

EVALUATING THE ENVIRONMENTAL AWARENESS OF CONSUMERS ON PURCHASE OF ORGANIC PRODUCTS

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Abstract

Environmental issues like global warming, climate change, greenhouse gas effect, ozone layer depletion, etc. have brought a great variation in monsoon pattern and it does have a negative impact on agricultural sector. This alarming issue has caught the attention of agricultural scientists across the globe and they laid emphasis on an alternative farming system which ensures environmental sustainability, which resulted in the widespread adoption of organic farming practices both in developed and developing economies. Even in India, organic market is considered as a promising area of investment, as many consumers are coming forward to purchase organic products for its perceived benefits. Therefore, it was felt necessary to conduct a consumer survey to evaluate the environmental awareness of consumers in purchasing organic products in Coimbatore city of Tamilnadu. The city comprises of many organic outlets and people are also showing keen interest in buying organic products. A well-structured questionnaire is framed to collect information from organic consumers who frequently visit the organic outlets. The collected data are analyzed using appropriate statistical tools and inferences are drawn.

Key words: Environmental issues, organic farming, environmental sustainability, organic movement, environmental awareness, etc.

1. Introduction

Organic agriculture is a kind of farming system that has created a positive link between the nature and mankind. The concept is not new to humans, for ages we were involved in this natural method of farming. But with the advent of mechanization and commercialization, farmers started to adopt conventional agricultural practices, where more emphasis was laid on the usage of pesticides and fertilizers. This contributed to increased agricultural productivity and export promotion gained its importance. It does have a negative impact on soil fertility. Therefore, to protect the soil structure and to ensure environmental sustainability, farmers are returning back to traditional methods of farming. Organic farming to a greater extent has a positive impact on environment: combats soil erosion; fighting against the effects of global warming and climate change, enriches soil fertility by using bio-manures and bio-fertilizers, supports water conservation, ensures water management and encourages biodiversity.

2. Review of literature

Pillai and Shah (2012) tried to assess the buying behaviour of consumers in relation with environmental concern. Structural equation model was used to draw inference and results indicated that organic products had a strong positive impact towards environmental concern in motivating a consumer to purchase organic products.

Life Cycle Assessment (LCA), a quantitative method was used by (Baker, 2015) to assess the environmental impacts generated from a commodity within a defined boundary. Results inferred that organic farming and its products has a positive impact on the environment.

3. Statement of the problem

Modern farming techniques have deteriorated the soil quality by excessive application of chemical fertilizers. To ensure environmental sustainability, organic farming methods are widely adopted by farmers. The demand for organic produce is also on the rise for its perceived benefits. Several literature studies have also shown positive link between organic product consumption and rise in environmental concern. Thus, it was felt necessary to conduct a consumer survey, in evaluating the environmental awareness of consumers in purchasing organic products.

4. Objectives of the study

1. To analyze the demographic profile of organic consumers in Coimbatore district.
2. To evaluate the environmental awareness of consumers in purchasing organic products in Coimbatore district.
3. To provide suggestions to improve organic claims in the district based on the findings of the study.

5. Hypothesis

Education has a positive influence on environmental awareness of consumers in buying organic products.

6. Scope of the study

Organic farming and its products are considered to be environment friendly as it excludes the use of synthetic chemicals and pesticides. This nature of organic produce enriches soil fertility; also healthy soil produces healthy crops which foster the health of all living beings in the ecosystem.

7. Research methodology

The study is descriptive and analytical in nature. Coimbatore district, Tamil Nadu is chosen as the area of study. The district comprises of many organic outlets and people are also showing keen interest in purchasing organic products. The study extensively used both primary and secondary data. Primary data were collected with the help of a well-structured questionnaire from 60 organic consumers. Secondary data related to organic product purchase in relation with environmental concern were collected from journals. Non-probability sampling technique, namely purposive sampling was used to select the sample respondents. Accordingly, the data collected was analyzed using descriptive statistics, factor analysis, correlation analysis and Garrett ranking method.

8. Results and Discussion

8.1. Demographic characteristics of the respondents

Demographic characteristics like age, gender, education, income and occupation plays a vital role in influencing a consumer to purchase organic products (Shows, et al. 2009).

TABLE 1
Demographic Profiles of Organic Consumers

S. No.	Particulars	Percent of Respondents
1	Age (years)	
	less than 25	21.7
	26-35	33.3
	36-45	28.3
	Above 45	16.7
2	Gender	
	Male	35.0
	Female	65.0
3	Education	
	School level	6.7
	College level	48.3
	Professional courses	36.7
	Others	08.3
4	Occupation	
	Agriculturist	11.7
	Business	25.0
	Service sector Jobs	26.7
	Home maker	31.7
	Others	05.0
5	Monthly income (Rs.)	
	Below 20000	11.7
	21000 to 30000	36.7
	31000 to 40000	36.7
	41000 to 50000	10.0
	Above.50000	05.0

Source: Primary Data

Earlier studies stated that middle aged people has more environmental concern in purchasing organic products than young people. 61.6 per cent of respondents who buy organic products were middle aged people falling under the age group of 26-35 years and 36-45 years. It was also evident that more female respondents (65 per cent) were interested in buying organic produce for environmental concern than male (35 per cent). Higher the educational level, higher will be the environmental concern to purchase organic products. 85 per cent of organic consumers have completed their college level and done professional courses like medicine, engineering, law, etc. Nearly 31.7 per cent of homemakers were responsible for shopping organic products, 26.7 per cent were employed in service sector jobs which comprises of both public and private employees, whereas 25 per cent were business people and 11.7 per cent were agriculturists, remaining 5 per cent comprises of retired people and industrial workers working in manufacturing units. These people had come to know the environmental benefits of organic products through word of mouth information. Nearly 73.4 per cent of the consumers' income falls under the category of Rs.21000 to 40000; while 11.7 per cent were earning below Rs.20000, 10 per cent were in the range of Rs.41000 to 50000 and 5 per cent were earning above Rs.50000.

8.2. Organic farming and its products in relation with environmental awareness

Various statements were listed relating to the opinion of organic farming and its products in relation with environmental awareness and respondents were asked to rate the statements on a five point scale. Factor analysis was used to identify the underlying dimensions among the factors, to determine the reliability of applying factor analysis the Cronbach's alpha test was applied and was estimated to be 0.884, which was greater than 0.7 indicating the reliability of the constructs. To determine the appropriateness of applying factor analysis the KMO and Bartlett's test measures was computed and the results are presented in Table 2.

TABLE 2
KMO and Bartlett's Test Measures

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.808
Bartlett's Test of Sphericity	Approx. Chi-Square	595.344
	DF	45
	Sig.	.000

The KMO statistics for all respondents was 0.808, signifying higher than acceptable adequacy of sampling. The Bartlett's test of sphericity was also found to be significant at 1 per cent level providing evidence of the presence of relationship between the variables to apply factor analysis.

Table 3 enlists the Eigen values, their relative explanatory powers and factor loadings for 10 components were identified within the data set. The Eigen values greater than one alone was considered for inclusion in the analysis.

TABLE 3
Factor Loadings for Organic Farming and Its Products

S. No.	Statements	Components		
		1	2	3
1	Enriches soil fertility		.825	
2	It will fight against the effects of global warming, climate change and greenhouse gas effect.	.880		
3	Ensures water management	.911		
4	Encourages biodiversity	.901		
5	More emphasis on environmental sustainability			.968
6	Organic products are natural		.839	
7	More fresh	.860		
8	Chemical free	.907		
9	No preservatives	.900		
10	Does not contain GMO material		.596	
Eigen values		5.681	1.351	1.051
Percentage of variance		56.814	13.508	10.514
Cumulative percentage		56.814	70.323	80.837

Source: Primary Data

TABLE 4
Correlation Analyses

		Education	Looking at the Source of Organic Products
Education	Correlation	1	.894*
	Sig. (2-tailed)		.000
	N	60	60
Looking at the source of organic products	Correlation	.894*	1
	Sig. (2-tailed)	.000	
	N	60	60

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

Source: Estimation based on field survey

H₀: There is no significant association between education and looking at the source of organic products.

H₁: There is a significant association between education and looking at the source of organic products.

From Table 4, it is observed that the calculated value is less than the tabulated value ($p < 0.01$) and there is a perfect degree of positive correlation between the variables which signifies that education has a greater influence on consumers to look at the source of organic products i.e. they are aware of organic production methods, standards and regulations under which organic farming should be done. Thus, the null hypothesis is rejected and alternative hypothesis is accepted.

8.3. Frequent purchases of organic products

In the present study, respondents were asked to rank organic products that were frequently purchased on a regular basis and rank was converted into per cent position by using the formula:

$$\text{Per cent position} = \frac{100 (R_j - 0.5)}{N}$$

Where R_j is the rank of the i^{th} item and N refers to the number of items ranked. The per cent position were converted into score by using Garrets' rating scale and average score obtained for differential reasons are tabulated and presented in Table 5. Male respondents have mentioned 'Vegetables' (1st rank), 'Fruit Jam' (2nd rank) and 'Milk' (3rd rank) whereas female respondents have marked 'Organic Millet' (1st rank), 'Eggs' (2nd rank) and 'Fabric/clothing' (3rd rank) as prime organic products that they were purchasing on a regular basis.

TABLE 5
Frequent Purchases of Organic Products

S. No.	Organic Products	Scores under Gender			
		Male		Female	
		Score	Rank	Score	Rank
1.	Vegetables	37.50	1	26.73	21
2.	Fruits	31.71	6	29.85	16
3.	Pulses	30.00	11	30.77	11
4.	Cereals	29.14	15	31.23	7
5.	Food grains	30.21	10	30.65	12
6.	Organic millets	26.95	21	32.41	1
7.	Oil products	30.71	8	30.38	14
8.	Milk	34.19	3	28.51	19
9.	Tea	32.81	4	29.26	18
10.	Sugar	29.86	12	30.85	10

11.	Jaggery	29.00	17	31.31	5
12.	Honey	29.10	16	31.26	6
13.	Spices	29.24	14	31.18	8
14.	Fruit juices	31.88	5	29.76	17
15.	Fruit jams	34.57	2	28.31	20
16.	Pickles	30.79	7	30.35	15
17.	Organic meat	30.67	9	30.41	13
18.	Eggs	27.74	20	31.99	2
19.	Organic cosmetics	29.81	13	30.87	9
20.	Clothing/ Fabric	28.19	19	31.74	3
21.	Home ware appliances	28.69	18	31.47	4

Source: Primary Data

9. Findings of the study

1. Out of 60 organic consumers, only 20 per cent of respondents have stated they buy organic products due to environmental concern.
2. Nearly 32 per cent of respondents have stated that the major sources of awareness which influenced them to buy organic products were radio, newspapers, magazines and books.
3. 33 per cent of organic consumers have mentioned that they always look at the source of organic products i.e. they are aware of organic production method.
4. Only 25 per cent of respondents had high and very high knowledge about organic products.
5. Majority of the respondents i.e. nearly 42 per cent of respondents stated that organic products are environment friendly in nature.

10. Suggestions

1. More awareness regarding organic products has to be generated among the public through media.
2. All organic outlets should showcase a display about the benefits of organic products on environment, so that they can gain more knowledge about organic production method.
3. School curriculum should inculcate the benefits of organic farming on environment; this will enable children to gain knowledge about organic produce.
4. Packaging the products in an environmental friendly way like usage of biodegradable plastics should be promoted among the organic marketers.

11. Conclusion

Environmental awareness regarding organic products is showing an increasing trend and this is a good start-up for Indian organic market. More promotional campaigns regarding organic farming and its positive impact on environment should be conducted on a mass scale to create more wakefulness among the general public. The role of government as well as people is pivotal here, where we have to work together to protect environment.

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