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Constraints in the functioning of farmer producer organizations in Karnataka, India: A rank based quotient analysis

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ABSTRACT

Aims: To identify and prioritise the constraints in the functioning of Farmer Producer Organizations (FPOs) in Karnataka, India.

Study design: Cross-sectional sample survey with a multistage sampling design.

Place and Duration of Study: Sixteen FPOs located in 14 districts across the four administrative divisions of Karnataka, India; the primary data were collected during mid-2026.

Methodology: FPOs that had completed at least five years of operation were stratified by administrative division and by promoting agency (National Bank for Agriculture and Rural Development, Small Farmers' Agribusiness Consortium, Watershed Development Department and Department of Horticulture), and one FPO of each agency was selected from each division by simple random sampling. Thirty respondents, comprising the Chief Executive Officers, accountants and members of the Board of Directors of these FPOs, ranked the constraints under four aspects. The constraints were prioritised using the Rank Based Quotient (RBQ).

Results: Lack of member participation in FPO activities (RBQ 69.33) was the most serious institutional and governance constraint, followed by lack of professionalism and managerial capacity (59.33). Lack of working capital (82.22) and limited access to institutional credit (72.22) were the foremost financial constraints. Absence of a viable business plan (68.67) and limited market linkages (64.00) were the leading business and marketing constraints, while lack of storage and warehouse facilities (75.00) and inadequate value addition and processing facilities (72.50) were the leading infrastructure and operational constraints. Delay in receiving government financial assistance (45.56) and poor digital infrastructure and record management (44.17) were the least serious constraints in their respective aspects.

Conclusion: The functioning of FPOs was constrained mainly by limited member participation, a weak capital base, inadequate business planning and insufficient storage and processing infrastructure. Working capital support, credit linkage, professional management and post-harvest infrastructure deserve priority in strengthening FPOs

Keywords: Farmer Producer Organizations, Constraints, Rank Based Quotient, Working capital, Member participation, Storage infrastructure, Market linkage

1. Introduction

Agriculture in India is predominantly production-oriented and is confined to a large number of fragmented small holdings. Small and marginal farmers constitute 86.08 per cent of the total operational holdings and operate 46.94 per cent of the operated area, and the average size of holding is 1.08 ha (Agriculture census, 2016). A small farmer produces a limited quantity and lacks access to quality inputs, credit facilities, modern technologies and an assured market, and consequently remains highly dependent on intermediaries and local money lenders.

Collectivization of agricultural production and marketing through Farmer Producer Organizations (FPOs) is pursued in the country as the institutional response to these difficulties. An FPO is an entity that comprises the primary producers of any product, and a producer company is visualised as an amalgamation of the efficiency of a private business organization and the spirit of a co-operative. The Companies Act, 1956 was amended in 2002 to provide for producer companies (Patil *et al.*, 2025) [1]. The Central Sector Scheme for Formation and Promotion of 10,000 FPOs was launched on 29 February 2020 with a budget outlay of Rs. 6,865 crore till 2027-28, and the 10,000th FPO was registered in February 2025. Under the scheme, each FPO receives financial assistance of Rs. 18 lakh for three years towards management cost, a matching equity grant of up to Rs. 2,000 per farmer member with a limit of Rs. 15 lakh per FPO and a credit guarantee facility of up to Rs. 2 crore of project loan (Press Information Bureau, 2025) [2].

The growth in the number of FPOs, however, does not in itself ensure that the organizations are economically active and financially stable. A total of 44,460 producer companies were registered in the country between 1 January 2003 and 30 August 2024, of which only 15,455 had active status and up-to-date financial

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filings (Abraham *et al.*, 2024) [3]. The average paid-up capital of farmer producer companies is less than Rs. 5 lakh, only 387 companies have a paid-up capital above Rs. 15 lakh, and a significant proportion of FPOs remain inactive after registration owing to weak governance, inadequate capital or absence of business avenues (National Association for Farmer Producer Organisations, 2025) [4]. Most of the producer organizations are constrained by weak balance sheets, are unable to raise capital for their establishment and do not have strategic business planning to expand their area of operation (NABCONS, 2011) [5].

Earlier studies have documented several constraints in the functioning of FPOs. A case study from Gujarat showed that FPOs can deliver benefits through effective collective action, although raising sufficient capital remains their main challenge (Bikkina *et al.*, 2018) [6]. Poor access to capital and the absence of a proper monitoring and evaluation mechanism were among the most important challenges of FPOs in Bihar (Verma *et al.*, 2019) [7]. Inadequate storage facilities, shortage of transportation facilities and lack of grading and packaging skills were significant constraints of the member farmers of FPOs in Kannauj district of Uttar Pradesh (Verma *et al.*, 2021) [8]. Lack of initiative among members, inadequate processing facilities, absence of crop insurance, high transportation costs, weak financial status of the organization and non-availability of timely and quality inputs affected the sustainable functioning of FPOs in Tamil Nadu (Jayashree *et al.*, 2023) [9]. A systematic review of 64 studies on FPOs in India identified working capital constraints, weak market linkages and inadequate managerial expertise as the main challenges (Patil *et al.*, 2025) [1].

Karnataka has a total of 1,338 FPOs promoted by various departments and agencies. The Watershed Development Department (WDD) of the Government of Karnataka accounts for the largest

number, with 379 FPOs (28.33 %), followed by the National Bank for Agriculture and Rural Development (NABARD) with 279 FPOs (20.85 %), the Department of Horticulture with 172 FPOs (12.86 %) and the Small Farmers' Agribusiness Consortium (SFAC) with 150 FPOs (11.21 %) (Watershed Development Department, 2026) [10]. The existing studies on FPOs are largely concentrated on selected FPOs, districts or specific regions (Verma *et al.*, 2021; Jayashree *et al.*, 2023) [8, 9], and the constraints of FPOs promoted by different agencies across the regions of Karnataka, as perceived by the functionaries who manage them, have not been adequately documented. The present study was, therefore, undertaken to identify and prioritise the constraints in the functioning of FPOs in Karnataka.

2. Methodology

2.1 Study area and sampling design

The study was conducted in Karnataka, India. A multistage sampling design involving purposive and stratified random sampling was adopted for the selection of FPOs. Only those FPOs that had completed at least five years of operation and were active at the time of the survey were considered eligible. The eligible FPOs were stratified based on the four administrative divisions of the state (Belagavi, Bengaluru, Kalaburagi and Mysuru) and the four major promoting agencies, namely WDD, NABARD, the Department of Horticulture and SFAC. One FPO of each promoting agency was selected from each division using simple random sampling without replacement from the list of eligible FPOs available with the respective agency. Thus, four FPOs were selected from each division, resulting in a total of 16 FPOs located in 14 districts of the state. The details of the sampled FPOs are presented in Table 1. The shareholder base of the sampled FPOs ranged from 321 to 1,500.

Table 1. Details of the Farmer Producer Organizations selected for the study

Division	Promoting agency	Farmer Producer Organization	District	Established (year)	Shareholders (No.)
Belagavi	NABARD	Gavishree FPCL	Bagalkote	2021	516
	SFAC	Mudhol Oilseed and Millets FPCL	Bagalkote	2021	321
	WDD	Bhoomi Odeya FPCL	Haveri	2021	1,000
	Horticulture	Dummawad HFPCL	Dharwad	2017	959
Bengaluru	NABARD	Mokshagundam Vishweshwarayya FPCL	Chikkaballapura	2016	1,354
	SFAC	Kalpasiri FPCL	Tumakuru	2021	555
	WDD	Hadonalli Arkavathi FPCL	Bengaluru Rural	2021	930
	Horticulture	Rajaghatta Horticulture Farmer Producer Company Ltd.	Bengaluru Rural	2016	1,000
Kalaburagi	NABARD	Shri Maradi Gangad FPC Ltd.	Raichur	2021	1,500
	SFAC	Aland Bhootai Millets FPCL	Kalaburagi	2021	770
	WDD	Tekkalakote FPC Ltd.	Ballari	2021	850
	Horticulture	Abhinavashree HFPCL	Koppal	2016	1,000
Mysuru	NABARD	B G Pura Ragi FPC Ltd.	Mandya	2021	769
	SFAC	Souharda FPC Ltd.	Chamarajanagara	2018	1,000
	WDD	Banavara FPCL	Hassan	2021	835
	Horticulture	Varuna HFPCL	Mysuru	2016	1,000

NABARD: National Bank for Agriculture and Rural Development; SFAC: Small Farmers' Agribusiness Consortium; WDD: Watershed Development Department; Horticulture: Department of Horticulture; FPCL/FPC Ltd.: Farmer Producer Company Limited; HFPCL: Horticulture Farmer Producer Company Limited

2.2 Respondents and data collection

The constraints were ranked by 30 respondents, comprising the Chief Executive Officers, the accountants and the members of the Board of Directors of the 16 sampled FPOs. The data were collected through the personal interview method using a well-structured and pre-tested

schedule during mid-2026. The constraints were grouped under four aspects, namely institutional and governance (five constraints), financial (three constraints), business and marketing (five constraints) and infrastructure and operational (four constraints) aspects. The respondents ranked the constraints under each aspect in the order of their seriousness, the first rank being assigned to the most serious constraint.

2.3 Rank based quotient

The constraints were prioritised using the Rank Based Quotient (RBQ) method (Sabarathnam, 1988) [11], as used by Jayashree *et al.* (2023) [9] for the constraints of FPOs. The ranks assigned by the respondents were converted into scores using the formula:

$$RBQ = [\sum f_i (n + 1 - i) / (N \times n)] \times 100$$

Where,

f_i = frequency of the respondents assigning the i th rank to the constraint

N = number of respondents

n = number of ranks

i = concerned rank (1, 2, ..., n)

The RBQ was worked out for each constraint by taking all the ranks into account, and the constraint with the highest RBQ value under each aspect was considered the most serious. As the number of con-

straints ranked differed among the aspects, the RBQ values were compared only within each aspect.

3. Results and Discussion

3.1 Constraints in institutional and governance aspects

The constraints in institutional and governance aspects are presented in Table 2. Lack of member participation in FPO activities was ranked as the most serious constraint with an RBQ value of 69.33, followed by lack of professionalism and managerial capacity in managing the organization (59.33), social and political heterogeneity affecting collective decisions (58.67) and lack of awareness about FPOs among farmers and other stakeholders (57.33). Dependence on promoting agencies was ranked last (55.33). Lack of member participation was placed in the first rank by 12 respondents. Although seven respondents ranked dependence on promoting agencies first, 15 respondents placed it in the fourth rank, which lowered its overall score.

Table 2. Constraints in institutional and governance aspects of Farmer Producer Organizations

Sl. No.	Constraints	Number of respondents assigning the rank					RBQ	Rank
		1	2	3	4	5		
1	Lack of member participation in FPO activities	12	4	4	6	4	69.33	I
2	Lack of professionalism and managerial capacity in managing the organization	3	7	11	4	5	59.33	II
3	Social and political heterogeneity affecting collective decisions	5	8	6	2	9	58.67	III
4	Lack of awareness about FPOs among farmers and other stakeholders	3	9	7	3	8	57.33	IV
5	Dependence on promoting agencies	7	2	2	15	4	55.33	V

Number of respondents = 30; the first rank was assigned to the most serious constraint; RBQ: Rank Based Quotient

The primacy of member participation might be because many members had joined the FPOs mainly to avail of input and subsidy benefits and did not regularly attend general body meetings or route their produce through the organization. The second rank of managerial capacity might be due to the inability of FPOs to engage and retain trained Chief Executive Officers and accountants owing to their small turnover. Members of an FPO belong to different social groups, land-holding classes and political affiliations, which could make it difficult to arrive at a consensus on procurement, pricing and the election of directors. The divided ranking of dependence on promoting agencies might reflect the fact that only some of the FPOs were still within the support period of their promoting institutions. These results were in line with the findings of Perme *et al.* (2026) [12], who reported low attendance of members at meetings and irregular conduct of annual general meetings in the FPOs of Arunachal Pradesh, and Jayashree *et*

al. (2023) [9], who reported lack of initiative among the members as the major personal constraint in the functioning of FPOs in Tamil Nadu. Similarly, Yadav *et al.* (2022) [13] found that only a few members of the Board of Directors were active in the FPOs of Jharkhand, and Priyanka *et al.* (2024) [14] reported lack of trained staff as the foremost technical and operational constraint of FPOs in Telangana.

3.2 Constraints in financial aspects

The constraints in financial aspects are presented in Table 3. Lack of working capital was ranked first with an RBQ value of 82.22, followed by limited access to institutional credit and weak support from banks and financial institutions (72.22), while delay in receiving government financial assistance was ranked third (45.56). Lack of working capital was placed in the first rank by 18 respondents and limited access to institutional credit in the second rank by 19 respondents, whereas 23 respondents placed delay in receiving government financial assistance in the third rank.

Table 3. Constraints in financial aspects of Farmer Producer Organizations

Sl. No.	Constraints	Number of respondents assigning the rank			RBQ	Rank
		1	2	3		
1	Lack of working capital	18	8	4	82.22	I
2	Limited access to institutional credit and weak support from banks and financial institutions	8	19	3	72.22	II
3	Delay in receiving government financial assistance	4	3	23	45.56	III

Number of respondents = 30; the first rank was assigned to the most serious constraint; RBQ: Rank Based Quotient

Lack of working capital emerged as the most serious financial constraint because FPOs mobilise their share capital mainly from small and marginal farmers, whose contributions are small, while the aggregation of produce and the supply of inputs require funds well before the sale proceeds are realised. Limited access to institutional credit

might be due to the lack of collateral and credit history of the FPOs and the perception of banks that lending to FPOs is risky. These findings were in line with Priyanka *et al.* (2024) [14], who reported lack of enough capital as the most serious financial constraint of FPOs in Telangana, Kumar *et al.* (2023) [15], who found capital requirement to be the biggest constraint in achieving better performance of FPOs, and Venkattakumar *et al.* (2022) [16], who observed that many FPOs

were not able to arrange regular credit facilities. Thangavel *et al.* (2025) [17] also reported that most farmer producer companies in Tamil Nadu showed average to poor financial performance owing to limited access to credit, inadequate marketing infrastructure and lack of business management skills. Delay in receiving government financial assistance was ranked last, which was contrary to the findings of Perme *et al.* (2026) [12], in whose study delayed release of government funds was reported more widely than inadequate working capital. This might be due to the difference in the study area and in the stage of development of the FPOs studied.

Table 4. Constraints in business and marketing aspects of Farmer Producer Organizations

Sl. No.	Constraints	Number of respondents assigning the rank					RBQ	Rank
		1	2	3	4	5		
1	Absence of a viable business plan	5	10	11	1	3	68.67	I
2	Limited market linkages	2	15	5	3	5	64.00	II
3	Limited operational scale (membership, aggregation volume)	11	0	1	16	2	61.33	III
4	Price fluctuations of agricultural commodities	7	2	3	10	8	53.33	IV
5	Middlemen interference in marketing	5	3	10	0	12	52.67	V

Number of respondents = 30; the first rank was assigned to the most serious constraint; RBQ: Rank Based Quotient

The absence of a viable business plan might be due to the fact that many FPOs were formed under scheme targets rather than around an identified market opportunity, so that their activities remained largely confined to input supply. Limited market linkages indicated that the FPOs had few tie-ups with processors, exporters and institutional buyers and continued to depend on local markets. The divided ranking of limited operational scale might reflect the differences in membership size and aggregation volume across the sampled FPOs (Table 1). Price fluctuations and middlemen interference were ranked lower, which might be because these problems are faced by farmers in general and collective marketing through FPOs partly reduces their effect. The results were in line with the findings of Venkattakumar *et al.* (2022) [16], who identified failure to establish market tie-ups, lack of business experience and low volume of operation as the emerging challenges for the sustainability of FPOs, and Lalitha *et al.* (2024)

3.3 Constraints in business and marketing aspects

The constraints in business and marketing aspects are presented in Table 4. Absence of a viable business plan was ranked first with an RBQ value of 68.67, followed by limited market linkages (64.00) and limited operational scale in terms of membership and aggregation volume (61.33). Price fluctuations of agricultural commodities (53.33) and middlemen interference in marketing (52.67) occupied the fourth and fifth ranks, respectively. Limited operational scale received the largest number of first ranks (11), but 16 respondents placed it in the fourth rank, indicating divided opinion among the respondents. Middlemen interference in marketing was placed in the fifth rank by 12 respondents.

[18], who observed that farmer collectives suffered from institutional and structural impediments that affected their performance. Weak market linkages and inadequate managerial expertise were also among the main challenges identified in the review of Patil *et al.* (2025) [1].

3.4 Constraints in infrastructure and operational aspects

The constraints in infrastructure and operational aspects are presented in Table 5. Lack of storage and warehouse facilities was ranked first with an RBQ value of 75.00, followed by inadequate value addition and processing facilities (72.50) and inadequate transportation and logistics (58.33). Poor digital infrastructure and record management was ranked last (44.17). Although inadequate value addition and processing facilities received 11 first ranks against 10 for lack of storage and warehouse facilities, the latter was placed in the second rank by 15 respondents, which raised its overall score. Poor digital infrastructure and record management was placed in the third rank by 18 respondents.

Table 5. Constraints in infrastructure and operational aspects of Farmer Producer Organizations

Sl. No.	Constraints	Number of respondents assigning the rank				RBQ	Rank
		1	2	3	4		
1	Lack of storage and warehouse facilities	10	15	0	5	75.00	I
2	Inadequate value addition and processing facilities	11	10	4	5	72.50	II
3	Inadequate transportation and logistics	8	4	8	10	58.33	III
4	Poor digital infrastructure and record management	1	1	18	10	44.17	IV

Number of respondents = 30; the first rank was assigned to the most serious constraint; RBQ: Rank Based Quotient

In the absence of storage facilities, an FPO has to sell the aggregated produce immediately after harvest and loses the opportunity to sell when prices are higher. Inadequate value addition and processing facilities might be due to the high capital investment required for processing units relative to the financial base of the FPOs. Poor digital infrastructure and record management was ranked last, which might be because accounts and member records were maintained manually or with the help of the promoting agencies, and the respondents did not regard this as an immediate constraint. The results were in line with the findings of Yadav *et al.* (2022) [13], who reported inadequate storage facility followed by lack of processing facility as the most se-

rious marketing constraints of FPOs in Jharkhand, and Priyanka *et al.* (2024) [14], who reported lack of godowns and storehouses as the foremost marketing constraint of FPOs in Telangana. Inadequate storage and processing facilities were also reported by Verma *et al.* (2021) [8] and Jayashree *et al.* (2023) [9]. However, contrary to the present study, Priyanka *et al.* (2024) [14] ranked lack of transportation facilities above lack of processing facilities, which might be due to the difference in the commodities handled and the location of the FPOs studied.

Taken together, the most serious constraints under the four aspects, namely limited member participation, inadequate working capital, the absence of a viable business plan and the lack of storage and warehouse facilities, appeared to be rooted in the small capital base of the

FPOs and their limited professional management, which in turn restricted their access to credit, markets and infrastructure. The constraints were broadly similar to those reported for FPOs in other states. It may be noted that the results reflect the perceptions of 30 functionaries of the sampled FPOs and that the *RBQ* values are not comparable across the aspects, as the number of constraints ranked differed among them.

4. Conclusion

The study prioritised the constraints in the functioning of 16 FPOs promoted by four agencies across the four administrative divisions of *Karnataka*. Lack of member participation in FPO activities (*RBQ* 69.33) was the most serious institutional and governance constraint, lack of working capital (82.22) the most serious financial constraint, absence of a viable business plan (68.67) the most serious business and marketing constraint and lack of storage and warehouse facilities (75.00) the most serious infrastructure and operational constraint. Limited access to institutional credit (72.22), inadequate value addition and processing facilities (72.50) and limited market linkages (64.00) followed closely within their aspects, whereas delay in receiving government financial assistance (45.56) and poor digital infrastructure and record management (44.17) were the least serious. The findings suggest that working capital support and credit linkage with banks and financial institutions, support for godowns and processing units, capacity building of the Board of Directors and Chief Executive Officers in business planning and market linkage, and awareness among members to transact their inputs and produce through the FPO deserve priority from the promoting agencies for strengthening the functioning of FPOs.

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Competing interests

Authors have declared that no competing interests exist.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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