



Do Market-Led-Extension Interventions Promote Farmer Satisfaction?

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ABSTRACT

Market oriented production is a key approach that can promote more profitability from farm enterprises there by leading to farmer satisfaction. The new agricultural policy emphasizes on commercialization, diversification, value addition and export orientation, which underlines the importance of market led extension. But the farmers, especially the smallholders face numerous challenges with respect to accessibility of services provided by the marketing systems. The present study aimed to identify the satisfaction level of farmers towards the market led extension services provided by different marketing support mechanisms using a satisfaction scale and the key factors affecting the satisfaction level of farmers were identified using spearman's correlation and binary logistic regression. The results revealed that VFPCCK beneficiaries showed high level of satisfaction towards the market led extension services where satisfaction of the beneficiaries of other market support mechanisms ranged from poor to medium.

Key Words: Agriculture, Market led extension, Satisfaction level, Wholesale Market.

INTRODUCTION

Market led extension stems from the market ward orientation of agriculture, with a perfect blend of extension services in order to link the primary producers to the ultimate consumers with the use of appropriate technologies (Krishna *et al*, 2019). Market led extension works with various aspects of physical infrastructure, advisory services, quality standardization, market intelligence, post harvest handling and market information on regular basis (Gauraha *et al*, 2012). Market oriented production, upgrading farmer's knowledge about market, market analysis and market intelligence are very essential in the changing context of agricultural scenario. A large population of smallholder vegetable farmers still face challenges such as inferior produce and rising input costs and transportation costs, unfair market fee and questionable price information. As a result, they are unable to compete in this high valued agricultural market (Sharma *et al*, 2012). The extent of smallholder farmers' market participation was

determined by a variety of factors like age, family size, food security, fertilizer availability, and advantages from organizational membership (Chirwa and Matita, 2012). There is a need for proper channelling of marketing services in order to make the farmer market savvy, and help them to realize high returns for their produce, minimize the marketing costs and improve the product value and marketability.

The new agricultural policy emphasizes on commercialization, diversification, value addition and export orientation, which emphasizes the importance of market led extension (Gauraha *et al*, 2012). Market information is a critical supporting function for making appropriate decisions starting from production to marketing. Availability of market information allows timely transaction of the produce into the market by cutting down the marketing costs and thereby improving the efficiency of marketing (Phukan *et al*, 2018). So to analyze the effectiveness of a marketing intervention, it is important to understand the perception of

Table 1. Satisfaction level towards market-led-extension of the beneficiary farmers

Market	VFPCCK	Ecoshop	Kudumbasree	AWM
Satisfaction level	High (100 per cent)	Good (52.5 %)	Low (100 %)	Fair (60 %)
		Fair (47.5 %)		Good (40 %)

the beneficiaries towards the extension services employed by such markets (Dhara *et al*, 2015). The present study aims to understand the satisfaction level of smallholder farmers towards the market led extension components/ services provided by the different types of markets like VFPCCK, Ecoshops, Kudumbasree Nattuchantha and Agricultural Wholesale Markets in Kerala. The study also aimed to identify the factors affecting satisfaction level of farmers towards market led extension components/ services.

MATERIALS AND METHODS

For the present study, two active and well-functioning farmers' markets promoted by Vegetable and Fruit Promotion Council Keralam (VFPCCK), Kudumbasree nattuchantha markets, Eco shops and Agricultural Wholesale Markets under the Department of Agricultural Development and Farmers' Welfare were selected randomly. All these were state funded initiatives. From among the farmer groups and individual farmers, a sample of not less 20 farmers each from the different markets was selected randomly to form a total sample size of 160 farmers.

Satisfaction level of farmers towards market-led-extension components employed by the markets

After identifying major market led extension components employed by the selected marketing mechanisms, scale developed by Lotfy and Adeeb (2016) with appropriate modification was used to measure the satisfaction level of the beneficiaries. The facilities provided by each intervention are arranged under different subheads indicating the

various extension services made available to the farmers. Market infrastructure, advisory services, transportation facilities, storage and warehousing infrastructure, financial infrastructure, market intelligence, post harvest maintenance and supportive infrastructure were the major dimensions of market led extension services considered for the scale. A Likert type scale was used to elicit and mark the responses. The total score was then calculated to find the overall satisfaction of the respondent.

After the scale administration, the scores obtained by the individual respondents were categorized into high, good, fair and low based on their value attained after calculating the 25th, 50th and 75th percentile. Wherein a value 1 is given for less than or equal to 25th percentile indicating low satisfaction level, value 2 for range between 25 and 50 percentiles indicating fair level of satisfaction and value 3 for range between 50 and 75 percentiles indicating a good satisfaction level and a value 4 given for more than or equal to 75th percentile denoting a high level of satisfaction.

Factors governing the satisfaction level of farmers towards market led extension components were identified using Spearman's correlation and Binary logistic regression.

RESULTS AND DISCUSSION

The results with respect to overall satisfaction level of farmers towards market led extension were found for each of the four marketing interventions.

The data (Table 1) indicate the level of satisfaction of beneficiaries towards market-led-extension, using the satisfaction scale. It

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Table 2. Correlation between satisfaction level of farmers towards market led extension and personal profile of beneficiaries..

Sr. No.	Variable	Correlation coefficient
1	Age	0.364**
2	Education	-0.248**
3	Occupation	0.176*
4	Experience	0.528**
5	Owned land	0.502**
6	Leased land	-0.408**
7	Area under vegetable	-0.027
8	Crop diversification	-0.313**
9	Annual income from vegetable cultivation	0.015
10	Earning family members	-0.139
11	Organizational membership	0.261**
12	Extension contact	0.309**
13	Financial source	-0.288**
14	Transportation facility	0.120
15	Source of price information	-0.323**
16	Market choice	-0.395**
17	Periodicity	-0.137
18	Distance from market	-0.097
19	Grade of produce	-0.141
20	Grading function	-0.453**
** significant @ 0.01 level * significant @ 0.05 level		

may be inferred from the results that all VFPCCK beneficiaries had high level of satisfaction. This may be due to the fact that VFPCCK provide support to the farmers starting from seed or seedling supply to marketing of the produce. Majority of the Ecoshop beneficiaries (52.5 %) showed good satisfaction level followed by 47.5 per cent showed a fair satisfaction towards market led extension. In case of beneficiaries from Agricultural Wholesale Market, it was evident that 60 per cent happens to have a fair level of satisfaction followed by 40 per cent with good level of satisfaction. Though the Agricultural Wholesale Market had more infrastructural facilities compared to other markets, most of facilities were dysfunctional and were not utilized by the farmers. In case of Kudumbasree, the beneficiaries showed a low level of satisfaction

towards the market led extension, this may be due to lack of permanent market facility.

Relationship between satisfaction level of farmer towards market led extension and personal profile of beneficiaries

Market-led-extension satisfaction can be explained with the help of certain profile attributes of the farmer. For the study independent variables like age, education, occupation, experience, owned land, leased land, area under vegetable, other crop cultivated, annual income from vegetable cultivation, earning family members, organizational membership, extension contact, financial source, transportation facility, source of price information, market choice, periodicity of sale, distance from market, grade of produce and grading function were

Table 3. Factors affecting satisfaction level of farmers towards market led extension components

Factor	B	S.E.	Wald	Sig	Odds ratio	Probability percentage
Owned land	-1.195	.449	7.071	.008**	.303	23.25
Leased land	-1.032	.494	4.367	.037*	.356	26.25
Area under vegetables	1.181	.690	2.93	.087***	3.26	76.52
Organizational membership	.560	.259	4.69	.030*	1.75	63.63
Source of price information	1.694	.928	3.33	.068***	5.44	84.47
** Significant at 1% * Significant at 5 % *** Significant at 10%						
Hosmer- Lemeshow test	Chi square		3.89	Sig	0.996	

considered. Spearman's correlation was worked out to identify the variables having relationship with market-led-extension satisfaction.

The values (Table 2) shows the correlation between the independent variables and satisfaction about market-led-extension, where age, education, occupation, experience, extent of owned land, extent of leased land, crop diversification, organizational membership, extension contact, financial source, source of price information, market choice and grading function were significantly related with satisfaction. Education, leased area, crop diversification, financial source, source of price information, market choice, periodicity of sale and grading function had a negative relationship with satisfaction. This can be an indicator that the more market savvy and efficient farmers do not depend on these markets for selling their produce. Wider exploration into the reasons for this need be carried out.

Binary logistic regression was worked out to pinpoint the extent of relationship between the selected variables and satisfaction. For this, the respondents were categorized into two groups based on the median value (92) of market led extension satisfaction score. Where respondents with a score less than 92 were categorized as the group 1 (low category) and respondents with score more than 92 as group 2 (high category) (Poornima, 2022).

The data (Table 3) showed the model adequately fits the data as the significance value was greater than 0.05. The binary logistic regression result

was explained using odds ratio. When odds ratio is greater than 1, it indicates a positive relationship and if it is less than 1 then it implies a negative relationship. The result indicates that as owned land increases, the odds of having higher market-led-extension satisfaction decreases. As the land ownership increases by 1 unit, the market-led-extension satisfaction is likely to decrease by 0.303 times. Similarly, with increase in leased area, the odds of being satisfied with market-led-extension is likely to decrease. Market-led-extension satisfaction decreases by 0.356 times as the odds ratio is less than one for leased area.

With an advance in organizational membership, an improvement of 63.63 per cent in market-led-extension satisfaction can be achieved. A unit increase in organizational membership could improve the market-led-extension satisfaction of the farmer by 1.75 times. Area under vegetables and source of price information showed a good level of significance at 10 per cent on market-led-extension satisfaction. The odds of having higher market-led-extension satisfaction increases by 3.26 times and 5.44 times, respectively with unit increase in area under vegetables and utilization of direct source of price information other than main market. The results obtained were similar to that of Ele *et al* (2013) where the total amount of vegetables produced, experience in farming, availability to extension services, size of cultivation land, organizational membership and the family size were the important factors influencing the extent of commercialization of smallholder farmers.

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CONCLUSION

The analysis on satisfaction indicated a high level of satisfaction only towards the VFPCCK markets. The other three types of markets under study drew mixed levels of satisfaction scores from the farmers ranging between low to good. This point towards the need to making the working of these markets more users friendly and beneficial to the farmers. Overall satisfaction level of farmers towards market led extension were found for each of the four types of markets and it was evident that VFPCCK provided support to the farmers starting from seed or seedling supply to marketing of the produce, which in turn led to the high satisfaction among the beneficiaries. Age, education, occupation, experience, owned land, leased land, crop diversification, organizational membership, extension contact, financial source, source of price information, market choice and grading function were the traits which showed a positive relationship with respect to the satisfaction towards market led extension. The key factors affecting the satisfaction level were organizational membership, area under vegetables and source of price information. For increasing the satisfaction of its beneficiaries, the marketing institutions could directly provide market information and access to advanced infrastructural facilities to the farmers and providing additional benefits to the registered farmers for increasing their participation in the market.

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