Original Research Article

Socio-economic profile of fruits and vegetable growers: An after the fact research

Abstract

India is the second largest producer of fruits and vegetables in world. The fruits and vegetables production will give a positive hope to small and marginal farmers to increase their income compared to food grains. The productions of horticulture crops can improve the socio-economic status of farmers in short span due to their value**.** The present study was conducted in Davangere district of Karnataka to know the socio-economic characteristics of the fruit and vegetable growers. The study has used Expost facto research design. The study was conducted by taking total sample of 120 viz., 40 farmers each from public, co-operative and private market interventions. The data was collected with help of pre tested interview schedule through personal interview. The majority of farmers had medium level of education in public (75.00 %), co-operative (72.50 %) and private (72.50 %) market interventions. More than half the respondents had medium level of decision making ability in public (72.50 %) and private (77.50 %) market interventions but half of the had medium level (50.00 %) of decision making ability in case of co-operative market intervention. The majority of the respondents belonged to medium level (87.50 %) of market orientation in private market intervention.More than half of the farmers had medium level (77.50 %) of information seeking behavior in case of public market intervention.The variables like education and information seeking behavior were found to be significantly associated with respect to knowledge level of public market intervention farmers. Cosmopoliteness was found to be significantly associated with respect to knowledge level of both co-operative and private market intervention farmers.

Key words: Horticulture, Education, Market Interventions, Socio-economic

Introduction:

The India has witnessed a great stride in agriculture production, especially with the introduction of improved farm technology during the green revolution to the Artificial Intelligence and IoT in the 21st century. In agriculture, horticulture takes a prominent place in getting good productivity and profit to the farmers. India is the second largest producer of fruits

and vegetables in the world. The horticulture output grew by around 2% to 341 million tonnes against 334 million tonnes in 2020-21.The area under cultivation of fruits and vegetables are 9.6 and 10.86 million hectares. India produced 102.48 million metric tonnes of fruits and 200.45 million metric tonnes of vegetables (National Horticultural Board, 2020-21).The United Nations, FAO had declared 2021 has international year of fruits and vegetables.

The sudden outbreak of Covid-19, gave way to poverty, unemployment and health issues among the population in India. The pandemic has lead youth to travel back to villages due lockdowns. But with small land holdings, the farmers are not able to earn more income. So, commercial fruit and vegetable production can be option to increase the income in short time span. The fruits and vegetables being perishable commodities require quick transportation to consumer markets or to the processing gates due to which it is labour intensive. Therefore, this sector can provide employment opportunities to many people. The commercial fruit and vegetable production can improve the socio-economic status of people. With this, it becomes need to conduct research on socio-economic profile of fruits and vegetable growers to get insights of people in the area.

Methodology:

The current research study was based on Ex-Post-Facto research design. The study was conducted in Davangere district of Karnataka. The district was purposively selected based on the functioning of all three institutional market interventions. From these institutional interventions APMC was selected under public institutional market intervention, HOPCOMS was selected under co-operative institutional market intervention and Big Bazaar and Reliance Fresh were selected under private institutional market interventions.The study has three categories of respondent's *viz.*, APMC farmers, HOPCOMS farmers and Big Bazaar and Reliance Fresh farmers who were growing fruits and vegetables.From each institutional marketing intervention, 40 farmers growing fruits and vegetables were selected based on simple random sampling. A total of 120 samples were used to complete this study with help of pre tested interview schedule through personal interview.

Results and Discussion:

The Socioeconomic status (SES) is a measure of an individual's or family's social position relative to others. Thesocio-economic profile of farmers consists of personal characteristics, Psychological characteristics and Communication characteristics are discussed below.

I. Personal characteristics of the farmers

1.Age:

It was evident from Table 1 that, majority of farmers belonged to middle age category in public (65.00 %) and co-operative (42.50 %) market intervention. In case of private market intervention farmers, majority of them were falling under young (50.00 %) age to middle (47.50 %) age. The farmers were more innovative and try to do something different were falling under young to middle age group. This age group was more receptive to new technologies and information. This might be the reason for the above result. The results are in line with Karamjit Sharma (2015) and Kavyashree (2016).

2.Education

The farmers had medium level of education in public (75.00 %), co-operative (72.50 %) and private (72.50 %) market interventions(Table 1). This might be due to the fact that middle and young aged farmers are more in all the market interventions who has received formal education, because of realization of importance of primary education and also due to free and compulsory education scheme by Government of Karnataka. The villages in these areas had primary school might be the reason for this. The results are in conformity with Karamjit Sharma (2015).

3. Farming Experience

The appraisal of Table 1shows that majority of the farmers belonged to medium level of farming experience in public (65.00 %), co-operative (67.50 %) and private (67.50 %) market

intervention. This might be due to the fact that farmers belonged to medium age category and were engaged in agriculture from their early age.

4. Cropping pattern

The data presented in Table 2 reveals that, major crops grown in study area were Chilli in kharif, Tomato and Cucumber in rabi, Maize as field crop in summer and Arecanut, Banana and Papaya as a perennial crop in the study area. This might be due the fact that the farmers growing vegetable like Tomato and Chilli and in fruits like Banana and Papaya were purposively selected for the study.

II. Psychological characteristics of the farmers

1.Economic Motivation

It is observed from Table 3 that majority of the farmers in public (57.50 %), co-operative (72.50 %) and private (62.50 %) market interventions had medium level of economic motivation. Majority of the respondents in the present scenario wants to achieve profit maximization with the available resources. Along with this, their extension participation, influence of recent ICT tools and more opportunities due to globalization might have been motivated them to have medium to high level of economic motivation. The above findings are in line with that of Pottappa (2008).

2.Decision making ability

Regarding decision making ability, the results in Table 3 depicts that majority of the farmers belonged to medium level of decision making ability in public (72.50 %), co-operative (50.00 %) and private (77.50 %) market intervention. This might be due to the fact that most of the respondents were having medium education and medium level of farming experience. This helped them to take their own decisions in certain aspects. Apart from this mass media exposure and extension participation might have influenced them to have medium level of decision making ability.

3. Market Orientation

The data in Table 3 reveals that the farmers had medium level of market orientation in public (67.50 %), co-operative (82.50 %) and private (87.50 %) market interventions. This might be due to the fact that globalization of the market. Farmers were having many avenues to market their produce to get more profit. Greater exposure of the respondents to recent ICT tools along with their education and economic motivation might have influenced in the following result. The results are in line with Akshath (2015).

4. Scientific orientation

A glance at Table 3 indicated that, 82.50per cent of the farmers in public market intervention had medium level of scientific. Whereas, farmers in co-operative (72.50 %) and private (60.00 %) market intervention had medium level scientific orientation. In the present scenario more emphasis was given on scientific cultivation for maximizing production. Along with this extension services from public, co-operative and private were available at door steps. Their educational level, social exposure might have been influenced to have the medium level of scientific orientation. The results are in line with Devaraja (2011).

5. Motivational Factors

As per data in the Table 3, majority farmers belonged to medium level of motivational factors in public (65.00 %), co-operative (60.00 %) and private (52.50 %) market intervention respectively. This may be due that, the farmers had medium level of economic motivation, medium level of scientific orientation, education level and also with government support and facilities might have influence them to medium level of motivation.

III. Communication characteristics of the farmers

1 Cosmopoliteness

It is clear from the Table 4 that, more than half the farmers had medium level of cosmopoliteness in public (55.00 %), co-operative (62.50 %) and private (67.50 %) market interventions. This is due to the fact that farmers are having very easy access and transportation facilities made them to visit nearby cities. Educational level of respondents along with mass media exposure and scientific orientation influenced might be the reason for having medium level of cosmopoliteness.

2. Information seeking behaviour

It could be explained from the Table 4 that majority of the farmers had medium level of information seeking behaviour in public (77.50 %), co-operative (67.50 %) and private (62.50 %) market interventions. This outcome is probably due to the reason that farmers had good mass media exposure, cosmopoliteness and scientific orientation that promotes farmers to seek information from various sources about the technologies and different market interventions that would help them to adapt to the new channels for marketing of their produce. The results are in line with Kavyashree (2016).

The relationship between profile characteristics of the farmers and their knowledge on public market intervention

The detail of relationship between independent variables and knowledge of the farmers on public market intervention was presented in Figure 1. A close observation of the figure reveals that education and information seeking behaviour was found to be significant and all other variables were non-significant at 5 per cent level of significant. The above result might be to the reason that education had significant influence on knowledge of the respondents. Educated farmers had more knowledge regarding emerging institutional market intervention. Further, the farmers think of various emerging market avenues and thus try to gather information from various available sources. This variable has influence on their knowledge on public market interventions.

The relationship between profile characteristics of the farmers and their knowledge on co-operative market interventions:

The Figure 2 depicts the detail of relationship between independent variables and knowledge level of the farmers on co-operative market intervention. A close observation of the figure reveals that, only cosmopoliteness was found to be significant and all other variables were non-significant with the knowledge level of the farmers. This might due to the fact that, majority of the farmers visit to nearby town for their personal work and to get agricultural and market relation information from extension personnel of various developmental departments, NGOs, etc., When the farmers visit the cities to obtain the information and modern technologies to maximize profit. This might have contributed to better knowledge of the farmers on market intervention.

The relationship between profile characteristics of the farmers and their knowledge on private market interventions

The detail of relationship between independent variables and knowledge level of the farmers on private market intervention was presented in Figure 3. The figure reveals that cosmopoliteness was found to be significant and all other variables were non-significant with respect to knowledge. The reason may be due to that the private farmers frequently visit the nearby town and cities to obtain the information on market information. The farmers also visit

towns to buy the agricultural inputs and also to supply the produce to private markets which have made the farmers to have better knowledge about market interventions.

Conclusion:

The study gave overview of different characteristics of the fruits and vegetable growers across public, co-operative and private market interventions in the study area. The study revealed that majority of farmers belonged to the middle age category in public market interventionbut in case of co-operative and private market intervention, they belonged to young age category. The majority of farmers had medium level of education, farming experience, economic motivation in public, co-operative and private market interventions. This study reveals the socio-economic profile of growers in different market interventions like public (APMC), Co-operative (HOPCOMS) and private (Reliance fresh and Big bazaar). The government should consider these conditions to help and formulate schemes to the horticultural farmers.

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Table 1. Personal characteristics of the farmers across the market interventions **n=120**

Variable	Category	Criteria	Public(n_1=40)		Co-operative(n_2=40)		Private(n_3=40)	
			f	%	f	%	f	%
Age	Young	Upto 35	12	30.00	17	42.50	20	50.00
	Middle	36-55	26	65.00	17	42.50	19	47.50
	Old	>55	2	5.00	6	15.00	1	2.50
Education	Category		Criteria	f %	Criteria	f %	Criteria	f %
	Low (<$\bar{x}$ - SD)		<2.24	4 10.00	<2.58	5 12.50	<2.73	4 10.00
	Medium($\bar{x}$ ± SD)		2.24-5.51	30 75.00	2.57-5.48	29 72.50	2.73-5.57	29 72.50
	High (>$\bar{x}$ + SD)		>5.51	6 15.00	>5.48	6 15.00	>5.57	7 17.50
Farming Experience	Low (<$\bar{x}$ - SD)		<9.41	6 15.00	<9.70	5 12.50	<10.69	7 17.50
	Medium($\bar{x}$ ± SD)		9.41-28.59	26 65.00	9.70-31.60	27 67.50	10.69-27.91	27 67.50
	High (>$\bar{x}$ + SD)		>28.59	8 20.00	>31.60	8 20.00	>27.91	6 15.00

f = Frequency % = Percentage

Table 2: Cropping pattern of the farmers across the market interventions

TCP= Total Cropped Area

Crops	Public (n_1=40)		Co-operative(n_2=40)		Private(n_3=40)	
	Area	% TCP	Area	% TCP	Area	% TCP
Kharif						
Beans	1.75	0.70	1.50	0.80	-	-
Cabbage	1.00	0.40	3.00	1.59	-	-
Chilli	20.50	8.14	1.75	0.93	25.50	13.01
Cucumber	3.50	1.39	2.50	1.33	-	
Tomato	15.50	6.16	34.00	18.06	44.50	22.70
Onion	1.00	0.40	-		-	-
Pumpkin	2.00	0.79	1.00	0.53	-	-
Sunflower	-		1.00	0.53	-	-
Rabi						
Bitter guard	0.50	0.20	2	1.06	1.00	0.51
Cabbage	-			0.00	2.00	1.02
Chilli	3.00	1.19	24	12.75	2.00	1.02
Capsicum	-		2	1.06	1.50	0.77
Cucumber	3.00	1.19	2	1.06	10.50	5.36
Coriander	-		-	-	1.00	0.51
Field bean	1.00	0.40	-	-	-	-
Onion	1.00	0.40	-	-	-	-
Paddy	15.50	6.16	-	-	-	-
Tomato	29.00	11.52	-	-	-	-
Summer						
Brinjal	3.00	1.19	6.50	3.45	-	-
Chilli	1.00	0.40	-	-	-	-
Cluster bean	0.50	0.20	-	-	-	-
Field bean	3.00	1.19	2.00	1.06	3.00	1.53
Maize	34.00	13.51	21.00	11.16	22.50	11.48
Paddy	6.00	2.38	-	-	-	-
Ragi	-		1.00	0.53	-	-
Tomato	3.50	1.39	-	-	-	-
Perennial						
Arecanut	45.00	17.87	54.25	28.82	39.00	19.90
Banana	27.00	10.72	14.50	7.70	23.50	11.99
Papaya	17.00	6.75	14.25	7.57	18.00	9.18
Pomegranate	-		-	-	2.00	1.02
Sugarcane	13.50	5.36	-	-	-	-
Total cropped area	**251.75**	**100.00**	**188.25**	**100.00**	**196**	**100.00**

Table 3 .Psychological characteristics of the farmers across the market interventions **n=120**

Variables	Category	Public(n_1=40)			Co-operative(n_2=40)			Private(n_3=40)		
		Criteria	f	%	Criteria	f	%	Criteria	f	%
Economic motivation	Low(<$\bar{x}$ - SD)	<23.06	9	22.50	<21.44	6	15.00	<22.53	6	15.00
	Medium($\bar{x}$ ± SD)	23.06-27.74	23	57.50	21.44-26.11	29	72.50	22.53-26.97	25	62.50
	High(>$\bar{x}$ + SD)	>27.74	8	20.00	>26.11	5	12.50	>26.97	9	22.50
Decision making ability	Low(<$\bar{x}$ - SD)	<4.28	6	15.00	<6.04	9	22.50	<4.38	5	12.50
	Medium($\bar{x}$ ± SD)	4.28-9.37	29	72.50	6.04-11.41	20	50.00	4.38-8.42	31	77.50
	High(>$\bar{x}$ + SD)	>9.37	5	12.50	>11.41	11	27.50	>8.42	4	10.00
Market Orientation	Low(<$\bar{x}$ - SD)	<4.12	13	32.50	<3.67	5	12.50	<3.71	4	10.00
	Medium($\bar{x}$ ± SD)	4.12-5.18	27	67.50	3.67-5.23	33	82.50	3.71-5.14	35	87.50
	High(>$\bar{x}$ + SD)	>5.18	0	0.00	>5.23	2	5.00	>5.14	1	2.50
Scientific Orientation	Low(<$\bar{x}$ - SD)	<15.82	2	5.00	<14.30	7	17.50	<16.03	8	20.00
	Medium($\bar{x}$ ± SD)	15.82-19.68	33	82.50	14.30-18.60	29	72.50	16.03-19.67	24	60.00
	High(>$\bar{x}$ + SD)	>19.68	5	12.50	>18.60	4	10.00	>19.67	8	20.00
Motivational Factors	Low(<$\bar{x}$ - SD)	<6.37	7	17.50	<7.34	6	15.00	<7.07	9	22.50
	Medium($\bar{x}$ ± SD)	6.37-10.73	26	65.00	7.34-11.11	24	60.00	7.07-11.08	21	52.50
	High(>$\bar{x}$ + SD)	>10.73	7	17.50	>11.11	10	25.00	>11.08	11	27.50

f = Frequency % = Percentage

Table4.Communication characteristics of the farmers across the market interventions

n=120

Variables	Category	Public(n_1=40)			Co-operative(n_2=40)			Private(n_3=40)		
		Criteria	f	%	Criteria	f	%	Criteria	f	%
Cosmopoliteness	Low(<$\bar{x}$ - SD)	<26.49	8	20.00	<30.98	4	10.00	<32.52	6	15.00
	Medium($\bar{x}$ ± SD)	26.49-46.41	22	55.00	30.98-43.52	25	62.50	32.52-47.83	27	67.50
	High(>$\bar{x}$ + SD)	>46.41	10	25.00	>43.52	11	27.50	>47.83	7	17.50
Information seeking behavior	Low(<$\bar{x}$ - SD)	<17.99	4	10.00	<18.42	5	12.50	<19.02	4	10.00
	Medium($\bar{x}$ ± SD)	17.99-25.76	31	77.50	18.42-24.63	27	67.50	19.02-25.73	25	62.50
	High(>$\bar{x}$ + SD)	>25.76	5	12.50	>24.63	8	20.00	>25.73	11	27.50

f = Frequency % = Percentage

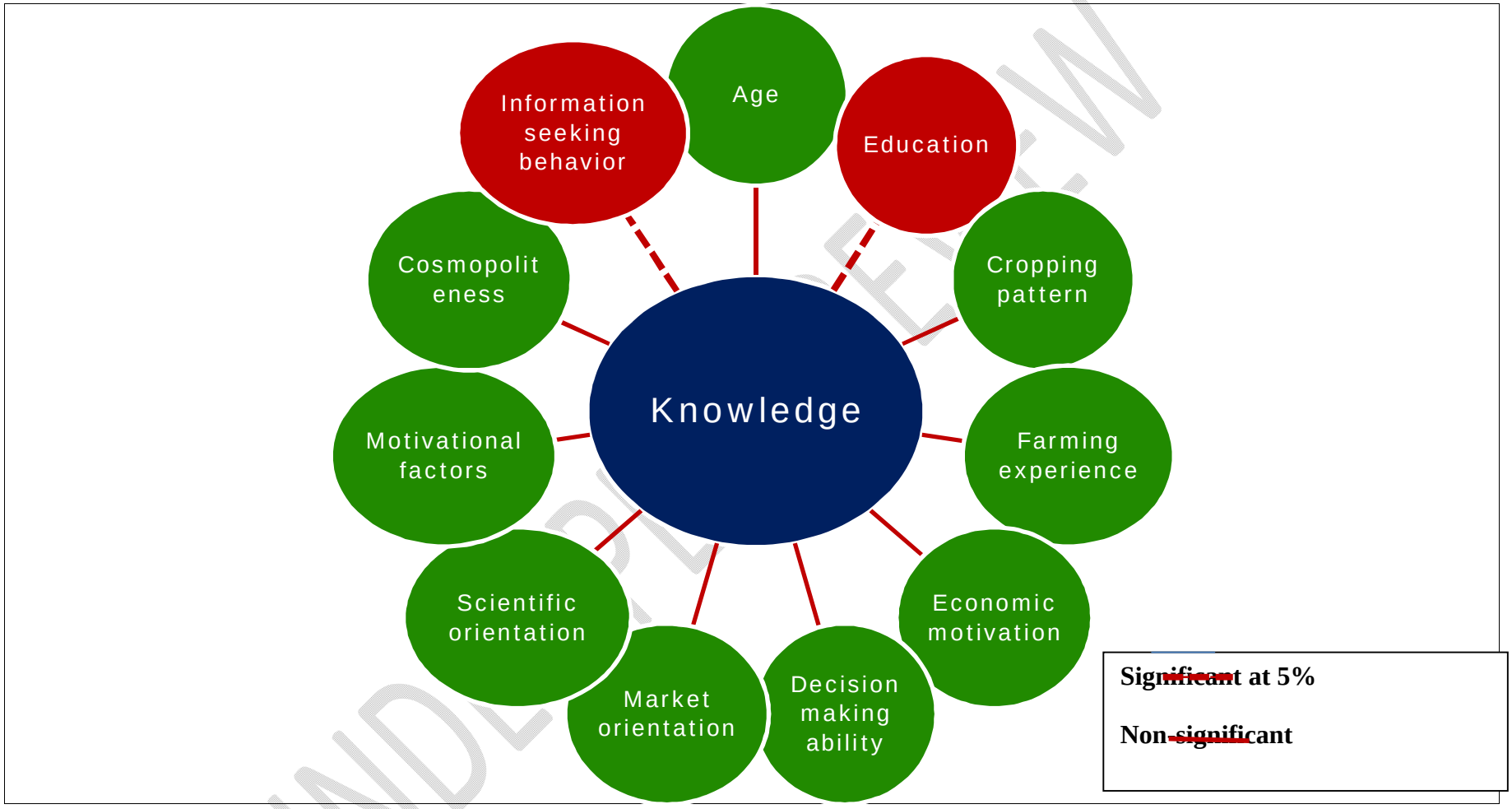

Fig.1.The relationship between profile characteristics of the farmers and their knowledge onPublic market intervention

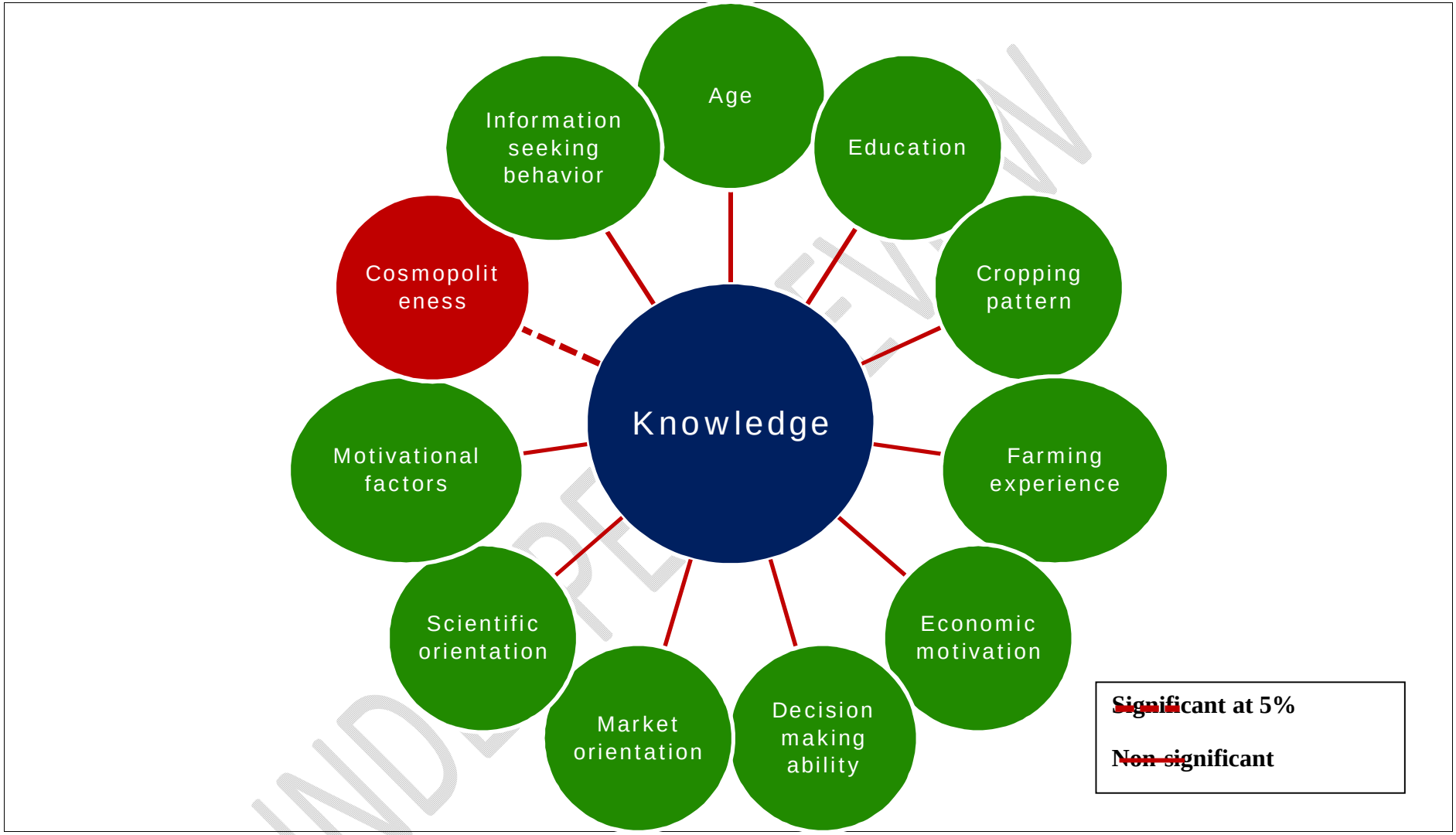

Fig.2.The relationship between profile characteristics of the farmers and their knowledge on Co-operative market intervention

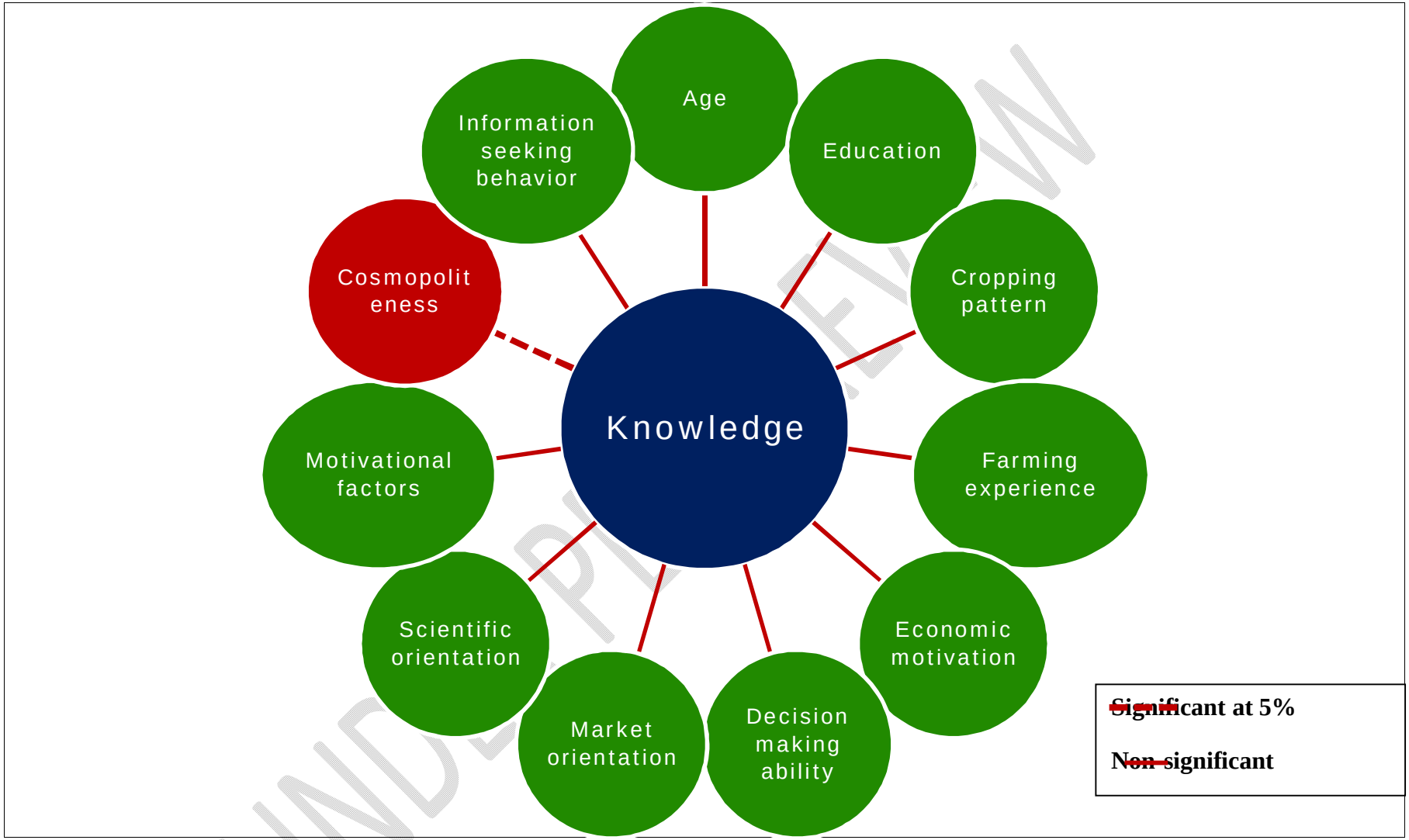

Fig.3.The relationship between profile characteristics of the farmers and their knowledge onPrivate market intervention