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Export Potential of FPOS in Indian Agriculture

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ABSTRACT

Farmer Producer Organizations (FPOs) have emerged in India as a transformative institutional mechanism designed to address the persistent challenges faced by small and marginal farmers, including limited market access, inadequate finance, and weak bargaining power against intermediaries. Introduced as an alternative to traditional cooperatives following the 2002 amendment of the Companies Act and the 2013 Policy and Process Guidelines for FPOs, these organizations aim to strengthen farmers' collective participation in domestic and international markets. While India currently has more than 12,000 registered FPOs, only a small proportion are actively engaged in export activities, despite the country's considerable agricultural export potential in commodities such as fruits, vegetables, spices, millets, and organic products.

This paper examines the present status of FPOs in export activities, the extent of government support extended to them, and the role of technology and digital platforms in connecting farmers with global buyers. It further identifies the emerging opportunities available to FPOs in export markets and the key challenges that continue to constrain their participation, including inadequate storage and cold-chain infrastructure, limited access to timely finance, weak technological adoption, climate-related risks, and significant post-harvest losses. The study draws on a review of existing literature, government reports, and secondary data to build a structured understanding of these issues. Findings indicate that government initiatives such as the SFAC credit guarantee scheme, PM-KISAN, the 10,000 FPO Mission, and digital platforms including e-NAM, ONDC, and GeM have begun improving FPOs' market linkages and export readiness, though structural barriers persist. The paper concludes by offering practical suggestions, including capacity building, infrastructure development, digital awareness, financial support, market linkages, branding and certification, and cluster development, to enhance the export performance of FPOs and strengthen their contribution to farmer income and sustainable rural development in India.

Keywords: Agricultural cooperatives, APMC, FPO, Agri-business, Agri-export

1. INTRODUCTION

The current era, Agri-business is one of the fastest-growing industries. As per Provisional Estimates of National Income, 2022–23, released by the Ministry of Statistics and Program Implementation, during the last six

years, the Indian agriculture and allied sector has been growing at 4.4% per annum. In addition, according to World Bank statistics from 2023, the agricultural sector, which accounts for 4% of global GDP and up to 25% in the least developed nations, is crucial to economic

growth. Agriculture ultimately helps achieve sustainable development goals such as no poverty, zero hunger, good health and wellbeing, and decent economic growth. However, despite agriculture playing a vital role in countries' overall development, small and marginal farmers face various challenges in the agricultural sector, including climate change, inadequate financial support, ineffective marketing systems, and difficulties in securing a fair price for their produce. All these issues continue to limit agricultural productivity and farmer incomes and, therefore, require institutional mechanisms that empower farmers and improve their access to resources and markets. In response to the challenges faced by small and marginal farmers, the Indian government has implemented several innovative initiatives. The main one is "Agricultural cooperatives," which have long dominated farmer collectives and were founded by the Cooperative Credit Societies Act of 1904. However, the history of cooperatives exposes several barriers that prevent effective group action. In India, cooperatives did not have as much success due to their organizations' weak administration and organizational internal corruption, financial problems, and political meddling (Abraham et al., 2022). Then, the Agricultural Produce Marketing Committee (APMC) Act was modified in 2003. The APMC model is initiated to strengthen the marketing channels for farmers. However, it became an instrument for political traders' or mediators' monopolistic practices over time. This led to high marketing charges and poor market infrastructure. Excessive state control on APMCs discouraged free trade and private investment, creating long value chains and intermediaries (Saha et al., 2024). Since then, self-help groups, contract farming, and procurement sheds have all become widespread. However, these interventions did not fully deliver the expected benefits to farmers. Recognizing the need for a more efficient collective model, the Indian government introduced a new kind of collective called FPO as an alternative to traditional cooperatives. The FPOs aim to solve the problems encountered by small and marginal farmers, especially those about better access to capital, technical improvements, and efficient inputs and markets (Bikkina et al., 2018; Government of India, 2013; Hellin et al., 2009). A key milestone in this effort was that the Government of India amended the Companies Act 1956 in 2002 by introducing section IX A, establishing producer companies managed by primary producers that would function similarly to corporate organizations, following the recommendations of the Y. K. Alagh Committee. Further, the Department of Agriculture and Cooperation published a policy paper in 2013 called "Policy and Process Guidelines for FPOs" to encourage

the development of FPOs and to offer clear instructions for the establishment and administration of these organizations (Bikkina et al., 2018; Government of India, 2013). FPOs are among the most critical constitutional reforms for farmers and rural people's advancement, poverty alleviation, and empowerment (Nikam et al., 2019). While several FPOs were registered and operating effectively in their locality. Only a few have fully met their objectives (Bikkina et al., 2018). In recent years, several studies have examined different aspects of FPOs. The role of FPOs in facilitating smallholder farmers' access to market, finance, and technology has been thoroughly studied in the literature (Singh & Sharma, 2021). Governance mechanisms (Patil & Meena, 2020), financial transaction sustainability (Reddy et al., 2021), and the impact of government policies on FPO promotion (Sharma & Rao, 2019) have been the research focus. The academic research on the FPOs impact is also focussed on the impact on income generation and enhancement of rural livelihoods (Gupta & Verma, 2020). Although there has been growth in the number of FPOs in India, their efficacy in achieving their key objectives like financial sustainability, market participation and leadership is not evident. Previous research has focussed on various aspects of FPOs, but comprehensive and systematic reviews, covering both the historical context and the challenges and policy options of the present, are far from the norm. This is a gap that makes it difficult to have a picture of the FPO dynamics as a whole and develop strategies for sustainability. As a result, this study aims to offer a structured understanding of existing knowledge and emerging themes on FPO, analyzing status in terms of trends, gaps, thematic focus areas, challenges, and future directions. The study's implications will offer a more practical perspective on public policies. The paper is divided into various sections. Firstly, the literature on FPO sets the theoretical background of the research, with research questions followed by the methodology. Additionally, it continues with data collection and analysis procedures, followed by findings and results. Further, it elaborates on findings through discussion and discusses limitations and future research directions. Finally, the study sheds soe light on policy implications.

India, a developing country heavily reliant on the agricultural sector, has witnessed the emergence of farmer producer organizations (FPOs) as a transformative collective model for farmers as an alternative to traditional cooperatives. The FPOs aim to solve the problems encountered by small and marginal farmers, especially those about better access to capital, technical improvements, and efficient inputs and markets.

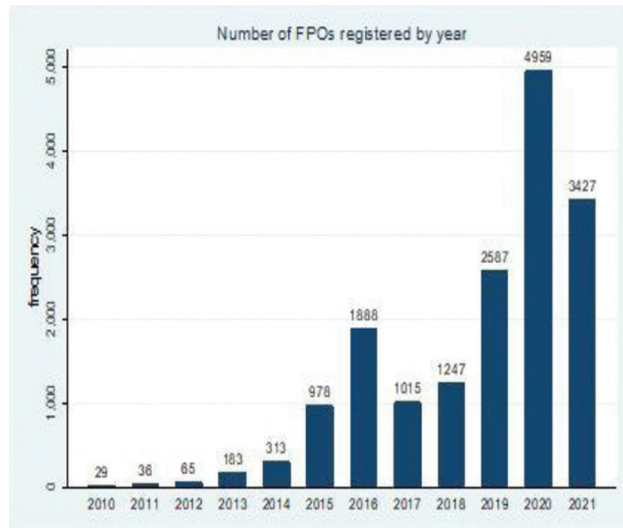


Figure 1. Number of FPOs registered in India by year - 2010–2021.

Source: Joshi (2022), Tata-Cornell Institute for Agriculture and Nutrition.

2. LITERATURE REVIEW

Farmer Producer Organizations (FPOs) have gained increasing attention in academic and policy research due to their potential to enhance farmers' participation in both domestic and international markets. Several studies highlight their role in improving export opportunities and strengthening agricultural value chains. A recent systematic review by Patil et al. (2025) describes how FPOs enable farmers to realize economies of scale, lower transaction costs, and enhance access to markets, all of which are crucial for strengthening export competitiveness. The study highlights the importance of collective action to enable small farmers to engage in high-value markets such as exports that they were unable to access otherwise.

Technology-based services like Information and Communication Technology (ICT), are important in supporting FPOs to disseminate market information, traceability and communication with buyers, Salokhe (2025) says. This technological development is especially significant for export markets, as quality standards and timely information are so important.

Pallavi et al. (2024) find that FPOs function as intermediaries in the agriculture system, as they bridge the gap between farmers and markets, institutions and farmers, and stakeholders and farmers. The study further suggests that most of the FPOs are still limited in their engagement in high value initiatives such as exports and are primarily engaged in input supply, showing a scope of possibilities yet to be tapped.

The export potential identified by the scoping study of FPOs revealed a tremendous scope in the agriculture

sector particularly in the natural and organic farming products from Indian agriculture. But farmers face some obstacles to take full advantage of these opportunities, including limited access to export markets, fear of production risk, and unaware.

The news media also reflects recent developments that provide evidence of export potential, in practice. It is noted that the farmers' income has improved significantly and they were able to tap into the international markets through FPOs and supported through training and infrastructure development programme in mango exports from India.

In India, as a developing nation, where agriculture is a significant economic activity, there is a growing trend of the emergence of farmer producer organisations (FPOs) which are an alternative method of farmer organisation to the classical cooperative model. The FPOs are expected to redress the issues of small and marginal farmers particularly with regard to access to capital, technology and efficient inputs and markets. Considering the speed at which FPO research articles are being published, it is necessary to conduct a thorough review of the literature on the subject. Scholars have published several review articles on FPO from different perspectives to tackle this issue. There are few published studies, however, illustrating FPO that provide a significant number of studies using bibliometric analysis. In the present study an attempt is made to study the FPO publications from bibliometric analysis. The methodology used in this study is Systematic Literature Review with research that was taken from 2002 to 2023. A total of 3796 research articles were identified from the Scopus database and 64 related studies were selected for the study. A publication analysis, a journal analysis, a country analysis, an author productivity analysis, analysis of the most cited documents, co-citation analysis, bibliographic coupling analysis and cluster analysis were used to analyze these papers. The results show that majority of the studies are limited to evaluating the performance of FPOs, and few studies have addressed the critical aspects such as institutional support, leadership and policy implementation. The cluster analysis results revealed that agricultural marketing, sustainable agriculture, the impact of membership on performance, women in agriculture, manufacturing, sustainability driving innovation, and technological efficiency of the food supply chain are the emerging themes in the literature. This paper offers a range of policy suggestions to address some of the major issues that are likely to be relevant to FPOs, including the streamlining of documentation, the improvement of market access, fair tax treatment, the right of fertilizer distribution and farmer-led leadership.

The implementation of Good Agricultural Practices (GAP) is an important factor in boosting the productivity of the farms, the safety of the food and the improvement of the market access of agricultural products, especially export crops such as chilli. This research examines the level of GAP adoption and its economics among chilli growers under three farming systems: Farmer Producer Organizations (FPOs), contract farming or non-contract farming. For comparative study an adoption index and Garrett's ranking technique were used and a total of 135 farmers were selected randomly in the three districts namely NTR, Prakasam and Kurnool. The findings showed that 73.33% of the FPO farmers had high degree of GAP adoption while the medium was more prevalent among the contract farmers (68.89%) and non-contract farmers (48.89%). Soil-climate suitability, market demand and better returns were the key determinants for chilli farming. On the other hand, high input costs and lack of knowledge were the main constraints to GAP adoption particularly for non-contract farmers. The FPOs were much more successful than other models in terms of compliance to certified inputs, integrated pest and crop management, and hygienic post-harvest handling. The results emphasize the need to promote GAP through institutional mechanisms and capacity development and support in policy structures to scale the chilli production of farmers economically and sustainably.

Farmer-producer organization (FPO) plays an important role in addressing the problems faced by individual farmers. In addition to its contribution to the proper management of FPOs, ICT can play a significant role in enhancing the performance and profitability of FPOs in order to contribute to the knowledge-based economy. The research method adopted in this study is literature review to get knowledge and realize the possibility of ICT in the management of FPO. The research revealed that the use of ICT applications like precision farming, farm management software and mobile technology is contributing to farming practices that have never been seen before. There is the potential for designing some ICT integration programmes that would enable farmers to use ICT more efficiently, and generate greater returns from their farming enterprises. Program activities can encompass capacity building, registration, business planning, business information systems (BIS) development, value chain linkages and administrative expenses and costs related to progress monitoring necessary to FPO development. The application of ICT enhances the performance and profitability of FPOs, demonstrating a promising future.

Farmer-producer organizations (FPOs) are vital for supporting agricultural communities by tackling individual farmers' challenges. Information and Communication

Technology (ICT) not only improves FPO management but also has the potential to significantly enhance the performance and profitability of these organizations, driving the knowledge-based economy. This study uses a literature review as the research methodology to understand and harness the potential of ICT in FPO management. The study found that ICT applications such as precision farming, farm management software and mobile technology are leading to unprecedented advancements in farming practices. Effective integration programs could be designed to help farmers incorporate ICT more efficiently and increase the returns from their farming businesses. These programmes can encompass capacity building, registration, business planning, development of MIS, linkages with the value chain, administrative costs and expenses for progress monitoring essentials for FPO development. The use of ICT, with its positive impact on performance and profitability of FPOs, holds a bright future.

Empirical evidence also shows that FPOs help in promoting value addition and export diversification. FPOs provide institutional support for processing, grading, packaging and branding agricultural products and thus support access to the international market, by bringing farmers in groups together. Value-added and processed products are found to have high market demand both in domestic and international markets which enhances their export potentiality.

However, literature also lists a number of issues that hinder the export potential of FPOs. These include limited institutional capacity, limited knowledge on export procedures, lack of infrastructure (storage and cold chain) and lack of finance. To overcome these challenges, policy support, capacity building, and the integration of digital technologies play a vital role in strengthening the contribution of FPOs in agricultural exports.

According to studies conducted by Small Farmers' Agribusiness Consortium (SFAC, 2020) FPO has proved to be an efficient institutional structure to connect small and marginal farmers into national and international markets. It emphasizes that the benefits of FPOs in terms of aggregation, grading and collective marketing are vital for making products export ready. It also highlights the vital role that export-oriented FPOs can play in maintaining the uniformity of the product and bulk supply, which is essential in the international trade.

The study conducted by National Bank for Agriculture and Rural Development (NABARD 2019) shows that by working with the farmers' organizations, the market access of farmers has improved and they are now less dependent on the intermediaries, which is increasing their income. The study states that those FPOs taking initiatives in value chain development (processing,

packaging, branding in case of high value commodities like fruits, spices, organic products etc.) are more likely to gain the opportunities of exports.

Farmer organisations are central to the involvement of smallholder groups with world trade chains (Food and Agriculture Organization, 2018). According to the report, collective farming organisations, such as FPOs can offer higher export standards more efficiently through quality control measures, certification systems and traceability management. This makes them more competitive in the arena of international markets.

According to Agricultural and Processed Food Products Export Development Authority (APEDA, 2021) India has huge potential in exporting rice, spices, fruits and vegetables back. The report indicates that the FPOs, as an export advocate can play a significant role in export promotion through coordinating farmers, compliance with international standards and direct engagement with exporters and buyers in the world market.

According to Trebbin (2014), elimination of middlemen through FPOs is a promising way to enhancing the Bargaining power and price realization of farmers. The study further underlines FPOs can be instrumental in improving institutional capacity and market linkages, both of which are important to get involved in export markets. It also identifies problems like poor systems of leadership and lack of monetary means.

Collective action through FPOs can involve the farmers in cutting the transaction costs and enhance production and marketing efficiency as found in the study by Singh and Singh (2013). The authors stress the importance of the economies of scale realised by FPOs for sale to export markets, particularly for bulk commodities.

The study conducted by BIRTHAL et al. (2019) has detailed that diversification towards high value agriculture such as horticulture, livestock products, etc. may provide a great opportunity for exporting. The study indicates that FPOs can make a significant contribution to this change by encouraging farmers to do value addition and connect them to export markets.

Additionally, World Bank 2020 study highlights the importance of enhancing farmer organism for making the agricultural competitiveness in developing countries such as India. The report says that FPOs can help expand the export potential by enhancing the supply chain efficiency, minimising the losses post production and by providing better price realization for the farmers.

There are also limitations, however, as outlined in the literature. Research shows that several FPOs are facing problem with export knowledge and lack of infrastructure facilities like cold storage, logistics,

finance, and market intelligence. For FPOs to achieve their full export potential, it is critical to address these challenges by using training, policy support, and digital tools.

3. OBJECTIVES

- Learn about the present status of the FPOs with regard to export and the government support given to FPOs for exports.
- To see how technology and online platforms help farmers reach global buyers.
- Find out what new opportunities that are available to the FPOs and the challenges FPOs face in exporting goods.
- To suggest simple ways to improve export performance of FPOs

4. PRESENT STATUS OF FPOS IN EXPORT

India currently has more than 12,000 FPOs, but only a small percentage are actively involved in exports. However, the trend is improving as more FPOs are entering international markets. FPOs are exporting products such as: Fruits (mango, grapes, pomegranate), Vegetables, Spices, Organic products, Millets. Government agencies like Agricultural and Processed Food Products Export Development Authority are supporting FPOs by linking them with international buyers and facilitating export procedures. Despite progress, the export contribution of FPOs remains limited due to lack of awareness, infrastructure, and export readiness.

4.1. Government Support for FPO Exports

The Government of India has launched several schemes to promote FPOs and enhance their export potential.

4.2. Key Initiatives

SFAC Scheme- Credit guarantee fund of ₹2,000 crore for FPOs

The Small Farmers' Agribusiness Consortium (SFAC) provides a credit guarantee fund to support FPOs in getting loans from banks. The government provides comfort to banks under this scheme, thereby putting at ease the risk faced by the banks. This will help banks making loans to FPOs easier, which subsequently will enhance their access to finance.

PM-KISAN- ₹6,000 annual direct benefit transfer to farmers

The PLGI aims to transfer to the farmers cash resources of ₹6000 per annum through PM-KISAN. The schemes of PLGI aim at cash transfer of ₹6000

annum to the farmers under PM-KISAN. PM-KISAN helps farmers get ₹6,000 per year directly in their bank accounts. This financial support enables farmers to cover their agricultural needs such as for seeds, fertilizers and water. It indirectly supports FPO members by enhancing their financials.

10,000 FPO Mission- Formation target by 2027-28 with ₹6,866 crore budget

The Government of India is on a mission to establish and promote 10,000 FPOs by 2027–28. The objective of this campaign is the grouping of farmers, better collective bargaining power and greater incomes from market access and support services.

Formation target by 2027-28 with ₹6,866 crore budget

The government has assigned a fund of ₹6866 crore for promoting and developing FPOs in this mission. This fund is made available for training and development of FPOs, infrastructure costs, administrative expenses and capacity building of FPOs.

Formation and Promotion of 10,000 FPOs Scheme

The focus of this scheme is to establish and develop FPOs. It has everything you need in terms of registration, training, management and business development. The aim is to make FPOs self-reliant and sustainable.

Support under Rashtriya Krishi Vikas Yojana

Under RKVY, the financial aid is given to states for the development of agriculture which includes the promotion of FPOs also. This encourages better infrastructure development, technology uptake and innovation on farming systems.

Financial assistance through equity grants and credit guarantee schemes

FPOs are awarded equity grants to build up their fundraising capabilities. They have credit guarantee schemes that enable them to obtain loans without being backed by solid collateral. This enhances their financial position and allows activities to be expanded.

Export incentives under Remission of Duties and Taxes on Exported Products

In this scheme, taxes and duties which are paid during production and transportation to the exporter are refunded. This lowers the total export costs and increases FPO products competitiveness in international markets.

5. ROLE OF APEDA

5.1. Role of APEDA in Promoting Export Potential of FPOs

Agricultural and Processed Food Products Export Development Authority (APEDA) is a statutory authority set up by Government of India under the APEDA Act, 1985. It plays an important role in promoting the export of agricultural and processed food products from India. It is also involved with export promotion, quality standard, packaging, market development, exporter registration, training and collection of export related statistics.

Connecting FPOs with international markets

The Farmer Connect platform is one of the vital initiatives APEDA has done for FPOs. It provides a digital link between FPOs/FPCs/cooperatives and exporters. FPOs can make profile and publish their produce available and exporters can make enquiries and find out the suitable supplier. This can help minimise the price differential between producers and international buyers.

Development of export-oriented agricultural clusters

APEDA classifies agricultural clusters and products in view of their export potential and engages state governments, exporters, experts and farmer organisations. This cluster strategy enables FPOs to focus on products with market demand in overseas markets.

Quality and standardisation

Agricultural products need to be produced to fulfill certain quality and safety standards, be graded, be packaged and be traceable for entry into the international markets. APEDA has responsibilities relating to standards and specifications, quality improvement and export-oriented production. These activities can help FPOs improve the quality and consistency of their products for export markets.

Capacity building and training

APEDA conducts capacity-building and training programmes for FPOs, FPCs, SHGs and exporters. These programmes can improve farmers' understanding of export procedures, quality requirements, packaging, market opportunities and export linkages. APEDA has also worked with organisations such as NABARD, NCDC, SFAC, NAFED and TRIFED to strengthen farmer groups and increase agricultural exports.

Promoting value addition and processing

FPOs can increase their export potential by moving beyond the sale of raw agricultural produce toward grading, processing, packaging and value-added products. APEDA's mandate covers a wide range of agricultural and processed products, including fruits and vegetables, cereals, groundnuts, dairy products, honey, processed foods and other scheduled products.

Export information and market intelligence

APEDA provides information on agricultural exports, export markets and commodities. Its Farmer Connect platform also provides information about buyer enquiries, sell offers, exporter directories and FPO/FPC directories, which can help FPOs identify potential business partners.

Promotion of organic exports

APEDA also plays an important role in India's organic export system through the National Programme for Organic Production (NPOP). It functions as the secretariat for accreditation of certification bodies under NPOP. This is particularly relevant for FPOs producing organic products because certification can help them access international markets.

Facilitating export value-chain integration

APEDA's initiatives have included integrating farmer groups into export value chains and facilitating the movement of fresh fruits, vegetables and regional rice to international destinations. It has also undertaken capacity-building programmes to link FPOs/FPCs/SHGs with exports and encourage entrepreneurs to become prospective exporters.

Importance for the export potential of FPOs

The role of APEDA can therefore be represented as:

FPOs → Aggregation → Quality & Grading → Processing & Packaging → APEDA Support/Certification → Exporter Linkage → International Market

This shows that APEDA can help FPOs overcome some of the major barriers to agricultural exports, particularly market access, quality compliance, information gaps, packaging, capacity building and exporter linkages.

6. ROLE OF TECHNOLOGY AND ONLINE PLATFORMS

Technology plays a crucial role in enabling FPOs to access global markets.

6.1 Important Platforms:

- National Agriculture Market
- Digital marketplaces and e-commerce platforms
- e-NAM (National Agriculture Market)
- ONDC (Open Network for Digital Commerce)
- GeM (Government e-Marketplace)
- Private agri-tech platforms
- Online export portals

6.2. Benefits:

- Direct interaction with buyers
- Transparency in pricing
- Access to real-time market information
- Digital payments and logistics tracking
- Online marketing and branding
- Reduced dependence on middlemen

Technology reduces dependency on intermediaries and allows FPOs to expand their reach beyond local markets.

7. OPPORTUNITIES FOR FPOS IN EXPORT**7.1. FPOs are beneficial to its members in following ways****Providing better market knowledge**

FPOs collect and share important information about domestic and international markets. They facilitate the alertness of farmers and their awareness of price trend, demand trends and quality expectation of export markets. This information can help farmers select better crops to be sold and thus elevated their earnings.

Providing opportunities of betterment of income

FPOs can secure better price for their produce by aggregating and selling in bulk. High-quality and organic products are frequently able to earn a better price in the export market. This directly contributes to the farmer's income.

Enabling to be integrated vertically

FPOs give farmers an opportunity to participate in various steps of the production, processing, packaging and sale of their produce. This decreases reliance on intermediaries and gets farmers more profit.

Development of buyer and market relationship

The FPOs develop a long-term relationship with exporters, wholesalers and retailers. Such relationships promote the regular demand, its

stability in prices, and trust in business relationships that in the long run benefits farmers.

High demand for organic and natural products

Worldwide, people are searching for chemical-free and environmentally friendly products. By adopting organic farming and adhering to the international standards, FPOs can promote organic farming along with securing higher prices in export markets.

Export of niche products (spices, millets, fruits, vegetables)

Spices, millets, fruits, vegetables and medicinal plants have high demand in the global markets. Unlike other agricultural marketing firms, FPOs can focus on these niche products and profit more because of their uniqueness.

Value-added products (processed foods, packaged goods)

FPOs can transform raw agricultural products into processed and/or value-added products such as packaged food, juices, pickles and spices powder. This helps to increase shelf life, quality and get better international price.

Direct farmer-to-buyer trade models

The FPOs provide a direct linkage between the farmers and exporters/buyers to cut down the number of middlemen. This creates fair pricing, transparency, and improved farmers' revenues.

Government push for "Make in India" and agri-exports

This is due to the help and support given by government initiatives, which include subsidies, training, export incentives, and financial support. These policies provide incentive to FPOs to venture into export activities and develop the size and scope.

Digital marketplaces expanding global reach

FPOs can easily gain access to international buyers through online platforms and e-commerce. Digitalization makes exports accessible in the areas of marketing, order management and price discovery.

Ensuring accessibility to market

Single farmers can't access big markets but FPOs enable the grouping of farmers to sell their produce. This will help to make it easy for them to export and sell domestically. This is because of the economies of scale that can be obtained.

Opportunities for benefits of economies of scale

The FPOs share resources and produce, which helps to minimise production, storage, and transportation

expenses. Bulk selling makes the export markets more efficient and competitive.

8. CHALLENGES FACED BY FPOS

The following are some of the obstacles, challenges and issues faced by the Farmer Producer Organizations (FPOs):

Distances form the market:

Most FPOs are situated in rural and remote areas away from the big markets and cities. The further this distance the higher transport expenses and lower profit margin for farmers. Perishable commodities, such as fruits and vegetables, can become less fresh and better, because of time of travel. Sometimes local traders or middlemen provide furniture to the farmers at a less desirable price, thus depriving the farmers of the benefit of negotiating price with them.

Lack of storage facilities or warehouse :

FPOs do not generally have adequate warehouses and cold stores to store produce. These facilities are essential for farmers to preserve food for an extended period, as otherwise they will have to sell immediately after harvest. This results in distress sales at a very low price particularly during the peak production period. Moreover, perishable materials go bad very quickly which results in tremendous losses.

Members not contributing properly :

For effective functioning of FPOs, active participation of all the members is necessary. But in many situations, it isn't even that members are attending meetings regularly or that they are contributing equally. Conflicts between members due to lack of trust, awareness and coordination. This compromises decision making and the efficiency and effectiveness of the organisation.

Problems of getting appropriate and timely finance:

Timely and adequate finance is one of the greatest problems of FPOs. You may have a low credit score or may not have enough assets to secure a loan from a bank. A bank may be hesitant to loan money because of poor credit history or because they don't feel they have enough collateral. However, delayed loan disbursement impacts farming activities such as acquisition of seed, fertiliser and farm implements even when loans are granted. High interest rates further deters borrowing.

Lack of owned office building:

FPOs lack basic infrastructure like office buildings, storage units, processing units and good roads. These facilities help to facilitate operation, storage and value addition, if not, it becomes difficult. Also, communication and transportation and the overall efficiency take a hit due to poor infrastructure.

Lack of transporting vehicle:

Typically, FPOs don't hold transport vehicles and it is challenging to transport produce from farms to markets. Hired vehicles make up the cost of transportation, which is a factor they must rely on. Rural roads offer little protection against damage or spoilage occurring during transport causing additional delays to transportation.

Lack of technology and upgradation:

While several FPOs are still using traditional methods, others are not even availed with modern Agricultural technologies. The level of machine and digital use and information systems is limited which impacts productivity and efficiency. The lack of awareness and training further cut down the use of new technologies.

Credit Access:

The other challenge faced by FPOs is institutional credit, although there are also difficulties in the financial sector but this includes a complexity of processes and a requirement to present documentation. They are also considered to be riskier borrowers for banks. Shortage of working capital hinders their growth and investment in infrastructure.

Climate Change:

Climate change has a significant impact on agriculture. Irregular rainfall, droughts, floods, and temperature variations cause unpredictable weather conditions, which impact crop production. This puts FPOs in a dilemma as well as financial risk and uncertainty for them to plan.

Water Scarcity:

Water shortage is a serious problem in many areas of agriculture. Irrigation facilities are lacking and reliance on the rain lowers crop production. Groundwater depletion exacerbates the situation, impacting on long-term agricultural sustainability.

Low Profitability:

Because of high input expenses (seeds, fertilizers, labor) and low market prices, FPOs often are

not profitable. Middlemen result in less farmers' margin in the final market price. Low bargaining power and lack of value addition also contribute to low income.

Post Harvest Losses:

Losses are high due to improper handling, storage and transportation after harvest. Poor quality of packaging and inadequate cold chain facilities leads to poor produce quality. This brings down the prices and incomes of the farmers.

9. SUGGESTIONS TO IMPROVE EXPORT PERFORMANCE

To enhance the export potential of FPOs, the following measures can be adopted:

Capacity Building:

Capacity building involves enhancing the knowledge and skills of the farmers and FPO members. Export procedures, quality standards, packaging and market requirements in the international market should be the subject of training. Farmers need to be educated in business management, communication and modern technologies as well. This ensures they are able to be competitive in the international arena.

Infrastructure Development:

Without proper infrastructure, exports will not work. Investment must be put into warehouses, cold storage units, grading units, packaging centres and transportation facilities. A good infrastructure contributes to maintaining product quality, limiting post-harvest losses and timely delivery for international markets.

Digital Awareness:

The use of digital platforms including e-commerce websites, mobile apps and online platforms should be encouraged in FPOs. Digital tools facilitate price discovery, direct marketing and global buyers. Enhancing efficiency through awareness of digital payments and online documentation.

Financial Support:

Easy access to credit and export finance is very important. Banks and other financial institutions should offer loans, with low interest rates and simple procedures. Government schemes and subsidy should be easily accessible. Support for FPOs in terms of funds is crucial to the development of infrastructure, technology, and expansion.

Market Linkages:

Exporters, wholesalers, retailers and international buyers are important stakeholders and need to be engaged in building a strong relationship with FPOs. Partnerships and contracts help to guarantee stable demand and improved prices. Expanding market reach can also be achieved through trade fairs, exhibitions and buyer-seller meets.

Branding and Certification:

The establishment of a strong brand identity and the acquisition of certifications, such as organic, fair trade and quality, adds value to the product. The products are more attractive in international markets if good packaging and labeling are used. Additionally, certification strengthens the trust of foreign buyers.

Cluster Development:

FPOs should concentrate on particular crops or product in line with the regional strength. Cluster-based development helps in achieving better quality, higher production, and specialization. It also makes the process of meeting large export orders and consistency much easier.

10. CONCLUSION

Farmer Producer Organizations (FPOs) can play a crucial role in boosting the agricultural export market in India, supporting the interests of small and marginal farmers and enhancing their market access. Though only small number of FPOs presently is involved in export, their active involvement is progressing gradually with support from the government, institutions and development of technology. Enhanced market linkages, digital platforms are improving the ability of FPOs to connect with international buyers. However, the growth of their business is still constrained by some challenges including poor infrastructure, lack of knowledge about export procedures, financial constraints and quality standard concerns. Solving these problems by strengthening capacities, upgrading infrastructure, providing financial assistance and simplifying export policies is crucial. With continuous support and strategic improvements, FPOs can play a crucial role in enhancing agricultural exports, increasing farmers' income, and ensuring sustainable rural development in India.

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Declaration of Conflicting Interests

The authors declare no conflict of interest.

Declaration of Generative AI and AI-assisted Technologies in the Writing Process

During the preparation of this manuscript, the authors have not used generative AI or AI-assisted technologies. The authors independently developed the conceptual framework and scholarly arguments and remain fully responsible for the accuracy, originality, and integrity of the manuscript.

REFERENCES

- Agarwal, S., & Goyal, S. K. (2022). Progression of farmer producer organisations in India. *The Indian Journal of Agricultural Sciences*, 92(12), 1490–1495. <https://doi.org/10.56093/ijas.v92i12.118068>
- Agricultural and Processed Food Products Export Development Authority (APEDA). Agri Export Promotion Reports. <https://apeda.gov.in/>
- APEDA (2021). Agricultural Export Strategy Report. <https://apeda.gov.in/study-reports>
- Birthal, P. S., Hazrana, J., & Negi, D. S. (2019). Diversification in Indian agriculture towards high value crops: Multilevel determinants and policy implications. *Land Use Policy*, 91, 104427. <https://doi.org/10.1016/j.landusepol.2019.104427>
- Chintamani, B. G., Yadav, H., & Kumari, S. (2024). Stylized facts of performance measures for sustaining the farmer producer companies in India. *Business Strategy & Development*, 7(1), e312. <https://doi.org/10.1002/bsd2.312>
- Dhondge, N. N. (2023). Application of corporate governance measures in Indian SMEs: A way forward. *Indian Journal of Commerce & Management Studies*, 14(2), 14–21. <https://doi.org/10.18843/ijcms/v14i2/02>
- Food and Agriculture Organization of the United Nations. (2018). *Farmer organizations and market access*. <https://www.fao.org/home/en>
- FPO India Portal. (2025). *FPO India Portal*. <https://www.fpoindia.com>
- Government of India. (2020). Formation and Promotion of 10,000 FPOs Scheme Guidelines. <https://sfacindia.com/PolicyandProcess-Guidelines-for-FPOs.aspx>
- Gupta, A., & Kumar, B. (2021). A review of various facets of farmer producer organisations: Opportunity for farmers' growth. *Journal of Progressive Agriculture*, 12(2), 77–101.
- Kakati, S., & Roy, A. (2022). Financial performance of farmer producer companies of India: A study from 2013–2014 to 2018–2019. *Journal of Agribusiness in Developing and Emerging Economies*, 12(3). <https://doi.org/10.1177/09730052211034700>
- Kumari, A., & K., K. (2025). Good agricultural practices in FPOs and contract farming: A comparative study. *Archives of Current Research International*, 25(8), 673–681. <https://doi.org/10.9734/acri/2025/v25i81449>
- Malaisamy, A., Yazhini, A., & Raswanthkrishna, M. (2025). Farmers' producer organisations in India: A critical examination of growth, current status, and policy needs. In

- Agricultural Sciences: Techniques and Innovations* (Vol. 1, pp. 83–92). <https://doi.org/10.9734/bpi/asti/v1/4708>
- NABARD. (2025). *Promotion and development of farmer producer organisations*. National Bank for Agriculture and Rural Development.
- Nithya Shree, D. A., & Vaishnavi Shree, P. (2022). Challenges faced by Farmer Producer Organisations (FPOs): A review. *Journal of Agricultural Extension Management*, 23(1), 131.
- OECD. (2025). *Agricultural policy monitoring and evaluation 2025*. OECD Publishing. https://www.oecd.org/en/publications/2025/10/agricultural-policy-monitoring-and-evaluation-2025_354e7040/full-report/developments-in-agricultural-policies-and-support-by-country_411a0245.html
- Patil, S., Mehta, M., Pancholi, G., & Saxena, A. (2025). Unveiling the dynamics of farmer producer organizations in India: A systematic review of status, challenges, and future directions. *Humanities and Social Sciences Communications*, 12(1). <https://doi.org/10.1057/s41599-025-05063-9>
- Praxis Global Alliance Report (2025). Role of FPOs in agricultural exports. <https://www.awazthevoice.in/india-news/india-to-see-significant-growth-in-agricultural-export-in-report-33448.html>
- Rangarajan, C., & Dev, S. M. (2021, March 11). How FPOs can help small and marginal farmers. *The Indian Express*.
- Shree, D. A. N., & Shree, P. V. (2022). Challenges faced by Farmer Producer Organisations (FPOs): A review. *Journal of Agricultural Extension Management*, 23(1), 131.
- Singh, S. (2021). Institutional innovations in India: An assessment of producer companies as new-generation co-operative companies. *Journal of Asian and African Studies*. <https://doi.org/10.1177/2633190X211033510>
- Singh, S. (2025). *India's producer companies and small farmers: Performance and impact*. Springer.
- Singh, S., & Singh, T. (2013). *Producer companies in India: A study of organization and performance* (CMA Publication No. 246). Cost and Management Accountants.
- Trebbin, A. (2014). Linking small farmers to modern retail through producer organizations: Experiences with producer companies in India. *Food Policy*, 45, 35–44. <https://doi.org/10.1016/j.foodpol.2013.12.007>
- Trebbin, A., & Hassler, M. (2012). Farmers' producer companies in India: A new concept for collective action? *Environment and Planning A*, 44(2), 411–427. <https://doi.org/10.1068/a44143>
- World Bank (2020). Enabling the Business of Agriculture. <https://eba.worldbank.org/en/eba>
- Yazhini, A., Malaisamy, A., Rani, S. P., Ramakrishnan, K., Prabakaran, K., & Arunachalam, P. (2025). A comprehensive review of farmers producer organizations in India: Historical evolution, current status and future policy challenges. *Plant Science Today*. <https://doi.org/10.14719/pst.5831>

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