A Study on Collective Farming and Its Financial Advantages for Rural Farmers in Amravati Region

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ABSTRACT: Agriculture plays a vital role in the Indian economy, with a large number of rural households depending on small and marginal farming for their livelihood. However, fragmented landholdings, low income, high input costs, market uncertainties, and climate-related risks make farming economically unstable for many farmers. To address these challenges, collective farming has emerged as an important approach to improve the financial condition of small farmers. The present study focuses on farmers in the Amravati region who are involved in collective farming initiatives. The main purpose of the study is to understand farmers' perception of collective farming and to examine its impact on financial aspects such as cost reduction, productivity improvement, income growth, and income stability.

The study is based on primary data collected from 50 farmers using a structured questionnaire. Simple statistical tools such as percentages and the chi-square test were used for analysis. The findings reveal that collective farming has helped farmers reduce input costs, increase productivity per hectare, improve market access, and enhance overall income. The chi-square test results indicate a significant positive impact of collective farming on farmers' financial condition, leading to the rejection of the null hypothesis. Although some challenges such as lack of awareness, management issues, and infrastructure limitations exist, the overall results show that collective farming is a beneficial model for small and marginal farmers. The study concludes that with proper support, training, and policy intervention, collective farming can play a key role in improving rural livelihoods and ensuring sustainable agricultural development.

KEYWORDS: Collective farming, small farmers, income improvement, cost reduction, Amravati region

I. INTRODUCTION

Small and marginal farmers form the backbone of agriculture in India and many developing countries. In India, nearly 86 per cent of farm holdings belong to small and marginal farmers, yet they cultivate less than half of the total agricultural land. These farmers generally operate on fragmented landholdings with limited investment capacity, low income, and heavy dependence on family labour. Due to financial constraints, they rely on traditional farming practices and face difficulties in accessing modern technology, credit, insurance, and organized markets. Their weak bargaining power in buying inputs and selling produce often forces them to depend on local traders, who offer low prices, especially for perishable crops. In addition, climatic risks, pest attacks, price fluctuations, and increasing import competition have further worsened their economic condition, leading to indebtedness, unemployment, and rural migration.

Recognizing these challenges, market participation and income enhancement have become central to agricultural development policies in India. While contract farming and integration with modern retail chains offer opportunities, such arrangements often exclude small farmers or place them at a disadvantage. Therefore, collective farming has emerged as an effective solution to strengthen the economic position of small and marginal farmers through cooperation and shared resources.

Collective farming refers to a system in which farmers voluntarily come together to pool land, labour, capital, and other resources and carry out agricultural activities jointly. Unlike forced collectivization seen in some historical contexts, modern collective farming models are voluntary, farmer-centric, and flexible. Examples include agricultural cooperatives, Farmer Producer Organizations (FPOs), and self-help farming groups. These models allow farmers to retain land ownership while benefiting from large-scale operations.

The need for collective farming in India arises mainly from land fragmentation. The average size of landholdings has declined steadily due to inheritance practices, making farming economically unviable for individual farmers. Small farm size leads to low productivity, high production costs, limited mechanization, and poor access to institutional credit. Collective farming helps overcome these limitations

by pooling land and resources, enabling better use of machinery, irrigation facilities, storage infrastructure, and modern inputs.

One of the key features of collective farming is resource pooling, which reduces individual costs and increases efficiency. Collaboration with social entrepreneurs and agricultural experts helps farmers access quality inputs, technology, and markets. Many collective farming models also promote natural and sustainable farming practices, which improve soil health, reduce input costs, and ensure long-term sustainability. Income generated through collective farming is fairly distributed among members in the form of wages and profit-sharing, ensuring financial security and social equity.

Collective farming offers several benefits, including higher income, better market access, improved bargaining power, risk sharing, and social empowerment. It reduces dependency on middlemen, enhances access to credit and training, and strengthens rural communities. However, challenges such as loss of individual motivation, management issues, conflicts, and lack of professional skills may arise if collectives are poorly governed.

To promote collective farming in India, supportive policies are essential. Financial incentives, easy access to credit, mechanization support, farmer training, and strong institutional frameworks can help scale up collective farming initiatives. With proper implementation, collective farming can play a vital role in improving the livelihoods of small and marginal farmers and ensuring sustainable agricultural development in India.

II. LITERATURE REVIEW

Agarwal, S. & Goyal, S.K. (2022). In the paper "Progression of Farmer Producer Organisations in India", the authors used secondary data spanning from 2015-16 to 2020-21 to trace the registration, state-wise spread and growth trends of FPOs in India. They revealed that over 3,000 FPOs had been registered and supported by agencies such as NABARD and SFAC, with Madhya Pradesh leading in numbers. Although the primary focus was growth and registration rather than direct finances, the authors suggested that higher scale and spread of FPOs create the conditions for financial advantages for their members. They emphasized that mobilising FPOs is a necessary foundation for collective farm benefits. The paper pointed to strategic policy implications for promoting FPO growth to ensure rural farmers reap financial gains.

Kumar, S., Kumar, R., Meena, P.C. & Alok, K. (2023). The study "Determinants of Performance and Constraints Faced by Farmer Producer Organizations (FPOs) in India" surveyed 125 FPOs across five states and identified that FPOs engaged in a higher number of enterprising activities (input supply, aggregation, processing) achieved higher turnover and net profit. The research highlighted membership size, years of operation, diversity of business functions, and governance as major predictors of financial performance. The authors also documented constraints such as limited working capital, lack of market linkages and weak member participation that hindered profitability. Their findings emphasised that mere formation of an FPO is insufficient – performance depends on business diversification, scale and professional management. Thus, this work provides strong evidence linking collective structures to improved financial outcomes.

Pabba, A.S. & Ponnusamy, K. (2024). The paper "Evolving Strategies for Improving the Performance of Farmer Producer Companies through Field Studies" investigated older FPCs and found that about 45 % of those older than five years were functionally dormant. The authors used field interviews and ranked-strategies via Garrett method to identify revitalisation measures such as professional leadership, market diversification, member training and digital transaction systems. They argued that when these strategies were implemented, FPCs regained operational vigour, which translated into increased member incomes and reduced transaction costs. Their study connected management reforms to financial benefits for farmer-members. They underscored that the maturity of collective entities matters for unlocking financial advantages.

III METHODOLOGY

Research Design

A descriptive research design has been adopted because the study aims to describe and analyse:

- The structure and functioning of collective farming groups
- Cost-saving and profit-sharing benefits

Objectives of the Study

- To understand the perception and practice of collective farming among rural farmers in the Amravati region.
- To study the financial advantages of collective farming such as cost reduction, higher productivity, and better market access.

- To analyze how collective farming helps farmers in improving income stability and reducing risks.
- To examine the challenges and limitations faced by farmers in adopting collective farming in the region.

Hypotheses

Null Hypothesis (H_0):

There is no significant impact of collective farming on the financial condition (income stability, cost reduction, and market access) of rural farmers in the Amravati region.

Alternative Hypothesis (H_1):

Collective farming has a significant positive impact on the financial condition (income stability, cost reduction, and market access) of rural farmers in the Amravati region.

Sources of Data

Primary Data: Primary data will be collected directly from rural farmers participating in collective farming in the Amravati region. A structured questionnaire and personal interviews will focus on:

- Landholding size
- Costs of inputs (seeds, fertilizer, equipment)

Shared resources and labor

Secondary Data:

Secondary data will be used for context and comparison, including:

- Government reports on collective farming initiatives
- Agricultural research papers and case studies
- NGO and cooperative society reports

Sample Design

Sampling Technique: The Simple Random Sampling (SRS) technique is used to select respondents. Every employee in the selected departments has an equal chance of being included, reducing bias and ensuring a representative sample of employees regarding experiences and perceptions of trade unions.

Sample Size: The study will include 50 rural farmers participating in collective farming in the Amravati region.

Sample Area: Amravati city.

Sample Universe: All rural farmers in the Amravati region who are participating in collective farming initiatives organized by cooperatives, NGOs, or farmer groups.

Tools and Techniques

Percentage analysis, tables, bar graphs, and Chi-square test were used for data analysis and hypothesis testing.

Scope and Limitations

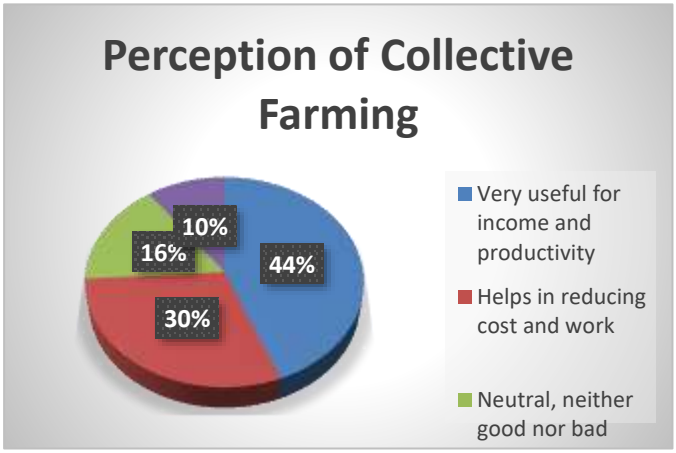
The study is limited to 50 farmers from the Amravati region who are involved in collective farming initiatives. The findings may not be applicable to farmers from other regions or those practicing individual farming. The study mainly focuses on financial aspects such as cost savings, shared investments, and income improvement, while social and environmental benefits are not emphasized. Time constraints and possible response bias may also affect the accuracy of the results.

III. INTERPRETATIONS

Table 1 Analysis of Perception of Collective Farming.

Response	No. of Respondents	Percentage (%)
Very useful for income and productivity	22	44
Helps in reducing cost and work	15	30
Neutral, neither good nor bad	8	16
Not useful at all	5	10
Total	50	100

Graph 1 Analysis of Perception of Collective Farming



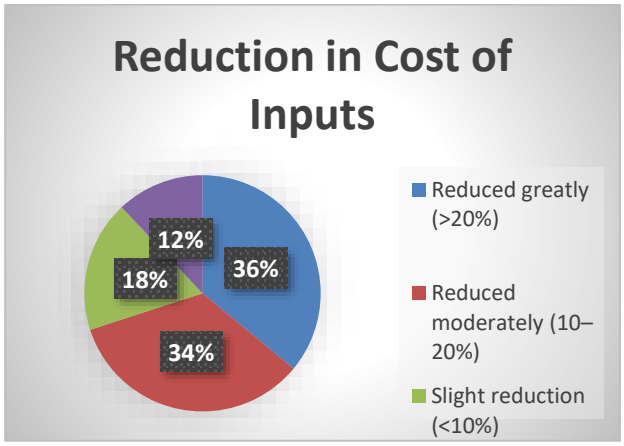
Interpretation :- From the above table, it is interpreted that 44% respondents feel collective farming is very useful for income and productivity, while 30% believe it helps in reducing cost and work. Further, 16% respondents have a neutral opinion, and only 10% feel that collective farming is not useful at

all.

Table 2 Reduction in Cost of Inputs

Response	No. of Respondents	Percentage (%)
Reduced greatly (>20%)	18	36
Reduced moderately (10–20%)	17	34
Slight reduction (<10%)	9	18
No reduction	6	12
Total	50	100

Graph no. 2 - Reduction in Cost of Inputs

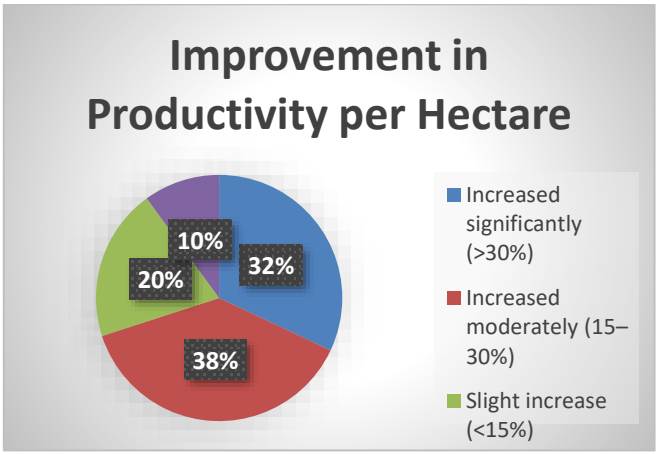


Interpretation:- From the above table, it is interpreted that 36% respondents experienced a great reduction in input costs, while 34% reported moderate cost reduction. Further, 18% observed only a slight reduction, and 12% respondents did not experience any reduction in costs.

Table 3 Improvement in Productivity per Hectare

Response	No. of Respondents	Percentage (%)
Increased significantly (>30%)	16	32
Increased moderately (15–30%)	19	38
Slight increase (<15%)	10	20
No change	5	10
Total	50	100

Graph 3 Improvement in Productivity per Hectare

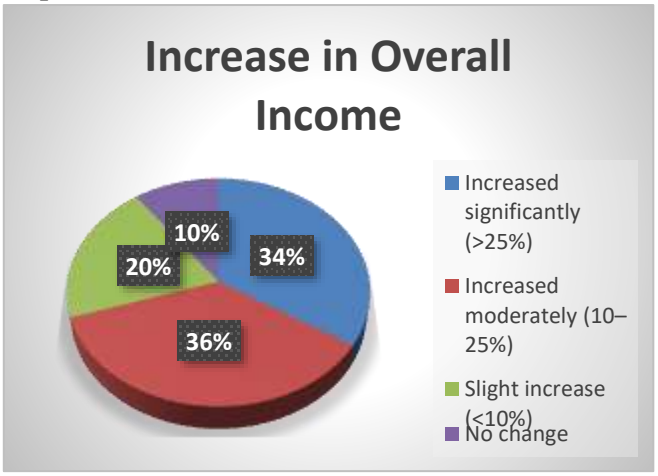


Interpretation :- From the above table, it is interpreted that 32% respondents reported a significant increase in productivity, while 38% reported a moderate increase. Further, 20% respondents experienced only a slight increase, and 10% observed no change in productivity..

Table 4 Increase in Overall Income

Response	No. of Respondents	Percentage (%)
Increased significantly (>25%)	17	34
Increased moderately (10–25%)	18	36
Slight increase (<10%)	10	20
No change	5	10
Total	50	100

Graph 4 Increase in Overall Income

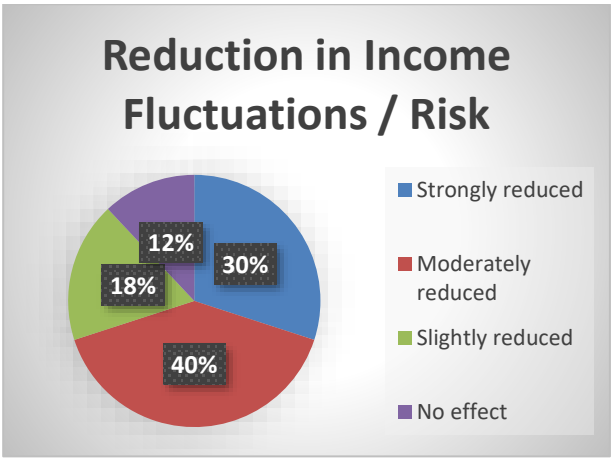


Interpretation :- From the above table, it is interpreted that 34% respondents experienced a significant increase in income, while 36% reported a moderate increase. Further, 20% respondents reported only a slight increase, and 10% experienced no change in income.

Table 5 Reduction in Income Fluctuations / Risk

Response	No. of Respondents	Percentage (%)
Strongly reduced	15	30
Moderately reduced	20	40
Slightly reduced	9	18
No effect	6	12
Total	**50**	**100**

Graph 4.5 Reduction in Income Fluctuations / Risk



Interpretation :- From the above table, it is interpreted that 30% respondents strongly felt that income fluctuations were reduced, while 40% felt a moderate reduction. Further, 18% respondents felt only a slight reduction, and 12% reported no effect on income stability.

IV. CONCLUSION

The study concludes that collective farming has a positive impact on the financial condition of small and marginal farmers in the Amravati region. By working together, farmers are able to reduce costs, improve productivity, and earn better income. Collective farming also helps farmers become more financially secure by sharing risks and improving market access. Although some challenges exist, the overall results prove that collective farming is a useful and effective approach for improving farmers' livelihoods.

FINDINGS

The study shows that most farmers in the Amravati region have a positive view of collective farming. A large number of farmers reported reduction in input costs due to shared purchase of seeds, fertilizers, and machinery. Many farmers also experienced an increase in productivity and overall income after joining collective farming groups. The study found that income fluctuations and risks due to crop failure or price changes were reduced for several farmers. However, a few farmers still faced problems like lack of full participation, limited awareness, and management issues within the group.

SUGGESTIONS

To make collective farming more successful, farmers should be given proper training and awareness programs about its benefits and working methods. The government should provide more financial support, easy loans, and subsidies for collective farming groups. Better infrastructure such as storage facilities, transport, and market linkages should be developed. Strong leadership and transparent management within farmer groups should be encouraged to avoid conflicts and ensure smooth functioning.

V. REFERENCES

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