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Opportunities and Constraints of Linking Farmers with futures markets in India

1 Dr. Preeti Garg, 2 Mr. Mitul Garg
1 Assistant Professor, Department of Management and Commerce PES University, Bangalore
Email:preetigupta2k1@yahoo.com Tel: +91-96111-88100
2 BTech. 8th Semester, Student, Electronics and Communication Engineering PES University, Bangalore
Email:mitulgarg3@gmail.com Tel: +91-74062321746

Corresponding Author
Dr. Preeti Garg
Assistant Professor, Department of Management and Commerce PES University, Bangalore
Email:preetigupta2k1@yahoo.com Tel: +91-96111-88100

ABSTRACT

Farmers in India, particularly small and marginal farmers, do not trade directly in the agri-futures market. Their small size, lack of trust and understanding of futures market and dependence on middlemen, are some of the main deterrents. Farmer Producer Organizations (FPOs) play an important role in this context because they can procure commodities, aggregate them, and ensure that the size and quality standards required for agri-futures trading are met. The Union Finance Minister set a target of 10,000 FPOs in the next five years in her Budget speech for the Union Budget of FY20 (by 2024). NCDEX has been attempting to increase FPO participation in markets for several years. This is a qualitative study based on in-depth interviews with representatives of NCDEX officials, producers involved in the agricultural value chain, interest groups, and government agencies. In addition, for specific case-study data, interviews were conducted with local actors at the producer-company level at seven producer companies and their supporting organisations in the states of Gujarat, Rajasthan, and Madhya Pradesh. The study attempts to bring understanding of ways of linking farmers with FPO in India and map the role of FPO in agri value chain creation. Based on this research, the paper makes the recommendations for FPOs, NCDEX, and the government in order to achieve better price risk management and quality of life for the farmers of the country.

Keywords: Commodity futures, farmer producer organizations (FPOs), NCDEX

INTRODUCTION

Improving agricultural marketing and lowering price risk for India's small and marginal farmers has been a major policy priority for decades (Chand & Sahadevan, 2012). Agri-futures are important because they not only help with price discovery, but they also help to mitigate price risk by ensuring a pre-determined price. Agri-futures are financial contracts in which the buyer agrees to purchase an asset or the seller agrees to sell a physical agri-commodity at a future date and price. Despite it's more than a century of existence, India's agri-futures market is shallow and lacks liquidity. Farmers have a shaky relationship with the futures market. Acreage decisions are made based on last year's prices rather than projected future prices. This results in a vicious circle of oversupply and low prices, followed by scarcity and high prices. Some futures contracts require the asset to be physically delivered, whereas others are settled in cash. Trading in futures markets guarantees both the buyer and seller a fixed price for the commodity at a future date. The World Bank's International Task Force on Commodity Risk Management recommended the establishment of an international intermediary to facilitate transactions between service providers of price insurance instruments and potential users of such instruments in developing countries, particularly farmer organisations, processors, and traders.

Although the government has made significant efforts to improve marketing links for smallholders, direct benefits, particularly in price risk management, have remained limited, with the exception of support prices. The main issues are small quantities of produce/marketed surplus, large numbers, and small and marginal farmers' low financial capacity and literacy. The National Agriculture Policy (NAP) of 2000, for example, was aimed at protecting small farmers from market risks and externalities, and bringing smallholders together and efficiently connecting them with the agricultural value chain was an important goal of the policy (Ton, 2008; Trebbin and Hassler, 2012). Pilot studies conducted by NABARD, SFAC indicate that the problems of Indian farmers can be addressed by organising them into producer's organisation. These POs enable the farmers reap the benefits of economies of scale, procurement of raw materials, processing, marketing of produce and access to adequate credit. To promote a sustainable FPO involves observation of appropriate legal framework, sound organisational structure, social project appraisal, process planning and management. The National Commodity & Derivative Market (NCDEX), India's largest agri-commodity exchange, has been trying to get farmers and

FPOs on board for the past few years. Ram Rahim Pragati Producer Company, situated in Madhya Pradesh's Dewas district, enrolled on the exchange platform in 2014 and hedged soybean price risk. The Securities and Exchange Board of India SEBI has replaced the Forward Market Commission as a commodities market regulator, which could open up new opportunities for agricultural commodity derivatives trading (Ghosh & Dey, 2015). A Producer Organization (PO) is a legal entity can be a producer company, a cooperative society, or any other legal entity that allows members to share profits/benefits. The Small Farmers' Agribusiness Consortium is assisting in the promotion of FPOs. PO is a generic term for an organisation of producers of any type of produce, such as agricultural, non-farm products, artisanal products, and so on. Legal provisions exist in institutions registered as cooperative societies and producer companies for the distribution of profits earned by the PO in the form of dividends (NABARD, 2015). During 2007-2008, a pilot project was launched in India to encourage farmer participation in the cotton futures market. Sajjata Sangh (a Gujarat-based NGO network), AKRSP (I), MCX, NABARD, Cardinal Edge Management Services Limited, and the Chotila Taluka of Surendranagar district in Gujarat were among the stakeholders. The project's goal was to assist the sample farmers (67) in gaining access to market information, raising awareness, and becoming acquainted with hedging mechanisms. With a strong institutional structure, this attempted to connect farmers with professional service providers and commodity exchanges, among other things, along the value chain (Dey et al., 2019). Based on average daily turnover, National Commodity & Derivatives Exchange Limited is India's leading agricultural commodity exchange, with market shares of 78.0 percent, 81.5 percent, 79.9 percent, and 78.1 percent in the agricultural commodity segments for the six months ended September 30, 2019, Fiscal 2019, Fiscal 2018, and Fiscal 2017, respectively (by value). The Exchange has a diverse portfolio of permitted commodities totalling 23 (the most in the world), including commodities such as pulses, spices, and guar, which are not traded on any global platforms and are economically relevant to India, constituting an important component of India's global trade. “Connecting farmers with futures markets can be mutually beneficial to both,” according to the ICRIER paper. “Farmers will be able to reap the benefits of efficient price discovery if they are linked to a consistent, liquid, and deep futures market.” Farmers will become more involved if they discover that markets are consistent, reliable, and accessible, resulting in more liquid and deep markets (Hindu, 2020).

Theoretical framework

In order to mitigate price risks, NCDEX has launched a number of initiatives to provide farmers with access to commodity derivatives markets, in line with the government's vision of doubling farmers' income. Small farmers' livelihoods in India, like elsewhere in the developing world, are under threat as a result of agricultural liberalisation and privatisation, as well as increased private capital interest in the agribusiness sector. Small-scale farmers face new challenges as the state withdraws from productive and economic functions, as well as changes in the organisation of marketing channels. Organization and collective action can help farmers improve their livelihoods in this environment of increased insecurity and competition. In order to participate in futures markets, FPOs can procure and aggregate produce while ensuring that size and quality standards are met. This would involve two steps: first, connecting farmers to FPOs, and then connecting FPOs to futures markets. According to the study, the following constraints exist in connecting farmers to FPOs and, later, futures: (1) farmers' already existing strong relationships with middlemen and traders; (2) given the higher risk involved in output-related activities, fewer FPOs are involved in marketing; and (3) a lack of FPO capacity, (4) management issues with FPOs, (5) a lack of trust and understanding of the futures market, and (6) a high level of risk in the futures market (Chatterjee et al., 2019). Currently, the country has approximately 6000 FPOs that have been promoted by SFAC, NABARD, State Government departments, NGOs, and other promoting organisations. According to field evidence, approximately 20-25 percent of FPOs have benefited primarily in terms of improved credit, quality inputs, and assured markets, resulting in increased income to members by eliminating intermediaries, lowering cultivation costs through bulk input sourcing, and diversifying business activities in accordance with market demand. However, one of the major challenges that FPOs face today is ensuring market linkage, which necessitates a significant shift in marketing strategy. If FPOs are to participate in futures trading on a reasonable scale, they must take huge steps. The role of Farmer Producer Organizations (FPOs) as aggregators becomes increasingly important.

The Ecosystem for Sustainable FPO depicted graphically

Procurement Marketing Processing	Marketing
Direct Marketing & FPO as rural retail point	Retailing
Capital, revolving Fund, Loans, Credit Guarantee	Finance
Inputs, Business planning, advisory, Agro services Warehouse receipt	Services
State and Central Govt schemes	Infrastructure

Training and Capacity Building	HRD
Promotion, Nurturing, licenses Taxes compliances, trade policies	Govt policies

Source: NCDEX

REVIEW OF LITERATURE

Hedging serves as a substitute for a farmer with a high risk aversion, and the benefits of hedging, defined as certainty equivalent income gain, are positively related to natural disasters (Ranganathan & Ananthakumar, 2014). ITC-ABD, India's largest agri-commodity aggregator and exporter, has used these exchange platforms to hedge price risk. Farmers' participation in commodity exchanges has been low, and risk mitigation facilities for sharing ITC-ABDs trading strategy have been provided to Indian farmers (Rajib, 2015). It is observed that farmers who are aware of futures/forward markets are also likely to have stronger associations with farmer bodies (cooperatives, PACs, FPC), APMC officials and traders/dealers in both Gujarat and Madhya Pradesh (Dey et al., 2019). Farmers have been observed making planting decisions based on prices from the previous year rather than expected harvest prices. Policymakers, on the other hand, see it as a mystery and a major source of inflation (Gulati et al. 2017). Allowing FPOs to trade in commodity markets can benefit both parties, and it may help farmers make cropping decisions based on next year's prices rather than last year's prices. This will loosen the grip of middlemen and traders, ultimately increasing agricultural families' income (Hindu, 2020). Farmers manage price risk through FPOs, and in the last ten months, over 25000 small and marginal farmers have used the NCDEX trading platform. Women in Rajasthan's Bundi district formed an FPO with 2,300 members and sold produce at a higher price than wholesale markets offered two months later. Former head of the Small Farmers' Agribusiness Consortium, which was tasked with creating FPOs and connecting them to markets, Pravesh Sharma, believes that future and forward markets for a variety of crops should be permitted and aggressively promoted (Bera, 2020). Market institutions such as public warehousing and commodity exchanges, as well as their combined use, can aid in short and long-term marketing decisions. It enables manufacturers, consumers, and traders to create their own business strategies (Kozár & Fodor, 2006). Large FPOs play an important role in risk management through derivatives. According to Kapil Dev, Head Products and Business Development NCDEX, FPOs must be consolidated and FPOs must be educated about future and spot trading. Approximately 300 FPOs have registered with NCDEX, with 100 currently trading on the exchange. He went on to say that there are a slew of issues on the ground because FPOs represent farmers (Panel discussion in commodity markets, 2020). Based on P.C. Kannan & Co., Madhya Pradesh, India's largest coriander exporter's experience, this case study on coriander hedging with future contracts is presented. , Commodity futures allow exporters to quote a reasonable price and, as a result, set a contract for export in a competitive market. Commodity futures are also used to streamline procurement transactions, according to them (Hedging in commodity futures, NCDEX). In a Case Study on Kisan Beej Producers Organisation by the transformation of Farmers Clubs into Producer Organizations in the District of Bilaspur, Chhattisgarh State- A group of farmers from the Arpanchal Farmers Club Federation formed ‘Kisan Beej,' a ‘Producer Organization.' The PO was established under the ‘Chhattisgarh Autonomous Cooperative Act, 1999,' which allows farmer groups to operate as a business and earn profits. FPO Promotion and Development Process as outlined in the Department of Agriculture and Cooperation's Policy and Process Guidelines for Farmer Producer Organizations. Technoserve, a non-profit organization that develops entrepreneurial solutions to poverty by connecting people to information, capital, and markets, has partnered with JEEEika a developed FPO to undertake a technical assistance programme targeted at strengthen Bihar governments' efforts to aid farmers through FPO. Pilot was done at Purnia district with ten producer group for Maize crop by adopting aggregation model which helped them to reduce multiple layers and better price realization. The producer company was involved in risk mitigation by selling the produce in NCDEX (NABARD, 2015). The study relied on primary data collected from 60 farmers using a pre-tested schedule. The SWOT analysis of four FPOs in the districts of Janagaon and Siddipet revealed that the Telangana FPOs in the region are fortunate to have been supported by promoting institutions. The low level of participation afflicts the region's FPOs, as it has in other parts of the country. Members believe that liberal provisioning of capital is critical for business expansion and making FPOs a sustainable business entity (Manaswi et al., 2019). According to a study by Prasad & Prateek (2019) Producer firms can learn from the failure of traditional co-operatives and the success of new generation co-operatives and the central argument advanced is that there has been a greater reliance on equity and normative principles in the organizational structure and functions than on efficiency and design principles. In a training program “Linking Farmers to Market: Opportunities and Challenges**:** Feed The Future India Triangular Training (FTF ITT)**”** which was organized by CCS National Institute of Agricultural Marketing the executives prepared and presented individual "Back-at-work-plans" to help operationalize the relevant concepts learned during the programme in their respective countries. Back to work-plan also traces the link between Indian experience and back home extension issues. Back-to-work plans have been developed on topics such as creating a legal framework for FPOs, enhancing livelihood, using social media for marketing information systems, organizing agri-logistics for cassava chips, organizing storage, strengthening farmer clusters and

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federations, connecting farmers to microcredit, and improving marketing channels for small holders (Yadav, 2018)**.** Tsar Shah (2017) contends that the distinctions between promoting cooperatives and FPCs are, at best, superficial. He criticizes FPCs for "being sheep in wolf's clothing," citing a lack of design-thinking in the FPCs' promotional process, and goes on to state that the discourse in FPCs is to garner resources and concessions from external agencies, rather than "mobilizing energy for growth from within" Huang et al (2015) compared the changes that have occurred in China since the 1980s that have resulted in farmer specialized co-operatives, land-shareholder co-operatives, and co-operative unions as a departure from previous government-led models of farmers' associations. Sharma P. (2013) specifically mentions the fragmented presence of other modes of aggregation, such as informal and formal co-operatives, as well as the poor performance of contract farming for smallholders and FPOs have been argued as a new institutional paradigm to further the case of smallholders. The international performance of FPOs, particularly in India and China, has been cited as reflecting growth prospects, and an enabling policy environment has been cited as a significant factor influencing the emergence of FPOs. He advocates for efforts to build the capacity of managerial staff, but he does not argue for the government to play a definitive role in member mobilization. Toward the end, the commentary contextualizes FPOs' relevance to food security in India and mentions three critical barriers to membership and credit mobilization, as well as infrastructure provision that must be overcome for the role to be realized.

METHODS

Research Design

This is a qualitative study based on in-depth interviews with representatives of NCDEX officials, producers involved in the agricultural value chain, interest groups, and government agencies. In addition, for specific case-study data, interviews were conducted with local actors at the producer-company level at seven producer companies and their supporting organisations in the states of Gujarat, Rajasthan, and Madhya Pradesh. Data will also be gathered from secondary sources such as journals, reports, paper publications, and websites.

Objectives of the Study

1. To bring understanding of ways of linking farmers with FPO in India.
2. To map the role of FPO in agri value chain creation.
3. The evaluate factors that prevent the FPO participation in the futures market in India.
4. To recommend solutions to bottlenecks in the farmer-futures market link.

ANAYSIS OF INTERVIEWS CONDUCTED WITH EXPERTS

Mr. Manish Malhotra

According to Mr Manish Malhotra who was previously with NCDEX and now working in commodity markets brokerage firm, Price risk management is taken up by big trading companies like ITC, Kargil and hedging is performed. Farmers are not able to trade directly. FPO are formed which helps in Price risk management. Although APMC Act has changed, Mandi tax is abolished, warehouse subsidy, margin is reduced by SEBI to support the farmer. Institutional Push is Very important in price risk management and farmers participation in commodity market. Even 5 farmers can form FPO. Efforts are required to train farmers in technology and financial literacy need to be improved where the role of kisan call centres, KVK etc. is very important.

Mr. Kapil Dev

Mr. Kapil Dev, EVP & Head Product and Business Development, NCDEX said that Farmers do Price risk management through Farmers producers organizations their participation is limited due to socioeconomic factors like small land size etc. and it’s a challenge for them to open an account also because in emerging economies like India many farmers they don’t have PAN Card, documents etc. Most of the Indian farmer’s small and marginal farmers with small land-holdings and are fragmented, they face credit crisis. In India farmers are not even connected to bank so their connection is complex and challenging with commodity markets. Big framers globally are able to be associated with commodity markets. In India farmers are more benefited by price discovery and price dissemination which is a huge support in decision making. Farmers through FPO and few farmers take reference from future markets but actual traders are Exporters, importers and big trading houses. Focus of research can be Evolution of Commodity Markets, Challenges-Government policies, and reference from international markets and how they help is value chain creation.

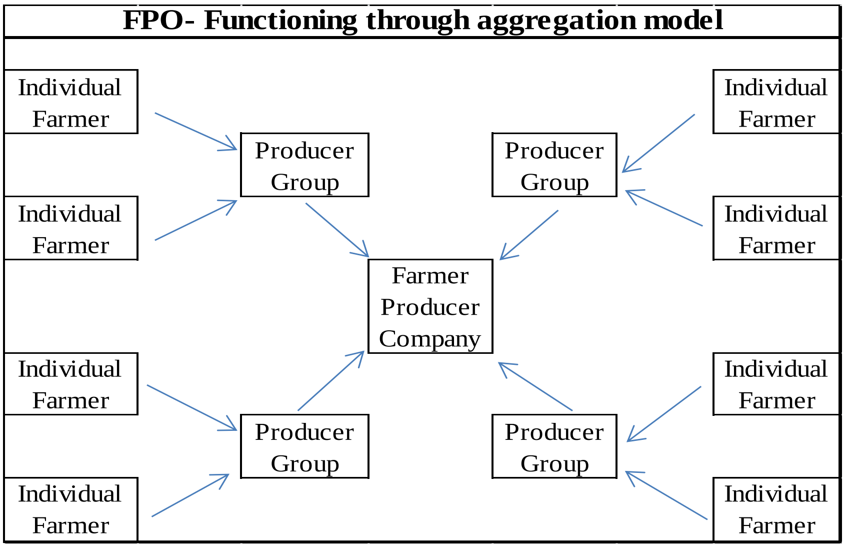
Mr Sridhar R

Mr Sridhar R, NCML, Commodity Researcher who was earlier with NCDEX, said that farmers are not able to participate in commodity markets due to literacy issues, regulatory requirements (demat a/c, KYC, Bank A/c) are not there, farmers profile and landholding pattern, production does not match with lot size, margin maintains with market. Standard delivery does not match 10-12 tons which can be the lot size. Exchange has only few delivery centres. Traders perform price risk management on behalf of farmers. Some awareness has been created in farmers recently. Exchange has also taken up special try through Farmers producers' organisation FPOs so that farmers can reap the benefits. Now they can trade of Flat price basis (Fixed price without reference to derivative market) and Basis price basis (Exchange price basis point) hence can get the benefit if future market. This is happening for Castor seed, Chana, Soybean. Processors are price changers according to future platform and indirectly get benefits. He added "If there was no future platform there will be not reference point. Now farmers can better bargain to end user, but this should be spread to all commodities. Future markets are very active but spread is restricted near delivery centres". He suggested that massive awareness is required to distinguish between speculation and hedging, Physical delivery should not be compulsory to exit the contract.

Mr. Nalin Rawal

Mr. Nalin Rawal, Head-Crop Weather Intelligence Group (CWIG) at National Collateral Management into price forecasting services, price polling etc. promoted by NCDEX, Major function of future exchange is price discovery and Price Risk Management. NCDEX is able to perform price risk management and price discovery. At present NCDEX has 3 months contracts which is shorter than most of the crops duration hence farmer is not able to receive full benefit at the time of sowing but he gets a tentative idea of the prices. Farmers are not able to trade in commodity markets but they get the benefit indirectly by getting the reference price. If exchange has 6 months contracts there is no liquidity, due to the nature of existing participants, regulators, etc. is not attracted. Few crops like soybean 5-6 months contracts are traded and have liquidity also but in international commodity markets like CME agriculture contracts for 2 years are also traded.

Aggregation model of FPO



Source: NABARD

CONCLUSION AND RECOMMENDATIONS

Farmers are not able to trade directly in commodity markets. FPO are formed which helps in Price risk management. NCDEX has launched a number of initiatives to provide farmers with access to commodity derivatives markets, in line with the help of government. NCDEX has taken many efforts and have been assisting FPOs through a variety of initiatives, including price dissemination via free SMS service, awareness and training programmes across the country, and reaching out to farmers through a dedicated TV show "Mandi.com" on DD Kisan, among others. As a result of these initiatives, an increasing number of FPOs are turning to commodity derivatives platforms as a transparent and fair alternative market platform for managing price risk. If there was no future platform there will be not reference point. Now farmers can better bargain to end user, but this should be spread to all commodities. Future markets are very active but spread is restricted near delivery centres".

Based on this research, the paper makes the following recommendations for FPOs, NCDEX, and the government in order to achieve better results: (1) To cause the least amount of disruption in futures markets, both FPOs and NCDEX must initially focus on commodities that are not deemed "sensitive" by the government in terms of food security. This will assist them in gaining confidence in the futures markets' operation. 2) NCDEX must identify production centres, construct delivery centres around them, and promote futures trading in these locations; and (3) Resource Institutions involved in training and aiding FPOs in futures trading must improve their own knowledge and skills.

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