

SDG 2030

**INSIGHTS FROM INDIA
FOR A SUSTAINABLE FUTURE**



EDITOR: DR. K K SOMASEKHARAN MA MPhil PH.D

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Gaveshana R& D Cell

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INTRODUCTION

In 2015, 193 member countries of the United Nations (UN) adopted the 2030 Agenda for Sustainable Development, marking a historic global commitment to dignity, peace, and prosperity for both humanity and the planet. This landmark agenda outlines 17 Sustainable Development Goals (SDGs) with specific targets to be achieved by the year 2030. The agenda encompasses a wide range of action areas, including poverty eradication, sanitation, education, health, and economic development, while simultaneously addressing social equity and environmental sustainability. This edited volume is a modest attempt to offer meaningful insights toward building a sustainable future.

It gives me immense pleasure to present this edited book titled *SDG 2030: Insights from India for a Sustainable Future*. This volume is the outcome of a concerted academic effort to compile scholarly contributions that aim to enrich discourse and inspire action toward a sustainable and inclusive future.

The book consists of 14 chapters, each offering diverse perspectives and practical insights on sustainable development.

The first chapter, *How Informal India Hinders the Path to Meeting SDG 2030: An Exploratory Overview for Research*, emphasizes the critical role of social sector investment in development and encourages researchers to explore emerging and underexplored areas related to sustainability.

The second chapter elaborates on the transformative potential of Farmer Producer Organizations (FPOs) in reshaping the

agricultural landscape of rural India and emphasizes their role in promoting rural transformation and collective empowerment.

Chapter 3 analyses how digital technologies are transforming microfinance delivery and enhancing women's access to credit, while also exploring regional variations in adoption behaviour, financial management practices, and social norms that shape empowerment trajectories in Kerala and Tamil Nadu.

Chapter 4 illustrates how SDG 4 (Quality Education) can be achieved through the introduction of progressive educational policies such as the Four-Year Undergraduate Programme (FYUGP). This article offers a theoretical and critical examination of the key features and emerging concerns of the FYUGP in Arts and Science colleges in Kerala.

The fifth chapter explains the transition of women from economic dependence to financial independence through microfinance initiatives. The study proposes policy recommendations aimed at enhancing microfinance initiatives to secure wider and long-lasting benefits for women.

Chapter 6 examines the influence of green brand image, brand credibility, green packaging, eco- innovation, and consumer environmental awareness on green purchasing behaviour among working women professionals in Tamil Nadu. This study further analyses the confidence of women professionals in relation to their propensity to purchase green products.

In Chapter 7, the authors explore Chimamanda Ngozi Adichie's illuminating work *We Should All Be Feminists* as an influential text that resonates with the principles of SDG 5 (Gender Equality) and women's empowerment. The chapter

highlights how Adichie's text raises awareness of persistent gender inequalities and encourages a rethinking of social attitudes in ways that align with the broader goals of SDG 5.

Chapter 8 discusses various government-led initiatives such as the Atal Innovation Mission, Skill India Mission, and Startup India, and their alignment with NEP 2020 objectives to foster innovation, enhance skills, and promote youth employment in line with SDG 4 (Quality Education).

In Chapter 9, the authors examine the impact of government policies on agricultural sustainability, drawing evidence from rural households in Kannur District, Kerala, with a focus on SDG 1 (No Poverty) and SDG 2 (Zero Hunger).

Chapter 10 evaluates the effectiveness of government initiatives such as the Jal Jeevan Mission, Jal Shakti Abhiyan, and Atal Bhujal Yojana, with particular emphasis on Jal Jeevan Mission activities in rural Palakkad, in alignment with SDG 6 (Clean Water and Sanitation).

Chapter 11 analyses the socio-economic and sustainable development impacts of Self-Help Group (SHG) participation on rural women in Kerala, corresponding to SDG 1 (No Poverty), SDG 5 (Gender Equality), and SDG 8 (Decent Work and Economic Growth).

In Chapter 12, the authors highlight the role of Big Data Analytics in Public Health from the perspective of SDG 3 (Good Health and Well-being). This chapter also critically evaluates the ethical and regulatory guidelines associated with Big Data Analytics (BDA) in public health applications.

Chapter 13 examines how literary works not only offer aesthetic value but also provide critical commentary on real-world challenges related to sustainable development. The author reads the renowned novel, *The Hungry Tide* by Amitav Ghosh, in line with SDG 6 (Clean Water and Sanitation).

The final chapter explores the influence of microfinance on women's empowerment, with a special focus on Kudumbashree, Kerala's flagship programme for women's empowerment and poverty alleviation. The chapter also identifies the challenges faced by beneficiaries in achieving independence, self-confidence, and entrepreneurship, thereby underscoring the importance of SDG 5 (Gender Equality).

I would like to wholeheartedly acknowledge the contributors to this edited volume for their valuable scholarly contributions. I extend my sincere gratitude to the Management of Navajyothi College for their constant support and encouragement. I also congratulate the entire Gaveshana (R&D) Team for their dedicated efforts in bringing out this publication in a time-bound manner.

Dr. K K Somasekharan M.A., M.Phil., PhD.

CHAPTER 2

Harvesting Power: The Rise of Farmer Producer Organizations in Rural India

Mr. Shijo Jose*, Dr. Antony George**

1. Introduction

India's agricultural sector is predominantly driven by small and marginal farmers, who account for more than 86% of the total farming population, cultivating nearly 47% of the total agricultural land (Ministry of Agriculture & Farmers Welfare, 2023). These farmers are critical to national food security, rural livelihoods, and the sustainability of India's agrarian economy. Despite operating on fragmented landholdings, they contribute significantly to producing cereals, pulses, fruits, and vegetables. However, their capacity to scale operations and access modern agricultural services remains limited. In many cases, smallholders are unable to take advantage of economies of scale, making it difficult for them to adopt advanced technologies or engage competitively in the marketplace (FAO, 2022).

The challenges faced by small and marginal farmers are multi-dimensional and persistent. Financial exclusion is one of the major hurdles, as access to formal credit and crop insurance continues to be disproportionately skewed in favour of larger landholders. According to the Reserve Bank of India (2023), less than 30% of smallholder farmers have adequate access to institutional credit, forcing many to rely on informal lenders. In addition, inadequate irrigation, poor storage infrastructure, high

input costs, limited bargaining power, and a lack of direct market linkages severely constrain profitability. Climate change has further intensified these vulnerabilities, with erratic rainfall and extreme weather events disproportionately affecting marginal farmers who lack adaptive capacity (NITI Aayog, 2022).

In response to these persistent challenges, the need for collective action has become increasingly evident. One such approach gaining momentum in India is the formation of Farmer Producer Organisations (FPOs), which enable smallholders to pool resources, enhance their market participation, and access better inputs, technology, and financing. The Government of India launched a Central Sector Scheme in 2020 to promote 10,000 FPOs by 2027, backed by NABARD, SFAC, and other implementing agencies (Ministry of Agriculture & Farmers Welfare, 2023). FPOs help farmers move from subsistence to surplus production and enable them to participate more effectively in value chains. By boosting collective bargaining and professional management, FPOs have the potential to transform India's rural economy and empower smallholders both economically and socially.

2. Understanding Farmer Producer Organisations (FPOs)

2.1. Definition

Farmer Producer Organisations (FPOs) are legally recognized collectives of farmers that aim to improve the socio-economic conditions of small and marginal agricultural producers by enhancing their access to markets, finance, and technology. Unlike traditional cooperative societies, FPOs function as business entities and are typically formed under the Companies Act, 2013, allowing them to operate professionally and generate profit while serving member interests (Government of India,

2020). The fundamental idea behind FPOs is to aggregate small farmers so they can overcome their limitations, particularly those related to scale, bargaining power, and access to information. As a group, farmers benefit from shared services, better price realization, and increased competitiveness in both input and output markets.

2.2 Legal and Institutional Frameworks

Legally, FPOs are most commonly registered as Producer Companies under Section 465 of the Companies Act, 2013 (earlier under the Companies Act, 1956), which grants them the benefits of a corporate entity while retaining cooperative principles such as mutual assistance and one-member-one-vote governance (Ministry of Corporate Affairs, 2022). Other possible legal forms include cooperatives and societies, though the Producer Company model is now preferred for its operational flexibility and investor credibility. Institutional support is coordinated through various nodal agencies such as NABARD (National Bank for Agriculture and Rural Development), SFAC (Small Farmers' Agribusiness Consortium), and state agricultural departments. NABARD also facilitates credit linkage, capacity building, and handholding services for nascent FPOs (NABARD, 2023).

The Government of India, recognizing the potential of FPOs to uplift smallholder farmers, launched the Central Sector Scheme for the Formation and Promotion of 10,000 FPOs in 2020. This initiative offers financial support of up to ₹18 lakh per FPO over five years, in addition to equity grants, credit guarantees, and capacity-building services. As of early 2024, over 6,000 FPOs have been registered under this scheme, with a significant focus on tribal, hilly, and rain-fed regions (Ministry of Agriculture & Farmers Welfare, 2024).

2.3 Key Objectives of FPOs

The key objectives of FPOs include improving farmers' access to quality inputs at lower prices, facilitating collective marketing, enabling access to fair and transparent markets, and providing institutional support for credit, storage, transportation, and value addition. Importantly, FPOs are envisioned as platforms that can shift farmers from being price takers to price makers. They also foster entrepreneurial attitudes among rural youth and promote sustainable practices through shared knowledge systems and training. In the long term, FPOs are expected to build resilient rural economies, reduce agrarian distress, and promote inclusive agricultural growth by bridging the gap between production and market realization (Sharma & Patel, 2022).

3. Policy Landscape and Institutional Support for Farmer Producer Organisations

The policy ecosystem supporting Farmer Producer Organisations (FPOs) in India has evolved significantly over the past decade, driven by the realization that smallholder farmers need collective strength to improve their bargaining power and income. Recognizing this, the Government of India has initiated a multi-stakeholder approach involving national financial institutions, ministries, state governments, NGOs, and international agencies to nurture and strengthen FPOs. This coordinated strategy has led to a structured policy landscape, integrating legal, financial, and operational support to accelerate the establishment and sustainability of FPOs.

3.1 Role of Government Schemes (SFAC, NABARD, etc.)

The Small Farmers' Agribusiness Consortium (SFAC) and the National Bank for Agriculture and Rural Development

(NABARD) are the two primary government institutions driving FPO development in India. SFAC, under the Ministry of Agriculture and Farmers Welfare, plays a critical role in mobilizing farmers, supporting registration as Producer Companies, and facilitating market linkages and equity grant support (SFAC, 2023). NABARD, on the other hand, focuses on the financial and institutional aspects—providing handholding, capacity building, and initial grant assistance through Producer Organisation Promoting Institutions (POPIs).

3.2 Budget Allocations and Policy Reforms

India’s Union Budget has steadily increased its focus on FPOs in recent years. In the Union Budget 2024–25, the government reaffirmed its support for agricultural collectivization by allocating ₹1,500 crore specifically for FPO development under various schemes, including the Agriculture Infrastructure Fund and the Central Sector Scheme. In a policy reform context, the government introduced amendments to ease credit flow to FPOs, including credit guarantees and interest subvention for agri-infrastructure loans (Department of Financial Services, 2024). The introduction of a dedicated “FPO Digital Platform” to integrate registration, financing, traceability, and marketing has also modernized the institutional landscape. Moreover, FPOs have now been recognized as priority sector borrowers, improving their eligibility for concessional loans and support under schemes like PM Formalisation of Micro Food Processing Enterprises (PM-FME) and PM Kisan Sampada Yojana (NABARD, 2023).

3.3 Support from NGOs and International Agencies

Non-Governmental Organisations (NGOs) and international development agencies have also played a pivotal role in nurturing grassroots-level FPOs. NGOs such as PRADAN, BAIF, and

SEWA have long-standing experience in collectivizing rural communities and continue to offer field-level support in farmer mobilization, training, and governance capacity building. These organisations act as critical bridges between policy frameworks and real-world implementation, particularly in underdeveloped and tribal regions. On the international front, the World Bank, IFAD, and GIZ have provided technical assistance and funding through projects like the National Rural Economic Transformation Project (NRETP) and NAIP. These interventions focus on financial literacy, value chain development, and digital integration to enhance the long-term sustainability of FPOs (World Bank, 2023). Such cross-sector collaborations are essential in scaling impact and ensuring that FPOs transition from dependent collectives to self-sustaining agribusiness entities.

4. The Socio-Economic Significance of FPOs

Farmer Producer Organisations (FPOs) represent a transformative model aimed at addressing the systemic socio-economic vulnerabilities faced by small and marginal farmers in India. By collectivizing producers into formal, business-oriented groups, FPOs have demonstrated the potential to elevate farmers from subsistence-level operations to economically viable enterprises. Their impact is most evident in areas such as bargaining power, input procurement, and market access—each of which contributes directly to increasing rural incomes, improving resilience, and fostering inclusive growth.

4.1 Enhancing Bargaining Power and Reducing Exploitation

One of the foremost advantages of FPOs is their ability to enhance the bargaining power of smallholder farmers, who individually lack influence in input and output markets. Traditionally, these farmers are subjected to exploitative pricing

by middlemen and traders due to information asymmetry, scattered production, and weak negotiation positions. FPOs enable collective procurement and sales, thus positioning farmers to negotiate better prices and reduce their dependency on informal market agents. According to Sharma and Patel (2022), FPO-affiliated farmers reported a 15–20% increase in net incomes due to better price realization and reduced input costs. Additionally, institutional procurement initiatives such as tie-ups with e-NAM, TRIFED, and state mandis have begun offering FPOs more transparent and fair market access (Ministry of Agriculture & Farmers Welfare, 2024), which further mitigates exploitation and enhances farmers' autonomy in commercial transactions.

4.2 Improving Input Access and Reducing Costs

FPOs also play a critical role in streamlining the access to agricultural inputs such as seeds, fertilizers, pesticides, and machinery. Through bulk purchasing and strategic partnerships with suppliers, FPOs reduce the cost of these inputs by 10–30%, depending on scale and region (NABARD, 2023). This reduction not only lowers the financial burden on individual farmers but also ensures the timely and quality supply of essential resources. Many FPOs now operate input shops registered under the Fertiliser Control Order (FCO), enabling them to supply certified inputs directly to members. Furthermore, input aggregation has led to the promotion of sustainable practices such as Integrated Pest Management (IPM) and organic cultivation, which are often supported through NGO and CSR partnerships (PRADAN, 2022). Overall, FPOs contribute significantly to reducing per-unit cultivation costs, increasing input efficiency, and making farming more economically sustainable.

4.3 Creating Market Linkages and Improving Price Realization

In recent years, FPOs have entered into Memoranda of Understanding (MoUs) with private sector players like Reliance Retail, Big Basket, and ITC, leading to higher price realization and reduced post-harvest losses (SFAC, 2023). Moreover, value addition initiatives—such as primary processing, grading, and packaging—have empowered several FPOs to fetch premium prices in niche markets. Empirical evidence suggests that FPOs engaging in direct marketing and value chain activities have reported a 25–40% increase in price realization compared to individual farmers (Sharma & Patel, 2022). This integration into formal markets strengthens farmer income security and reduces income volatility.

5. FPOs as Catalysts for Market Empowerment

Farmer Producer Organisations (FPOs) are increasingly recognized as key drivers of market-oriented rural transformation in India. Their role has evolved from merely providing collective input services to actively reshaping value chains through aggregation, branding, digital integration, and direct market participation. As enablers of market empowerment, FPOs reduce farmer dependence on traditional intermediaries and help them tap into modern, high-value markets. In doing so, they also contribute to achieving national goals related to income doubling, rural entrepreneurship, and inclusive agribusiness development.

5.1 Role in Aggregation, Branding, and Direct Marketing

FPOs serve as essential institutions for the aggregation of farm produce, especially from fragmented landholdings. Through collective harvesting, storage, and logistics, they reduce post-

harvest losses and enhance economies of scale. This, in turn, makes smallholders competitive in larger supply chains. Many FPOs have moved beyond bulk selling to commodity branding, packaging, and direct marketing to consumers, thereby enabling price premiums and improved brand recognition. According to SFAC (2023), over 1,500 FPOs in India have developed their own branded products—such as organic millets, spices, pulses, and dairy—targeting local markets, e-commerce platforms, and urban retail chains. Direct marketing models, such as producer-run retail stores and mobile markets, have been especially successful in states like Tamil Nadu, Madhya Pradesh, and Maharashtra. These initiatives help farmers capture a greater share of the consumer rupee while fostering trust and traceability in supply chains (Sharma & Kumar, 2022).

5.2 Use of Digital Platforms and ICT Tools

Digital technologies and Information and Communication Technology (ICT) tools are revolutionizing the way FPOs engage with markets. From online input procurement to digital warehousing and e-marketplace integration, FPOs are increasingly adopting tech-enabled solutions to enhance efficiency and transparency. Platforms such as e-NAM, AgriStack, ReMS, and private agri-tech portals like Ninja Cart and DeHaat have enabled FPOs to connect with buyers, track prices, and negotiate directly without geographical barriers. The Government of India's push for a Digital FPO Dashboard under the Central Sector Scheme further helps in monitoring FPO activities and sharing best practices across regions (Ministry of Agriculture & Farmers Welfare, 2024). Moreover, mobile-based tools for weather forecasting, soil testing, and market analytics are now being used by FPOs to support members with data-driven decision-making. Studies show that digitally integrated FPOs are more likely to achieve profitability and member satisfaction (Rao & Joshi, 2023).

5.3 Case Examples of Successful FPO-Led Market Transformations

Numerous FPOs across India have demonstrated market-led success stories. One of the most cited examples is the Mahagrapes FPO in Maharashtra, which started as a collective of grape growers and has evolved into an export-oriented entity dealing with European supermarkets. Through branding, cold-chain investment, and compliance with global standards, Mahagrapes enabled its member farmers to achieve up to 50% higher earnings than market average (SFAC, 2023). Similarly, the Tamarind FPO in Odisha, promoted by PRADAN, added value through primary processing and branding under the “Tribal Taste” label, successfully marketing to metropolitan organic stores. Another standout is the Sahaja Aharam Producer Company in Telangana, which operates a full-fledged farmer-run retail network offering chemical-free products sourced from over 500 organic producers. These cases exemplify how strategic leadership, digital enablement, and market alignment can transform FPOs into profitable and impactful rural enterprises (PRADAN, 2022; Sharma & Kumar, 2022).

6. Capacity Building and Governance

The long-term success and sustainability of Farmer Producer Organisations (FPOs) depend not only on external policy and financial support but also on their internal institutional strength. Capacity building, strong leadership, transparent governance, and a culture of accountability are critical to transforming these collectives into robust rural enterprises. In the current Indian context, a significant number of FPOs still face challenges in these areas, which directly affect their ability to scale, access markets,

and retain farmer trust. Therefore, investing in human resource development and internal democratic systems is vital for unlocking the full potential of the FPO movement.

6.1 Leadership, Training, and Skill Development

Effective leadership and continuous skill development are fundamental to the success of any FPO. As many of these organisations are managed by individuals from rural and often under-educated backgrounds, structured training in financial management, business planning, marketing, and compliance is essential. Institutions such as NABARD, SFAC, and various state agricultural universities offer capacity-building modules aimed at professionalizing FPO boards and CEOs (NABARD, 2023). Additionally, support from NGOs and private agencies helps in field-based experiential learning and exposure visits. The National Institute of Agricultural Extension Management (MANAGE) has also developed dedicated curricula to train FPO leaders in enterprise management. However, despite these efforts, a large number of FPOs continue to operate without full-time CEOs or trained staff, highlighting the need for more targeted and sustained human capital investment (Kumar & Jha, 2022).

6.2 Transparent Governance and Participatory Decision-Making

Democratic governance and member participation are at the heart of FPO models, yet implementing these ideals remains a work in progress. Many FPOs still struggle with inadequate record-keeping, lack of regular general body meetings, and top-down decision-making processes. To address this, NABARD and SFAC have introduced governance guidelines, including board composition norms, rotation policies, conflict of interest declarations, and audit requirements (SFAC, 2023). Digital tools

such as MIS dashboards and accounting software are also being introduced to promote transparency. Encouraging women's representation in decision-making bodies is another emerging focus, especially in regions with women-led collectives. According to a 2023 study by PRADAN, FPOs that ensure participatory practices tend to have better trust among members and improved collective outcomes. Nevertheless, a wider cultural shift toward accountability and member engagement is still required to institutionalize these practices across all FPOs (PRADAN, 2023).

6.3 Challenges in Professionalism and Accountability

Despite the positive momentum, professionalism and accountability remain persistent challenges in FPO functioning. Many organisations are overly reliant on external agencies such as Producer Organisation Promoting Institutions (POPIs) or NGOs for day-to-day management. This dependency often weakens internal capacity and delays the transition to autonomous, farmer-run enterprises. Furthermore, issues such as irregular audits, misappropriation of funds, lack of business plans, and absence of key managerial staff compromise their financial credibility (Rao & Singh, 2023). The problem is particularly acute in smaller and newly formed FPOs, which lack the resources to attract skilled personnel or invest in IT systems. Establishing professional norms, performance-linked incentives, and third-party evaluations could enhance accountability. As per recommendations from the Ministry of Agriculture (2024), creating a pool of certified FPO managers and introducing a national FPO rating system could incentivize better governance practices and reduce systemic inefficiencies.

7. Case Studies from Rural India

Case studies from diverse geographies in India provide compelling evidence of how FPOs can transform the socio-economic realities of smallholder farmers. From tribal communities to women-led cooperatives and export-oriented enterprises, these examples highlight the adaptability, resilience, and impact of the FPO model when supported by the right mix of institutional backing, leadership, and market access. The following case studies offer insights into the structural innovations and outcomes emerging from different agro-ecological and cultural contexts across India.

Case 1: A Tribal FPO in Maharashtra – Bhunjia Agro Producer Company

The Bhunjia Agro Producer Company, based in the Gadchiroli district of Maharashtra, is a tribal-led FPO formed under the support of the Small Farmers' Agribusiness Consortium (SFAC) and a local NGO, Vayam. Formed in 2019 with 320 tribal farmer-members, mostly from the Gond and Madia tribes, this FPO focuses on the sustainable cultivation and marketing of minor forest produce (MFP), millets, and pulses. Through training in organic farming and support for processing units, Bhunjia Agro has been able to brand its products—like *Gadchiroli turmeric* and *Kodo millet flour*—and sell directly to urban markets in Nagpur and Pune. The FPO reported a 35% increase in members' net income between 2021 and 2023, mainly due to better price realization and reduced dependency on forest contractors (SFAC, 2023). This model highlights how indigenous knowledge and modern enterprise can converge to support livelihood resilience and tribal empowerment (Sharma & Rao, 2023).

Case 2: A Women-led FPO in Kerala – Kudumbashree

Amrutham Producer Company

In the Thrissur district of Kerala, the Kudumbashree Amrutham Producer Company stands as a testament to the power of women-led collectivism in agriculture. Founded in 2020 under the umbrella of the Kudumbashree Mission, the FPO comprises 500 women members involved in the production of vegetables, value-added coconut products, and homemade snacks. The FPO operates under a federated model with strong linkages to state government support and cooperative banks. Through training in food safety, branding, and financial literacy, members have developed the “Amrutham” product line, which is sold in local markets, fairs, and online platforms. According to Kerala State Planning Board (2023), the FPO’s turnover exceeded ₹1 crore in FY 2023–24, and member households reported a 25–40% rise in annual supplementary income. The enterprise has also significantly enhanced the socio-political agency of women by promoting leadership and decision-making roles at the grassroots (Thomas & Devi, 2022).

Case 3: A Successful Export-Oriented FPO in Tamil Nadu – Dharmapuri Mango Growers Producer Company

The Dharmapuri Mango Growers Producer Company (DMGPC) in Tamil Nadu exemplifies how FPOs can integrate smallholder producers into international supply chains. Established in 2016 with assistance from NABARD and the Tamil Nadu Agricultural Marketing Board, the FPO includes over 800 mango farmers cultivating varieties like Alphonso, Banganapalli, and Mallika. With technical support for post-harvest management, hot water treatment, and grading facilities, DMGPC has become a registered exporter to the Middle East and Europe. The FPO has signed marketing agreements with exporters and online grocers such as Udaan and Big Basket, ensuring predictable demand and

fair prices. By 2024, DMGPC's export volumes had reached over 150 metric tonnes annually, contributing to a 50–60% improvement in member profits compared to traditional mandi sales (NABARD, 2024). The success story demonstrates the viability of FPOs as globally competitive business entities when equipped with technical capacity, infrastructure, and institutional support (Rao & Kumar, 2024).

8. Key Challenges and Limitations

Farmer Producer Organisations (FPOs) in India continue to grapple with a multitude of structural and operational challenges. These constraints range from inadequate financial resources and logistical hurdles to issues in participatory governance and farmer engagement. Understanding these barriers is essential for designing appropriate policy interventions and support systems.

8.1 Financial Constraints and Credit Access

One of the foremost challenges confronting FPOs is limited access to timely and adequate credit. Most FPOs operate with low initial capital, which restricts their ability to invest in procurement, processing, marketing, and infrastructure development. Though institutions like NABARD, SFAC, and various state governments offer equity grants and credit guarantees, a significant number of FPOs remain excluded from formal finance due to their weak financial records, lack of collateral, and perceived credit risk by banks (NABARD, 2023). According to a 2023 report by the Indian Council for Research on International Economic Relations (ICRIER), over 60% of FPOs surveyed could not access working capital loans beyond ₹5 lakh. This funding gap severely restricts their ability to scale up operations and achieve market competitiveness (ICRIER, 2023; Verma & Singh, 2022).

8.2 Issues in Logistics, Infrastructure, and Scalability

Logistical and infrastructural deficiencies also pose substantial limitations for FPOs. Many rural collectives lack access to cold storage facilities, grading and sorting centers, packaging units, and transportation networks, making it difficult to ensure product quality and timely delivery. This gap is particularly acute in remote or tribal areas where connectivity remains poor. Furthermore, scalability is often hindered by fragmented production, low economies of scale, and limited professionalization of operations. While some government schemes promote infrastructure development through cluster-based approaches (such as the PMFME and Agri Infrastructure Fund), the pace of implementation and FPO-level access remains inconsistent (Ministry of Agriculture, 2024). According to KPMG (2023), fewer than 25% of operational FPOs in India currently possess the basic logistical infrastructure required for handling produce at scale. Without reliable back-end support, most FPOs are unable to compete effectively in integrated supply chains or fulfil bulk procurement contracts.

8.3 Farmer Participation and Ownership Hurdles

Low levels of member participation and weak ownership structures are core limitations affecting FPO performance. In many cases, farmers perceive FPOs as externally driven or donor-supported projects rather than farmer-owned enterprises. This results in limited engagement in governance processes such as Annual General Meetings (AGMs), elections, and decision-making forums (PRADAN, 2023). Additionally, leadership is often concentrated among a few individuals, which discourages democratic participation and undermines collective accountability. Language barriers, lack of business literacy, and cultural hierarchies further inhibit marginal and small farmers—

particularly women—from active involvement (Sharma & Thomas, 2022). According to a report by the Centre for Rural Development and Governance (2023), over 50% of FPO members were unaware of their rights and responsibilities as shareholders. Enhancing farmer engagement requires focused awareness campaigns, leadership development programs, and participatory governance tools to foster genuine ownership and accountability within FPOs.

9. Future Prospects and Strategic Interventions

The future trajectory of Farmer-Producer Organisations (FPOs) in India hinges on strategic reforms that prioritise stronger policy implementation, enhanced financial mechanisms, and integrated digital infrastructure. While government schemes such as the Central Sector Scheme for Formation and Promotion of 10,000 FPOs have laid foundational support, there is an urgent need to streamline fund disbursement, reduce bureaucratic delays, and ensure equitable access to credit and insurance services (NABARD, 2023). Promoting digital innovations—such as e-commerce platforms, agri-tech tools, and blockchain for traceability—can help FPOs improve transparency, build direct market linkages, and enhance value realisation (Mehta & Ramesh, 2022). By embedding FPOs into the broader ecosystem of agricultural and social policy, they can evolve into resilient, inclusive, and market-competitive institutions.

10. Conclusion

Farmer-Producer Organisations (FPOs) have emerged as a transformative force in rural India, offering a viable model for empowering small and marginal farmers through collective action and market integration. By fostering economies of scale, improving bargaining power, and bridging critical gaps in finance,

technology, and infrastructure, FPOs contribute significantly to the vision of inclusive and sustainable agricultural growth (NABARD, 2023; Sharma & Thomas, 2022). Their role extends beyond economic cooperation to enabling social empowerment, especially among women and tribal communities, while promoting environmentally responsible practices and localized value chains. For this model to achieve its full potential, sustained policy commitment, financial innovation, and robust institutional capacity are imperative. The future of India's agricultural resilience and rural prosperity increasingly rests on the success of these farmer-led enterprises and their ability to navigate market complexities through cooperation, innovation, and inclusivity (Mehta & Ramesh, 2022).

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