies with the SDG framework, emphasizing inclusive growth, social equity, and ecological sustainability. In this context, PACS, owing to their community-based, democratic, and participatory structure, are uniquely positioned to operationalize SDG objectives at the grassroots level. They enable localized implementation of development initiatives by directly engaging rural populations and addressing region-specific needs (Arpith & Ishwara, 2023).

This study specifically focuses on the Kodagu district of Karnataka, a region characterized by plantation agriculture, particularly coffee cultivation, and a strong presence of cooperative institutions. Administratively, Kodagu district comprises **five taluks—Madikeri, Somwarpet, Virajpet, Kushalnagar, and Ponnampet**. The district also has a well-developed cooperative network, with **approximately 74 Primary Agricultural Cooperative Societies (PACS)** affiliated to the district central cooperative bank (Kodagu District Central Cooperative Bank, 2024). This makes Kodagu a relevant context to examine the functioning and impact of PACS in supporting farmers, enhancing financial



inclusion, and contributing to sustainable rural development. By analyzing PACS in Kodagu, the study offers localized insights into their role in achieving SDGs and addressing region-specific agricultural and socio-economic challenges (Government of Karnataka, 2022).

Furthermore, with the national vision of achieving Viksit Bharat 2047, which aspires to transform India into a developed and self-reliant economy, the role of PACS has gained renewed significance. Strengthening these institutions through reforms, digitalization, and diversification is essential to unlock their full potential as drivers of sustainable rural transformation. Thus, PACS can serve as vital instruments in bridging the gap between policy aspirations and ground-level development outcomes.

Literature Review:

Primary Agricultural Cooperative Societies (PACS) have been widely recognized as foundational institutions in India's rural credit structure and play a significant role in promoting inclusive and sustainable development. As the grassroots tier of the cooperative credit system, PACS directly connect farmers with institutional finance, thereby strengthening rural economies and reducing dependence on informal lending sources. Scholars emphasize that PACS constitute a crucial component of the three-tier cooperative framework and serve as the primary interface for small and marginal farmers (Sujith & Mohan, 2022).

Existing literature highlights the contribution of PACS to rural development and financial inclusion. Studies indicate that cooperative credit institutions significantly enhance access to affordable credit, enabling farmers to invest in agriculture and allied activities, thereby improving income levels and reducing rural indebtedness (Shailaja & Hebbar, 2018). Similarly, Senapati and Bhatia (2018) argue that PACS have historically played a vital role in reducing dependence on moneylenders and promoting inclusive growth in rural economies.

Recent studies further reinforce these findings. NABARD (2022) reports that PACS continue to be instrumental in deepening financial inclusion by expanding credit outreach in underserved rural regions. Kumar and Singh (2021) highlight that PACS contribute to rural livelihood diversification by supporting agri-based microenterprises, while Ramesh and Patil (2023) observe that digitization initiatives have improved transparency and operational efficiency.

In the context of Sustainable Development Goals (SDGs), several studies underline the multidimensional role of PACS. Arpith and Ishwara (2023) demonstrate that PACS contribute to SDGs by enhancing



agricultural productivity, income generation, and community participation. Similarly, FAO (2021) notes that cooperative institutions play a critical role in achieving SDGs related to poverty reduction, zero hunger, and decent work. Research also indicates their contribution to food security and agricultural supply chains through improved access to inputs, credit, and markets (Minzar & Mishra, 2023).

Scholars have also examined the role of PACS in promoting inclusive growth and reducing socio-economic inequalities. Their democratic and participatory structure enables equitable distribution of resources and empowers marginalized groups (Sujith & Mohan, 2022). Studies such as Sharma et al. (2022) further indicate that PACS can enhance women's participation and rural employment when linked with self-help groups and cooperative enterprises.

Despite these contributions, the literature identifies several structural and operational challenges. Financial inefficiencies, governance issues, and limited technological adoption hinder the effectiveness of PACS (Minzar & Mishra, 2023). Issues related to loan recovery, profitability, and regional disparities in performance are also highlighted (Janaki, 2024; RBI, 2023).

Recent policy perspectives emphasize that strengthening PACS is essential for achieving the vision of Viksit Bharat 2047. The transformation of PACS into multi-functional rural institutions offering services such as storage, processing, and digital platforms is seen as a key strategy (Ministry of Cooperation, 2023).

However, most of the existing studies are conducted at the national or state level, with limited empirical focus on district-level analysis. In particular, there is a lack of focused research examining the role and performance of PACS in the Kodagu district of Karnataka, which has unique agricultural and cooperative characteristics. This study attempts to address this gap by providing a localized analysis of PACS and their contribution to SDGs in Kodagu district.

Research Gap

Despite extensive research on Primary Agricultural Cooperative Societies (PACS), several gaps remain:

- Most studies discuss PACS in relation to rural development but do not clearly measure their contribution to specific Sustainable Development Goals (SDGs) such as poverty reduction, food security, employment, and inequality.



- Existing research is largely concentrated at the national or state level, with very limited district-level studies, particularly in the Kodagu district of Karnataka.
- The impact of digital transformation in PACS is not adequately explored, especially in terms of operational efficiency and benefits to farmers.
- Issues related to sustainability and climate resilience receive limited attention in existing literature.
- There is a lack of empirical studies based on primary data from PACS members and officials, particularly in region-specific contexts like Kodagu.

Therefore, the present study addresses these gaps by focusing on the Kodagu district and analyzing PACS performance using primary data, with special emphasis on SDGs, financial inclusion, challenges, and development prospects.

Objectives

1. To examine the role of PACS in achieving Sustainable Development Goals in India.
2. To analyze the contribution of PACS towards rural development and financial inclusion.
3. To identify challenges faced by PACS in promoting sustainable development.
4. To suggest measures to strengthen PACS for achieving Viksit Bharat 2047

Hypotheses

H1: PACS have a significant positive impact on achieving Sustainable Development Goals (SDGs) in rural areas.

H2: PACS have a significant positive influence on financial inclusion and rural development.

H3: Operational and institutional challenges significantly affect the performance of PACS.

H4: Strengthening governance, digitalization, and infrastructure significantly improves the effectiveness of PACS in achieving sustainable development.



Research Design

The present study adopts a mixed-method research approach, combining both quantitative and qualitative techniques to provide a comprehensive analysis of the role of Primary Agricultural Cooperative Societies (PACS). A descriptive and analytical research design is employed to examine the contribution of PACS towards Sustainable Development Goals (SDGs) and rural development. The study is based on both primary and secondary data sources. Primary data were collected through a structured questionnaire administered to PACS members (farmers) and PACS officials/managers in the Kodagu district of Karnataka. Secondary data were obtained from reliable sources such as reports published by NABARD, RBI, the Ministry of Cooperation, as well as research journals and government publications. The sampling design follows a random sampling method, with a total sample size of 100 respondents comprising both PACS members and officials. For data analysis, descriptive statistical tools such as percentage analysis, mean, and mean score ranking method are used to interpret the data and draw meaningful conclusions.

Role of PACS in Achieving Sustainable Development Goals

1. Poverty Reduction (SDG 1)

Primary Agricultural Cooperative Societies (PACS) help reduce poverty by providing affordable credit to small and marginal farmers. They support income-generating activities in agriculture and allied sectors, leading to improved income stability and living standards (Yashoda, 2017; Sahore, 2024).

2. Zero Hunger and Food Security (SDG 2)

PACS enhance food security by ensuring timely access to inputs like seeds and fertilizers and offering credit for farming activities. This improves agricultural productivity and strengthens food supply systems (Yashoda, 2017).

3. Gender Equality (SDG 5)

PACS promote women's empowerment by increasing their access to financial resources, participation in decision-making, and entrepreneurial opportunities, thereby improving their socio-economic status (Yadav & Kumar, 2024).



4. Decent work and economic growth (SDG 8)

PACS contribute to employment and economic growth by supporting agriculture, allied activities, and rural enterprises. They encourage self-employment and entrepreneurship through credit and market support (Sahore, 2024).

5. Reduced Inequalities (SDG 10)

PACS foster inclusivity by providing financial services to marginalized groups, helping reduce socio-economic disparities and promoting equitable rural development (Arpith & Ishwara, 2023).

6. Sustainable Agriculture and Climate Resilience

PACS support sustainable farming practices and resource management. However, their role in climate resilience is limited and can be strengthened through technology adoption, training, and policy support (Ghanashyam & Hans, 2025).

Data Analysis and Interpretation

This section presents the analysis and interpretation of data collected from 100 respondents includes PACS members and officials in Kodagu District by using random sampling method. Statistical tools such as percentage analysis, mean score, and ranking method are used.

1. Role of PACS in Achieving SDGs:

Table 1.1: Mean Score Analysis

Sl. No	SDG Indicators	Mean Score	Interpretation
1	Poverty Reduction (SDG 1)	3.9	High Impact
2	Food Security (SDG 2)	4.0	Very High
3	Gender Equality (SDG 5)	3.4	Moderate
4	Economic Growth (SDG 8)	3.8	High Impact
5	Reduced Inequalities (SDG 10)	3.7	High Impact
6	Climate Resilience	3.3	Low Impact



Interpretation

The findings indicate that PACS have a strong impact on food security and poverty reduction, while their contribution to gender equality and climate resilience is comparatively weaker.

Hypothesis Testing (H1)

H1: PACS have a significant positive impact on achieving SDGs in rural areas.

- The high mean scores for poverty reduction (3.9), food security (4.0), and economic growth (3.8) clearly indicate a strong contribution of PACS toward key SDGs.
- Although certain areas like gender equality and climate resilience show moderate to low impact, the overall performance is positive.

Result: H1 is Accepted

PACS significantly contribute to achieving SDGs, especially in economic and agricultural dimensions.

2. PACS and Viksit Bharat 2047:

Table 2.1: Contribution Analysis

Sl. No	Indicators	Mean Score	Interpretation
1	Financial Inclusion	4.1	Very High
2	Agricultural Productivity	3.9	High
3	Local Governance	3.7	Moderate
4	Digital Transformation	3.5	Moderate

Interpretation

PACS contribute significantly to financial inclusion and agriculture, but digital transformation remains moderate, indicating scope for improvement.

Hypothesis Testing (H2)

H2: PACS have a significant positive influence on financial inclusion and rural development.

- The very high mean score for financial inclusion (4.1) strongly supports the hypothesis.
- Contributions to agricultural productivity (3.9) further reinforce their role in rural development.

**Result: H2 is Accepted**

PACS play a significant role in enhancing financial inclusion and rural development.

3. Challenges Faced by PACS:

Table 3.1: Ranking of Challenges

Sl. No	Challenges	Mean Score	Rank
1	Financial Inefficiencies & NPAs	4.2	1
2	Limited Adoption of Technology	4.0	2
3	Governance Issues	3.9	3
4	Low Member Participation	3.7	4
5	Dependence on Government	3.6	5

Interpretation

Financial inefficiencies are the most critical challenge, followed by technology gaps and governance issues, indicating structural weaknesses in PACS.

Hypothesis Testing (H3)**H3: Operational and institutional challenges significantly affect the performance of PACS.**

- High mean scores (above 3.5) for all challenges confirm that these issues are serious and widespread.
- Financial inefficiencies (4.2) and technological limitations (4.0) particularly hinder operational performance.

Result: H3 is accepted

Operational and institutional challenges significantly impact the effectiveness of PACS.

4. Suggestions and Policy Recommendations:

Table 4.1: Ranking of Suggestions

Sl. No	Suggestions	Mean Score	Rank
--------	-------------	------------	------



1	Digitalization of PACS	4.3	1
2	Capacity Building & Training	4.2	2
3	Strengthening Governance	4.1	3
4	Diversification into Allied Activities	3.9	4
5	Integration with SDGs	3.8	5
6	Youth & Women Participation	3.7	6

Interpretation

Digitalization and capacity building are the top priorities, indicating the need for modernization and skill development in PACS.

Hypothesis Testing (H4)

H4: Strengthening governance, digitalization, and infrastructure significantly improves the effectiveness of PACS in achieving sustainable development.

- Digitalization (4.3), capacity building (4.2), and governance strengthening (4.1) receive the highest rankings. These factors are perceived as essential for improving PACS performance and sustainability.

Result: H6 is accepted

Improving governance, digital systems, and infrastructure significantly enhances PACS effectiveness.

Major Findings:

Based on the data analysis and interpretation in the context of Kodagu district, several key findings emerge. Primary Agricultural Cooperative Societies (PACS) play a significant role in achieving Sustainable Development Goals (SDGs), particularly in reducing poverty and improving the financial stability of farmers in the region. Given Kodagu’s plantation-based economy (especially coffee and spices), PACS contribute strongly to food security and agricultural productivity, while also supporting economic growth and reducing inequalities to a moderate extent. However, their role in promoting gender equality and climate resilience remains limited, especially considering the district’s vulnerability to climate-related risks such as landslides and erratic rainfall, indicating the need for focused interventions.



PACS in Kodagu make a substantial contribution to rural development by enhancing financial inclusion through the provision of affordable credit to small and marginal farmers, including plantation growers. They reduce farmers' dependence on informal moneylenders and support agricultural and allied activities, thereby strengthening rural livelihoods and contributing to overall rural development in the district.

Despite these contributions, PACS in Kodagu face several challenges. Financial inefficiencies and rising non-performing assets (NPAs) are critical issues affecting their sustainability. Limited adoption of digital technology, particularly in remote and hilly areas, reduces operational efficiency. Governance issues and lack of professional management further hinder their performance. Additionally, low member participation and awareness, especially among younger members, weaken their functioning, while heavy dependence on government support limits autonomy and long-term sustainability.

In the context of Viksit Bharat 2047, PACS in Kodagu play a vital role in promoting financial inclusion and improving rural credit access. They contribute to agricultural modernization, particularly in plantation and allied sectors, although their role in local governance and community participation remains moderate. Digital transformation of PACS in the district is still at a nascent stage and requires substantial improvement to meet future development goals.

Suggestions:

Based on the findings from Kodagu district, several important suggestions are proposed to strengthen PACS. First, there is a strong need for digitalization through the implementation of core banking solutions and digital platforms, especially in rural and hilly regions. Promoting online transactions and digital record management can enhance transparency, efficiency, and accessibility of services.

Second, capacity building and training programs should be regularly conducted for PACS staff and members in Kodagu. Improving financial literacy and digital awareness among farmers, particularly coffee growers and smallholders, will enable better utilization of cooperative services.

Third, PACS in Kodagu should diversify their activities beyond credit services into areas such as storage, processing, and marketing of plantation crops like coffee, pepper, and cardamom. Encouraging value addition and linking farmers to markets can significantly enhance their income.



Fourth, strengthening governance is essential by improving accountability, transparency, and professional management practices. Introducing performance-based monitoring systems and adopting best cooperative practices can improve institutional effectiveness in the district.

Fifth, PACS should be aligned with Sustainable Development Goals by integrating SDG targets into their operations, particularly focusing on climate resilience due to Kodagu's ecological sensitivity. Promoting sustainable agricultural practices and environmental conservation should be prioritized.

Finally, encouraging greater participation of youth and women in Kodagu is crucial. Promoting youth involvement in cooperative leadership and increasing women's participation in management and decision-making will make PACS more inclusive, innovative, and sustainable in the long run.

Conclusion:

The analysis confirms that PACS act as important catalysts for rural development and SDG achievement. All major hypotheses (H1, H2, H3, and H6) are supported by the findings, indicating that PACS significantly contribute to sustainable development while facing notable operational challenges.

However, to fully realize their potential, PACS require structural reforms, technological advancement, and stronger governance frameworks. With appropriate policy support and modernization, PACS can emerge as resilient and dynamic institutions contributing effectively to the vision of Viksit Bharat 2047.

References:

- Arpith, S., & Ishwara, P. (2023). Role of cooperative institutions in achieving sustainable development goals in rural India. *Journal of Rural Development Studies*, 15(2), 45–58.
- FAO. (2021). *Cooperatives and sustainable development goals: Contributions to inclusive growth*. Food and Agriculture Organization.
- Ghanashyam, P., & Hans, V. B. (2025). Financial analytics in primary agricultural cooperative societies (PACS) in Karnataka: Opportunities, challenges, and performance insights.
- Government of Karnataka. (2022). *Economic survey of Karnataka 2021–22*. Bengaluru: Government of Karnataka.



- Janaki, M. (2024). Financial performance analysis of primary agricultural cooperative societies in India. *Indian Cooperative Review*, 61(1), 23–35.
- Kodagu District Central Cooperative Bank. (2024). *Statistics*. Retrieved from <https://www.kodagudccb.bank.in/statistics.html>
- Kumar, V., & Singh, R. (2021). Cooperative credit and rural livelihood diversification in India. *Agricultural Economics Research Review*, 34(1), 89–102.
- Kumar, V., & Singh, S. (2020). Governance issues in cooperative credit institutions in India. *Indian Journal of Agricultural Economics*, 75(3), 345–358.
- Ministry of Cooperation, Government of India. (2023). *Computerization of Primary Agricultural Credit Societies (PACS)*.
- Minzar, S., & Mishra, A. (2023). Challenges and prospects of primary agricultural cooperative societies in India. *Asian Journal of Agriculture and Development*, 20(1), 67–82.
- NABARD. (2022). *Status of microfinance in India*. National Bank for Agriculture and Rural Development.
- Ramesh, K., & Patil, S. (2023). Digitization of cooperative credit institutions: Opportunities and challenges. *International Journal of Rural Management*, 19(1), 55–70.
- RBI. (2023). *Report on trend and progress of banking in India*. Reserve Bank of India.
- Sahore, N. (2024). Study on primary agricultural cooperative credit societies financial management in Indian states. *Journal of Informatics Education and Research*.
- Senapati, S., & Bhatia, A. (2018). A study on the contributions of PACS towards inclusive growth of rural economy. *Theoretical Economics Letters*.
- Shailaja, H., & Hebbar, C. K. (2018). Cooperative credit and rural development in India. *Indian Journal of Agricultural Economics*, 73(3), 345–357.
- Sharma, L., Gupta, P., & Verma, S. (2022). Role of cooperatives in women empowerment and rural employment. *Journal of Cooperative Studies*, 55(3), 112–126.
- Singh, S., et al. (2022). Constraints in the functioning of primary agricultural cooperative societies in Haryana State, India. *Economic and Regional Studies*, 15(4), 509–518.
- Sujith, K., & Mohan, R. (2022). Cooperative governance and financial inclusion: Evidence from PACS in India. *Journal of Co-operative Organization and Management*, 10(2), 100–115.
- Yadav, P., & Kumar, A. (2024). Empowerment of women through participation in primary agricultural cooperative societies (PACS) in Delhi-NCR. *Journal of Chemical Health Risks*.



- Yashoda, K. (2017). Role of primary agricultural cooperative societies in rural development. International Journal of Commerce and Management Research, 3(5), 112–115.