

## RESEARCH ARTICLE

## Determinants of Managerial Abilities of Farmers: Insights from Millet Based Farmer Producer Organizations (FPOs) of Karnataka

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### ABSTRACT

*In recent years, there has been a resurgence of interest in millets due to their nutritional benefits and sustainability. Millet farmers are not getting remunerative prices to their produce due to various constraints like lack of assured markets, lack of mechanization and less awareness on improved production techniques. Millet FPOs aim to improve the economic status and well-being of small, marginal and landless farmers by providing a platform to pool their resources to gain economies of scale, share knowledge, access technology, and collectively negotiate better prices for their produce. One of the most important aspects of FPOs is its effective management. With this background the current study was carried out to assess the managerial abilities of FPO members and its determinants. Survey research design was employed in this study. Four FPOs promoted by ICAR-IIMR, Hyderabad were selected randomly and from each FPO 50 millet farmers were selected randomly thus making a total sample of 200. The study was conducted during the period 2022-23. A structured interview schedule was used for collecting the data on managerial aspects of millet FPOs in running the millet business. The findings of the study showed that; more than one-third of the respondents were found to have a medium to high level of overall managerial ability. The determinants that influenced the managerial abilities of respondents were education, annual income, occupation, training, market orientation, achievement motivation and risk orientation. The findings have theoretical and managerial impacts. It helps in making more informed policy decisions and capacity-building efforts, to benefit the farming community.*

**Key words:** Millet FPOs; Managerial abilities; Trainings; Millet Business; Factors.

India's prominence in millet production is indeed significant. India is the largest producer of millet in the world, accounting for approximately 41 per cent of global millet production. Millets have a rich history in India and are classified into two main categories: major millets (Sorghum and Pearl millet) and minor millets (Little millet, Barnyard millet, Kodo millet, Foxtail millet, Finger millet, Proso millet and Browntop millet). Millets have been an integral part of diets in various regions, including India, for centuries as they played a crucial role in providing sustenance to communities that promote cultural and traditional significance. Millets are also called as "Nutri-Cereals or Coarse Cereals or Shree Anna". Millets are highly nutritious and have antioxidant properties that provide balanced nutrition (Misra et al., 2021).

Millet farming is an important component of small and marginal landholders in the farming systems of India as they constitute 86 per cent. To make small holdings economically viable there is a genuine need for collectivizing small and marginal producers for improving incomes and reducing risks (Kumar et al., 2020). Millets are climate-resilient crops that can tolerate any kind of climatic conditions (Pulla R. D., 2013; Shankar, 2013). India's top millet-producing states are Rajasthan, Uttar Pradesh, Maharashtra, Karnataka, Gujarat, and Madhya Pradesh. Jowar is mainly grown in Maharashtra, Karnataka, Rajasthan, Tamil Nadu, Andhra Pradesh, Uttar Pradesh, Madhya Pradesh, etc. Millet farmers face various constraints that can hinder their productivity, income, and overall well-being (Chauhan et al., 2021). The millet growers

are not getting fair prices for their produce due to various constraints like lack of assured markets, lack of mechanization and less awareness of improved production techniques of millets (Suresh, 2016). Farmers Producer Organizations (FPOs) are collectives or groups of farmers who come together to collectively engage in agricultural production, processing, marketing, and related activities and act as an important platform for transforming smallholder farming, increasing agricultural productivity and farmers' income (Valentinov, 2007; Adhikari et al., 2021). FPOs play a crucial role in empowering farmers, promoting sustainable agriculture, and ensuring their collective growth (Sahoo et al., 2022; Gorai et al., 2023). FPOs aim to improve the economic status and well-being of small, marginal and landless farmers by providing a platform to pool their resources, share knowledge, access technology, and collectively negotiate better prices for their produce (Mukherjee et al., 2018; and Venkattakumar et al., 2019).

Like any other enterprise, millet FPOs require technical and management proficiency to efficiently carry out their business operations, hence assuring the sustainability and profitability of FPOs for all shareholders involved (Parthiban et al., 2015; Kumar et al., 2023). Managerial competencies are required for the long-term sustainability of business and farmers' cooperatives (Gupta, 1989). Managerial entrepreneurial skills are essential to all successful and stable organizations (Pingali et al., 2005). Many research studies emphasized the significant challenge faced by millet FPOs but the lack of professional management capabilities for running the farmer-producer organizations efficiently was not addressed (Sangappa et al., 2023). Building managerial competencies among FPO directors assumes urgency and relevancy but it is essential and valuable for understanding the functioning of producer companies (Amitha et al., 2021). With the above background, the present study was conducted to understand the degree of managerial abilities of millet FPOs and its determinants for effective management of millets-based FPO business activities.

## METHODOLOGY

This study adopted a survey research design to achieve the objectives. The study was conducted during the year 2022-23 in four millet FPOs promoted by ICAR-IIMR, Hyderabad in Karnataka State. Four

FPOs were selected randomly and from each FPO, 50 millet farmers were selected randomly totaling a sample of 200. The data was collected using a pretested structured interview schedule. Three-point continuum was used to elicit the responses from respondents. Factors such as age, education, training undergone, market orientation, achievement orientation and occupation were modelled as factors that influence the managerial abilities of millet farmers (FPOs). The overall managerial ability of farmers of millet FPOs was studied by concluding planning ability, organizing ability, directing ability, staffing ability, coordinating ability and budgeting ability. The collected data was analyzed by using SPSS software. Descriptive statistics, averages, cumulative frequencies, correlation and regression analysis were used to draw meaningful conclusions. The regression model used for the study is as follows:

$$Y = b + a_1 X_1 + a_2 X_2 + a_3 X_3 + a_4 X_4 + a_5 X_5 + a_6 X_6 + a_7 X_7 + a_8 X_8 + u_i$$

Where

b = Intercept

$a_i$  = Partial regression coefficient

$X_1$  to  $X_8$  = Independent variables (profile characters)

$u_i$  = error component

## RESULTS AND DISCUSSION

The socioeconomic profile characters of FPO members are illustrated in Table 1. Data revealed that nearly 73.5 per cent of respondents of the FPO members belonged to the middle-aged (25-50) category followed by old age (14.50%). A significant proportion (76.5%) of the respondents was literate and educated which facilitated their comprehension of improved technologies and acquisition of expertise in the field of millet business. More than half (58.5%) of the FPO farmers belonged to the income category of 3-6 lakhs per annum and less than one-fourth (23%) of the farmers had higher income levels of above >6 lakhs. Farming and millet business was the major occupation for the majority (48.50%) of the respondents and about 20.05 per cent of the farmers were self-employed with their own business. Around three-fourths of the respondents had undergone six to eight trainings from State agriculture departments, NGOs, cooperative societies, KVKs and research institutes for improving their millet cultivation practices and business. More than half of the respondents had a higher level of achievement motivation and risk orientation with a medium level of market orientation.

**Table 1. Socio-economic profile of Millet FPO farmers (N=200)**

Category	No.	%
<b>Age</b>		
Young	24	12.00
Middle	147	73.5
Old	29	14.50
<b>Education</b>		
Illiterate	47	23.5
Literates	153	76.5
<b>Annual Income</b>		
Upto 3 Lakhs	36	18.0
3 to 6 Lakhs	117	58.5
Above 6 Lakhs	47	23.5
<b>Occupation</b>		
Farming	36	18.00
Daily wage earners	26	13.00
Self-employed	41	20.50
Farming and millet business	97	48.50
<b>Trainings undergone</b>		
Less	20	10.00
Medium	140	70.00
More	40	20.00
<b>Achievement motivation</b>		
Low	40	20.00
Medium	50	25.00
High	110	55.00
<b>Market orientation</b>		
Low	35	17.50
Medium	105	52.50
High	60	30.00
<b>Risk orientation</b>		
Low	24	12.00
Medium	59	29.5
High	117	58.5

Operationally managerial abilities of FPO farmers were defined as the cumulative outcome of planning, organizing, directing, staffing, coordinating and controlling scores. Furthermore, all the components were grouped into three categories viz., high, medium and low based on the scores obtained (Table-2). Most (42.5%) of the FPO farmers fall into the medium category for planning ability. Planning is considered essential for starting and prospering in any enterprise. FPO farmers exhibit a higher level (45%) of organizing ability, making it a strong point among this group. Organizing is described as the backbone of management, essential for the smooth operation of a business, as it combines human, physical, and financial resources. For directing ability, 50 per cent of the respondents are in the high category, while the remaining 50 per

**Table 2. Managerial Ability of Millet FPOs in Running Millet Business (N=200)**

Managerial Ability	No.	%
<b>Planning Ability</b>		
Low	40	20
Medium	85	42.5
High	75	37.5
<b>Organising ability</b>		
Low	30	15
Medium	80	40
High	90	45
<b>Directing ability</b>		
Low	80	40
Medium	20	10
High	100	50
<b>Staffing ability</b>		
Low	90	45
Medium	50	25
High	60	30
<b>Coordinating ability</b>		
Low	60	30
Medium	50	25
High	90	45
<b>Controlling ability</b>		
Low	75	37.5
Medium	40	20
High	85	42.5

cent are split between the low and medium categories. Directing involves tasks like supervision, guidance, motivation, and effective communication to ensure tasks are carried out efficiently. Most of the respondents (45%) of millet FPOs have low staffing ability. The lower staffing ability could be attributed to a lack of exposure to frequent training and limited experience in managing their business. About half (45%) of the respondents have high coordinating ability, indicating their strong communicative nature and aptitude for effective teamwork. Coordination is vital for ensuring organizational activities work efficiently. Approximately 42.5 per cent of respondents have high controlling ability, while 37.5 per cent have low controlling ability, and 20 per cent have medium controlling abilities. Controlling involves monitoring and regulating activities to achieve organizational growth.

*Overall managerial abilities of Millet FPOs :* The overall managerial abilities of FPOs in the millet business are shown in Table 3. The majority of the farmer interest groups had medium levels of planning ability & staffing abilities followed by higher levels of organizing, directing, coordinating and budgeting

**Table 3. Overall managerial abilities of millet FPOs**

Managerial abilities	No.	%
Low	50	25.00
Medium	70	35.00
High	80	40.00

abilities and lower levels of staffing abilities. From Table 3, it can be concluded that nearly 40 per cent of respondents of the FPOs had higher levels of overall managerial abilities followed by medium (35.00%) and low (25.00%) levels. Very less per cent of millet FPOs have higher overall managerial ability and further assured price for millets, announcement of MSP to millet crops, assured markets, and knowledge share in operating millet machinery will further increase the overall managerial abilities of millet FPOs in doing millet business (Sahoo and Rout, 2023).

*Determinants of overall managerial abilities of Millet FPO farmers* : The factors that influence the overall managerial ability of millet FPOs are depicted in Table 4. Among the selected variables education, annual income, occupation, training, market orientation, achievement motivation and risk orientation had positive, direct and significant influence on managerial abilities. The factors included in the model explain 63 per cent ( $R^2$ ) of the variation in the managerial ability as indicated by  $R^2$ . Farmers' occupation, market orientation, achievement motivation and risk orientation were statistically significant at a one per cent level of significance with overall managerial abilities while education, annual income and training were significant at a five per cent level of significance with overall managerial abilities. To improve the managerial abilities of members of FPOs the extension

**Table 4. Factors influencing the managerial ability of FPO farmers**

Variables	a
Age ( $X_1$ )	0.014
Education ( $X_2$ )	0.316*
Annual income ( $X_3$ )	0.371*
Occupation ( $X_4$ )	0.290* *
Trainings( $X_5$ )	0.480*
Market orientation ( $X_6$ )	0.391**
Achievement motivation( $X_7$ )	0.312**
Risk orientation ( $X_8$ )	0.293**
$R^2 = 0.631$	

\*Significant at 5 % level, \*\*Significant at 1 % level,

$R^2$ -Coefficient of determination;

a- Partial regression coefficient

functionaries should focus on the education and training aspects of members. Further, emphasis should be given to orienting farmers towards market forces, developing risk-bearing ability and motivating them to achieve higher business goals and income enhancement. The above findings are in coherence with the findings of Virendra *et al.* (2022). There are several limitations faced by Farmer Producer Organisations (FPOs) in agriculture and fisheries, and complex factors influence their growth and development (Chandegara *et al.*, 2023). Other factors that need to be studied are credit utilization, knowledge, attitude, social participation and marketing distance (Khandave *et al.*, 2019). The theoretical contribution of this study is that it identified the factors (determinants) influencing the managerial abilities of members of FPOs and managerially it suggests the extension personnel focus on education, market & risk orientation and achievement motivation to improve managerial abilities of farmers of FPOs.

## CONCLUSION

Formal education helps millet farmers and FPOs to gather new information for doing millet business. The study concluded that the majority of the FPOs have higher overall managerial abilities. The results further suggest that FPO farmers have varying levels of managerial abilities. While organizing and directing abilities seem to have a relatively higher representation at the high level, staffing ability is notably lower and this is due to limited training and experience in managing the millet business. The factors that influence managerial abilities are education, occupation, market orientation, achievement motivation, income and risk orientation. Improvements in managerial abilities could be achieved through actions like ensuring assured prices for millets, providing Minimum Support Prices (MSP) for millet crops, providing assured markets, and sharing knowledge on operating millet machinery. The major limitation of this study is the small sample size and limited factors under consideration; still, this study demonstrates the statistical vigour. Future researchers can study other social, situational and policy factors influencing managerial abilities.

## CONFLICTS OF INTEREST

Authors don't have any conflicts of Interest

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