Extension Strategies as Tools of Competitiveness for FPOs: An Analytical Study

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Abstract

FPOs are farmers' collectives, with membership mainly comprising small/ marginal farmers (around 70 to 80%). As of now, more than 8700 FPOs have been registered under the Producers' Company & Cooperative Act, section 8 company act, society act, and trust act. The study uses literature review and follows a case-based approach to assess the elements of extension strategic interventions required to attain competitiveness and better business performance of FPOs. The study's objective is to understand how effective extension strategies lead to competitiveness with the help of the APP (Asset-Process-Performance) framework. This framework has been implemented to analyse Savitribai Phule Goat Farmer Producers Company Ltd. (SPGFPCL) based at Maharashtra. Focus group discussions with the leaders and members of the FPO reveal that this unique form of collective organization with a blend of deployment of extension strategies with good governance and professional management has paved the way towards business competitiveness

Keywords: APP framework, Business performance, Competitiveness, Extension strategies, Farmer producers' organization

Introduction

The core of Indian agriculture is Marginal and Small Farmers (hereafter smallholders), comprising of 85% of total farmers in India and cultivate 44% of the total area, contributing around 60% of the total food grain

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production. Several studies and reports have demonstrated the major problems of the sector that must be addressed as soon as possible for the betterment of farmers and Indian agriculture like distributed and small-scale landholdings, paucity of high-quality seeds, insufficient supply of manures, fertilizers, and biocides at the appropriate time and quantity, inadequate irrigation infrastructure, lack of mechanization, soil erosion, inadequate storage, processing, and transportation facilities, capital scarcity, lack of communication networks, exploitative practices by local traders and middlemen abound (Singh et al., 2020, Mourya & Mehta, 2021). Further, smallholders are more efficient in per hectare output and cropping intensity than the large farmers (Singh et al., 2011). However, in spite of their significant contribution in the production, their link with market is very weak (Birthal, 2008). Thus, smallholders face numerous challenges in accessing land, water, inputs, credit, technology and markets. Furthermore, there are emerging challenges like risk and vulnerabilities due to climate change and natural calamities (Thapa and Gaiha, 2011). In this quest, the current pandemic, brought by COVID-19 and its resultant restrictions, has further aggravated the farmers' issues (Wadkar 2021, Nikam & Kale 2021).

In order to address these issues and challenges, Producers Collectives - community-based and community-driven organizations have grown in popularity as a tool for helping resource-poor farmers to improve their living conditions by providing a wide range of collective services, including common property administration, technical research and testing, rural infrastructure management, and the selling of critical production inputs or agricultural goods. As the size of their landholdings reduces, farmers are unable to benefit from economies of scale, access to large and mechanized equipment, or credit/finance. Additionally, produce marketing and the capacity to haggle for a fair price are severely limited. As a result, there is a compelling case for collectivization in the agricultural sector of the country (Ramappa K. 2018).

The government of India has undertaken number of development interventions for collectivizing farmers into different forms of producers' collectives. The prominent amongst them are the Cooperative movement

(Since 1900s), Self-Help Groups (Since 1980s) subsequently, Joint Liability Groups, Farmers Clubs, Federations of SHGs, Common Interest Groups (CIGs), etc. Recently, there has been a renewed interest in the 'Farmer Producers Organizations (FPOs), which is a hybrid model based on the principles of cooperatives and corporate enterprise (Tripathy, et al., 2020).

The Small Farmers Agri Business Consortium (SFAC), National Agricultural Bank for Agriculture and Rural Development (NABARD), National Cooperative Development Corporation (NCDC), National Agricultural Cooperative Marketing Federation (NAFED), and State governments have been supporting the FPOs movement in India. The civil society organizations and private foundations are also promoting this movement in their respective area of operations. The idea is to encourage groups of small-scale farmers and smallholders to connect with market and corporate buyers and thereby to boost agriculture and rural development in general and agribusiness in particular.

The primary objective of these producers collectives is to develop effective & efficient system across agri value chain i.e. production, harvesting, aggregation, grading, storage, value-addition, processing, marketing, export/ import, sale or supply of machinery, consumables, etc. They are run and owned by member farmers/ producers, and managed by professionals. The concept of FPOs is still in its infancy in the agricultural sector and has captured almost no attention in the literature particularly outside India. The present research, therefore, is focusing on the evolutionary journey of FPOs registered under Producers Company Act 2002 & 2013, its promotion, governance and management and mechanism for making them competitive and sustainable.

Evolution of FPC Movement in India

Based on the findings of the Prof. Y. K. Alagh Committee, the Indian Companies Act of 1956 was amended in 2002 and Producers Company as a separate chapter has been added in the Indian Companies Act. The amendment enabled primary producers to organize themselves on the basis of the one-man-one-vote principle, which is the foundation of a cooperative institution. The stated company's objective can be to profit from production, harvesting, procurement, grading, pooling, handling, marketing, selling, export of the members' primary produce, or import of commodities or services.

Like its conventional predecessors, this capital limitation makes it difficult for producer firms to create value-added and marketing facilities. Despite the fact that the producer company law has been in place for five years, neither the government nor development organizations have made an effort to raise understanding of the concept and its use. This committee's offer came at a time when the concept was just starting to gain traction in terms of producer implementation, and many development agencies appeared to have discovered a way to organize producers in a market-oriented economy (Singh, 2008). FPCs can be used by small and marginal landholding farmers to preserve the value of their goods and the dignity of their labour, preventing them from becoming victims of captive or hierarchical value chains in the face of vast corporate capacity and money. This, however, is insufficient in light of the greater issue of insufficient food systems for the vast majority of smallholders (Kalia, 2019).

Status of FPC's in India

The formation and nurturing of FPCs is actively encouraged and supported by the Central and State Governments and their agencies like SFAC, NABARD, NCDC, NAFED, state governments and other agencies, using financial resources from various Centrally- sponsored and State-funded schemes related to agriculture and allied sector. These agencies/ supporting organizations have empaneled Resource Institutions (RIs) and Producers Organizations Promoting Institutions (POPIs), which are now being called as Community Based Business Organizations (CBBOs) across India for establishing and enabling the FPCs. The State of Maharashtra, Madhya Pradesh, and Tamil Nadu have maximum numbers of RIs. Out of a total number of districts in India, NABARD has identified POPIs in 475 districts, highest among the State of Uttar Pradesh, Karnataka, Kerala, Rajasthan, Andhra Pradesh, and Bihar, having more than 50 POPIs involved in the sensitizing and mobilizing farmers to form producers' companies and extend the handholding support in their respective area of operation (Tripathy et al., 2020).

SFAC has also taken many initiatives to strengthen the FPCs functions and business performance by linking them to suitable technology as well as to the markets in association with private, corporate or cooperative sector. State Level Producers Companies (SLPCs) have been created as a State level umbrella support for their respective State FPCs in order to expand and enhance their backward and forward linkages. At present eight of such SLPCs in the States of Gujarat, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, and West Bengal are working and are observed as an effective solution to the functional challenges of FPCs. They address several objectives like a) Achieving better coordination among FPCs formed in the State; b) Helping to enter into policy dialogue with the State and Central agencies; c) Availability and accessibility of services and inputs; d) Increasing the capacity in cost effective manner; e) Facilitating the credit support from financial institutions; f) Leveraging the opportunities for strengthening backward and forward linkages.

As on 31st December, 2020 SFAC has supported 1225 registered FPOs (886 FPOs by SFAC and 339 by non-SFAC promoted) and NABARD has promoted 2064 FPOs, which are working in different parts of the country. Besides this State Governments have also promoted many FPOs under various schemes and programs. In addition, about 63 FPOs are under self-promoted category across the Country. India's first producers company was the "Farmers Honey Bee India Producer Company Ltd.". Five producers companies were registered in the first financial year (FY) April 1, 2003 to March 31, 2004. Only 445 companies were formed in the first ten years after the statute was passed (FY 2004 to FY 2013). In FY 2014, the number of producer enterprises registered climbed to 497, surpassing the preceding ten years combined. In FY 2016, the number of registered businesses surpassed 1,000 for the first time. In the last three financial years (FY 2017, FY 2018, FY 2019), 4,190 producer enterprises were registered, an average of four per day, with Maharashtra accounting for one out of every four. These companies have been established in 33 of India's 36 states and union territories. Maharashtra has the most production companies (1,940), outnumbering the other three states combined. Maharashtra, Uttar Pradesh, Tamil Nadu, and Madhya Pradesh accounted for over half of the producer enterprises registered until March 31, 2019 (Govil et al., 2019).

Statement of Problem

India is witnessing a paradigm shift from 'Food Security to Nutritional Security', 'Production only to Production plus Marketing' and more recently focus has been given on 'Farm-to-Fork and Fork-to-Farm' approach. The Government of India has called for "Atmanirbhar Bharat" and urged to 'be vocal for local products and making them global'. This has called for change in approach to see farming vis-à-vis agriculture as a 'business profession' or "business enterprise".

Considering the current statistics of Indian agriculture in general and farmers in particular, aggregating producers' farmers into collectives is accepted as a 'best-fit' for reducing risk in agriculture, improving access to technology, market and credit. Subsequently, many forms of collectives have emerged in the country, having their own set of pros and cons as highlighted by number of research studies and reports. However, the recent model of FPCs has been seen as more professional form of business organization with the hope that they will play an effective and efficient role in strengthening the backward and forward linkages of the member farmers and thereby to enhance the farmers' income.

Around 8500 plus FPCs have been promoted in India. It has been observed that around 12-15% are functional and rest are struggling to streamline their business activities and thereby causing inter-regional disparity as well. As we promote larger number of FPCs going forward, the path cut out for the growth and sustenance of these enterprises is quite daunting. These enterprises are owned and run by the farmers, especially the smallholders. Therefore, setting up a farmer producers organizations is a process-driven activity, which needs a thoughtful, empathetic and participatory planning & action in order to focus on inculcating the sense of belongingness and ownership among members and potential members. The greater degree of attention needs to be given to 'governance' and 'management' issues. These enterprises are different from the traditional company forms as there is very strong social angle of uplifting the lives of the farmers and contributing to the larger rural development cause. The economic focus of this set of hybrid enterprises along with a strong social orientation puts them in the category of a 'social enterprise' which address socio economic and developmental issues through a 'Community Driven Development' (CDD) approach.

In the background of these factors, the study aims to answer the question on how effective extension strategies lead to competitiveness in FPOs? After this introductory section, the second section reviews the literature on this subject. The third section is about the research methodology adopted for the study. The fourth section presents a case study of Savitribai Phule Goat Farmer Producers Company Ltd. (SPGFPCL), Asia's first women FPC and the fifth session discusses the conclusion of the study.

Review of Literature

The social enterprise model is well suited to the development pursuit of countries around the world. However, the fundamental question is the sustainability and competitiveness of these enterprises which makes them a part of the larger economic growth story. It has been observed that although many social enterprises work towards social and economic goals, but fail to rise on the growth trajectory beyond a certain point. They may be burdened with a great responsibility and may have limited capacity to address the issue in hand, thereby necessitating the need of proper legislative and conducive policy environment (Anna and Lyne, 2008). Studies have pointed out that social enterprises are equally susceptible to poor governance, leading to poor performance and need proper scrutinization to ensure subsequent outcomes for social good and community welfare (Lyne, 2008; Schöning et al., 2012). Since social enterprises are a hybrid form between "profits" and "non - profits", their governance aspects have received very little attention from researchers, despite being distinct and critical (Low, 2006). Since social enterprises are constantly creating a trade-off between social and commercial goals, they may find it difficult to practice proper governance and are often in need of stewardship to prevent them from mission drift and remain viable (Dart, 2004; Low, 2006). Since FPCs exhibit many characteristics of a social enterprise, it may be crucial to study their governance issues at this stage to carve out a suitable path for them in future. The cooperatives are crucial part of rural development and financing. By implementing the efficient governance into operational system uplifts the competitiveness of cooperatives. Efficient governance is always globally acceptable and applicable despite of its financial indicators, strategic policies or decisions and progressive business performance of cooperatives (Tripathy et al., (2021).

Against this backdrop, very few studies have been conducted to bring out the issues in the promotion of FPCs with policy implications. Not much investigation has been carried out to highlight the process adopted in the formation of FPCs by different supporting/ promoting organizations, the critical factors contributing to the success and failure of the FPCs and the impending issues related to management and governance.

Ajitabh & Momaya, (2004) Carried out the study on "Competitiveness of Firms: Review of theory, frameworks, and models" The major reason for software firms` competitiveness challenges in India has been recognized as a lack of understanding of the concept and its implementation. This study looks at frameworks and models connected to competitiveness, as well as a research summary at the firm level. The study was further classified using the Asset-Processes-Performance (APP) framework. Several competitiveness frameworks and models were investigated and classified. The author divided the dynamics into three aspects i.e. (1) Assets (2) Processes (3) Performance

Aspects and factors of Competitiveness Framework

Competitive Assets	Competitive Process	Competitive Performance
• Human Resource • Industry Infrastructure • Technology • Demand Conditions • Government	• Strategic Management • Normal Plan Implementation • Human Resource Development and Synergies	• Productivity • Human sources • Quality / Effectiveness • Costs • Financial • International • Technological

(Source; K Momaya 1998)

Research Methodology

This study employed a persuasive case study technique (Siggelkow, 2007) to examine both the business models that support the extension strategies deployed by the promoting institution and resultant competitiveness in FPOs. The study's objective is to understand how effective extension strategies lead to competitiveness with the help of the APP framework (Momaya (1998). This framework has been implemented to analyse Savitribai Phule Goat Farmer Producers Company Ltd. (SPGFPCL) based at Nashik district of Maharashtra, promoted and nurtured by Yuva Mitra NGO[1] . The study accomplishes the above objectives through the use of both primary and secondary data. The face-to-face discussions with the

[1] The SFAC and NABARD has empanelled many agencies like NGOs, Krishi Vigyan Kendras (KVKs), private foundations, etc. in order to mobilise, aggregate, register and hand-hold the FPOs for three-five years. Yuva Mitra was one such agency empanelled by NABARD.

Chairman, CEO, and staff members of the SPGFPCL were made during January and February 2020 followed by telephonic conversations with some of the members during May - June 2020. The secondary data was sourced from company annual reports, audited balance sheets, profit & loss statements.

Case study: Savitribai Phule Goat Farmer Producers Company Ltd. (SPGFPCL): A Story of Social Transformation

SPGFPCL was established on 6th May, 2016 by pro-active women farmers with the support from a local NGO called Yuva Mitra at Sinnar block of Nashik district, Maharashtra. The Company has membership from 30 villages around Sinnar block with a total membership of 1041 as on March 2021. The authorized Share Capital is Rs. 25 Lakhs and paid-up share capital is Rs. 22.63 Lakhs, having Rs. 500/- as a share price. Since inception, the Company has maintained Rs. 3.37 Lakhs as reserves and surpluses.

Strategies Adopted by Promoting Institution: Competitive Processes

Yuva Mitra NGO was founded by Late Shri. Sunil Pote, passionate and dedicated development professional from a village in the Sinnar block, Nashik, started the development interventions since 1995. In its initial days, NGO team spent lot of time in understanding the challenges, opportunities in the locale and more particularly farmers and village dynamics. After this exercise they identified 3-4 broader areas of development. The development journey started with ensuring regular supply of 'Irrigation Water' to farming. The collective action along with farmers of the region and local administration, Yuva Mitra restored a 140 years-old network of canals around the Devnadi River of the region. As a result, farming community of the region realized the power of collective action.

Thereafter, the NGO did work in Health & Sanitation, Education and more particularly started working in ensuring sustainable livelihoods to farming community. In doing so, they identified two key challenges - 'availability of quality inputs - credit, resources, & technology' on one side and 'connecting farmers to domestic and export market' on the other. As an empanelled NGO by NABARD, Yuva Mitra started to address these livelihoods issues through a new model called Farmer Producers Organization (FPO).

Target-driven vs Process-driven: As a development professional, Mr. Pote was very much aware about the power of 'participatory panning and action'. In addition, the NGO also did a "need analysis and aspirations mapping'" of the local farmers to understand their pain points.

Credibility of Promoting Institution: In the case of Yuva Mitra, the SPGFPCL formation process didn't take much time to collectivize the women farmers towards the common agenda, as the farmers already had witnessed the power of collective action during the developmental journey.

Sensitization and Social Mobilization drive: The NGO team along with 12-15 pro-active youths (both male & female) had various meetings, group discussions, workshops and awareness rallies about the new form of farmers' collectives - FPC. In some of the occasion, key representatives of NABARD were also participated in the discussion.

Concept Clarification and Understanding the Role: The focus was on understanding the difference between primary agricultural cooperative society and farmer producers company, its governance, management, business model, compliance, etc. The roles and responsibilities as a member, board of directors were thoroughly discussed, besides the role of management staff including CEO.

Exposure Visits: The prospective members were taken to visit Sahyadri FPC and Central Institute for Research on Goats (ICAR-CIRG). 'Seeing is believing' had act as strong mover for these members and has actually kick-started their activities on fast track.

Participatory Decision Making: Yuva Mitra has been following a participatory planning and action approach in all their developmental work.

This has ensured the peoples participation and ownership. The members of SPGFPCL were also actively involved in all the activities undertaken for the promotion and formation of FPC.

Training and Capacity Building: The women members also received a training at Central Institute for Research on Goats (ICAR-CIRG) to understand goat farming practices, and how to maintain quality, reduce wastage and spoilage in all farm operations.

Credit & Market Connects: The Yuva Mitra has facilitated the business plan preparation of the Company and establish market connects. As a result, the Company has received a grant from NABKISAN and company's products were being marketed by Kodai Pvt. Ltd. besides local vendors & retailers.

Governance and Management of SPGFPCL

As part of the Company governance, it has 7 Board of Directors (BoDs) and a chairman. All BoDs were passionate and did significant work for the members of the Company. The Company has 10 management staff, which includes a Chief Executive Officer (CEO), marketing manager, plant manager, plant operator, procurement manager, accountant, and three supporting staff.

The 'CEO' manages the day-to-day business activities with support from other management staff. In order to manage Company business effectively and efficiently, the Company has formed the management committee like procurement, and marketing & distribution. The company's strategic decisions are taken in the board meetings by the chairman. The company also has empaneled honorary expert director on the board to mentor board members in all important matters. Every year company conducts the Annual General Meeting (AGM) with 80% of members' participation and quarterly board members meetings with 90% participation. CEO maintains the record of all the meetings and decision taken by directors' body with signature of all members and ensures timely implementation of decisions.

Business Operating Systems of SPGFPCL: Competitive Performance

SPGFPCL has been working on the both fronts of the goat value-chain. The poor and marginalized women members are actively involved in goatery business. The Yuva Mitra has identified 30 para veterinaries called as 'Pashu Sakhi' at village level to offer a first-aid treatment and handholding support to the goat rearing women members of the Company. These Pashu Sakhis are from the same village and/or nearby villages, trained on different aspects of goat farm management. They have been involved in the extending the services like vaccination, goat insurance, and sales of milk, vermicompost, vermiwash, fodder seeds, live goat, salt bricks, etc. The company provides an honorarium of Rs. 3000/- per month to each Pashu-Sakhi.

During 2018-19, under credit guarantee scheme of SFAC, the company had received a funding of Rs. 73.95 lakhs from NABKISAN (empaneled lending institution) for enhancing and expanding forward linkages by setting up a goat milk manufacturing plant. As a result, the company has diversified their product portfolio, having seven different products and services to cater the needs of member women as well as creating a latent demand for their innovative products under the brand - "Sahaj".

Table 1: Business Line of SPGFPCL

S. No.	Product	Purchasing Price (INR)	Selling Price (INR)	Company Margin (INR)
1	Goat Milk (per litre)	35	100	47.47
2	Live goat (per kg) Avg. wt 18 KG	210	240	26.12
3	Vermi Compost (per Quintal)	5000	7500	430 per tonne
4	Vermi Wash (per litre)	10	12	0.20
5	Inputs (per kg)	110	120	9.95
6	Cheese (milk per litre)	35	220	182
7	Yogurt (per litre)	80	300	217

(Source: Primary Survey)

To ensure quality procurement and transparency in business operations, company has developed a standard operating procedure to be followed by all members and makes advance estimates of demand & supply of product line. CEO ensures entry of all business transactions and payment of members within 48 hrs. The company has established their own marketing and distributing network and works in B2B and B2C segments. However, the Company is facing problems in economizing scale of production and managing losses & wastage in handling and marketing.

As informed by Chairman, it is heartening to note that "the Company has changed the lives of poor and marginalized women of the region, who were struggling for their existence and now feeling proud and living better life for themselves & their family members. The company has come long way from 3.34 lakhs turnover (2016-17) to 178 lakhs (2020-21).

Conclusion

In building sustainable institutions, the number of indicators play important role. Starting with the 'geo-demography', farmers sound understanding of business and a spirit of entrepreneurship. The history says that three years is not sufficient to establish a sustainable grassroots institution. As a process-driven activity, it takes almost one and a half years to convince farmers and register the FPO in right way and right spirit. The promoting institutions people management skills and understanding the socio-cultural aspects has an implications in bringing cohesiveness and ownership among members.

There is a need to have an enabling ecosystem for promotion & formation, financing, and marketing of FPOs products and services. The extent of technology adoption for value addition and processing is need of the hour. Networking and liasioning with technical institutions like ICAR and SAUs including KVKs would help FPOs in understanding technical know-how. This has been exemplified in the present case as well, having linkages with ICAR-CIRG has resulted in the productivity enhancement of goatery business.

The governance and management are at the core of any business entity. SPGFPCL has developed and followed a good-governance and management practices. The key success factors amongst were participation of all members and board members in all meetings and activities, accountable and transparent company's board, control over management staff and transformational leadership of chairman of the company, skilled management staff and professionalism and so on.

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References

Ajitabh, A., & Momaya, K. (2004). Competitiveness of firms: review of theory, frameworks and models. Singapore management review, 26(1), 45-61.

Anna Mdee , Isaac Lyne & Nelarine Cornelius (2008). Social enterprise: governance, impact and measurement, Education, Knowledge & Economy, 2 (3): 149-153.

Birthal, P. S. (2008). Linking Smallholder Livestock Producers to Markets: Issues and Approaches. Indian J. of Agricultural Economics, 63 (1): 19-37.

Dart, R. (2004). Being "business-like" in a nonprofit organization: A grounded and inductive typology. Nonprofit and Voluntary Sector Quarterly, 33(2), 290-310.

Kalia, Y. (2019). Farmer Producer Companies in India. Policy Watch, 12, 9-10.

Low, C. (2006), "A framework for the governance of social enterprise", International Journal of Social Economics, 33 (5/6): 376-385.

Mourya, M., & Mehta, M. (2021). Farmer Producer Company: India's Magic Bullet to Realise Select SDGs? International Journal of Rural Management, 17(1_suppl), 115S-147S.

Nikam, V. and Kale, R. B. (2020). Unshackling FPOs from the COVID-19 Lockdown. Agricultural Extension in South Asia (AESA) Blog 110 - April 2020.

Singh, A. K., Prasanna, L. P. and Chand, R. (2011). Farm Size and Productivity: Understanding the Strengths of Smallholders and Improving Their Livelihoods. Economic and Political Weekly, 46 (26&27): 5-11.

Singh, A. K., Upadhyaya, A., Kumari, S., Sundaram, P. K., & Jeet, P. (2020). Role of Agriculture in making India $5 trillion Economy under Corona Pandemic Circumstance: Role of agriculture in Indian economy. Journal of AgriSearch, 7(2), 54-58.

Tripathy, K. K., Deshpande, D, V., Wadkar, S, K., & Jaya, L. (2020). Catalyzing Development through Collectives: Status and Issues of Cooperatives, Self-Help Groups and Farmer Producers Organizations in India. VAMNICOM Working Paper Series, 02(01), 1-47.

Tripathy, K. K., Paliwal, M., Nistala, N. (2021). Good Governance Practices and Competitiveness in Cooperatives: An Analytical Study of Kerala Primary Agricultural Credit Societies. International Journal of Global Business and Competitiveness, 16: 153 - 161.

Wadkar, S. K. (2020). Collective Action in Maharashtra to deal with COVID-19: Impact on Agriculture. Agricultural Extension in South Asia (AESA) Blog 111 - April 2020.