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Factors influencing the perception of the members of farmer producer organizations (FPOs) in Kalaburagi district

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Abstract

Indian agriculture is mostly made up of small and marginal farmers, who own 86.1 percent of operational holdings. It has ongoing structural problems, such as fragmented landholdings, limited access to markets, low capital formation, and rising input costs. Farmer Producer Organizations (FPOs) have arisen as institutional innovations designed to mitigate these constraints by facilitating collective action and enhancing market connections for smallholder farmers. Even though they are becoming more important in agricultural policy, there is still not enough empirical evidence on how members think about FPO functioning and what affects those thoughts. This study examines the association between the profile characteristics of FPO members and their perceptions regarding the operation of FPOs in the Kalaburagi district of Karnataka, India. Data were collected from 125 respondents from five actively functioning FPOs registered under the Companies Act of 2013. Chi-square analysis was used to analyse the association of members' profile characteristics that included personal, socio-economic, psychological and communication aspects, with their perception. The findings indicated that most respondents were middle-aged, had completed high school, originated from medium-sized families, owned small landholdings, and had moderate levels of farming experience and annual income. Chi-square analysis revealed significant correlations between members' perceptions and eight profile characteristics: education, farming experience, achievement motivation, management orientation, cosmopolitanism, risk orientation, mass media engagement, and organizational participation. Management orientation and cosmopolitanism were significant at the one percent level, while the other six were significant at the five percent level. Age, family size, land holding, annual income, extension contact, extension participation, social participation, and innovativeness did not significantly correlate with perception. These results provide useful information for policymakers and FPO promoters who would like to get farmers more involved in organizations and make institutions work better.

Keywords: Farmer Producer Organization (FPO), perception, chi-square analysis, farmers

Introduction

The sustainability of traditional agriculture is increasingly under threat, as conventional farming systems struggle to maintain farmers' interest owing to their limited economic returns. For agriculture to remain a viable enterprise, it is imperative to enhance income generation per unit of time and land, while simultaneously creating diversified employment opportunities within the sector. In the contemporary era of intensifying market competition, Indian agriculture must have a transition from being merely a cultural way of life to functioning as a dynamic agribusiness entity capable of responding to market forces (Bhoi & Dadhich, 2019) ^[3]

India, as an agriculture-dominant economy, has agriculture contributing approximately 16 per cent to national GDP and employing 46.1 per cent of the workforce (Economic Survey, 2023) ^[6]. The sector is predominantly constituted of small and marginal farmers, who account for 86.1 per cent of operational holdings (Agricultural Census, 2015), and these farmers face persistent challenges including

fragmented landholdings, low capital formation, limited market access and rising input costs forming structural and financial constraints that have historically limited their bargaining power (Mishra *et al.*, 2023) ^[11].

The mobilization of higher profitability at the individual farmer level lies at the heart of resolving this crisis. In response to these challenges, collective action models such as Farmer Producer Organization (FPOs) have emerged as institutional innovations to address market exclusion and input asymmetries faced by small holder farmers (Kormelinck *et al.*, 2019; Gurung and Choubey, 2023; Gurung *et al.*, 2024, Singh, *et al.*, 2026) ^[9, 7, 8, 13]. Various forms of group approaches, including farmer cooperatives, farmer interest groups, farmer Producer Companies (FPCs) and community-based organizations, have been promoted over the years. FPOs hold significant potential to empower farmers, increase their incomes and promote sustainable agricultural practices. However, their effective implementation faces considerable challenges, including governance issues, financial sustainability, inadequate

market linkages and policy coherence (Arahant *et al.*, 2025, Bikkina, *et al.*, 2018, Mwambi, *et al.*, 2020 and Krishnan, *et al.*, 2021) [2, 4, 12, 10].

To date, the impact of FPOs in India remains under-explored in the empirical literature and there is limited evidence on the income-generating effect of FPO membership that is not tied to a particular organization. Furthermore, farmers' organizations are considered a primary pathway for improving the productivity, profitability and sustainability of small and marginal farmers, making it of paramount importance to study members' perception and the association of characteristics with perception. Isolating the constraints that hinder the effective and efficient functioning of FPOs is essential to enhancing their socio-economic outcomes for member farmers. Against the backdrop this paper presents the association of profile characteristics of FPO members with their perception (Dechamma, *et al.*, 2022) [5].

Methodology

A research design is a structured framework that tells you how to collect, measure, and analyze data. It serves as a strategic plan that links all parts of a study in a way that makes sense, making sure that the research problem is solved well. The ex-post facto research design was deemed the most appropriate methodology for this specific study.

Ex-post facto research, often called after-the-fact research, is a type of research design in which the study starts after an event has happened, and the researcher doesn't get involved. It is a non-experimental method employed to investigate causal relationships and to evaluate whether one or more pre-existing conditions may have impacted the observed differences among groups of subjects.

The research was conducted in the Kalaburagi district of Karnataka state from 2020 to 2021. The criteria for choosing Farmer Producer Organizations (FPOs) were that each FPO had to have been in business for at least three years and be registered under the Companies Act of 2013. There are currently a total of 318 FPOs in Karnataka currently. Of these, 22 are in Kalaburagi district. The study selected specifically five actively functioning FPOs: Nisarga Krushikara Producer Company Limited (NKPCL), Rohini Krushikara Producer Company Limited (RKPCL), Balabheemasena Krushikara Producer Company Limited

(BKPCL), Negilayogi Horticulture Farmer Producer Company Limited (NHFPCL), and Grameena Horticulture Farmer Producer Company Limited (GHFPCL).

The NGO Vrutti Livelihood Resource Centre promoted three of these, and the State Department of Horticulture promoted the other two. We randomly chose 25 people from each FPO, which made the total number of people in the study 125.

Chi square test was used to find out the association between the independent variables (personal, socio-economic, psychological and communication characteristics of respondents) with the dependent (perception of members of Farmers Interest Groups) variables using the formula,

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where, O_i – Observed value; E_i – Expected value

Results and Discussion

Personal characteristics of members of Farmer Producer Organization

Data presented in the table 1 reveals that that majority (53.60%) of the respondents, belonged to middle age group, 35.20 per cent of respondents had high school education and majority (51.20%) belonged to medium sized family, 44.00 per cent of them had medium level of farming experience and most (44.00%) of them belonged to small land holding category. 53.60 per cent of them had medium level of achievement motivation, 47.20 per cent of respondents had medium level of annual income, medium level of management orientation (49.60%), 56.80 per cent of respondents had medium level of cosmopolitanism, 59.20 per cent of respondents belongs to medium level of risk orientation, majority of them belonged to medium level of innovativeness (57.60%), low level of social participation (53.60%), medium level of mass media exposure (44.00%). It was also found that 52.80 per cent of respondents had medium level of extension contact, 48.00 per cent of respondents had medium level of extension participation and more than half, that is 52.80 per cent of the respondents had medium level of organizational participation.

Table 1: Personal characteristics of members of Farmer Producer Organization n = 125

Sl. No.	Characteristics	Category	F	%
1.	Age	Young (up to 35 years)	35	28.00
		Middle (36 to 50 years)	67	53.60
		Old (above 50 years)	23	18.40
2.	Education	Illiterate	09	07.20
		Up to middle school	12	09.60
		High school	44	35.20
		JOC/ITI/Diploma	19	15.20
		PUC	26	20.80
		Graduate	15	12.00
3.	Family size	Small (2 – 4members)	30	24.00
		Medium (5 – 7members)	64	51.20
		Big (8 and above)	31	24.80
4.	Farming experience	Low (< 10 years)	04	16.00
		Medium (10 – 20 years)	11	44.00
		High (> 20 years)	10	40.00

5.	Land holding	Marginal (< 2.5acres)	21	16.80
		Small (2.5-5 acres)	55	44.00
		Big (> 5 acres)	49	39.20
6.	Annual income	Low (< Below 40,000)	26	20.80
		Medium (40,000 – 60,000)	59	47.20
		High (> 60,000)	40	32.00
7.	Achievement motivation	Low (< 6.88)	21	16.80
		Medium (6.88 – 8.46)	67	53.60
		High (> 8.46)	37	29.60
8.	Management orientation	Low (< 37.54)	28	22.40
		Medium (37.54 – 40.78)	62	49.60
		High (> 40.78)	35	28.00
9.	Cosmopoliteness	Low (< 10.35)	31	24.80
		Medium (10.35 – 13.78)	71	56.80
		High (> 13.78)	23	18.40
10.	Risk orientation	Low (< 14.02)	22	17.60
		Medium (14.02 – 16.07)	74	59.20
		High (> 16.07)	29	23.20
11.	Innovativeness	Low (<19.38)	14	11.20
		Medium (19.38 – 21.49)	72	57.60
		High (> 21.49)	39	31.20
12.	Social participation	Low (< 0.48)	67	53.60
		Medium (0.48 – 1.91)	26	20.80
		High (> 1.91)	32	25.60
13.	Mass media exposure	Low (< 4.94)	27	21.60
		Medium (4.94 – 6.41)	56	44.80
		High (> 6.41)	42	33.60
14.	Extension contact	Low (< 11.10)	38	30.40
		Medium (11.10 – 13.71)	66	52.80
		High (> 13.71)	21	16.80
15.	Extension participation	Low (< 7.19)	21	16.80
		Medium (7.19 – 9.00)	60	48.00
		High (> 9.00)	44	35.20
16.	Organizational participation	Low (< 5.52)	28	22.40
		Medium (5.52 – 7.76)	66	52.80
		High (> 7.76)	31	24.80

Association of profile characteristics with perception of members towards functioning of FPOs

The chi-square analysis was carried out to know the association between perception and profile characteristics of FPO members (Table 2). Six variables namely, education, farming experience, achievement motivation, risk orientation, mass media contact and organizational participation were found to be significantly associated at five per cent level with the perception of members of FPOs. The remaining two variables such as management orientation and cosmopoliteness were found significantly associated at one per cent level with the perception of members towards FPOs. The variables such as age, family size, land holding, annual income, extension contact, extension participation, social participation and innovativeness were found to have no significant association with the perception of members towards functioning of FPOs.

Education with perception: There is a significant relationship between education and perception of members about functioning of FPOs. The possible reason for the results obtained was that schooling facilities and learning

facilities which in turn presumed to instill an average perception of members towards functioning of FPOs. Education provides an opportunity for the people to derive advantages of becoming members of FPOs. Hence, there exists a significant relationship at five per cent level between education and perception of members towards functioning of FPOs.

Farming experience with perception: There is a significant relationship between farming experience and perception of members about functioning of FPOs. This might be because majority of the respondents belongs to middle (35 to 50) level of age group and they will be having good amount of farming experience, as the farming experience increases the respondents will be having good knowledge regarding farming aspects as well as critical understanding regarding the functioning of FPOs towards the welfare of farmers as well as service aspects of FPOs, intern this will add up in members having average perception of members towards functioning of FPOs. Hence there exists a significant association at five per. cent level between farming experience and perception of members towards functioning of FPOs.

Table 2: Association of profile characteristics with perception of members towards functioning of FPOs (n=125)

Sl. No.	Characteristics	Chi-square value
1	Age	1.71 ^{NS}
2	Education	12.16*
3	Family size	1.59 ^{NS}
4	Land holding	8.37 ^{NS}
5	Annual income	7.36 ^{NS}
6	Farming experience	10.19*
7	Achievement motivation	12.56*
8	Management orientation	15.21**
9	Cosmopolitaness	15.86**
10	Extension contact	4.03 ^{NS}
11	Extension participation	3.33 ^{NS}
12	Social participation	5.71 ^{NS}
13	Risk orientation	11.78*
14	Innovativeness	2.73 ^{NS}
15	Mass media contact	12.29*
16	Organizational participation	12.77*

NS = Non-Significant; * Significant at 5% level; ** Significant at 1% level

Achievement motivation with perception: Table 2 reveals that there exists a significant association between achievement motivation and perception of members towards functioning of FPOs. Achievement motivation forces the individual towards reaching the goals which he/she has set to for himself and helps to acquire the knowledge and develop favourable attitude. Hence there is a significant relationship at five per cent level between achievement motivation and perception of members towards functioning of FPOs.

Management orientation with perception: There exists a significant association between management orientation and perception of members towards functioning of FPOs. The probable reasons for management orientation for having significant association with the perception of members could be due to inculcation of management abilities in the FPO members through activities like training, visits and lecture by professionals. The management aspects of the crop production have helped the individual for better involvement in the management of crop production, processing, marketing and social activities. Hence there is a significant association at one per cent level between management orientation and perception of members towards functioning of FPOs.

Cosmopolitaness with perception: There is a significant association between cosmopolitaness and perception of members towards functioning of FPOs. Majority of the members belongs to the middle age group and they are enthusiastic to come out of their residents to the town in order to seek the additional technologies and information about their crop production aspects, and to become aware about the recent activities in their locality. Hence there exists a significant association at one per cent level between cosmopolitaness and perception of members regarding functioning of FPOs.

Risk orientation with perception: There is a significant association between risk orientation and perception of

members towards functioning of FPOs. Based on the results it is shown that majority of the members are having medium and high level of risk orientation which shows that the respondents tend to take calculated risk in order to gain profit, which in turn yielded in having a significant association at five per cent level between risk orientation and perception of members towards functioning of FPOs.

Mass media contact with perception: It is clearly observed that there is a significant association between mass media contact and perception of members about functioning of FPOs. Higher level of mass media exposure of members would facilitate members in having good amount of knowledge and habit of gathering information about improved crop production activities, this is advantageous to farmers for being member of FPOs. Hence the mass media exposure favours members in having a significant association at five per cent level between mass media contact and perception of members regarding functioning of FPOs.

Organizational participation and perception: It is observed that there exists a significant association between organizational participation and perception of members towards functioning of FPOs. Based on the results it can be observed that majority of the members are having medium and high level of organizational participation, this might be because the FPOs favours the members in participating various activities conducted by FPOs. And members tend to enhance their participative approach in various agriculture production related activities, this might have favoured members in having significant association at five per cent level between organizational participation and perception of members regarding functioning of FPOs.

Conclusion

Findings from the current study revealed that there are differences in the perceptions held by members regarding the functioning of the Farmer Producer Organizations. More specifically, education, farming experience, achievement motivation, management orientation, cosmopolitanism, risk orientation, mass media exposure, and organizational participation were found to be critical determinants of the member's perceptions with respect to the FPOs, suggesting that socially and cognitively active members tend to develop well-informed attitudes and perceptions. Moreover, it was also established that the management orientation and cosmopolitanism exhibited a particularly strong connection with the perception, implying that external information sources and management skills play an important role in shaping the member's attitude and actions within the organization.

These findings have significant implications for the design of interventions aimed at enhancing the performance of the FPOs in question. First of all, efforts should be made to enhance the educational background, media consumption habits, management skills and organizational participation rates of the members in order to facilitate positive developments within the respective organizations. Secondly, it is necessary to ensure that members who possess different personal qualities are approached in a differentiated manner.

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