Retailers' Perception on Factors Influencing Purchase of Organic Food Products: A Factor Analysis

Author 1: Sadia Tabassum
Research Scholar,
B.N. Bahadur Institute of Management Sciences,
Manasagangotri, Mysore.

Author 2: Dr. Aisha M Sheriff
Professor & Chairman,
B.N. Bahadur Institute of Management Sciences,
Manasagangotri, Mysore.

Abstract

Organic Food Product marketing is one of the emerging areas of business in the wake of sustainable development. To develop efficient marketing strategy for Organic Food Products, a retailer should know the consumers' buying behavior. Accordingly, in the present study an attempt has been made to understand the retailers' perception of consumer behavior by using primary data and factor analysis. It has been found from the present study that factors like chemically free, naturally grown, safety, healthy, tasty, hygiene and freshness have jointly determined the demand for organic food product with mean score above 4.5 (component 1). Factors such as free from GMO (Genetically Modified Organism), eco-friendly, ideal for children and ideal for elders represent mean score of less than 4.5 (component 2). Supporting the farmers is identified just below 4.5 (component 3). At the same time, craze to consume is not important in determining the demand for organic food products according to retailers. Therefore, the retailers have to develop the strategy based on the results obtained by the present study. The efficient marketing strategy should focus on chemical free, naturally grown, safety, healthy, tasty, hygiene and freshness factors in advertising and promotion of organic food products.

Keywords: organic food products, chemical free, naturally grown, safety, retailer's perception.

I. Introduction

Organic Food Products are gaining more importance in recent years. The United Nations has declared 2015-30 as a sustainable decade. Sustainable agriculture is the pre-requisite for sustainable development. Organic

Food Products (OFPs) are the result of practice of sustainable agriculture. Sustainability of agriculture often depends on market for OFPs. There are two ways to understand the marketing for OFPs; firstly, consumers' perception and secondly, traders' or retailers' perception. Most of the previous research works have largely examined the consumers' perception. But, there are very less attempts made to understand the perception of retailers. Retailers are an important source of information in understanding why do consumers purchase OFPs. Therefore, the present study will examine the perception of retailers to understand the purchasing behaviour of consumers.

OFPs are those products which are considered to be free from harmful chemicals, fertilizers and artificial pesticides. OFPs are not genetically modified and are cultivated under natural conditions. The demand for OFPs is increasing globally over the past few years. The reasons for the surge of this market may be many. The primary reasons responsible for the growth of this market in India identified by the Agricultural and Processed Food Products Export Development Authority (APEDA) are increased awareness of chemical effects among consumers, increase in the disposable income, the growth of e-commerce, favourable governmental regulations and increase in the export of Indian organic food (APEDA & India, 2019). India is also witnessing the growth of this market with the emergence of organic retail outlets and speciality stores in various cities pan India. With the increase in competition, the retailers need to differentiate their products and offers. The present empirical study attempts to examine the factors that significantly influence the purchase of OFPs as explained by retailers. This study can be useful especially for those who are into the business of organic food products particularly in a developing nation like India.

II. Review of Literature

There are good number of research studies carried out on organic food. Most of the previous studies have analysed the issues related to price, quality, health, safety etc. There are studies which extensively examined the willingness to pay for OFPs (Athanasios & George). Many previous studies have largely discussed the quality issues of food products and their impact on health of the consumers (Raffaele & Simona). Papers have also discussed the issues; why consumers do not purchase the OFPs (Fabian, Corinna, & Ulrich). Majority of the researches which were carried out to understand the relationship between health and organic food showed that health is one of the primary reasons that consumers buy organic foods (Fotopoulos & Athanasios, 2002).

Health is the dominating factor which is central to the decision of purchasing organic food (Zanoli & Naspetti, 2002). Consumers consider organic food as healthier alternative, more enjoyable, tasty, safe and better when compared to non organic products (Lockie, Lyons, & Lawrence, 2002). A positive relationship has been identified between health consciousness and price (Molyneaux, 2007).

Another study reveals that health, education and availability have a positive influence on the attitude of consumer while procuring organic food (Justin & Jyoti, 2012).Health, quality, price and food safety are the four

important factors responsible for the purchase of organic food (Nihan, 2012), (Chandrashekar, 2014), (Pittawat & Santiteerakul, 2016) and (Michaelidou & Louise, 2008). The barriers for growth of organic market and consumer knowledge about OFPs have also examined (Biao & at.al.).

However, the previous studies have not analysed the influence of the factors like chemically free, naturally grown, safety, healthy, tasty, hygiene and freshness, free from GMO (genetically modified organisms) eco-friendly, ideal for children and elders, craze to consume and support to local farmers together, particularly in Karnataka, specifically in Mysore.

It is also important to know the retailers' perception in understanding the reasons why consumers purchase OFPs. The present study will enable developing the strategies for marketing of organic food products.

The current paper has used primary data collected from 50 sample retailers in Mysore city. Simple random sampling method is used for selection of respondents and statistical formula with minimised error at 5% has been followed to arrive the sample size. Sample respondents are the sellers of organic food products, who provided information in 5 point Likert scale where 1 is for strongly disagree and 5 is for strongly agree. Hence, the collected data is suitable for factor analysis. Accordingly structure repeated principle component factor analysis has been adopted to determine the factors which influence the purchase of organic food according to retailers.

IV. Results and Discussion

The present study empirically identifies the factors perceived by the retailers which significantly influence the purchase of organic food products. Factor analysis helps in identifying the component, which is the combination of factors. Accordingly, the principle component analysis has been used in the present paper. Twelve factors (like, chemically free, naturally grown, safety…) have considered for the study and data collected from 50 respondents which is in Likert scale. As the data is in scale format, factor analysis has been applied.

It has been found from the study that most of the factors used in the analysis are having relationship and therefore there is possibility of jointly explaining the consumer behavior. Detailed analysis and results are presented in the following section.

Average Score for Attributes:

The five-point Likert scale was administered to enumerate the opinion from retailers about why do consumers purchase organic food products. The retailers have given their opinion on the scale from 1-5 (1 for strongly disagree and 5 for strongly agree) for the entire factors. The score for each factor given by all the respondents are summarized and presented in the following descriptive table.

Table 1: Descriptive Statistics for Factors Influence Buying OFP

Factors	Mean	Std. Deviation	Analysis N
Chemical Free	4.76	.431	50
Naturally Grown	4.70	.463	50
Safe	4.70	.463	50
Healthy	4.76	.431	50
Tasty	4.62	.490	50
Hygiene and Freshness	4.76	.431	50
Free GMO	4.36	.485	50
Eco-Friendly	4.22	.418	50
Ideal for Children	4.22	.418	50
Ideal for Elders	4.10	.580	50
Craze to Consume	2.96	.856	50
Support to Farmers	4.48	.789	50

Source: Field study data, computed by researchers.

The above table presents the average score for attributes. It is found from the analysis that the highest score is given to chemical free, healthy, hygiene and freshness factors, followed by other factors. The lowest score was given to craze to consume.

It is evident from the correlation matrix that the diagonal is the unit matrix and gives solutions for factor analysis. The highest correlation coefficient values are found between chemically free and naturally grown, safe. Highest correlation coefficients also found between naturally grown and healthy, hygiene and fresh. It is also proven with many other factors. Therefore, use of factor analysis has been found to be appropriate.

Table 2: KMO and Bartlett's Test for Factors Influencing Buying of OFP

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.528
Bartlett's Test of Sphericity	Approx. Chi-Square	324.712
	Df	36
	Sig.	.000

Source: Field study data, computed by researchers.

The Kaiser-Mayer-Olkin and Bartlett's test was conducted to identify the adequacy of sample for factor analysis. The chi-square test value is very high and significant at one percent level. Therefore, the samples are adequate for factor analysis.

Table 3: Communalities for Factors Influencing Buying of OFP

Factors	Initial	Extraction
Chemical Free	1.000	.679
Naturally Grown	1.000	.919
Safe	1.000	.919
Healthy	1.000	.908
Tasty	1.000	.694
Hygiene and Freshness	1.000	.908
Free GMO	1.000	.842
Eco-Friendly	1.000	.954
Ideal for Children	1.000	.954
Ideal for Elders	1.000	.849
Craze to Consume	1.000	.575
Support to Farmers	1.000	.912
Extraction Method: Principal Component Analysis.		

Source: Field study data, computed by researchers.

The communalities for each factor is calculated and found that initial values are 1 and extraction values are not zero and greater than 0.5. Hence, each one of the factor has been significantly contributing to total variance. Therefore, the present factor analysis will identify at least one component which represents more than one factor.

Table 4: Total Variance of Factors Influencing Buying of OFP

Component	Initial Eigen-values		
	Total	**% of Variance**	**Cumulative %**
1	**5.789**	**48.239**	**48.239**
2	**3.011**	**25.094**	**73.333**
3	**1.311**	**10.929**	**84.262**
4	.729	6.075	90.337
5	.564	4.700	95.037
6	.315	2.627	97.664
7	.158	1.320	98.984
8	.070	.581	99.565
9	.052	.435	100.000
10	1.000E-013	1.000E-013	100.000
11	-1.000E-013	-1.001E-013	100.000
12	-1.001E-013	-1.008E-013	100.000

Source: Field study data, computed by researchers.

The total Eigen value and percentage of variance of each component has estimated and presented in the above table. Based on the Eigen value, three components are extracted. The first component explains 48.239 percent of variation in total variation explained by all the variables. Second component explains 25.094 percent of variations. Third component explains 10.929 percent of variation. Together, three components explained 84.262 percent of variation.

Identification of factor for Each Component:

Using structure matrix which is also a rotated component matrix, the factors (variables) are identified under each component for which values is greater than 0.7 (A factor loading approximately 0.7 is considered to be sufficient).

Table 5
Structure Matrix for Factors Influencing Buying of OFP

Factors	Component		
	1	2	3
Chemical Free	**.808**	.357	.222
Naturally Grown	**.948**	.362	.318
Safe	**.948**	.362	.318
Healthy	**.950**	.226	.170
Tasty	**.752**	-.083	-.044
Hygiene and Freshness	**.950**	.226	.170
Free GMO	.490	**.744**	.608
Eco-Friendly	.289	**.967**	.042
Ideal for Children	.289	**.967**	.042
Ideal for Elders	.192	**.914**	.245
Craze to Consume	.397	-.443	.356
Support to Farmers	-.042	-.019	**-.928**
Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.			

Source: Field study data, computed by researchers.

With the help of principle component analysis and promax rotation method, factors under each component are identified and found that chemically free, naturally grown, safety, healthy, tasty, hygiene and freshness have jointly determined the demand for organic food product under component one according to the retailers. Factors such as free from GMO, eco-friendly, ideal for children and ideal for elders are representing the second component. Support to farmers is identified under the third component. At the same time, retailers' opine that craze to consume is not important in determining the demand for organic food products according to retailers. Therefore, to promote OFPs to the consumers, retailers have to jointly consider the factors as identified by the factor analysis.

Conclusion:

The present study has analyzed the consumer behavior of OFP as understood and explained by the retailers of Organic food. The study has used primary data which is in the form of Likert Scale and has used factor analysis. It has been found from the study that most of the factors used in the analysis are having relationship and therefore there is possibility of jointly explaining the consumer behavior. It has been proved from the factor analysis that chemically free, naturally grown, safety, healthy, tasty, hygiene and freshness factors have jointly determined the demand for organic food product under component one according to the retailers. Factors such as free from GMO, eco-friendly, ideal for children and ideal for elders represent the second component. Support to farmers is identified under the third component. At the same time, craze to consume is not important in determining the demand for organic food products according to retailers. This study has implications for the retailers in developing marketing strategy that should focus on chemical free, naturally grown, safety, healthy, tasty, hygiene and freshness factors in advertising and promotion of their products.

References

APEDA, & India, G. o. (2019). Ministry Of Commerece and Industry,.

Athanasios, K., & George, C. (n.d.).

Biao, X., & at.al., ,. (n.d.).

Chandrashekar, H. (2014). Consumers Perception towards Organic Products - A Study in Mysore City . *International Journal of Research in Business Studies and Management , 1* (1), 52-67.

Fabian, B., Corinna, F., & Ulrich, H. (n.d.).

FiBL, & IFOAM. (2019). *The World of Organic Agriculture Statistics and Emerging Trends.*

Fotopoulos, C., & Athanasios, K. (2002). Purchasing motives and profile of the Greek organic consumer: a countrywide survey. *British Food Journal 104 9* , 730-765.

Justin, P., & Jyoti. (2012). Consumer Behavior and Purchase Intention for Organic Food. *Journal of Consumer Marketing , 29* (6), 412 - 422.

Lockie, S., Lyons, K., & Lawrence, G. M. (2002). Eating Green: Motivations behind Organic Food Consumption in Australia. *Sociologia Ruralis , 42 (1)*, 23-40.

Michaelidou, N., & Louise, M. H. (2008). The role of health consciousness, food safety concern and ethical identity on attitudes and intentions towards organic food. *International Journal of Consumer Studies , 32*, 163–170.

Molyneaux, M. (2007). The Changing Face of Organic Consumers. *Food Technology , 61*, 22-26.

Nihan, O. (2012). Organic Foods Motivations Factors for Consumer. *Social and Behavioural Sciences, 62* , 661-665.

Pittawat, U., & Santiteerakul, S. (2016). A study of consumers' attitudes and intention to buy organic foods for sustainability. *Procedia Environmental Sciences , 34* , 423 – 430.

Raffaele, Z., & Simona, N. (n.d.).

Zanoli, R., & Naspetti, S. (2002). Consumer motivations in the purchase of organic food - A means-end approach. *British Food Journal , 104 (8)*, 643-653.