*Ind. Jn. of Agri. Econ.*
*Vol.73, No.3, July-Sept.2018*

**SUBJECT III**
**SOCIAL AND COMMUNITY ORGANISATIONS FOR AGRICULTURAL DEVELOPMENT AND COPING WITH LIMITED NON-RENEWABLE RESOURCES**

# Sustainability of Farmer Producer Organisations under Agricultural Value Networks in India: A Case of Punjab and Gujarat

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ABSTRACT

Small and marginal farmers constitute a majority in Indian agriculture but are integrated through traditional value networks which lack supportive environment with institutional and infrastructural system, inadequate resources and effective coordination within the value networks. Farmer Producer Organisations (henceforth, FPOs) are formed to integrate the small farmers with agricultural marketing system and offer remunerative prices with low transaction cost. With this understanding, this study explores the existing agricultural value networks and categorically makes a comparison between the FPO-led marketing system and the conventional models. It tries to investigate the efficacy and sustainability of FPO models and analyse the operational dynamics in two states of India, namely, Gujarat and Punjab. To examine the objectives of the paper, available data and literature along with information from field survey have been utilised. The study finds that the new initiative of linking farmers with the formal value networks through FPOs, which assumed as hybrids of co-operative model, seems ineffective for new entrants in the business. The formally active structures in agricultural marketing have taken the new shape under the FPO system which project the success of this model. One of the crucial determinants for the sustainability of FPO is institutional support that is not limited to the formation of FPO but provides new market linkages, adoption of agricultural best practices, and providing the managerial skills to the farmers.

**Keywords: Farmer Producers Organisations (FPOs), Agricultural value networks, Small farmers, Agricultural marketing.**

**JEL: O18, O32, Q11, Q13, Q16.**

## I

## INTRODUCTION

The proliferation of food standards has posed serious questions on the prospects of small and marginal farmers gaining from agricultural value networks. There has been a significant change in the operational and structural aspects of agricultural value networks due to globalisation, increased competition in retail and quality standards. The integration of food prices, owing to ever rising modern retail and supermarkets, has shifted the power in favour of retailers and not towards the producers (Gereffi and Lee, 2012). The emerging brand loyalties provide leverage to

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giant-retailers to dictate cost-cutting measures and enhanced standards to their suppliers. The rising sophistication in food technology that flows from producers to retailers poses a major challenge to small farmers. Under the neo-liberal economic regime, the laissez faire policies have empowered the multinationals and have restrained the distributive powers of developing countries' producer's vis-à-vis global buyers (Humphrey, 2001; Gereffi and Lee, 2012). As a result, the producers have gained relatively less in the agricultural value networks. Further, the non-price competition, i.e., on the basis of product quality, allows firms to extract more profits from consumers with sophisticated preferences and they also prefer to coordinate with a small number of large scale suppliers ensuring food quality, traceability, stringent and costly requirements. While these firms mainly target the large farmers, the small farmers fail to organise themselves to enter the value chain and hence remain marginalised (Kirsten and Sartorius, 2002; Van Der Meer, 2006; Singla and Dhindsa, 2011; Singh, 2012).

*Small Farmers in Value Networks:* Farmers, especially small and marginal holders, constitute a major proportion of Indian agriculture, however; they are integrated through traditional value networks which lack supportive environment with institutional and infrastructural system, inadequate resources and effective coordination within the value networks. In particular, small-scale producers are at a disadvantage because they have less capital to invest, use traditional/conventional techniques, largely depend on family labour and lack channels to connect with the global players (Reardon and Barrett, 2000; Daviron and Gibbon, 2002; De Janvry and Sadoulet, 2005). In the literature, a slew of case studies are described where small farmers search for new forms of collaboration/models which can increase their bargaining position in the prevailing value networks (Rondot and Collion, 2001).

As discussed earlier, the producers in the value networks are marginalised due to increasing importance of retailing agents. There can be alternatives which can enhance the negotiation power of this group of farmers such as co-operative or Producer Companies based models. One such model is Farmer Producer Organisations (henceforth, FPOs) which can integrate the small farmers with agricultural market for remunerative prices with low transaction costs. With this understanding, this study explores the existing value networks and draws comparison between the FPO-led marketing system and the conventional models. It also makes an attempt to investigate the efficacy and sustainability of such a model in the Indian context. Thus, the study focuses on the FPO models existing in two states of India namely, Punjab and Gujarat. The second section briefly explains the existing marketing channels for agricultural produce and the third section discusses the FPO model in India. Sustainability and viability of FPO programme has been analysed from the field observations and has been discussed in the fourth section while the final section presents the conclusions.

## II

## EXISTING AGRICULTURAL MARKETING CHANNELS IN INDIA

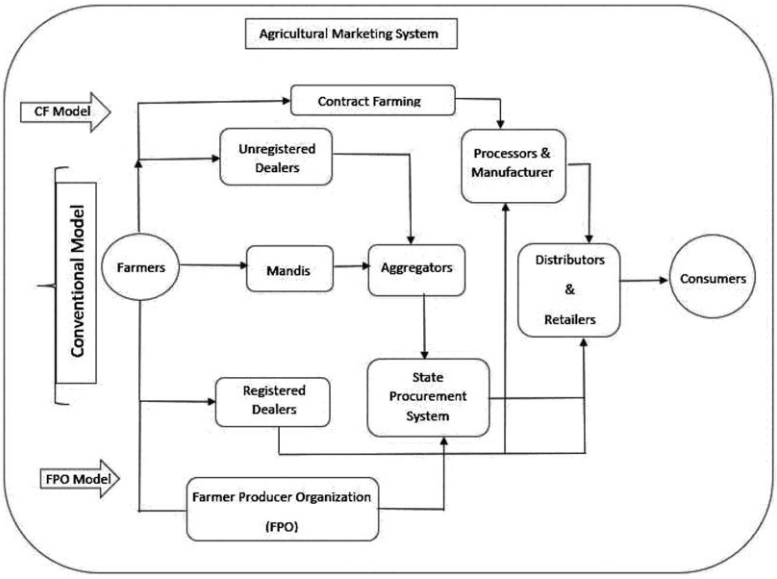
Since Independence, developing regulated agricultural market network was an important development agenda of the Indian economy to ensure remunerative and stable agricultural product prices to both the producers and consumers through fair play of demand and supply forces. Agricultural Marketing Regulation (APMC Model Act, 2003) focused on empowering farmers, especially small farmers, with knowledge, information and capabilities to undertake market-driven production and to provide multiple options for competitive marketing channels and efficient services at reasonable cost. In addition to the earlier act, the APMC (2013) Act aimed at creating primary infrastructure in primary markets, establishing farmer dominated management committee, establishing certain marketing practices (auctions, proper weighing, timely payments, etc.), standardising market charges such as fees, commissions, etc. and creating amenities in the market yards for farmers and the traders. No person or agency, beyond a particular area under the jurisdiction of market committee and the licenced traders, is allowed to carry out wholesale marketing activity independently, which acts as a major entry barrier for new entrepreneurs.

APMC, thus, has emerged as a sort of government sponsored monopoly in supply of marketing services/facilities, with all drawbacks and inefficiencies associated with a monopoly. Further, the magnitude and the multiplicity of fees under APMC arises due to exorbitant[1] mediation charges levied by licenced commission agents (Arhtiyas in local parlance) between buyers and farmers on the entire produce sold instead on the net income (refer Figure 1). Cartelisation is often seen in APMC system where agents deliberately restrain from higher bidding. As a result, produce is procured at manipulatively discovered price and sold at higher price. Due to high transaction costs and cartelisation, the share of farmer's revenue in consumer's price remained very low. Hence, this marketing structure becomes counterproductive for the farmers who are left with limited choice of selling their agricultural production through these commission agents (Figure 1).

Agricultural marketing in India involves a number of layers of intermediaries at different levels which makes the system more complex. There are varieties of reasons for the existence of these intermediaries in agricultural marketing such as persistent dependency of farmers on these agents who provide credit to the farmers, lack of initiatives on the part of Government, cartelisation between commission agents and wholesalers, lack of market access to the small farmers etc.

To integrate the markets across states in India, a central sponsored scheme, National Agricultural Market (NAM), has been introduced with e-platform in 2016 which provides opportunities to farmers and traders for purchase/sale of agricultural produce at optimal prices in a transparent manner across India. Under this framework, a trader/buyer will be able to bid for agricultural produce anywhere in the country. Many marketing schemes have been launched to eliminate the role of

middleman and narrow the gap between farmer's sale price and price paid by the consumer.




*Source:* Produced from existing literature and primary survey.

Figure 1. Various Marketing Models in Agriculture.

Since a majority of the Indian farmers (85 per cent) are small and marginal, they also lack information and access to market due to variety of reasons. They have very less information about crop procurement prices (only 24 per cent farmers) and less than 10 per cent of the total produce is sold to procurement agencies. Further, only 1.6 per cent of the total produce was sold at Minimum Support Price (MSP) or Statutory Minimum Price (SMP) (NSSO, 2013). Lack of adequate infrastructure in agricultural markets such as storage, sorting, grading and post-harvest management are the key reasons for low spread of the formal marketing system.

Apart from the existing state-driven marketing system, there are other programmes which facilitate the marketing of agricultural produce. Contract farming is an arrangement, introduced back in 1990s in Punjab and other parts of the country, for the production and marketing of agricultural produce in which farmers and firms enter into advance contracts to purchase produce of predetermined quality and quantity at a predetermined price and time often with the provision of certain services like inputs, technical assistance, etc., to the farmers (Singh, 2002). A company's decision to contract with a farmer is generally guided by the transaction cost theory where stringent demands of the value networks may exclude small farmers from contract production due to high transaction costs (Pingali, 2007). On the contrary, contract farming is generally observed as an institutional mechanism to reduce transaction costs emerging out of market imperfections (Minot, 2011; Kutlu, 2012; Jia and Bijman, 2014).

Apart from sale of output through contract farming and formal institutions, a majority of the households offer their produce for sale either to local private traders in India (Table 1). For cereals, 57 per cent of the farmers are disposing off their produce to private traders in India, whereas in Gujarat this proportion is as high as 77 per cent and in Punjab, only 13 per cent. The private traders dominate India and Gujarat for other crops as well. It is to be noted that rice and wheat are grown on very large area but other crops are not. The procurement share of input dealers is also large for few crops in Gujarat and India (Table 1). It shows that the institutional market access is quite limited to the farmers.

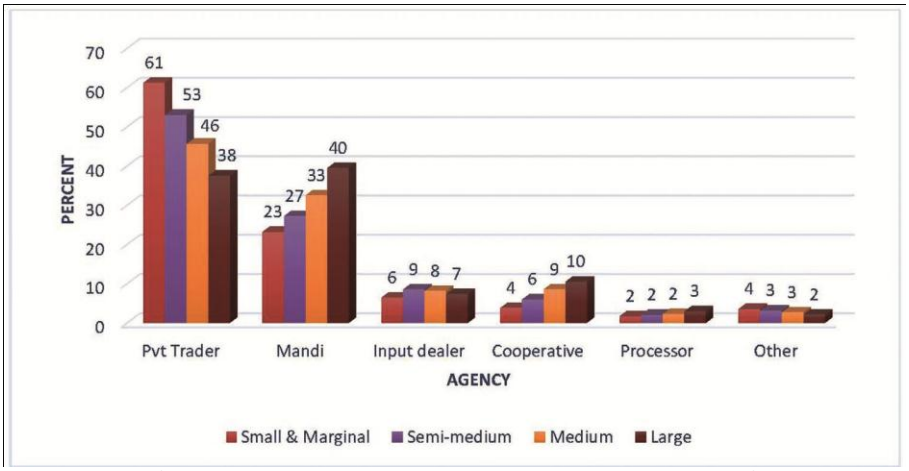
TABLE 1. CROP-WISE DISTRIBUTION OF HOUSEHOLDS SELLING THEIR PRODUCE TO VARIOUS MARKETING AGENCIES

(*per cent*)

| Crops | Private Traders | Mandi | Cooperatives | Input dealers | Processors | Others |
|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | | | Gujarat | | | |
| Cereals | 77 | 14 | 3 | 5 | 0 | 1 |
| Pulses | 76 | 18 | 2 | 3 | 0 | 1 |
| Sugarcane | 3 | 0 | 0 | 70 | 27 | 0 |
| Spices | 31 | 33 | 14 | 14 | 8 | 0 |
| Fruits | 43 | 14 | 35 | 0 | 8 | 0 |
| Vegetables | 63 | 16 | 11 | 11 | 0 | 0 |
| Oilseeds | 46 | 42 | 5 | 6 | 1 | 0 |
| Non-food* | 57 | 22 | 10 | 9 | 2 | 1 |
| | | | Punjab | | | |
| Cereals | 13 | 53 | 1 | 28 | 0 | 5 |
| Pulses | 0 | 100 | 0 | 0 | 0 | 0 |
| Sugarcane | 13 | 23 | 0 | 3 | 61 | 0 |
| Spices | 0 | 0 | 0 | 0 | 0 | 0 |
| Fruits | 0 | 100 | 0 | 0 | 0 | 0 |
| Vegetables | 19 | 75 | 0 | 0 | 0 | 6 |
| Oilseeds | 40 | 20 | 0 | 0 | 0 | 40 |
| Non-food | 28 | 58 | 1 | 6 | 2 | 5 |
| | | | All India | | | |
| Cereals | 57 | 24 | 9 | 6 | 1 | 3 |
| Pulses | 55 | 33 | 10 | 1 | 0 | 2 |
| Sugarcane | 23 | 5 | 3 | 37 | 28 | 4 |
| Spices | 62 | 23 | 7 | 2 | 1 | 5 |
| Fruits | 61 | 23 | 9 | 1 | 1 | 5 |
| Vegetables | 60 | 31 | 4 | 1 | 0 | 4 |
| Oilseeds | 59 | 30 | 5 | 3 | 0 | 3 |
| Non-food | 62 | 20 | 9 | 4 | 2 | 3 |

*Source:* Produced from 70th Round, unit-level data on Situational Assessment Survey of Farmers, NSSO.
*Tobacco, cotton, jute, mint, bamboo, cane etc.

Further**,** the situation is quite grim for small and marginal farmers as the share of private traders is 61 per cent which has been declining with the increase in the size of land (Figure 2). On the contrary, the share of procurement in the *Mandi* is increasing with the land size indicating that large farmers have better access to institutional markets and small farmers are unable to sell their marketable surplus in these markets, further reducing their profitability.




*Source:* Produced from 70th Round, unit-level data on Situational Assessment Survey of Farmers, NSSO.

Figure 2. Percentage Contribution of Various Agencies for Marketing of Agricultural Produce by Farm Size.

## III

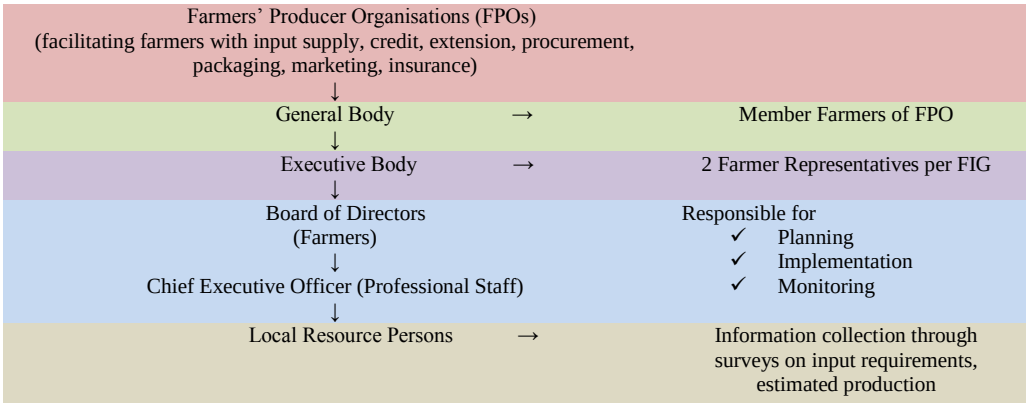
## FPOS IN THE CONTEXT OF VALUE AGGREGATION

To integrate the small farmers with agricultural market for more remunerative prices with low transaction cost and encourage them for the sale of their surplus production, Government of India introduced a pilot scheme, Farmer Producer Organisations (henceforth, FPOs) during 2011-12 through Small Farmers' Agribusiness Consortium (SFAC). The purpose of the formation of FPOs is to collectivise farmers, especially small producers, at various levels across several states so as to foster technology penetration, improve productivity, enable improved access to inputs and services and increase farmer incomes, thereby strengthening their sustainable agriculture-based livelihoods (Government of India, 2013).

SFAC has been the nodal agency to establish the FPOs through resource institutions. Resource institutions help building the FPOs during first three years with the financial support from SFAC. These institutions are mainly responsible in providing inputs, technical knowledge, financial resources and infrastructure to strengthen farmers' access to markets (Figure 3). Such an enabling policy environment will leverage their collective production and marketing power.

The key objective of FPOs is to enhance the forward and backward linkages for small farmers through provisions of technology, inputs and access to the market. They organise the farmers through farmer informal groups (FIGs) and aggregate the input demand and produce and help in reducing transaction costs and bringing economies of scale. FIGs constitute around 15-20 members and build their association with an appropriate federating point which is called FPO to manage and plan their crop production. The decentralised structure of FPOs allows the capacity

building, ensures access quality inputs and services for intensive agricultural production and encourages cluster competitiveness with access to remunerative markets.




*Source*: Reproduced from National Policy for the Promotion of Farmer Producer Organisations, Department of Agriculture and Co-operation, Government of India.

Figure 3. Structure and Operations of Farmers Producer Organisation in India.

## IV

## SUSTAINABILITY AND VIABILITY OF FPOS: A CASE OF GUJARAT AND PUNJAB

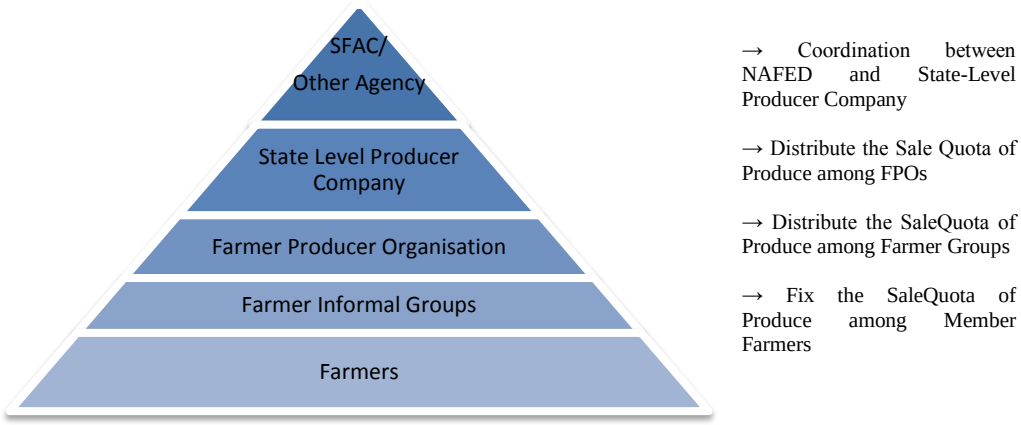
This section of the paper is based on field observations from the states of Punjab and Gujarat in 2018. This survey has compiled information from various stakeholders of FPO model such as farmers, FIGs, FPOs, State level Producer Company (SLPC), government officials and the resource institutions (RIs) responsible for establishing/facilitating the FPOs (Appendix 1). There are total 7 and 20 FPOs in Punjab and Gujarat respectively among which most of them are supported by SFAC. There are other FPOs which have been promoted by NABARD and a few of them are also working without association with any sponsored agency. The information was collected on the working, operations and formation of FPOs Punjab and Gujarat to study factors influencing profitability and sustainability of FPOs

FPOs are formed on the principle of clustering approach. The surveyed FPOs in Punjab are based within the radius of 60 kms from Ludhiana. Due to potential of urban consumption of raw, semi-processed and processed-food items, the vegetables and fruit markets of Ludhiana and Chandigarh are already well flourished and provide opportunities to market these crops. The surveyed FPOs were formed to enhance area under horticultural crops, ensure better prices through aggregation, reduce transaction costs and lower the price risk. Five FPOs were surveyed each from Punjab and Gujarat for a comparative picture of state-level performance.

*Institutional Structure of FPOs*

Majority of the FPOs in Punjab are registered under the Companies Act, 1956 whereas in Gujarat co-operative form of legal binding is more prevalent. It has been observed that FPOs having co-operative binding were already prevalent before the initiation of FPO models and were performing functions similar to those of the FPOs. These FPOs were formed during the period 2012 to 2014. The RIs were identified by SFAC and given an annual grant of Rs.9 lakh for initial three years of the FPOs for farmers' mobilisation, establishment of FPO, capacity building and operational costs.

The aim was to establish the business capacity of FPO by the end of three years and sustain its operations without any significant support from RI and the government. Further, FPOs are eligible for equity grant to establish processing units, enhancement of their operations of procurement of inputs and produce. Equity Grant Scheme provides support to the equity base of Farmer Producer Companies (FPCs) by giving matching equity grants subject to maximum of Rs.10 lakh per FPC in two instalments and to address promising and emerging FPCs which have paid up capital not more than Rs.30 lakh with a view to the undernoted primary aims. The basic model of FPO approach is bottom-up which has been presented in Figure 4.




*Source: Authors' own Figure*.

Figure 4. Vertical Integration of Agricultural Marketing through FPOs.

Small farmers are aggregated in small groups named Farmer Informal Groups (FIGs) and make one FPO in a designated area. The surveyed FPOs involve 800 to 2000 farmers amongst whom majority are small and marginal for both the states. FPOs have been aggregated by SLPC. In Gujarat the SLPC is called GUJPRO Agribusiness Consortium Producer Company Limited[2]while no such agency existed in Punjab. SLPC facilitates sale of the produce from FPOs to formal procurement agency such as NAFED or any other formal agency.

*Operations*

Institutional support for the success of an FPO is very important but the RIs supposed to support to FPOs was missing in Punjab. The FPOs in Punjab were almost inactive since the last two years. After first 3 years, the RIs appeared to have left the FPOs and all partners responsible for FPO operations became inactive. The small farmers could not benefit from the FPOs as they ended up selling their produce to the local traders or local aggregators who charged very high commission ranging between 6-9 per cent of the produce value. Even the large farmers could not access the wholesale markets of Ludhiana and Chandigarh due to lack of logistical support, high transportation charges and time-consuming processes.

In some cases, there was a complete disconnect of the smallholders as poor functioning of FPOs could not help in finding potential buyers for their produce. The lack of trust within the members is another reason for poor functioning of FPOs in Punjab. It has been usually found that the matching grant has not been utilised properly. There is a common distrust among the member farmers that the RIs and the professionals of the FPOs have not spent the grant and siphoned off the entire amount of the grant which was given on the account of establishing food-processing units and for marketing logistics. Therefore, the surveyed FPOs are found to be non-operational currently in Punjab, despite their willingness to adopt new institutional setups for better income.

Apart from this, inefficient marketing system under FPOs has led to serious repercussions on crop diversification in this region.

Working of FPOs: A Setback for Diversification Efforts in Punjab

One of the members of an FPO clearly stated that "After being a part of FPO, we actively participated in the meetings and adopted the recommended seeds and cultivation practices. We made efforts to diversify cultivation from wheat to garlic production and initially planted 5 acres of garlic with the seeds provided by FPO. However, lack of knowledge with FPO about appropriate markets and buyers of garlic made us sell the entire produce in local markets at throw away prices. Gradually, absence of any professional assistance from FPO made us resort back to cultivation of wheat and rice."

On the contrary in Gujarat, the FPO model portrays a mixed baggage where some FPOs are doing better while others have stopped operating. In the sample taken from Gujarat, some of the FPOs are newly formed and are under their three-year operational grant such as *Lilotri Pulse Producer Company Ltd* but others are relatively old such as *Krushidhan Producer Company.* The surveyed FPOs are functional in terms of providing the farmers training, collecting data on input needs and expected production, regular meeting with the board of directors, establishing forward linkages with the GUJPRO and other corporate buyers. Very few but some of these FPOs are also involved in processing and branding of the produce. *Krushidhan* is involved in processing of its produce and also have created a brand for seeds. Similarly, *Dhari Krushak Vikas Producers Company Ltd.*is involved in the

preparation of quality groundnut (GG20) and wheat (GW-366) seeds for its farmer-members. Using these seeds, farmers were able to prepare 38 quintals of groundnut and 32 quintals of wheat seeds. This FPO has also procured 165 tonnes of cotton from farmers especially from far off villages. The total procurement in terms of amount was around Rs.51.15 lakhs which directly benefited 130 farmers and resulted in a saving of around Rs. one lakh as transportation and labour charges. The most noteworthy effect of this initiative was that the farmers were able to yield better prices for their produce. The *status quo* of various operations of these FPOs in both the states are highlighted in the Table 2.

TABLE 2. STATUS-QUO OF FPO MODELS IN PUNJAB AND GUJARAT

| Indicators | Gujarat | Punjab |
|---|---|---|
| (1) | (2) | (3) |
| Existence of SLPC | ✓ | X |
| Existence of RIs | ✓ | X |
| Regular meetings | ✓ | X |
| No of farmers associated per FPO | 1500-2000 | 800-1000 |
| *Input provisioning:* | | |
| Seed | ✓ | ✓ |
| Fertiliser | ✓ | X |
| Pesticide | ✓ | X |
| Extension services | ✓ | X |
| Logistics | ✓ | X |
| Warehousing | ✓ | X |
| Processing | ✓ | X |
| Marketing plan | ✓ | X |
| Product branding | ✓ | X |

*Source: Compiled from field survey data,2018.*

Some FPOs operating in tribal belt bordering Maharashtra are assisting farmers with low cost bio-pesticides for cotton production. These FPOs are managing the marketing of output to NAFED and other corporate buyers through their erstwhile market linkages. Thus, such marketing strategies to direct any amount of produce to alternative marketing channels provide an edge to get better prices for their members, unlike in the case of their counterparts in Punjab. Although these FPOs are benefitting from market tie-ups but limited quota and coordination among the Government procurement agencies, SLPC, and FPOs resulted in poor coverage of procurement.

Lack of Coordination Among the Stakeholders During Procurement

One CEO from FPO in Gujarat mentioned about the coordination issue "untimely and delayed demands from government procuring agencies and hence from the SLPC have made the farmers forgo their produce to local traders at lower prices. As a result of which the additional revenue was not harnessed. During the last season, the bumper crop of superior quality tur dal was sold at around Rs.35-40 per kilogram to local traders as against prevailing MSP of Rs.54.5 per kilogram. Even the local trades were hesitant to pay such a low price due to bumper harvest hence over-supply. We, thereby, helped farmers by selling tur dal to Safe Harvest which procure organically produced crops at Rs.47 per kilogram".

*Sustainability: Product Quality, Branding and Processing.*

The feasibility of FPOs post termination of the grant provided by SFAC (which last only two years post establishment of this system), poses a question to function as an independent organisation. There are some key challenges in terms of access to credit to meet their infrastructural and working capital needs which have assumed the centrestage. Most of the FPOs are organised by small and marginal farmers and their contribution to equity base organisation is often insufficient to cover even the operational cost. Although these organisations are owned, and managed by farmers, but the remuneration to staff like board of directors, CEOs, local resource persons, chartered accountants needs to be covered by the profit margins made by FPOs. Another problem is obtaining loan from banks, reluctance in lending loans to organisations like FPOs with small turnover and absence of collateral makes it difficult. Therefore, a favourable ecosystem is a must for evolution of these value networks because they deal with the most vulnerable part of agri-value networks which starts from the farm and goes on till processing and the distant markets. The chief impediments which have been highlighted by the FPO professionals are highlighted in Table 3. Analysis from the two states reflects that the magnitude of impediments is different, where FPOs in Punjab are facing organisational issues like lack of trust among farmer members unlike,Gujarat with FPOs facing post-organisational issues like processing and storage.

TABLE 3. HENRY GARETT RANKINGS ON IMPEDIMENTS FOR SUSTAINABILITY OF FPOS

| Aspects | Henry Garett ranking | |
|---|---|---|
| | Gujarat | Punjab |
| (1) | (2) | (3) |
| Credit requirements to cover time lag between sale and payment | III | V |
| Operational expenses after completion of establishment grant | V | I |
| Lack of warehouses | IV | VI |
| Lack of processing | I | III |
| Lack of marketing linkages | II | IV |
| Lack of trust among FPO members | VII | II |
| Limited stake in decision making for procurement quota | VI | VII |

*Source:* Computed from field survey.

At every step, from the establishment till the stage of business expansion, the support from financial resources is very critical. However, the requirements may vary at every stage of value network. For instance, after incubation and establishment of FPO, funds are chiefly required for growth and expansion of their business; in setting up processing units, grading/sorting yards, cold storage, transportation facilities etc. For example, majority of the FPOs interviewed in Gujarat, lack adequate warehousing facilities to meet the demands of farmers and therefore, have no choice but to incur a major portion of their financial resources on storage facility. However, *Krushidhan* is developing own warehouse for storage and primary processing of agricultural produce. Such an investment will drastically lower the cost of handling

and logistics for the farmers. Whereas *Lilotri Producer Company* has rented the redundant godowns of APMC for which they pay out rent on monthly basis. Among the surveyed farmers and FPOs in Punjab, the farmers face the similar problem of lack of storage and due to this they get involved in number of intermediaries in this network to sell their bulk produce in mandi as mentioned in Table 4.

TABLE 4. HENRY GARETT RANKINGS ON PERCEPTION OF FARMERS ABOUT SUSTAINABILITY OF EXISTING FPOS

| | Henry Garett ranking | |
|---|---|---|
| Indicators | Gujarat | Punjab |
| (1) | (2) | (3) |
| Willingness to participation | XII | VIII |
| Engagement of RIs after establishment | XI | I |
| Remunerative prices of produce | II | VI |
| Input procurement | V | XII |
| Marketing Tie-ups | IV | VII |
| Utilisation of funds provided by SFAC | VIII | II |
| Utilisation of funds collected from members | IX | III |
| Time lag between sale of output and price realisation | III | XI |
| Operational and maintenance challenges | VI | IV |
| Establishment of processing units | I | V |
| Limited procurement quota | VII | X |
| Support from state | X | IX |

*Source:* Computed from field survey.

The concept of FPO, in this district of Punjab has been weak whereby many farmers sell their produce through Arhtiyas by paying out a good percentage of their total produce rather than share in profit. As a result, farmers remain indebted to these local creditors and input dealers via whom they sell their produce. Even the progressive farmers from Samana Farmers Vegetable Producer Company Limited in Punjab work on the principle of collectivisation and sell their bulk produce of vegetables after giving their due percentage of commission to agents in the *mandis* of Ludhiana and Chandigarh. Though they find markets and mandis to sell the vegetables but the layers of intermediaries they go through absorbs good amount of revenue from the farmers' pockets.

Apart from storage, limited access to marketing resources to understand market fluctuations, market factors, consumer preferences, also requires significant amount of investment and skills, which makes this venture even more vulnerable. Marketing of the crop, which includes promoting, selling and the efficient distribution of the crop, can help procure additional profits in the vegetable business. The existing *mandi* system is conventional and does not support branding of agricultural produce. This method strives to consolidate commodities without giving any opportunity for differentiation. It does not incentivise the farmers to provide superior or premium quality produce and charge premium prices. FPOs lack innovation in terms of new ideas to attract corporate buyers through product safety, quality and specifications, due to which they are unable to create their niche in the market.

Along with investment in value chain of the produce, improvement in quality is also vital. Sorting, grading and processing of agricultural products help differentiate the produce based on quality. Krushidhan, for example, has set up its own yard where trained employees/farmers, especially women are engaged in sorting of pulses and vegetables based on size and quality of these products (primary manual processing). However, to further economise the expenditure, the two FPOs are in process of setting up a *mini-dal* mill in the area. Generally, FPOs face challenges not just on the account of resources but also face severe competition from existing brands in the market to establish their own processing unit. Therefore, brand building for every commodity is important which can enhance their value for consumers. Integration of FPOs into main stream marketing along with branding of farm produce is integral for sustenance of FPOs. Therefore, FPOs needs to equip itself with trade negotiations, brand building, attracting finance from formal institutions, to mature as co-operative-business model. Therefore, a long-term commitment is essential for the survival of this model.

## V

## CONCLUSION

This paper attempts to understand the status-quo of FPOs in India. It carefully assesses the various dynamics of producers' organisation in the study areas; Punjab and Gujarat. The operational and managerial assistance provided by FPOs enables farmers to organise their production and post-harvest decisions. It also provides competitive edge to the small and marginal farmers by facilitating them with quality inputs, technical knowhow, financial resources, and most importantly linking petty producers to the formal marketing channels of agricultural produce. It encourages collective farm operations to enhance income levels by lowering transaction cost and increasing bargaining power of the farmers in the presence of structural constraints like small holdings and increasing pressures due to globalisation. The study finds that there are various conditioning factors that determine the sustainability and effective operations of FPOs. The growth of FPOs is also region-and area-specific as the case studies of the two states reflect in the present paper.

Land size and the cropping pattern in Punjab are two major reasons for the failure of FPOs. Prevalence of large land holders with well informed farmers and dominance of wheat-rice cultivation leaves less incentive for farmers to actively participate in the FPOs. These FPOs were formed under the Vegetable Initiative for Urban Clusters (VIUC) to encourage vegetable production and promote diversification. However, the assured and limitless procurement of wheat-rice produce make the farmers reluctant to venture into other crops, especially, vegetable production. A handful of progressive farmers are well aware of nearby markets and mandis to sell their vegetable produce but even these farmers cannot escape the handsome commission amounts reserved for *Arhtiyas*. Given this situation, farmers in Punjab regardless of

cropping pattern and land size are keen to adopt new institutional and technological innovations.

A historical background of well-established co-operatives' culture in Gujarat has proven to be successful to kick start the FPO regime. Therefore, the performance of FPO model has presented an excellent case in this state. The collective efforts of small and marginal farmers, especially among socially disadvantaged, to shift the social and economic frontier has set a clear platform to launch FPO model. Krushidhan producer company, Ekta vegetable producer company are the examples, to name a few, which have been established before SFAC-led FPO programme. The increasing credibility and profitability of these farmers' led collectives have substantially drawn stakeholders' participation. The intellectual and organisational inputs provided by resource institutions, in the form of product quality, specification, branding and marketing (exploring new market opportunities), have paved way to lead FPOs for their long-run sustainability. Therefore, sustainability and viability of this model depends upon consistent organisational support with the government intervention to understand its nitty-gritties of this framework.

There is a need to adopt a flexible approach to cater to the needs of producers therefore upscaling of FPOs is formidable. A holistic approach should be taken to strengthen the coordination between SLPC, SFAC and the procurement agencies so that the rationing of the produce can be decided beforehand to lower the market risks. In the era of global value chains, non-price competition in terms of product loyalty and branding has given more priority, branding is an important area to grab the market share of agricultural produce. Apart from issuing the grant for the establishment of FPOs, government also needs to support these PCs to institute processing units and storage facilities to get remunerative prices of the produce. A prerequisite for making an FPO successful is to have establishment of central agency to disseminate awareness about the practices of PCs among all the stakeholders. A joint venture between the developmental agencies and the state is essential to nurture and scale up the operations of FPOs in India. Last but not the least, a central authority should scrutinise each stakeholder in FPO on regular basis to ensure a seamless farm-to-fork value networks, comprising production, aggregation, warehousing, processing and retailing.

## NOTES

1. The transaction costs include market fee, tax, driage, R&D Cess, communication to Society, custody and maintenance and interest charges and admin charges

2. A state–level forum was formed realising the benefits of taking collective actions in agri-business, knowledge and information sharing and taking actions for policy reforms on 27th November 2012. This forum has been registered as SLPC and is recognised as "GUJPRO Agribusiness Consortium Producer Company Limited" (GUJPRO).

## REFERENCES

Daviron, B. and P. Gibbon (2002), "Global Commodity Chains and African Export Agriculture", *Journal of Agrarian Change*, Vol.2, No.2, pp.137-161.

De Janvry, A., and E. Sadoulet (2005), "Achieving Success in Rural Development: Toward Implementation of An Integral Approach", *Agricultural Economics*, Vol.32, pp.75-89.

Gereffi, G.; J. Humphrey and R. Kaplinsky (2001), "Introduction: Globalisation, Value Chains and Development", *IDS Bulletin*, Vol.32, No.3, pp.1-8.

Gereffi, G., and J. Lee (2012), "Why the World Suddenly Cares About Global Supply Chains", *Journal of Supply Chain Management*, Vol.48, No.3, pp.24-32.

Government of India (2013), *Policy and Process Guidelines for Farmer Producer Organisations*, Dept. of Agriculture and Cooperation, Ministry of Agriculture, New Delhi. http://mofpi.nic.in/sites/default/files/fpo_policy_processguidelines_1_april_2013.pdf Accessed on 15 March, 2018.

Humphrey, J. (2001), "Governance in Global Value Chains", *IDS Bulletin*, Vol.32, No.3, 19-29.

Jia, Xiangping and Jos Bijman (2014), "Contract Farming: Synthetic Themes for Linking Farmers to Demanding Markets," in C.A. da Silva and M. Rankin (Eds.) (2014), Contract Farming for Inclusive Market Access, Rome: FAO, pp 21–35.

Kirsten, J., and Sartorius, K. (2002), "Linking Agribusiness and Small-Scale Farmers in Developing Countries: Is there a New Role for Contract Farming?", *Development Southern Africa*, Vol.19, No.4, pp.503-529.

Kutlu, Ahmet Can (2012), "Outsourcing Contracting Strategies from Supplier's Side: A Real Options Approach Based on Transaction Costs", *Procedia-Social and Behavioral Scienc*es, Vol.58, pp.1601–10.

Minot, N. (2011), Contract Farming in Sub-Saharan Africa: Opportunities and Challenges, *Rwanda, Kigali, ACTESA_MSU_IFPRI African Agricultural Markets Programme*.

National Sample Survey Office (NSSO) (2013), *Situational Assessment Survey of Farmers*, National Sample Survey Office, Ministry of Statistics and Programme Implementation, Government of India, New Delhi.

Pingali, P. (2007), "Agricultural Growth and Economic Development: A View through the Globalization Lens", *Agricultural Economics*, Vol.37, pp.1-12.

Reardon, T., and C.B. Barrett (2000), "Agroindustrialization, Globalization, and International Development: An Overview of Issues, Patterns, and Determinants", *Agricultural Economics*, Vol.23, No.3, pp.195-205.

Rondot, P. and M.H. Collion (2001), *Agricultural Producer Organizations: Their Contribution to Rural Capacity Building and Poverty Reduction*.

Singh, S. (2002), "Contracting Out Solutions: Political Economy of Contract Farming in the Indian Punjab", *World Development*, Vol.30, No.9, pp.1621-1638.

Singh, S. (2012), "New Markets for Smallholders in India: Exclusion, Policy and Mechanisms", *Economic and Political Weekly*, Vol.47, No.52, 29 December, pp.95-105.

Singla, N., S. Singh, and P.K. Dhindsa (2011),"Linking Small Farmers to Emerging Agricultural Marketing Systems in India-The Case Study of a Fresh Food Retail Chain in Punjab", *Agricultural Economics Research Review*, Vol.24, No.1.

Van Der Meer, C.L.J. (2006), "Exclusion of Small-Scale Farmers from Coordinated Supply Chains", *Agro-food Chains and Networks for Development, Amsterdam*, pp.209-218.

APPENDIX 1. CHARACTERISTICS OF SURVEYED FPOS

| Level of Investigation (1) | Name (2) | Location (3) | Crops (4) |
|---|---|---|---|
| | Punjab | | |
| State-level Producer Company | Inactive | | |
| FPOs | 1) Sangrur Vegetable Producer Company Ltd.<br>2) Jagraon Farmers Vegetable Producer Company Ltd.<br>3) Fatehgarh Sahib Vegetable Producer Company Ltd.<br>4) Samana Farmers Vegetable Producer Company Ltd.<br>5) Jalandhar Vegetable Producer Company Ltd. | Malerkotla, Sangrur<br>Jagraon, Ludhiana<br>Fatehgarh Sahib<br>Dhanory, Patiala<br>Jalandhar | Cauliflower, Peas, Cabbage, Tomato, Radish, Carrot, Onion, Brinjal, Okra, Round gourd, Ridge gourd, Bitter gourd, |
| No. of Farmers | 50 | All locations of FPOs | Cucumber, Water melon, |
| Government Officials | Horticulture Department Officials | Ludhiana and Fatehgarh Sahib | Chili, Capsicum, Bottle Gourd |
| Resource Institution | Inactive | | |
| | Gujarat | | |
| State-level Producer Company | Gujpro Agribusiness Consortium Producer Company Ltd. | Ahmedabad | |
| FPOs | 1) Shri Munikripa Vegetable Producer Company Ltd.<br>2) Bhal Pradesh Vividh Khet Utpadak Ane Vechan Sahakari Mandali Ltd.<br>3) Netrang Pulse Crop Producer Company Ltd.<br>4) Lilotri Pulse Producer Company Ltd.<br>5) Shree Khambat Taluka Anusuchit Jati Sehkari Kheti Utpadak Sangh Ltd.<br>6) Dhari Krushak Vikas Producers Company Ltd. | Ahmedabad<br>Ahmedabad<br>Bharuch<br>Sagbara, Narmada | Tomato, Bitter Gourd, Brinjal, Gram, Cumin Seed, Wheat Pegion Peas, Green Gram, Black Gram, Gram and Cotton |
| No. of Farmers | 50 | All locations of FPOs | |
| Resource Institution | 1) Development Support Centre<br>2) Aga Khan Rural Support Programme<br>3) Cohesion Foundation Trust | Ahmedabad<br>Ahmedabad, Netrang Ahmedabad | |

APPENDIX 2. HENRY GARRETT RANKING TECHNIQUE

The basic principle of this method is that stimuli are presented to the respondents and are asked to rank them based on their perception. Since the perception of individuals differs, the ranking of the stimuli also varies. It is because of this reason that the rank values of the stimuli cannot be determined by the ordinary method of frequencies and hence, Henry Garret Ranking Technique was used.

Percentage position = (100(R_ij-0.5))/N_j

Where, Rij = Rank given for the i-th item by the j-th individual, and Nj = Number of items ranked by the j-th individual. The percentage position of each rank is converted into scores using Garrett Table.