



AN ECONOMIC ANALYSIS OF ORGANIC FOOD PRODUCTS – A CASE STUDY OF DAKSHINA KANNADA DISTRICT

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ABSTRACT

This article has made a modest attempt to undertake economic analysis of the consumption of organic food products in Dakshina Kannada district. The results of the primary survey indicated that the major influencing factors for consumption of these products in the district are taste of the product, health concerns, environment concerns, food safety concerns, consumer's income quality, availability and long-shelf life of the product. It is statistically validated that price has moderate degree of significant association with the consumption of organic food products in the district but income of the consumer do not have association with the consumption of organic food products.

There is a need to increase the consumption of organic products for healthier lives and therefore much awareness about the health benefits of the products should be made and the perception that "If it is organic, then it is costly" should be changed. Affordable price structure with attractive discounts, sustainable incomes of the consumers, increase in the availability of organic outlets are some of the key factors for encouraging sustainable consumption of organic food products.

KEYWORDS

Organic food products, premium price, environment concerns, sustainable consumption

1.1 INTRODUCTION

Since the implementation of the revised Organic farming policy in the Karnataka state during 2017, organic farming is being more promoted in the state. It revealed that the prominent organic crops grown in the state are cereals and millets such as non-basmati, paddy, maize, bajra and ragi; pulses such as black gram, green gram, Bengal gram, horse gram and pigeon-pea; Oilseeds namely sesame, ground nut and soybean; Fruits such as mango, pineapple and banana; commercial crops – sugarcane, spices & condiments namely arecanut, black pepper, chilly, cinnamon, cloves, ginger, turmeric etc.; plantation crops – coffee and coconut; as well as medicinal and aromatic plants. Government is now focusing on sustainable development of agriculture to revive the economic condition of the farmers as well as promoting organic consumption for addressing the health adversities of the consumers.

Dakshina Kannada is one among the top 5 districts of Karnataka state which has relatively more number of organic outlets. It has a rich socio-economic profile. It is known as Cradle of Banking, Hub of Education and is well-known for religious tourism. Medical facilities of this district is considered as the state of art. It ranks first in terms of literacy rates across all the districts of the state. Further the literacy rate of urban areas of the district is above 90 percent. It ranks second with respect to Gross District Domestic Product among all the districts of the state. The service sector contributes around 52 percent of the income in the district. It is the major contributor for economic growth in the district. It is followed by 26 percent contribution by agricultural sector and the remaining 22 percent is contributed from industrial sector in the district. The per-capita income of the district is 4.43 lakhs and the district ranks second in this regard.

1.2 REVIEW OF LITERATURE

This section gives the glimpse on the studies on organic food products in the Karnataka state. **Kumar and Chandrashekar (2015); Chandrashekar and Palaksha (2021)** analysed the consumer perception about organic product and marketing in Mysore city. They found out that most of the consumer in urban people preferred organic food products, but the marketing of organic products is inadequate. They elicited other major reasons such as less number of organic producers, lack of awareness and less availability of organic shops in connection with the growing demand. **Manangi and Padashetty (2019)** found out that consumers perceive that only vegetables and fruits are organically processed and other food items have lesser significance in the organic food market.

Similar study by **Srivatsava (2021)** showed that the purchase intention was significantly affected by health concern, product quality and knowledge and not by environmental concern. **Ravindran, et.al (2023)** in their study have elicited that the shown that the primary factor influencing someone's decision to purchase an organic food item is their level of financial ability and the price of the organic food products. Majority of the studies have covered Bengaluru and Mysore districts of the state. Even though Dakshina Kannada is one of the top five districts in terms of organic outlets, least attempt is being made to understand the economic prospects of consumption of organic food products in the district.

1.3 OBJECTIVE AND HYPOTHESES

The main objective of this research article is to analyse the economic factors which influence the consumption of organic food products in the study area. Further, it aims to test the following two hypotheses

- a) Demographic factors do not have association with the consumption of organic food products
- b) Price and income have association with the consumption of organic food products

1.4 ANALYSIS AND INTERPRETATION

This article is largely based on primary data. Information from 30 respondents on various aspects such as source to know about organic food products, source of purchasing the organic food products, types of organic food products such as cereals, pulses, vegetables, fruits and dairy products, frequency of its purchase, money spent on it, quantities of the various organic food products purchased during the present year and previous year, economic factors, problems faced in switching completely to organic food products and marketing strategies employed by the organic producers/sellers in the district.

Table 1.1
Demographic profile of the respondents in Dakshina Kannada district

Particulars		No. of respondents	% to the total
Gender	Female	18	60.0
	Male	12	40.0
Age	20-30	28	93.3
	30-40	2	6.7
Caste	OBC	15	50.0
	Others	13	43.3
	SC	1	3.3
	ST	1	3.3
Marital Status	Married	4	13.3
	Single	26	86.7
Type of family	Joint	7	23.3
	Nuclear	23	76.7
Educational Qualification	PUC/Diploma	1	3.3
	Postgraduate	11	36.7
	Undergraduate	18	60.0
Occupation	Accountant	1	3.3
	Business	8	26.7
	Contractor	1	3.3
	Farmer	1	3.3
	Government employee	1	3.3
	Manager	1	3.3
	Private Employee	5	16.7
	Store manager	2	6.7
	Student	3	10.0
	Teaching	4	13.3
	Unemployed	3	10.0
	Monthly income	upto 10,000	3
10,001 to 20,000		5	16.7
20,001 to 30,000		6	20.0
30,001 to 40,000		2	6.7
40,001 to 50,000		7	23.3
50,001 and above		7	23.3

Source: Primary Data

Table 1.1 below provides the basic socio-economic profile of the respondents interviewed in the district. Around 60 percent of the respondents were female. 93.3 percent of the respondents belonged to the age-group of 20-30 years. Almost 50 percent of them belonged to Other Backward Classes group. Further around 86.7 percent of them were single. Similarly, with regard to type of family, it was found that 76.7 percent belonged to nuclear families.

Further 60 percent of the respondents were undergraduate. On occupation aspect, it was found that around 26.7 percent of them were involved in business, followed by 16.7 percent of them working as private employees and 13.3 percent comprising teachers. With regard to their monthly income, it reveals that 23.3 percent each were found earning in the income group of Rs. 40000 to Rs 50000 and also in the income group of Rs. 50000 and above.

Chi-square test was employed to find out the association between the demographic factors and the consumption of organic food products in the district. The below table outlines the results of the test.

Table 1.2
Results of Chi-square test

Factors	Chi-square Value	Degrees of freedom	P-value
Gender and Consumption	2.563	2	0.278
Age and Consumption	0.079	2	0.961
Marital Status and Consumption	0.247	2	0.884
Educational Qualification and consumption	0.880	4	0.927
Family type and consumption	1.706	2	0.426
Occupation and consumption	10.740	20	0.953

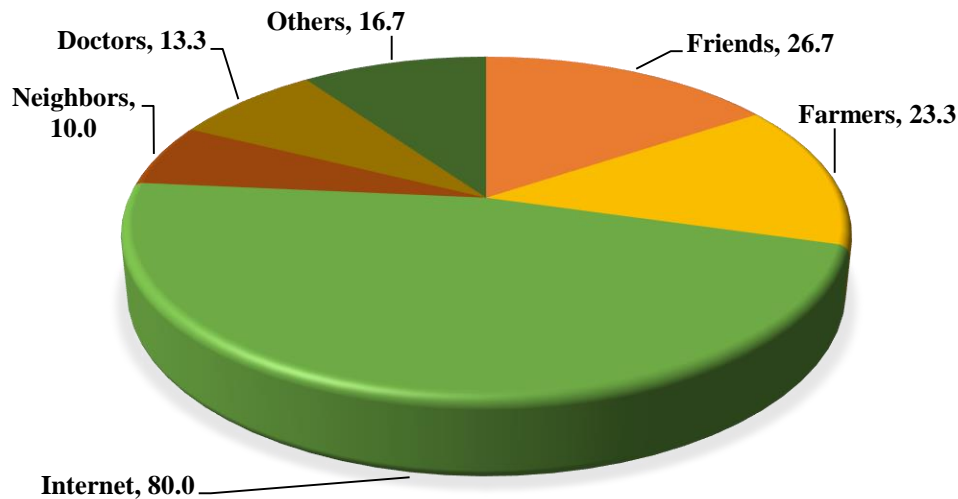
Source: Author's calculations

The results indicate that the p-values with regard to the various demographic factors and consumption of organic food products in the district is greater than 0.05. Therefore, it validates the null hypothesis which states that there is no association between the demographic factors and the consumption of organic food products.

The important sources of knowledge on organic food products in general are from friends, farmers, internet, neighbors and doctors. It is pertinent to note that during the process of collecting the information on this aspect, there are many respondents who have obtained knowledge from more than one source. Therefore, the absolute responses might not match which the 30 respondents and accordingly the percentage will not aggregate to 100.

The primary source of knowledge on organic food products in the Dakshina Kannada district is through internet as around 80 percent of 30 respondents have conveyed their opinion in this regard. The secondary source is from friends with 26.7 percent and farmers with 23.3 percent. The share of respondents obtaining information from doctors is 13.3 percent and neighbors with 10 percent. The other sources as revealed from the respondents in this district are television, parents and relatives which constitute around 16.47 percent of 30 respondents. (See Chart 1.1)

Chart 1.1
Source about the organic food products in Dakshina Kannada
(in percentage)



Source: Primary Data

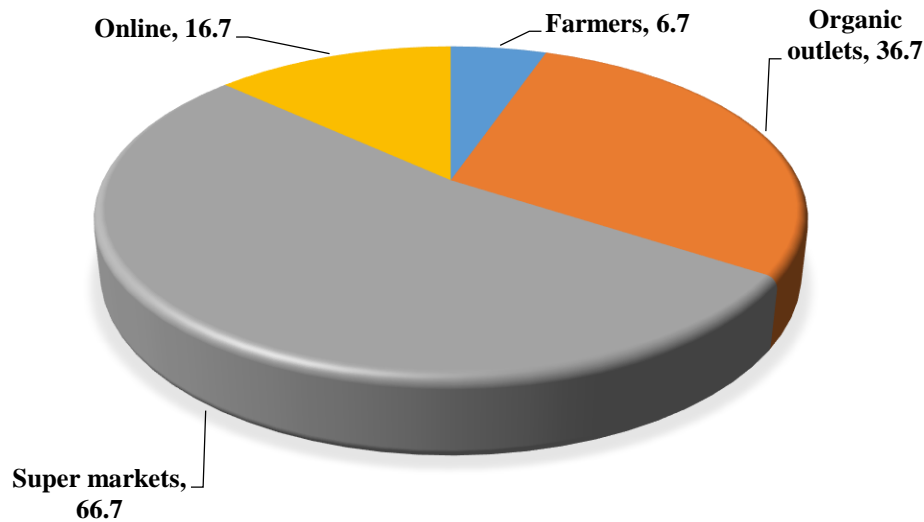
Table 1.3
Frequency of purchasing organic food products in Dakshina Kannada

Frequency	Number	Percentage
Daily	2	6.7
Monthly	16	53.3
Once in 3 months	5	16.7
Weekly	7	23.3
Total	30	100.0

Source: Primary Data

Table 1.3 reveals the frequency of purchasing organic food products in Dakshina Kannada. It reveals that out of 24 respondents, majority of around 53.3 percent of them purchase these products on a monthly basis. Further 23.3 percent of them purchase on weekly basis. Further 16.7 percent buy once in 3 months and the remaining 6.7 percent on daily basis in the district.

Chart 1.2
Source of purchase of organic food products in Dakshina Kannada
(in percentage)



Source: Primary Data

Around 66.7 percent of 30 respondents in Dakshina Kannada district purchase organic food products from super markets and 36.7 percent of them buy from organic outlets. It is further followed by 16.7 percent purchasing through online portals and 6.7 percent of them buy from farmers. (See Chart 1.2)

Table 1.4
Type of organic food products purchased in Dakshina Kannada

Products	Number		Growth	Percent to the Total	
	Previous Year	This year		Previous Year	This year
Cereals	13	14	7.69	43.33	46.67
Pulses	13	14	7.69	43.33	46.67
Vegetables	22	24	9.09	73.33	80.00
Fruits	20	18	-10.00	66.67	60.00
Dairy Products	14	17	21.43	46.67	56.67
Others	3	7	133.33	10.00	23.33

Note: Values in percent to the total is out of 30 respondents interviewed in Dakshina Kannada district across each product

Source: Primary Data

Table 1.4 provides the comparative outlook on various organic food products purchased by the respondents over the last two years in Dakshina Kannada. It reveals that the consumption of organic cereals, pulses, vegetables and dairy products have witnessed positive growth in the present year in comparison to previous year. Relatively, highest increase is noticed across dairy products with 21.43 percent increase. It is subsequently followed by increase in vegetables to the tune of 9.09 percent. On the other hand, the consumption of organic fruits has shown decline by 10 percent. Further the relative comparison in terms of percent to the total respondents across various organic food products reveal that consumption of organic vegetables constituted the highest share of 73.33 percent in the previous year, which has increased to 80 percent in the present year. It is then followed by fruits, dairy products, cereals and pulses. Apart from these products, consumers in this district also purchase organic chia seeds, pumpkin seeds, flax seeds, protein bars and dry fruits.

Table 1.5
Quantities of organic food products purchased in Dakshina Kannada

Products	500 grams to 1 kgs			1 kg to 2kg			2 kg and above		
	Previous Year	This year	Growth	Previous Year	This year	Growth	Previous Year	This year	Growth
Cereals	14	15	7.1	2	3	50.0	3	4	33.3
Pulses	5	11	120.0	7	6	-14.3	1	4	300.0
Vegetables	6	8	33.3	9	9	0.0	4	11	175.0
Fruits	6	8	33.3	8	11	37.5	4	5	25.0
Dairy Products	9	11	22.2	3	1	-66.7	0	4	-
Others	3	8	166.7	0	1	-	1	0	-100.0

Source: Primary Data

Table 1.5 provides the details with regard to quantities of organic food products purchased across different organic food products in Dakshina Kannada. With respect to the consumption of organic cereals, it is observed growth in its consumption across 500 gms to 1 kgs (7 percent), then by 50 percent across 1 kgs to 2 kgs and by 33.3 percent across 2 kg and above. With regard to pulses, positive growth is observed across 500 gms to 1kgs by 120 percent and by 300 percent across 2 kgs and above. Consumption of organic vegetables and fruits have also shown substantial increase. Vegetables have registered increase by 33 percent across 500 gms to 1 kgs and by 175 percent across 2 kgs and above. Similarly, consumption of fruits has shown increase across all the categories of quantities. Dairy products have registered rise in its consumption only across 500 gms to 1 kgs and also across 2 kgs and above.

Correlation technique is employed to testify the hypothesis which states that price and income have association with the consumption of organic food products in the district. Below are the results.

Table 1.6
Results of Correlation

		Quantity	Price	Income
Quantity	Pearson Correlation	1	0.6245	0.0232
	Sig. (2-tailed)		0.0002	0.9033
	N	30	30	30
Price	Pearson Correlation	0.6245	1	-0.1242
	Sig. (2-tailed)	0.0002**		0.5130
	N	30	30	30
Income	Pearson Correlation	0.0232	-0.1242	1
	Sig. (2-tailed)	0.9033	0.5130	
	N	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Author's Calculations

The above table makes clear that there is moderate degree of positive association between price of the organic food products and the consumption of organic food products in the district. The correlation value between these two variable stood at 0.6245, which is statistically significant at 0.01 level of significance. With regard to income of the consumer and its association with the consumption of organic food products in the district, it is found that there is very low degree of positive association between the two factors which is statistically insignificant as the p value is greater than 0.05 level of significance.

Therefore, price has association with the consumption of organic food products in the district but income of the consumer do not have association with the consumption of food products in the district.

Table 1.7
Influence of economic factors on purchase of organic food products in Dakshina Kannada

SI. No.	Economic factors	Number			Percentage		
		YES	NO	MAY BE	YES	NO	MAY BE
1	Price of the organic products	15	6	9	50.0	20.0	30.0
2	Willingness to pay premium price	13	12	5	43.3	40.0	16.7
3	Consumer's income	18	5	7	60.0	16.7	23.3
4	Marketing strategies such as advertisements	20	6	4	66.7	20.0	13.3
5	Availability of products	21	6	3	70.0	20.0	10.0
6	Quality of the product	21	4	5	70.0	13.3	16.7
7	Long-shelf life of the product	21	4	5	70.0	13.3	16.7
8	Taste of the product	24	2	4	80.0	6.7	13.3
9	Health Concerns (High in nutrition, Strong immunity and disease resistant)	23	1	6	76.7	3.3	20.0
10	Environmental Concerns (bio-degradable, ensures soil fertility, prevents pollution)	19	4	7	63.3	13.3	23.3
11	Food safety Concerns (free from additives and side-effects)	21	1	8	70.0	3.3	26.7
12	Usage by others	16	6	8	53.3	20.0	26.7

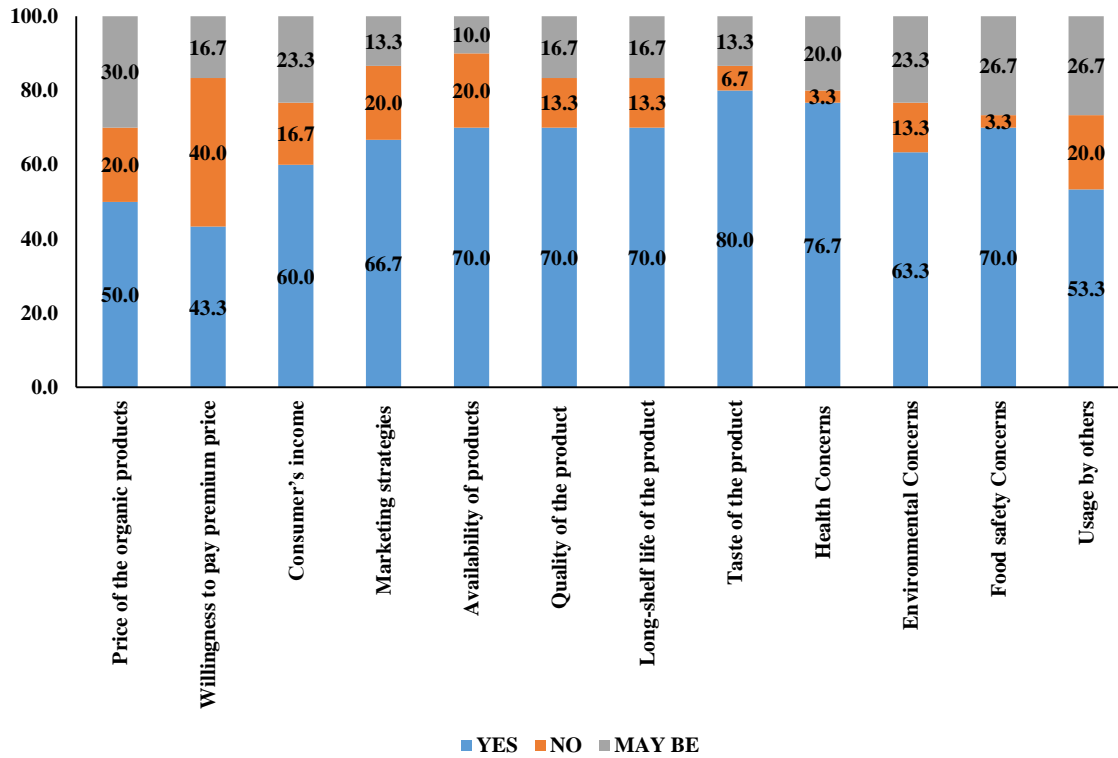
Source: Primary Data

Table 1.7 provides the account of various economic factors influencing the consumption of organic food products in Dakshina Kannada district. It is observed that people in Dakshina Kannada purchase the organic food products largely influenced by its taste (80 percent) and health concerns (76.7 percent) in comparison with other factors. 70 percent of respondents each account for influence by availability of products, quality of the product, long-shelf life of the product and food safety concerns respectively. Further 66.7 percent influenced by marketing strategies, 63.6 percent by environmental concerns, 60 percent by their income. Only 43.3 percent of them feel that willingness to pay premium price influences its purchase. Similarly, 53.3 percent influenced by usage of products by others and lastly 50 percent influenced by price of its products. (See Chart 1.3)

With regard to willingness to pay premium price, 40 percent of them are of opinion that, it doesn't influence the organic food consumption in the district.

Chart 1.3

Influence of economic factors on purchase of organic food products in Dakshina Kannada (in percentage)



Source: Primary Data

1.5 CONCLUSION

The article has analyzed the consumption of organic food products in Dakshina Kannada district from the economic point of view. It is elicited that organic vegetables and dairy products are more consumed in the district majorly from the super markets and organic outlets. They purchase on a monthly basis. Comparative picture in the present year with the previous year, revealed that organic cereals, pulses, vegetables and fruits have registered considerable increase in its consumption. The other products purchased in this district are organic chia seeds, pumpkin seeds, flax seeds, protein bars and dry fruits. An analysis of various economic factors influencing the consumption of these products reveals that the major influencing factors are taste of the product, health concerns, environment concerns, food safety concerns, consumer's income quality, availability and long-shelf life of the product as more than 50 percent of the respondents have opined in this regard.

Many of the respondents are worried about the increase in the prices of organic food products which makes it expensive to afford and also the inadequate availability of the products in the selected district. The marketing strategies adopted in this district with regard to organic food products are advertisements through social media, home delivery of the products, display on the billboards regarding type of products available and its content description. There is a need to increase the consumption of organic products for good health and betterment of the society. Prices should be made affordable by keeping lesser profit margins. Much awareness about the health benefits of the products should be made and the perception that "If it is organic, then it is costly" should be changed.

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