



Comparative Analysis of Entrepreneurial Orientation and Perceived Gains in Marketing of Farmer Producer Company Shareholders of Kerala, India

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

The study conducted among FPC shareholders of the state of Kerala in India, aimed at understanding their entrepreneurial orientation and perceived gains in marketing because of their membership. The relationship between selected variables and socio-demographic variables was also analyzed. For the purpose of the research 126 shareholders were selected from 30 organizations in different geographical regions of the state. The overall entrepreneurial orientation was found to be 74.60% and perceived gains in marketing were found to be 65.36%. Comparison shareholders from different geographical regions of the selected variables revealed that entrepreneurial orientation and perceived gains in marketing were low for shareholders in the Northern region of the state. A positive correlation of entrepreneurial orientation with age and annual income suggested that training must be focused on young shareholders belonging to low-income categories. Marketing of all marketable surplus was difficult due to the limited nature of crops considered by the Farmer Producer Companies. However, they appreciated the easiness in the marketing of their produce through FPCs. The education level of shareholders also had a positive impact on their perception of gains in marketing.

Keywords: *Producer companies; marketing gains; entrepreneurial orientation; shareholders.*

1. INTRODUCTION

Agriculture and allied sectors in India have been heralded for the resilience shown against the COVID-19 pandemic with a registered growth of 3.6 percent and 3.9 percent in 2020-21 and 2021-22 respectively [1,2]. Even the agricultural industry has been at a growth pace despite the stiff competition from service and other industrial sectors. Though there has been a significant decline in agricultural employment over the years, 54.16% of the population still relies on agriculture and related activities as their primary source of income, according to the report by the Department of Agriculture, Cooperation, and Farmers' Welfare [3]. Thus, the sector continues to play a pivotal role in supporting sustainable development, food and nutritional security, and poverty alleviation in the country. However, the slow pace of growth in the agriculture sector is a serious concern and has been attributed to the dominance of small and marginal agricultural holdings.

As per the latest report of the Agriculture Census, there has been a reduction in the average size of operational holding from 1.15 ha in 2010-11 to 1.08 ha in 2015-16 [4]. If the current trend continues unabated, the land holding size is projected to be 0.32 ha in 2030. The report also indicated a rise in the number of operational holdings which expanded from 138.35 million in 2010-11 to around 146.45 million in 2015-16, an increase of 5.86 percent. This increase in the number of holdings is attributed to the fragmentation of the farms which has resulted in problems related to the economy of scale and low marketable surplus [5]. In order to face such multi-faceted issues in agriculture, farmers increasingly required entrepreneurship and innovation orientation [6]. However, a lack of agribusiness competencies related to finance, infrastructure, and experience prevented farmers from effectively utilization of these strategies. This necessitated the advent of the concept of collectivization of farmers through Cluster-Based Business Organizations (CBBO) as an essential strategy to address the issues of fragmented farmers, especially related to the scale of economy and market.

Several institutional models have been tested to integrate farmers into the value chain over time. The transition of agriculture from a source of livelihood to agribusiness led to the emergence of Farmer Producer Organizations (FPCs). In fact, a mix of strategies related to crop

production, post-harvest operations, and value addition based on nature and quantity of demand has been promoted through FPCs to stay viable and sustainable in the market. Further, small and marginal farmers who could not meet the economies of scale through a simple aggregation were institutionalized to create post-harvest investments and brand-building through collective contribution. The need for these business-oriented institutions in the competitive agricultural scenario was first addressed by Prof. Y. K Alagh committee in 2002 constituted by the Government of India (GOI). It was according to the committee recommendations; that the Parliament of India passed the producer company legislation in 2002. Ever since collective marketing through these institutionalized mechanisms has been promoted to integrate market demands and ensure higher returns to producers. Further, based on the logistics of the marketing of produce through pooling, FPCs help member farmers get better terms of trade. FPCs help reduce the asymmetry of market information and promote sharing of marketing costs otherwise spent by individual farmers. Thus, farmers are able to save their expenses and time, which can be utilized elsewhere [7].

Even with such institutional interventions, the annual income of the majority of the member producers remained at a medium level. Further, these shareholders could only identify a medium level of impact in their livelihood for the services like marketing offered by such institutions [8]. Hence the question of whether shareholders remain silent beneficiaries of such organizations or receive entrepreneurial and market gains must be answered. In this context, the present study aims to understand the responsibility of entrepreneurial orientation and gains in the marketing of primary producers who are shareholders of different producer companies belonging to different geographical regions of the State of Kerala, India. The study also attempts to analyze the relationship between socioeconomic and demographic variables of the shareholders with their entrepreneurial orientation and marketing gains.

2. MATERIALS AND METHODS

2.1 Study Area

The state of Kerala is the 13th largest populated state situated on the Malabar Coast of the Indian subcontinent. With the highest human

Development Index (HDI), literacy rate, sex ratio, and life expectancy, Kerala has the lowest population growth rate in India. It is the 3rd most urbanized major state and the 2nd least impoverished in the country. The state previously recorded a 92.72 percent rate of increase in urban population as per Census, 2011. The state has fourteen districts with the Thiruvananthapuram as the capital city [9]. The study was conducted in four different geographical locations (North, Central, South, and High ranges) of the state.

2.2 Selection of Respondents

The study focused on the producers who are the shareholders of the registered Producer Companies (PCs) in the state under the main promoting agency i.e., NABARD. The minimum sample size for the study was estimated as 71 using the following formula, where the N= Number of FPCs in the state (105), t=1.96 for a confidence level of 95%, d=0.05 sampling error [10]. For a better estimation of the study variables, a final selection of 126 shareholders was done from different FPCs of the four geographical locations. The distribution of the shareholders of different FPCs according to the geographical regions selected is given in Table 1.

$$n = \frac{Nt^2p(1-p)}{d^2(N-1)+t^2p(1-p)} \quad (1)$$

2.3 Data collection

The data collection was done using a pretested interview schedule, administered among the selected respondents. The items related to entrepreneurship orientation were modified from the study of [11]. In the current study, entrepreneurship orientation was measured under 3 dimensions i.e., innovativeness, proactivity, and risk-bearing ability using a total of 10 statements given in Table 2. Gains in marketing were measured in a five-point

continuum of agreement i.e., strongly disagree, disagree, somewhat agree, agree, and strongly agree using four statements. The lowest score of one was assigned for strong disagreement and the highest score of five was given for strong agreement. Cronbach alpha value of more than 0.7 for both variables indicated high internal consistency for the selected items.

2.4 Statistical Analysis

Each individual score was divided by the maximum possible score for obtaining the responsibility and satisfaction levels of the shareholders. The results were further analyzed using Kruskal – Wallis H test for comparing the responsibility and satisfaction levels of the respondents belonging to different geographical regions. The relationship between responsibility and satisfaction levels with the producers' socioeconomic/demographic characteristics was analyzed using Spearman's rho. Descriptive statistics were also done to obtain meaningful inferences. All of the statistical analyses were performed with the aid of the SPSS-21.0 statistical software.

3. RESULTS AND DISCUSSION

3.1 Entrepreneurial Orientation of FPC Shareholders

Conventional theories about entrepreneurial orientation always suggested that the associated traits are inborn. However, these arguments have been proven wrong several times by many first-generation entrepreneurs [12]. Further institutional interventions help improve entrepreneurial behavior. Farmer Producer Companies emphasize the shift of agriculture to a more business-oriented activity than a simple livelihood option. Shareholders with higher entrepreneurial orientation may influence the performance of such organizations.

Table 1. Distribution of FPC shareholders among different geographical locations (N=126)

Geographical regions	Number of producers	Percentage
North	22	17.46
Central	51	40.48
South	30	23.81
High Ranges	23	18.25
Total	126	100

Table 2. Measurement dimensions of Entrepreneurial orientation

Dimensions of EO	Statements
1. Innovativeness	1.1 I like to try new varieties on my farm to better meet the FPC's request 1.2 If I am producing a better product, I am willing to seek a better buyer 1.3 I like to try new technologies on my farm 1.4 I am interested in the latest information for marketing the produce
2. Proactivity	2.1 I am not afraid of failing if I will get to learn a new technology 2.2 I will be ready to start new practices that others are not ready to 2.3 I am ready to improve new technologies that other members will not do
3. Risk bearing ability	3.1 I do not intend to expand because I do not want to have an additional cost 3.2 I prefer not to invest in the farm if I do not know the benefits of that investment 3.3 I will continue with the current crop/ variety and will not replace it

Table 3. Entrepreneurial orientation dimensions of shareholders of different geographical regions (N=126)

Sl. No	EO dimensions	North (22)	Central (51)	South (30)	High Ranges (23)	Overall (%) (126)
1	Innovativeness	92.05	86.76	87.50	90.22	88.49
2	Proactivity	86.36	83.66	83.33	92.75	85.71
3	Risk bearing ability	39.39	46.41	50.00	40.58	44.97

The dimensional score of entrepreneurial orientation of shareholders of different regions under innovativeness, proactivity, and risk-bearing ability is given in Table 3. From the table, it is noted that shareholders of North and High Ranges of Kerala had higher innovativeness and proactivity. Shareholders of the South and Central regions exhibited more risk-bearing ability. However, the overall results indicated that even though FPC shareholders exhibited higher levels of innovativeness and proactivity compared to risk-bearing ability. Higher percentage scores of these two dimensions substantiated their willingness to be part of and contribute to the day-to-day activities of the FPC which was a business-oriented institutional model. However, the lower levels of risk-bearing ability of the shareholders indicated that they were not ready to bear any risk of enterprise failures (new or old) or make substantial investments in the organizations they were part of.

3.2 Gains in Marketing

Among several services provided by the FPC to the member producers, the marketing of their

products is the major one. The marketing of products is one of the major problems for a smallholder farmer due to the limitations such as low marketable surplus and high transactional costs. Experts argue that collective marketing help to improve bargaining power and better price share. So the gains in marketing obtained by the shareholders must be evaluated from time to time for validating such arguments.

From Table 4 it is clear that shareholders from high ranges obtained better gains in marketing through FPC membership. The majority of the shareholders opined that it was easy for them to market their produce through FPCs and it fetched them a better price. They also opined that the marketing cost for their produce was low when marketed through FPCs. However, the majority of the shareholders were unable to market all their surplus through the FPCs they were part of. FPCs generally focus on one or a few crops. This combined with the prevalent mixed cultivation and homestead cultivation system in the state followed by the majority of the farmers might be the reason behind this.

Table 4. Perception about gains in the marketing of shareholders of different regions (N=126)

Statements	North (22)	Central (51)	South (30)	High Ranges (23)	Overall (%) (126)
1. Able to market all surplus produce through FPC	46.36	50.20	45.33	57.39	49.68
2. Marketing cost is less when marketed through FPC	69.09	69.02	63.33	79.13	69.52
3. It is easier to market the products through FPC	71.82	71.37	65.33	79.13	71.43
4. Marketing produce through FPC fetches a better price	68.18	72.94	66.00	74.78	70.79

3.3 Comparison of Entrepreneurial Orientation and Gains in Marketing

The comparison of entrepreneurial orientation and gains in marketing for the producers based on different regions using Kruskal – Wallis test is

given in Table 5 Considering the different regions in respect of the variables, all of the differences were statistically significant. These levels were found to be lowest in the Northern region of the state as noted in the table.

Table 5. Comparison of entrepreneurial orientation and gains in the marketing of different geographical regions (N=126)

Geographical Region	Entrepreneurial orientation		P-value	Gains in marketing		P-Value
	Median	Mean Rank	<0.05	Median	Mean Rank	<0.05
1. North (22)	7	4.33		13	4.00	
2. Central (51)	8	9.67		14	14.50	
3. South(30)	8	6.67		12	9.00	
4. High Ranges(23)	8	5.33		14	6.50	

Table 6. Entrepreneurial orientation and gains in marketing for Kerala (N=126)

Category	Entrepreneurial orientation (%) (N=126)	Gains in marketing (%) (N=126)
Low (<Q1)	9.17	23.81
Medium (Q1-Q3)	75	54.76
High (>Q3)	20.83	21.43
Overall Kerala	74.60	65.36

Table 7. Correlation coefficient and P –values for entrepreneurial orientation and gains in marketing (N=126)

Socio-economic and demographic variables	Measurement	Entrepreneurial orientation		Gains in marketing	
		Spearman Rho	P	Spearman Rho	P
Age	(Year)	0.109	>0.05	-0.035	>0.05
Education	(Nominal)	-0.009	>0.05	0.053	>0.05
Occupation	(Nominal)	-.085	>0.05	0.003	>0.05
Annual Income	(INR)	0.107	>0.05	-0.114	>0.05
EO		1		-0.038	>0.05
Gains in marketing		-0.038	>0.05		

The results of entrepreneurial orientation and gains in marketing for the state given in Table 6 indicated only a medium level. This suggests that some improvement in innovativeness and proactivity is generated by the membership in FPCs. The possible reasons may be that an assured market for the produce and better market price enable them to take a moderate level of risk-taking and this improves their entrepreneurial orientation. The results of Xhoxhi et al., [11] support this proposition as their findings suggest that institutional interventions among farmers improve their trust as they get an assured market and this, in turn, influences their entrepreneurial orientation positively.

The results from the table regarding gains in marketing suggested that shareholders perceived that better price realization could be achieved when marketed through FPC due to the reduced transaction costs involved. Further, the ease of marketing through FPCs also contributed to this. The results were obtained by the previous works of Parthibhan [13] who also suggested that FPCs helped to reduce the transactional costs involved in marketing and helped achieve better benefits from the market. However, the grievance of not being able to market their entire surplus through the FPCs in which they were shareholders might have brought the majority of perception to the medium level.

3.4 Relationship between Socioeconomic and Demographic variable

Correlations of the observed variables with demographic and sociological variables are given in Table 7. From the table, it could be noted that age and annual income had positive effects on the entrepreneurial orientation of shareholders. The results are in line with the study of Gayathri [12] who studied the entrepreneurial training needs of farmers in Kerala. In her study age and annual income exhibited a positive correlation between entrepreneurial intention, innovativeness, proactivity, and risk orientation. With increased age, farmers gain knowledge and experience in various aspects of agribusiness and entrepreneurship. Farmer Producer Companies being agribusiness institutions have influence over the exposure of member farmers to such innovative agricultural enterprising techniques. Hence these farmers are most likely to have a higher entrepreneurial orientation. Further increased annual income help improve the risk-bearing ability of farmers compared to less advantageous farmers. Results are further supported by the study of Xhoxhi et al., [11].

Results indicated that perceived gains in marketing improved with an increase in education and occupation. The educational level of the farmer helps them to understand the impact of collectivization on transactional costs and income as reported by Parthibhan [9]. FPCs also reduced the asymmetries regarding market information. Educated shareholders could comprehend such market information easily. Further educated shareholders showcased higher satisfaction levels in services offered by FPCs including marketing [10]. Since the majority of the selected shareholders had farming as their primary source of livelihood a positive correlation with perceived gains in marketing is expected [14].

4. CONCLUSION

Results of the study indicated that FPCs helped improve the entrepreneurial orientation of farmers with exposure to different value chains and enterprising models. Perceived gains in the marketing of 54.76% may be considered medium-low for the State. Even though FPCs help reduce transactional costs and assured markets, shareholders were unable to sell all their marketable surplus. The specificity of crops in FPCs was one of the major reasons for that. But shareholders appreciated the easiness of marketing through FPCs. A positive correlation between age and annual income with entrepreneurial orientation was detected. The results suggested that entrepreneurial orientation was low in young shareholders with below mean income. Hence entrepreneurial training must focus on such a category of shareholders. But the training programs may not be enough to achieve superior performance levels because many consumers do not know local products [15]. Further awareness programs on the impact of FPCs in the marketing of produce among less-educated farmers can help create more membership and investments for such organizations.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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