

Farmers Producer Companies: A Catalyst for Sustainable Agriculture

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ABSTRACT

This review delves into the multifaceted concept of sustainability within the context of farmer producer companies (FPCs). By examining the economic, environmental, governance and social dimensions of sustainability, this study provides valuable insights into the critical role of FPCs in addressing potential challenges in sustainable development. FPCs, as cooperative organizations, empower farmers and foster collective action, enabling them to enhance their bargaining power, access markets, and improve their livelihoods. However, achieving sustainable outcomes requires a holistic approach that considers the interconnectedness of these dimensions. The critique highlights the importance of strong governance, effective financial practices, and a dedication to social fairness as essential elements for the enduring success of Farmer Producer Companies (FPCs). Concentrating on these factors can lead to a more robust and equitable agricultural industry.

Keywords: Farmer Producer Companies (FPCs), Sustainability, Agricultural Development, Corporate Governance, Rural Livelihood

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1. INTRODUCTION

Agriculture is indispensable for human survival and societal progress. It underpins income and employment throughout the food production process. To feed a growing and increasingly affluent global population, agricultural productivity has surged (Bathaei & Štreimikienė, 2023). Agriculture is a cornerstone of the global economy, sustaining the livelihoods of 1.3 billion individuals, which accounts for 16% of the global population and contributes 24% to global economic output. Many developing countries have centered their development strategies around increasing agricultural production (Bathaei & Štreimikienė, 2023; Devaux et al., 2018). Small and marginal farmers account for 86.21% of India's total landholdings, according to the 2015-16 Agricultural Census. These farmers typically operate at a scale that precludes them from realizing the benefits of economies of scale (Gorai et al., 2022).

The concept of farmer producer companies was introduced in India in 2000, following the recommendation of the Y. K. Alagh committee and these companies gained legal status in 2003 when section 9A was added to the Indian Companies Act, 1956 (Renu & Sharma, 2023). This amendment provided a legal framework for the formation and operation of these companies, granting them specific rights and responsibilities.

Against this backdrop, Farmer Producer Companies (FPCs) present a promising avenue for transforming smallholder agriculture, augmenting agricultural productivity, and enhancing farmers' incomes (Mukherjee et al., 2018; Patil et al., 2025). Further, The Union Budget of 2019-20 introduced a significant initiative to establish 10,000 new Farmer Producer Companies (FPCs) over a five-year period. This strategic move aimed to enhance economies of scale for farmers. To support the development and sustainability of these FPCs, the government launched a dedicated central sector scheme titled "Formation and Promotion of Farmer Producer Companies (FPCs) (Gorai et al., 2022)." Agriculture provides essential food, fiber, and other resources for present and future generations while safeguarding natural assets and the enhancement of human welfare over time.

The definition of sustainable agriculture is diverse across nations, with limited quantitative assessments available. While some scholars and practitioners conceptualize it as a strategic management approach, others view it as a broader ideological or goal-oriented framework (Zhang et al., 2021). Nevertheless, the concept of sustainable agriculture is increasingly centered around its environmental, economic, and social dimensions. Numerous frameworks and indicators exist to assess the sustainability of food systems at both national and global levels, as well as to measure sustainable agricultural intensification at the farm level (Colapinto et al., 2020). India boasts a century-long history of cooperative movements, which have underscored the advantages of collective action for small and marginal farmers. The recognition that such farmers can only sustain and improve their livelihoods through collective efforts has grown increasingly evident over the past century (Mourya & Mehta, 2021; Patil et al., 2025). While sustainable agriculture began with an emphasis on environmental sustainability, its scope has expanded to include both economic and social considerations (Bathaei & Štreimikienė, 2023). Beyond ecological factors like topography, slopes, and soil quality, sustainable agriculture now encompasses economic aspects like land use, productivity, and farmer income. From a social perspective, sustainable farming frequently involves aspects such as the well-being of farmers, their skill levels, and the connections within their communities. (Akpoti et al., 2019; Hasanshahi et al., 2015).

Therefore, based on the above discussions, the following research questions have been proposed: RQ1: How do FPCs contribute to sustainable agricultural practices? RQ2: What are the key challenges for FPCs in promoting sustainability?

2. METHODOLOGY

This study adopted a structured literature review to examine the role of Farmer Producer Companies (FPCs) in promoting sustainable agriculture. The literature was identified through a comprehensive search of Scopus, Web of Science, Google Scholar, and other relevant academic sources. The search used the keywords "Farmer Producer Company", "Farmer Producer Organization", "Sustainability", "Governance", "Performance", and "Challenges", combined with Boolean operators (AND/OR). The search was limited to English-language journal articles, review papers, and relevant reports published between 2015 and 2025, with a few seminal studies included to provide conceptual and theoretical foundations.

The retrieved studies were screened for relevance to the review's objectives based on their titles, abstracts, and full texts. Only studies directly addressing the sustainability dimensions, governance, performance, or challenges of Farmer Producer Companies (FPCs) were included. Following screening, 35 relevant studies were selected for detailed analysis and synthesised using a thematic approach across four major dimensions: economic, environmental, governance, and social sustainability, together with the key challenges affecting the long-term sustainability of FPCs. This approach enabled a comprehensive synthesis of existing knowledge and the identification of research gaps for future investigation.

3. REVIEW OF LITERATURE

3.1 Sustainability of Farmer Producer Companies (FPCs)

Small and marginal farmers in India face persistent challenges in accessing quality inputs, institutional credit, crop insurance, technology, and organised markets due to their limited socioeconomic resources. These constraints, coupled with low adoption of modern farming practices, reduce productivity, value addition, and farm profitability. Consequently, Farmer Producer Companies (FPCs) have emerged as an important institutional mechanism to strengthen farmers' competitiveness through collective action (Venkattakumar & Narayanaswamy, 2022).

The literature suggests that FPCs improve farmers' access to bulk input procurement, training, production planning, branding, extension services, technological support, and market linkages (Sultana et al., 2023). However, studies also indicate that these benefits depend on effective governance, managerial capability, and institutional support, rather than on establishing FPCs alone. FPCs are increasingly recognised as contributors to sustainable rural development by promoting teamwork, resource sharing, and community participation,

thereby supporting economic stability, social equity, and environmental protection (Cervantes et al., 2023). Sustainable agriculture further emphasizes efficient resource utilization, biodiversity conservation, and environmentally responsible farming practices, while its success depends on farmers' participation, satisfaction, and technical competence (Bathaei & Štreimikienė, 2023; Chi, 2022).

Although previous studies acknowledge the role of FPCs in sustainable agriculture, most focus on individual aspects such as market access or income enhancement. Limited research has integrated the economic, social, environmental, and governance dimensions of FPC sustainability. Therefore, this review synthesizes the literature across these four interconnected dimensions to provide a comprehensive understanding of FPC sustainability.

3.1.1 Economic Sustainability

Economic sustainability refers to the ability of an agricultural system or Farmer Producer Company (FPC) to maintain long-term financial viability while improving farmers' economic well-being. It encompasses profitability, financial stability, productivity, liquidity, adaptability to market changes, and equitable distribution of benefits among members (Van Cauwenbergh et al., 2007; Cervantes et al., 2023). In addition, external factors such as input costs, production variability, market fluctuations, government support, and regulatory policies significantly influence the economic sustainability of FPCs (Bathaei & Štreimikienė, 2023).

Previous studies consistently report that FPCs positively influence farmers' economic performance. Gurung et al. (2024) found that participation in FPCs significantly improves farmers' return on investment and profit margins. Similar findings were reported by Ma et al. (2019), Ma et al. (2022), and Sharma et al. (2023), who observed improvements in farm income, financial performance, and market competitiveness through collective marketing and better access to resources. Furthermore, innovation and value addition have been identified as important drivers of long-term economic sustainability by enhancing product quality, reducing post-harvest losses, and increasing farmers' income (Pani et al., 2023; Suresh & Sreejith, 2024). A notable example is Sahyadri Farmers Producer Company Ltd. (Maharashtra), which has successfully demonstrated the benefits of collective marketing, value addition, and export-oriented business strategies. Its success highlights the role of professional management and integrated supply chains in enhancing the economic sustainability of FPCs (Lalitha et al., 2024).

Although the literature largely agrees that FPCs enhance farmers' economic outcomes, most studies assess economic sustainability using short-term indicators such as income, profitability, or productivity. Comparatively limited attention has been given to long-term financial resilience, business continuity, and the ability of FPCs to withstand market and policy uncertainties. Therefore, future research should adopt a broader assessment of economic sustainability by integrating both financial performance and long-term organizational resilience.

3.1.2 Environmental Sustainability

Environmental sustainability focuses on minimizing the adverse environmental impacts of FPC activities through the conservation of natural resources, reduction of carbon emissions, effective waste management, adoption of renewable energy, and environmentally responsible production practices (Cervantes et al., 2023). Increasing environmental concerns have encouraged the development of sustainability assessment frameworks that evaluate agricultural practices using indicators related to soil health, biodiversity, nutrient management, pesticide use, water and energy efficiency, land management, and greenhouse gas emissions (Vrolijk et al., 2020; Lebacqz et al., 2013; Ma & Liu et al., 2019).

The literature suggests that FPCs contribute to environmental sustainability by promoting sustainable farming practices, facilitating the adoption of organic cultivation, providing technical guidance, and ensuring access to quality agricultural inputs (Kumar et al., 2019). In addition, Lalitha et al. (2024) reported that many FPCs are increasingly integrating environmental responsibility with product quality and consumer well-being, thereby strengthening their market identity and long-term sustainability.

Although previous studies acknowledge the environmental benefits of FPCs, most have emphasized the promotion of sustainable agricultural practices rather than evaluating their measurable environmental outcomes. Limited research has assessed the long-term environmental impacts of FPCs using indicators such as carbon footprint, resource-use efficiency, biodiversity conservation, or climate resilience. Therefore, future research should adopt comprehensive environmental assessment frameworks to better understand FPCs' contribution to sustainable agriculture.

3.1.3 Governance Sustainability

The governance dimension of sustainable FPC emphasizes transparency, democratic participation, and accountability in decision-making processes. This involves ensuring that FPC members have a meaningful voice in shaping the organization's direction, establishing clear policies and procedures, and promoting ethical behaviour among all stakeholders (Cervantes et al., 2023; Anand et al., 2026; Naik et al., 2025).

To achieve effective governance, organizations should establish transparent decision-making mechanisms that allow members to participate meaningfully in the organization's affairs. This might involve holding regular general meetings, establishing committees or boards of directors to represent members' interests, and providing opportunities for members to contribute to decision-making through surveys, feedback forms, or other channels. Overall, the existing literature indicates that good governance serves as the foundation for the sustainable growth and effective functioning of FPCs by strengthening institutional credibility, member participation, and organizational performance (Cervantes et al., 2023; Naik et al., 2025).

3.1.4 Social Sustainability

Sustainable development aims to meet present needs without compromising the ability of future generations to meet their own needs (Hansen, 1996). In the context of Farmer Producer Companies (FPCs), social sustainability focuses on improving farmers' well-being, strengthening social capital, and promoting inclusive community development.

The literature suggests that membership in FPCs enhances trust, commitment, participation, and information sharing among members, thereby strengthening social capital and organizational cohesion (Sultana et al., 2023; Anand et al., 2026). Similarly, Mukherjee et al. (2020) reported that FPCs improve farmers' livelihoods while fostering stronger social networks within rural communities. Lalitha et al. (2020) further observed that improved farming practices promoted by FPCs enhance farmers' financial stability and social status, contributing to their overall well-being. Similarly, dairy-based Farmer Producer Companies in the Bundelkhand region have strengthened farmers' livelihood security and social networks through collective action (Mukherjee et al., 2020).

Previous studies have identified education, working conditions, quality of life, gender equality, access to infrastructure and services, employment opportunities, food safety, and community development as important indicators of social sustainability in agriculture (Lebacqz et al., 2013; Van Cauwenbergh et al., 2007; Van Calker et al., 2007). Collectively, these studies indicate that the sustainability of FPCs extends beyond economic benefits by strengthening farmers' social well-being, community participation, and rural development.

3.2 Challenges for FPCs in Promoting Sustainability

The literature identifies several institutional, financial, managerial, and market-related challenges that hinder the long-term sustainability of FPCs (Prajapati et al., 2023; Patil et al., 2025; Suresh & Sreejith, 2024). These challenges are discussed below:

3.2.1 Obstacles to Farmer Success in Open Markets

Farmers often struggled to compete in open markets, resulting in lower profits than their counterparts. The lack of information flow also poses significant challenges. Additionally, farmers are hindered by limited technical knowledge and a lack of transparency in financial accounting (Prajapati et al., 2023).

Economic Sustainability	Environment Sustainability	Governance Sustainability	Social Sustainability
• Financial Viability (Profitability, liquidity and Solvency) • Market Access (Ability to reach diverse markets and secure fair prices) • Member Benefits (Equitable distribution of profits and benefits among members) • Economic Resilience (Ability to withstand market fluctuations and economic downturns)	• Resource Conservation (Efficient use of natural resources (land, water and energy)) • Sustainable Practices (Adoption of eco-friendly farming techniques) • Reduced Environmental Impact (Minimization of pollution, waste and greenhouse gas emissions)	• Democratic Participation (Active involvement of members in decision-making processes.) • Transparency and Accountability (Clear communication and accountability of leaders.) • Fair Practices (Equitable treatment of members and adherence to ethical standards) • Community Engagement (Collaboration with local communities and stakeholders)	• Member Well-being (Improved livelihoods, income and quality of life for members) • Community Development (Positive impact on local communities) • Social Capital (Building trust, cooperation and social networks among members) • Cultural Preservation (Respect for cultural traditions and values in agricultural practices)

Figure 1: FPCs Dimensions and their Indicators

3.2.2 Lack of Technical Expertise

Many Farmer Producer Companies (FPCs) face significant challenges due to a lack of technical support. This deficiency can hinder their ability to adopt modern agricultural practices, improve productivity, and access new markets. Without adequate technical assistance, farmers may struggle to implement sustainable farming methods, manage their finances effectively, and navigate the complexities of the agricultural value chain (Sultana et al., 2023; Patil et al., 2025).

3.2.3 Lack of Accurate Market Information

This is another significant challenge faced by FPCs. FPCs may have difficulty predicting demand for their products, understanding market trends such as consumer preferences and emerging markets, which is essential for FPCs to remain competitive (Shree & Vaishnavi, 2022).

3.2.4 Lack of Storage Facilities

The undeveloped storage facilities lead to substantial losses of produce due to spoilage, pests and other factors. This inadequate condition compromises the quality of products, making them less attractive to buyers (Shree & Vaishnavi, 2022).

3.2.5 Lacking in Facilitating Credit Facilities and Crop Insurance

Many FPCs continue to struggle with establishing regular credit facilities (term loans) through partnerships with financial organizations. Additionally, they face challenges in arranging crop insurance facilities by collaborating with insurance service providers. These two services are essential to support farmers and ensure the long-term sustainability of FPCs (Venkattakumar & Narayanaswamy, 2022).

3.2.6 Difficulty in Mobilizing Farmer Participation

FPCs struggle in recruitment and retain staff members, hindering their efforts to establish new FPCs and attract farmers. This shortage of manpower leads to fewer farmers joining FPCs, resulting in insufficient share capital and subsequent financial difficulties (Bishnoi & Kumari, 2020).

3.2.7 Limited Financial Literacy

Many FPCs face difficulty establishing and maintaining relationships with financial institutions. This is often due to limited financial literacy among FPCs leaders, perceived risks by banks, difficulty in providing collateral and complex bureaucratic procedures (Chauhan et al., 2021; Suresh & Sreejith, 2024)

4. DISCUSSIONS

This review examined the sustainability of Farmer Producer Companies (FPCs) through four interrelated dimensions: economic, environmental, governance, and social sustainability. The findings suggest that these dimensions are closely interconnected and collectively influence the long-term sustainability and effectiveness of FPCs. The reviewed studies consistently indicate that “economic sustainability” is the most extensively investigated dimension of FPCs. Collective procurement, aggregation, value addition, and improved market linkages have been found to enhance farmers' income, profitability, return on investment, and overall economic performance (Gurung et al., 2024; Ma et al., 2019; Ma et al., 2022; Sharma et al., 2023; Pani et al., 2023). However, the literature also suggests that these economic gains are more sustainable when supported by efficient management and institutional support rather than financial interventions alone.

The review further highlights that “environmental sustainability” has gained increasing attention in recent years. Previous studies emphasize that FPCs encourage environmentally responsible farming through resource conservation, organic cultivation, efficient input utilization, and technical guidance, thereby promoting sustainable agricultural practices (Bathaei & Štreimikienė, 2023; Kumar et al., 2019; Lalitha et al., 2024). These findings indicate that environmental sustainability not only protects natural resources but also enhances the long-term resilience of agricultural production systems.

Similarly, “social sustainability” emerges as an important outcome of FPC membership. The literature demonstrates that FPCs strengthen social capital by improving trust, cooperation, information sharing, member participation, and farmers' livelihoods (Sultana et al., 2023; Mukherjee et al., 2020; Lalitha et al., 2020). Such improvements strengthen community networks and encourage greater participation in collective agricultural activities.

The findings also emphasize that “governance sustainability” provides the institutional foundation for the effective functioning of FPCs. Transparent decision-making, democratic participation, accountability, and ethical leadership enhance members' confidence and improve organizational performance (Cervantes et al., 2023). Effective governance further strengthens the implementation of economic, environmental, and social initiatives, indicating that governance acts as an enabling mechanism for achieving overall sustainability.

Despite these positive contributions, the reviewed literature identifies several common challenges affecting the sustainability of FPCs, including inadequate managerial capacity, limited access to finance, insufficient infrastructure, weak market linkages, and low awareness and participation of members. These challenges highlight the need for continuous capacity building, stronger institutional support, improved governance practices, and policy interventions to enhance the long-term sustainability of FPCs. Overall, the review demonstrates that sustainable FPCs require a balanced integration of economic viability, environmental responsibility, social well-being, and good governance. Strengthening these interconnected dimensions will

enhance the resilience, competitiveness, and long-term contribution of FPCs towards sustainable agricultural development.

5. CONCLUSION

This review synthesized the existing literature on the sustainability of Farmer Producer Companies (FPCs) and identified “economic, environmental, social, and governance sustainability” as the four key dimensions influencing their long-term performance. The findings demonstrate that FPCs play a significant role in improving farmers' livelihoods by enhancing market access, promoting value addition, strengthening collective bargaining, facilitating access to finance and technology, and encouraging sustainable agricultural practices. However, the long-term success of FPCs depends on maintaining a balanced integration of these four sustainability dimensions rather than emphasizing any single aspect in isolation.

Among the identified dimensions, economic sustainability remains the most extensively explored in the literature, whereas environmental, governance, and social sustainability require greater empirical attention to better understand their long-term contribution to FPC performance. The review further indicates that effective governance, active member participation, sound financial management, resource conservation, and institutional capacity are fundamental to strengthening the resilience and sustainability of FPCs.

Despite the positive contribution of FPCs, several challenges continue to hinder their sustainable growth, including limited managerial capacity, inadequate access to finance, weak market linkages, insufficient infrastructure, regulatory constraints, and low member participation. Addressing these challenges requires coordinated efforts from policymakers, government agencies, financial institutions, extension services, and FPC management. Strengthening institutional support, simplifying regulatory procedures, improving market connectivity, promoting technology adoption, and enhancing capacity-building programmes can significantly improve the long-term sustainability of FPCs.

Overall, this review provides a comprehensive synthesis of the sustainability dimensions influencing FPCs and highlights the need for a more integrated approach to future research and practice. Future studies should focus on developing comprehensive sustainability assessment frameworks, generating empirical evidence across different regions and commodities, and examining the interactions among economic, environmental, social, and governance dimensions to better support the sustainable development of Farmer Producer Companies.

6. Limitations and Directions for Future Research

This review acknowledges several limitations that must be considered. Firstly, the scope of the study is restricted to existing literature, potentially overlooking the most recent developments and diverse regional contexts of Farmer Producer Companies (FPCs). Secondly, the analysis primarily focuses on broad sustainability indicators. The findings indicate that existing research has largely focused on the economic performance of Farmer Producer Companies (FPCs), while comparatively less attention has been given to environmental, governance, and social sustainability. In particular, limited evidence is available on the long-term resilience of FPCs, measurable environmental outcomes, and the combined influence of governance and social factors on organizational performance. Future research should adopt integrated sustainability assessment frameworks, conduct empirical studies across different regions and commodities, and examine the interactions among economic, environmental, governance, and social dimensions to provide a more comprehensive understanding of FPC sustainability.

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