

Consumer behavior and purchase intention for organic food

Justin Paul

Nagoya University of Commerce & Business, Nagoya City, Japan, and Foster School of Business, University of Washington, Seattle, Washington, USA, and

Jyoti Rana

DAV Centenary College, Faridabad, India

Abstract

Purpose – The main objective of this study is to understand the behavior of ecological consumers and their intention to purchase organic food. The study aims to determine the factors influencing consumer behavior towards organic food.

Design/methodology/approach – The method used for the data collection was a face-to-face interview, using a structured questionnaire, with closed-ended questions. In total, 463 respondents participated in the survey. It was decided to use various multivariate analyses like multiple regressions, factor analysis and cluster analysis with large sample size.

Findings – The results indicate that health, availability and education from demographic factors positively influence the consumer's attitude towards buying organic food. Overall satisfaction of consumers for organic food is more than inorganic food but the satisfaction level varies due to different factors.

Practical implications – This study suggests that retailers can develop effective marketing program and strategies to influence consumers positively. They can emphasize the health benefits and quality of organic food. They can make these products easily available to attract consumers to buy organic food.

Originality/value – This study provides valuable insight into consumer behavior regarding organic food by examining the factors that influence consumers' intention to purchase organic food, within the Indian context. The lessons can also be replicated in other countries for marketing organic foods.

Keywords Ecological awareness, Consumer purchasing behaviour, Consumer satisfaction, India, Organic foods, Buying behaviour

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this article.

1. Introduction

Marketers are keen to sell the organic products with the increasing awareness of issues such as environment, naturopathy and green world. Environment friendly products are gaining popularity among consumers because they are more aware about their health and protection of the environment. Marketers involved in sales of organic food have to segment their market scientifically in order to maximize the market share. People who believe in health benefits, taste and protection of environment and believe to improve their life style can be the potential consumers of organic food. Moreover consumers are willing to “pay for the privilege of buying green” (Mintu-Wimsatt and Bradford, 1995).

During the last four decades, a progressive increase in environmental consciousness has emerged as the environment moved from a fringe, to a mainstream issue (Grant, 2007; Goleman, 2009). Many factors induced the consumers to be

attracted towards environment, explained by numerous studies during this period. This issue also attracted the media to explore, resulting more stringent legislation, which further resulted in the rise of premier group activities that has led consumers to become more concerned about the environment, resulting further, in great stir of major industrial disasters (Schlegelmilch *et al.*, 1996). Besides these efforts consumer awareness also encouraged consumers to take some responsibility to reduce environmental damage through recycling and purchasing ecologically sound products (Paladino and Baggiere, 2008).

Coddington (1993) also mentioned the change in the perspective of the consumers. Consumers were worried about the impact of environmental damage on their health and safety. Their anxiety compelled the marketers to incorporate environment issue in their decision making. Further two important attitudes, i.e. confidence in food and health consciousness have emerged as main attractions for the consumers towards organic food. This consciousness towards health is growing gradually with the increase of age. Even Germany is not far behind with regard to the attitude towards organic food (Von Alvensleben, 1998). Furthermore, Nigerian consumers are also aware as well as agree that organic food is healthier, tastier, has no harmful effects and is of better quality than the inorganic food (Dipeolu *et al.*, 2009). Consumers buy organic food mainly because of health benefits (Shepherd *et al.*, 2005). Effective campaigns play eminent role in creating awareness in the minds of consumers and they are ready to spend more money for green products (García-Gallego and Georgantzis, 2011).

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All the studies mentioned above have played an important role in understanding the purchasing pattern of the consumers and encouraging the expansion of green products at a fast pace. Every market has different factors determining the popularity of organic food. The change in attitude towards organic food was initially seen at a political level first in Europe and then followed by North America and Japan, which came in response to the growing interest in organic products due to the serious problems caused by the dominant world view underlying the theories and methodology of technology such as over production, environmental pollution, food scare and the depopulation of rural areas (Lockeretz, 2007; Padel and Lampkin, 2007).

On the one side, due to organic trend being weakened in the Eastern and southern Europe, Italy being an exception, consumers of these areas were not much interested in the organic food (Dabbert *et al.*, 2004; Padel *et al.*, 2008), whereas on the other side, the developed and industrialized cities in these areas showed a remarkable growth in the market share of certified organic food products (Aschemann *et al.*, 2007; Richter, 2008). Among developing countries, India is one of the most potential markets for marketing organic food. Many people since centuries are well aware that the organic food is much superior from the point-of-view of health than that of the inorganic food, India had been one of the main follower of organic food in fact it had been fully dependent upon the natural fertilizers. Therefore, India can be the best potential market for the marketers of organic food, but to fit themselves in, they will have to have the confidence of the consumers, who are the loyal customers of organic food, with their quality products (Chakrabarti, 2010).

1.1 Ecological awareness

Ecological awareness has multiple dimensional expression and is described in various ways in literature. Different factors determining ecological awareness among consumers are described by different sources. Nemcsicsné Zsóka (2005) describes five dimensions for understanding environmental awareness; environmental knowledge, environmental values, environmental attitudes, willingness to act and actual action. Through the study of these factors, interpretation of ecological awareness means the understanding of environmental related problems. These factors have great impact on the behavior of human beings. Their actions are motivated with the understanding of these factors. Ecological awareness varies among consumers and the degree of ecological awareness in consumers helps in market segmentation. The Roper Organization and S.C. Johnson & Sons (1990) identified the five categories of consumers on the basis of their environmental attitude as True-blue greens having strong concern about environment, greenback greens whose commitment towards environment depends on their willingness to pay, sprouts showing middling levels of concern about environment and middling levels of behavioral response, grouzers who used to rationalize their lack of pro-environmental behavior and basic browns believing that individuals cannot make a difference in solving environmental problems.

1.2 Ecological consumer behavior

The consumers belonging to the ecological market segment are those who are characterized by their self-fulfillment. These people always believe in self-improvement and take action, which are challenging. They are interested in

ecological lifestyle, i.e. environmental consciousness, selecting and rejecting products and also volunteering themselves in various events, which are introduced to protect the environment. This segment would naturally welcome changes and take interest in those firms which are committed to environment and launch new products and showing them as a new exciting experience (Fraj and Martinez, 2007).

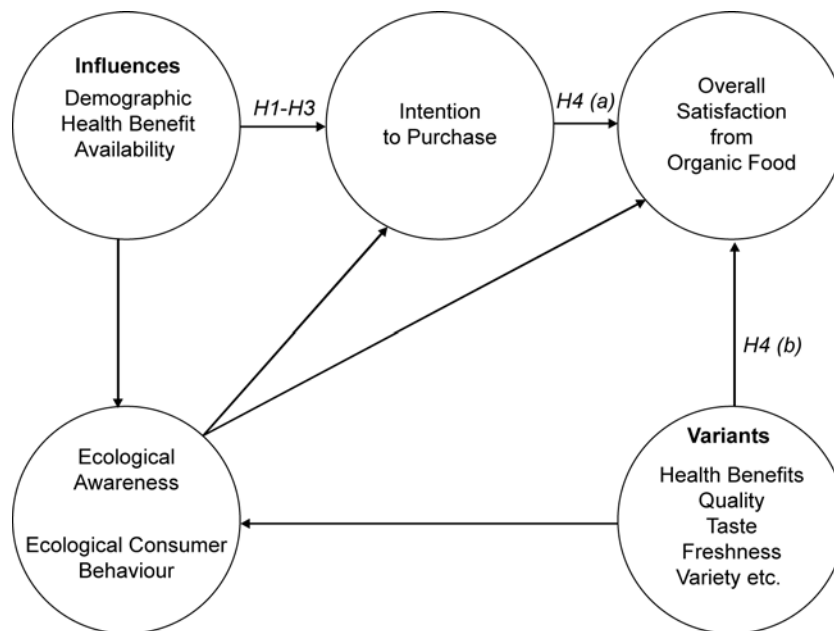
The consumers in this segment during shopping are interested in ecological products, not merely because of healthier option but it also hopes in sustaining the environment for future generation. The marketer and other institutions should be aware of the importance of the attitudes of the consumers of this segment, that they are even prepared to switch on to other products for ecological reasons and switch off buying products causing pollution (Fraj and Martinez, 2007). Different researchers explored the various features which contributed to shape the nature of behavior of ecological consumer. For example, the study by Mostafa (2007) confirms the influence of consumers' ecological knowledge, concern and attitude on gender differences in green purchase behavior. According to the study, most ecological consumers are well-educated, young adult women, who have more money to spend. They expect green products to satisfy their needs. Environmental benefits are additional attraction for them. Moreover they are conscious about the environmental claims. They are ready to pay premium price after verifying the environmental claims and individual benefits given to them.

1.3 Organic food

Food which is produced without using conventional pesticides can be labeled as organic food. "In terms of food that comes from living animals – meat, eggs and dairy products, the animal must not be fed antibiotics or growth hormones" – Organic Foods Production Act, 1990. Organic foods are those that are environmentally safe, produced using environmentally sound methods that do not involve modern synthetic inputs such as pesticides and chemical fertilizers, do not contain genetically modified organisms, and are not processed using irradiation, industrial solvents, or chemical food additives. The choice of organic versus inorganic food is significantly influenced by the perception of the health effect of organic foods. Households, who perceive organic foods as healthier, are more likely to purchase organic food, and they have a higher willingness to pay than other households (Andersen, 2007). Organic food is perceived as healthier and safer and organic practices are perceived to be more environmentally sound. Food which is not organic is taken as inorganic food for the purpose of this study.

2. Theoretical framework

This study focuses on the factors which influence the intention of consumers to purchase organic food. These factors create ecological awareness and develop ecological preferences among consumers which influence the intention of consumers to purchase. It becomes easy for ecologically aware consumers to include organic food in their regular purchase and get satisfied with it. In fact consumers purchase organic food if overall satisfaction from such food is more than inorganic food but their level of satisfaction varies for different attributes (see Figure 1).

Figure 1 Proposed theoretical framework

2.1 Influences

Although many factors can be included in the list of influences but for the study of influence on consumers' intention to purchase, we have chosen few like demographics factors, health benefits and availability.

2.1.1 Demographic factors

Younger household and women consider organic food more important and include it in their purchase (Govindnasamy and Italia, 1990; Van Doorn and Verhoef, 2011). Besides this females with age 30–45 with children having high disposable income include organic food in their purchase (Dettmann and Dimitri, 2007). In demographic portrayal of consumers, income is another factor considered important for influencing purchase of organic food. Higher income households purchase organic produce more frequently (Govindnasamy and Italia, 1990; Loureiro *et al.*, 2001).

Other studies reveal that purchase of organic food is affected by education also. Consumers with higher education were more interested in purchasing organic food than those with less education (Dettmann and Dimitri, 2007). Most of the studies focused on the importance of demographic factors but some of the studies have shown contradictory results which indicated that intention to purchase is slightly affected with age and education level (Yin *et al.*, 2010). Similarly Howie (2004) states consumers with income less than \$50,000 are more likely to purchase organic food. Due to these contradictory results, we aim to test the influence of demographic factors on purchasing patterns:

H1. There is difference in preference for organic food by various demographic factors.

2.1.2 Health benefits

Consumer's choice is influenced by many factors in which health concern has been given more weightage than other factors like concern about environment and food/diet. They consider it more dominating for paying higher price

(Brugarolas and Rivera, 2005). Deterioration in human health was a main reason to influence consumers to think about organic food (Grossman, 1972). On the other side consumers bought organic food as an investment in good health (Grossman, 1972). Its nutritive attribute gave competitive advantage to organic food over conventionally produced goods (Bourn and Prescott, 2002). Even consumers having concern for human health are grouped as "healthy eaters" (Davies *et al.*, 1995). Several studies considered health as a key motivator for consumers to purchase organic food (Grossman, 1972; Schifferstein and Oude Ophuis, 1998). But it is not the only reason. It is purchased because of its tastes also (Fotopoulos and Krystallis, 2002). Although health benefits is considered as a key motivator described under several studies but some studies (Tarkiainen and Sundqvist, 2005; Michaelidou and Hassan, 2008) do not consider it very important. For them, health benefit is the least important influence for purchase of organic food. With the contradiction in views regarding the importance of health benefits, we aim to test it:

H2. Consumers purchase organic food for health benefits.

2.1.3 Availability

Conventional supermarkets have noticed the growing popularity of organic products, and have added organic food to their shelves. Increased marketing of organic products through conventional supermarkets and large retail outlets in addition to the traditional venues of specialty stores, have made organic produce accessible to more consumers (Dettmann and Dimitri, 2007). Availability also, is one of the chief factors which encourage the purchase of organic food (Davies *et al.*, 1995), that is why we aim to test it:

H3. Availability is important for choosing the organic food.

2.2 Variants and overall satisfaction

Consumers do not have same satisfaction level with every type of food, organic as well as inorganic. It varies due to some factors. Overall satisfaction from organic food can be more than inorganic food. Consumers have different perception about organic products and inorganic products. Not only are they being differentiated with respect to their general attribute but with unique taste, visual appeal or freshness also. Same is the case with organic food and inorganic food. Consumers consider various attributes for comparing these two. Consumer differentiates not only with respect to process but with quality and safety characteristics of organic food also. It is purchased because of its superior perception, due to these unique attributes. Bourn and Prescott (2002) also supports the above study by highlighting the nutritive, sensory and food safety as the points of comparison between organic and inorganic food. Some consumers choose organic food because of taste, freshness and its appearance (Beharrell and MacFie, 1991). On the other hand some literatures have shown contradictory results. In one study consumers considered appearance less important (Lin *et al.*, 1986).

Some consumers did not find any difference in the taste of organic food and inorganic food (Jolly and Norris, 1991; Sparling *et al.*, 1992). Some contrasting conclusions have been given regarding their contents (Slanina, 1995; Lo and Matthews, 2002). So there is a continuously debate about whether consumers are more satisfied with organic food or with inorganic food. Therefore, we decide to test this phenomenon with the help of following hypothesis:

- H4a. There is significant difference between overall satisfaction from organic food and inorganic food.
- H4b. Satisfaction level varies for the different attributes for organic food.

3. Research methodology

The research methods employed in this study can be divided as follows.

3.1 Questionnaire development and instrument

The data has been collected through a structured questionnaire, which was designed on the basis of the objectives of this paper. The number, type, relevance, wordings and measurement scales of the questions were given due weightage.

3.2 Population and sample

The target population is defined as follows:

- *Elements.* The population has been identified of the organic food purchasers. The survey was conducted in front of organic food outlets and departmental stores having organic food section.
- *Extent and sample size.* The study is focused in Delhi National Capital Region and the other major cities of northern India. A total of 500 questionnaires were sent and 463 respondents participated in the survey. Majority of the respondents belonged to Delhi National Capital Region (45 percent) and rest comes from other cities (55 percent).

3.3 Data description

The first part of the questionnaire consisted of certain demographic information like age of the consumer, gender, monthly household income and number of family members. We conducted survey from individuals aged 25 years and above. As the age group below 25 years generally does not buy grocery products it did not fall under the purview of our survey. Respondents were men and women both. Respondents were graduates and postgraduate also. Less than 12 percent of the respondents were undergraduates. The majority of our respondents were in service followed by self employed individuals. Largely household size is four-six people comprising 71.9 percent for respondents surveyed. Most of the respondents surveyed had monthly income less than Indian Rupees 30,000.

3.4 Data collection procedures

The method used for the data collection was a face-to-face interview, using a structured questionnaire, with closed-ended questions. Convenience sampling method was used by approaching consumers who were coming out of the stores and willing to answer the questions. Questionnaires were given to only those consumers who were aware about organic food. Out of 463 respondents participated in the survey, 301 questionnaires were completed and validated (response rate of 65 percent).

3.5 Data analysis

The questionnaires were thoroughly checked and edited. The data were entered in Statistical Package for Social Sciences Version 14. Various statistical tools and techniques were used to analyze the data. At the questionnaire design stage, it was decided to use various multivariate analyses like multiple regression, factor analysis and cluster analysis which require large sample size.

4. Results

4.1 Influence of demographic factors (H1)

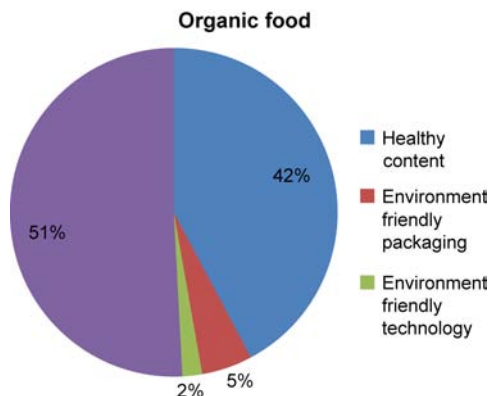
It was observed in the survey that preference for organic food could be affected with the demographic profile of the consumers. Therefore a Chi square test was conducted to check for significant difference between quantity of organic food purchase and demographic factors. The Chi Square Goodness of Fit Test revealed a *p* value of 0.000 for location factor and education factor (0.02), which is less than the level of significance (0.05). Therefore, (H1a) null hypothesis is rejected for these factors, i.e. it can be interpreted that the education of consumers and location are positively associated with quantity of organic food purchased. Consumers having high and professional education tend to buy more organic food. For almost all the other demographic factors *p* value was more than the level of significance (0.05) (age – 0.238, gender – 0.225, family members – 0.209, household income – 0.364) (Table I).

4.2 Important reason for purchasing organic food (H2)

Respondents marked healthy content as the main reason as their answer for the purchase of organic food (42.1 percent). But majority of respondents (50.8 percent) supported that overall benefit, i.e. healthy content, environment friendly packaging and environment friendly technology are the benefits that they seek from organic food (Figure 2). Then

Table I Chi-square test showing demographic factors influencing purchases of organic food

| Factors | Asymp. Sig. (2-sided) |
|------------|-----------------------|
| MHI | 0.364 |
| Location | 0.000 |
| Age | 0.238 |
| Gender | 0.225 |
| Education | 0.022 |
| Occupation | 0.492 |
| Family | 0.209 |

Figure 2 Reasons for buying organic food

we assessed the psychological factors that influence the purchasing behavior of the respondents and we had some interesting observations. A total of 96 percent of the people agreed that healthy contents play an important role in making a purchasing decision. This confirms the response to the previous result where respondents marked healthy content as the single largest individual reason for the purchase of organic food (42.1 percent).

Further regression analysis was also conducted to test the *H2*, specified earlier, i.e. health benefits as a significant reason of purchase of organic food. Regression analysis explains that *P* value of 0.095 was less than the level of significance (0.1). It supports *H2* that means consumers purchase organic food for a significant reason of health benefits (Table II).

Chi-square test also explained the *p* value of (0.065) is less than the level of significance (0.1). Therefore null hypothesis was rejected. That means health benefits and purchase of organic food are associated with each other (Table III).

Table II Regression analysis for health benefits as a reason for purchasing organic food

| Model | Unstandardized coefficients | | Standardized coefficients | <i>t</i> | Sig. |
|-----------------|-----------------------------|------------|---------------------------|----------|-------|
| | <i>B</i> | Std. error | <i>Beta</i> | | |
| (Constant) | 2.134 | 0.118 | | 18.135 | 0.000 |
| For good health | 0.242 | 0.144 | 0.107 | 1.678 | 0.095 |

Table III Chi-square test showing health benefits as a reason of organic food purchase

| | Value | df | Asymp. Sig. (two-sided) |
|------------------------------|----------|----|-------------------------|
| Pearson Chi-square | 8.841(a) | 4 | 0.065 |
| Likelihood ratio | 9.344 | 4 | 0.053 |
| Linear-by-linear association | 2.795 | 1 | 0.095 |
| No. of valid cases | 247 | | |

4.3 Availability of organic food (*H3*)

As to the place of purchase of organic and inorganic food, neighborhood store was seen more convenient for purchase of inorganic food while Malls are seen as easier place for purchase of organic food. Departmental and kirana stores are seen almost equally easier in terms of purchase of both categories of food items. Non-availability of organic food was cited as the major reason for not purchasing organic food followed by high price (expensive), taste, and popularity in the same order (Figure 3).

4.4 Overall satisfaction

A five-point satisfaction scale was used to determine consumers' overall satisfaction for organic food and inorganic food (1 = very satisfied, 5 = very dissatisfied).

4.4.1 Satisfaction for organic food (*H4a*)

A parametric test was conducted since the satisfaction scale was a five-point scale and was considered to be an interval scale. The Paired sample *t* test revealed a *p* value of 0.000. Since the *p* value 0.000 was less than the level of significance (0.05) the null hypothesis of overall satisfaction being the same for organic food and inorganic food was rejected (Table IV). Thus we found that that overall satisfaction for organic food and inorganic food is not same. The mean satisfaction with organic food (1.63) indicated high satisfaction level (Table V).

Further consumers were given a list of nine attributes that related to different aspects related with purchase of organic food and were asked to indicate their satisfaction level on a five-point scale (1 = highly satisfied ... 5 = highly dissatisfied). Here the objective was to identify which attributes were consumers most satisfied with and least satisfied with if any.

4.4.2 Satisfaction for organic food due to different variables (*H4b*)

Consumers were highly satisfied with the health benefits of organic food. Quality of the product was a very important factor for consumers of organic food. For satisfaction quality followed by taste, freshness, variety, size that the consumers

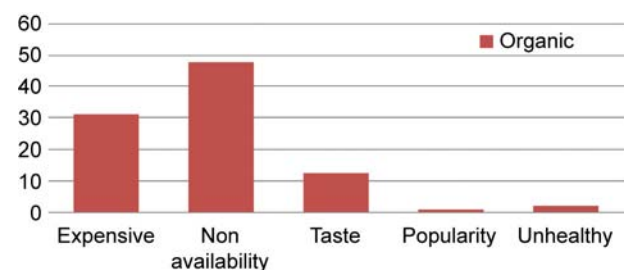
Figure 3 Reason for non purchase of organic food

Table IV Paired sample *t*-test between overall satisfaction for organic food and inorganic food – paired samples test

| | | Paired differences | | | 95% Confidence Interval of the Difference | | <i>t</i> | df | Sig. (two-tailed) |
|--------|--------------------|--------------------|----------------|-----------------|---|-----------|----------|-----|-------------------|
| | | Mean | Std. deviation | Std. error mean | Lower | Upper | | | |
| Pair 1 | ovsatorg-ovsatinor | − 0.95238 | 1.17651 | 0.07411 | − 1.09834 | − 0.80642 | − 12.850 | 251 | 0.000 |

Table V Mean satisfaction with organic food – descriptive statistics

| | <i>n</i> | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|----------|---------|---------|--------|----------------|
| ovsatorg | 255 | 1.00 | 5.00 | 1.6353 | 0.74528 |
| ovsatinor | 254 | 1.00 | 5.00 | 2.5827 | 0.91055 |
| Valid N (listwise) | 252 | | | | |

need, information of the product and lastly the timely delivery of the product. Eco-friendly contents add value to the product. A total of 85.8 percent of the respondents agreed with this statement while 81 percent of the respondents said that even eco-friendly packaging adds more value to the product. In contrast to the logical conclusion we find that only 69 percent of the consumers responded that Eco-friendly contents are being preferred in purchasing decision over unfriendly contents. A total of 70.3 percent of the respondents think that organic food is costly. And 67.1 percent of the people believe that more price can be paid for the eco-friendly and healthy contents of the product (Figure 4).

4.4.3 Multivariate analysis

Further factor analysis was conducted for organic food to analyze the consumer behavior pattern and to determine factors underlying satisfaction with the organic food.

The factor analysis was performed on the explanatory variables with the primary goal of data reduction. The principal components method, using varimax rotation, reduced the nine explanatory variables to two factors having Eigen values greater than 1. For the purpose of interpretation,

each factor was composed of variables that loaded 0.4 or higher on that factor.

The empirical results of this study indicated that factor analysis was a suitable method for the given data. The KMO measure was 0.825 and indicated that our sample size was adequate while the Bartlett's test indicated that the variables being considered had a significant correlation between themselves and hence could be grouped (*p* value was 0.00 which was less than level of significance 0.05) (Table VI).

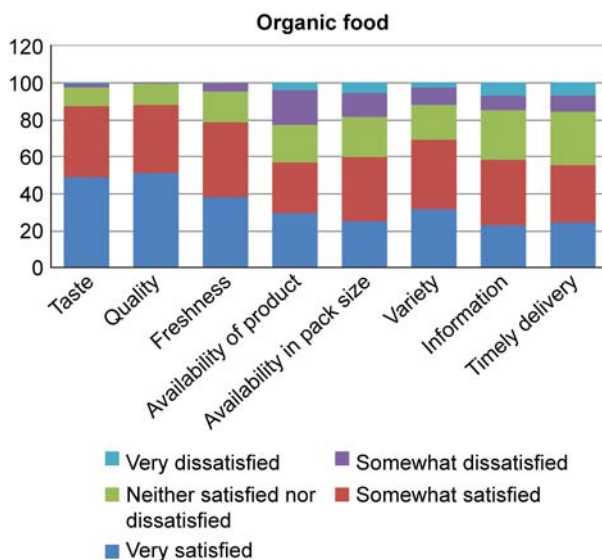
Normally communality value less than 0.4 are considered low. For the above factor analysis the communality values were in the acceptable range for all the attributes (Table VII).

In the output on analysis of satisfaction with various attributes for organic food, nine components (factors) would be needed to explain 100 percent of the variance in the data. However, using the conventional criterion of stopping when the initial eigen-value drops below 1.0, only 2 of the nine factors were actually extracted in this analysis. These six account for 62 percent of the variance in the data (Table VIII).

4.4.4 Factor loadings and interpretation of factors for organic food

Confirmatory factor analysis in the given study is showing loadings 0.7 or higher to confirm that independent variables identified are represented by a particular factor, on the rationale that the 0.7 level corresponds to about half of the variance in the indicator being explained by the factor.

Interpretation was facilitated by identifying the variables that had large loadings on the same factor (Table IX):

Figure 4 Satisfaction for organic food due to different variables**Table VI** KMO and Bartlett's test

| | | |
|---|--------------------|---------|
| Kaiser-Meyer-Olkin measure of sampling adequacy | | 0.825 |
| Bartlett's Test of Sphericity | Approx. Chi-square | 927.100 |
| | df | 36 |
| | Sig. | 0.000 |

Table VII Communalities

| | Initial | Extraction |
|-----------|---------|------------|
| Taste | 1.000 | 0.534 |
| Qty | 1.000 | 0.690 |
| Freshness | 1.000 | 0.666 |
| Availabl | 1.000 | 0.517 |
| pck | 1.000 | 0.667 |
| Size | 1.000 | 0.627 |
| Variety | 1.000 | 0.665 |
| Info | 1.000 | 0.624 |
| Delivery | 1.000 | 0.580 |

Notes: Extraction method: principal component analysis

Table VIII Total variance explained

| Component | Total | Initial eigenvalues | | Total | Extraction sums of squared loadings | |
|-----------|-------|---------------------|--------------------|-------|-------------------------------------|--------------------|
| | | Percent of variance | Cumulative percent | | Percent of variance | Cumulative percent |
| 1 | 4.404 | 48.932 | 48.932 | 4.404 | 48.932 | 48.932 |
| 2 | 1.166 | 12.957 | 61.889 | 1.166 | 12.957 | 61.889 |
| 3 | 0.949 | 10.547 | 72.436 | | | |
| 4 | 0.669 | 7.436 | 79.873 | | | |
| 5 | 0.491 | 5.457 | 85.330 | | | |
| 6 | 0.414 | 4.601 | 89.931 | | | |
| 7 | 0.356 | 3.957 | 93.887 | | | |
| 8 | 0.315 | 3.500 | 97.388 | | | |
| 9 | 0.235 | 2.612 | 100.000 | | | |

Notes: Extraction method: principal component analysis

Table IX Rotated component matrix(a)

| | Component | |
|-----------|-----------|-------|
| | 1 | 2 |
| Size | 0.785 | |
| Variety | 0.771 | |
| pck | 0.769 | |
| Info | 0.752 | |
| Availbl | 0.708 | |
| Delivery | 0.705 | |
| Qlty | | 0.819 |
| Freshness | | 0.793 |
| Taste | 0.314 | 0.660 |

Notes: Extraction method: principal component analysis; rotation method: varimax with Kaiser normalization; rotation converged in three iterations

- *Factor 1.* In the rotated factor matrix, factor 1 had high coefficients for the following variables – pack size, variety, packaging, information, availability and delivery. Therefore this factor was labeled as informative packaging contents.
- *Factor 2.* In the rotated factor matrix, factor 2 had high coefficients for the following variables – quality, freshness and taste. Therefore this factor was labeled as key proposition.

The above analysis supports *H4b*.

4.4.5 Multiple regressions

The relationship between the overall satisfaction with the organic food and consumers' perceptions regarding the organic food on various factors was again measured using a multiple regression model. Furthermore, the overall satisfaction question may be asked before or after the satisfaction with individual attributes. The researcher decided to use the first approach that is the overall satisfaction was asked before satisfaction with individual parameters. This was because customers after answering the overall satisfaction question firstly, have the ability to interpret the meaning of the question and give the judgment naturally. The two factors were the independent variables. The factor scores of each of the dimensions were used as inputs (Tables X and XI).

A moderate level of explanation was achieved by regressing overall customer satisfaction on factor scores ($R^2 = 22.4$

Table X Model showing multiple regression

| Model | R | R square | Adjusted R square | Std. error of the estimate |
|-------|----------|----------|-------------------|----------------------------|
| 1 | 0.473(a) | 0.224 | 0.217 | 0.67116 |

Notes: A Predictors: (Constant), REGR factor score 2 for analysis 4, REGR factor score 1 for analysis 4

percent). It was inferred that both the factors were significant predictors of overall satisfaction with organic food (p value was 0.00 less than significance value of 0.05). The beta statistics revealed that the most influential components of overall customer satisfaction of organic food were:

- Key proposition ($\beta = 0.454$).
- Informative packaging content ($\beta = 0.134$).

4.4.6 Cluster analysis

Further, cluster analysis was also conducted to analyze the same purchasing behavior of consumers influenced by the same factors and to group them into different clusters. Different consumers have different priority for different factors. Their overall satisfaction level is dependent on these factors. The item evaluations were made to determine factors underlying satisfaction with the organic food. The cluster analysis was conducted for organic food on nine variables. Responses are checked on five-point scale (very satisfied – 1, very dissatisfied – 5) (Table XII).

- *Cluster 1.* Consumers belonging to this cluster are somewhat satisfied with the organic food's taste and quality, freshness, availability, packaging, size and variety. They are very much satisfied with the information provided for the product and the delivery of the product.
- *Cluster 2.* Consumers belonging to this cluster are very satisfied with the organic food's taste and quality, freshness, availability, packaging, size, variety information provided and the delivery of the product. Consumers belong to this cluster are very positive and optimistic about the organic food.
- *Cluster 3.* Consumers belong to this cluster are somewhat satisfied with the organic food's taste and quality of the organic food. They are neutral about, freshness, availability, packaging, size that they need. They are somewhat dissatisfied with variety, information provided for the

Table XI Coefficients (a)

| Model | | Unstandardized coefficients | | Standardized coefficients | | t | Sig. |
|-------|------------------------------------|-----------------------------|------------|---------------------------|--|--------|-------|
| | | B | Std. error | Beta | | | |
| 1 | (Constant) | 1.645 | 0.044 | | | 37.409 | 0.000 |
| | REGR factor score 1 for analysis 4 | 0.102 | 0.044 | 0.134 | | 2.309 | 0.022 |
| | REGR factor score 2 for analysis 4 | 0.343 | 0.044 | 0.454 | | 7.807 | 0.000 |

Notes: A dependent variable: ovsatorg

Table XII Final cluster centers

| | Cluster | | |
|-----------|---------|------|------|
| | 1 | 2 | 3 |
| Taste | 1.81 | 1.19 | 2.21 |
| Qlty | 1.75 | 1.26 | 2.08 |
| Freshness | 2.16 | 1.31 | 2.44 |
| Available | 2.45 | 1.58 | 3.52 |
| Pck | 2.38 | 1.47 | 3.83 |
| Size | 2.03 | 1.36 | 3.00 |
| Variety | 2.15 | 1.41 | 3.52 |
| Info | 2.55 | 1.53 | 3.79 |
| Delivery | 2.74 | 1.42 | 3.67 |

Notes: Quick cluster analysis resulted into three clusters

product and the delivery of the product. Consumers in this cluster do not seem to be very optimistic.

5. Discussion

Consumers were satisfied with organic food for variety of reasons. Healthy content came first in their mind over environmentally safe, satisfies changing taste, attitude of the customers, and helps in maintaining status in the society. Quality of the product was also a very important factor for consumers, of organic food. Overall satisfaction of consumers for organic food was high than inorganic food. That means consumers of this food were quite happy with the food. Consumers think that organic food is costly. But at the same time they believe that higher price can be paid for the healthy contents and eco-friendly of the product. Consumers were not stick to the organic food purchase only. They bought inorganic food in combination with organic food. It can be inferred that the Marketers need to segment their market carefully and frame their marketing strategy to convince these potential consumers effectively.

6. Managerial implications

This study provides guidelines and suggestions for retailers who are selling organic food. Besides this, the study can be helpful for the organic food manufacturers to identify their target consumers by showing the influence of demographic factors on organic food purchase. Retailers of organic food can segment their market and can make their marketing strategy accordingly. It can provide a valuable insights for them by indicating health benefits is the most important determinant among various factors. They can focus on this factor in their marketing strategy. The findings of this study also suggest that availability also affect the intention to purchase organic food

therefore retailers can incorporate this element also in their marketing strategy. They should ensure the timely availability of organic food to their consumers at proper outlets. The findings of this study also suggest that consumers are willing to pay more price for organic food but retailers will have to convince them for its benefits. Further the study suggests that organic food retailers might attract potential consumers by providing information regarding other benefits like quality, taste freshness and environmental benefits also.

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About the authors

Dr Justin Paul is well known as an author of four best selling text books – *Business Environment* (3rd edition), *International Business* (5th edition), *Export-Import Management*, *Banking and Financial Services* published by McGraw-Hill, PHI, Oxford University Press and Pearson respectively. He has also co-authored two more books titled *International Marketing* and *Services Marketing* for McGraw-Hill. He is currently a Professor with the Nagoya University of Commerce and Business – Japan, the only business school in Japan accredited by both AACSB and AMBA. He served as Department Chairperson at the Indian Institute of Management (IIM), a premier business school at a young age. He taught full courses at Aarhus University, Denmark, Grenoble Ecole de Management, France, SP Jain, Dubai and ISM University, Lithuania and Great Lake Institute of Management. He has been an invited speaker at University of Washington Business School, Seattle, University of Puget Sound, St Martyn's University, USA, Fudan University, Shanghai, University of San Francisco, Athens University, Greece and University of New South Wales, Sydney. He has conducted corporate training programs for IAS-IFS Officers, South East Asian Bank, Mauritius, Al Omaniya Financial Services, Oman, executive MBA batch of Rotterdam School of Management, Holland, Federal Bank, South Indian Bank and Confederation of Indian Industries, to name a few clients. He has published over 30 research papers and case studies in refereed journals published by Harvard Business School, Ivey

Business School, Canada, Inderscience, Sage and Emerald. He has been PhD thesis examiner to four universities and is also on the Editorial Review Board of three refereed journals. Dr Justin has been distinguished as "Role Model" by *Careers and Campuses* magazine and as "Achiever" by *The Hindu* newspaper. He has also secured international level awards for Best Research Papers instituted for faculty members by the American Society for Competitiveness, London School of Business, Association of Indian Management Schools, etc. He was a consistent rank holder at Bachelors and Masters degree levels. He is also an alumnus of Goethe University, Frankfurt, Germany, and the Indian Institute of Technology, Bombay.

Dr Jyoti Rana is currently an Assistant Professor with the DAVC, NCR (DELHI)-India. She has 15 years of work experience in academe and training. She has been the coordinator of graduation courses in her college. She is continuously involved in upgrading herself with the latest trends in the academic environment. She has attended Faculty Development Programs from IIM Ahmedabad, IIM Kozikode and International Teachers Program from the Kellogg School of Management, USA, on scholarship. She is the author of one textbook *Principles of Marketing* prescribed in the syllabus of Darwad University, Karnatka (India). She has also co-authored two more textbooks titled *Basics of Retailing* and *Principles of Business Management for Graduate Students*. She has taught marketing courses at DAVIM, NCR (Delhi)-India and NIAM, NCR (Delhi)-India, as a visiting faculty. She has also taught in MDP organized by NIFM, NCR (Delhi), India, for Indian government officers. She has conducted many FDPs for management faculty and workshops for MBA students in the area of marketing. She has been the supervisor for MPhil students. She has presented over 15 papers in national and international conferences and has published in refereed journals also. She was a position holder in the university's merit list at Bachelors and Masters degree levels. She was scholarship holder throughout her graduation. She is a life member of the American Marketing Association, All India Commerce Association, All India Management Association and Higher Education Forum. She is actively involved in Roshni Education Society, an NGO working for the education of under privileged children. Jyoti Rana is the corresponding author and can be contacted at: Jyotid-123@yahoo.co.in

Executive summary and implications for managers and executives

This summary has been provided to allow managers and executives a rapid appreciation of the content of this article. Those with a particular interest in the topic covered may then read the article in toto to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefits of the material present.

Growing consumer interest in improving their health and protecting the environment has raised the significance of organically-produced food. Such concerns motivate a segment of people who consume organic food as part of a healthy lifestyle while also being eco-friendly.

People's consciousness has increased over recent decades to an extent that environmental conservation is now regarded as a major issue. Among the consequences of this awareness is new legislation and greater acceptance among consumers of

their own responsibilities to engage in behaviors which help safeguard the planet.

Many studies conducted in various nations have identified factors contributing to the rising popularity of organic food. In addition to health consciousness and anxiety about the effects of harming the environment, consumers regard organic food as being tastier and of superior quality to non-organic alternatives. Such individuals are often willing to pay higher prices for organic products. This tendency is even greater among those who regard organic food as healthier and more nutritious.

This previous work also revealed that the popularity of organic food is subject to influence from different factors within each market. For instance, excess production, food scares, contamination of the environment and urban migration are responsible for the mounting interest in organic food in certain regions. The market share of organic food varies widely across regions and research suggests that growth potential is currently higher in countries like India than in parts of Eastern and southern Europe.

Some researchers argue for the creation of consumer segments based on their differing levels of ecological awareness. The rationale behind this is that such as knowledge, values, attitudes and behavioral intention is determined by how much the consumer understands about environmental issues.

It is mooted that self-fulfillment and self-improvement are driving factors for consumers positioned in the “ecological market segment”. Such people are prepared to face challenges in order to achieve these goals. Since a green lifestyle is regarded as a means to both personal and environmental enhancement, this segment is likely to patronize companies that share its ideals and concerns. Switching away from products identified as possibly harmful is another behavioral norm for these consumers. Attempts to build a profile of the ecological consumer have additionally noted gender, education and financial status as likely significant factors.

The importance of organic food is greater among women and younger consumers, some studies report. Evidence likewise suggests that purchase of organic food products is likelier in higher income households. Education appears to be another influential factor. In this respect, positive correlation exists between level of education and likelihood of buying organic food. However, some conflicting results have been found with regard to these demographic factors.

Availability is recognized as having an impact on organic food consumption. No longer confined to specialist outlets, most conventional supermarkets and larger retailers now offer a range of such products.

Some contradictions are evident with regard to the factors that most generate consumer satisfaction with organic food. Taste, appearance, freshness, nutritional value and safety are among the reasons cited to justify purchase. However, findings remain inconclusive as certain consumers do not regard organic food as being superior to non-organic food in respect of these attributes.

Paul *et al.* further explore these issues in a survey of organic food purchasers in Delhi and other cities in northern India. Face-to-face interviews were conducted outside retail outlets selling organic food and 301 usable questionnaires were

completed. Participation in the study was restricted to consumers over 25 years-old as it was assumed that younger individuals are not the main buyers of grocery products for their household.

Following various analyses, the authors concluded that:

- highly educated professional people are inclined to purchase more organic food;
- the largest single reason for purchasing organic food is its perceived healthiness;
- purchase is also driven by ecologically-friendly packaging and production methods;
- poor availability was cited as the main reason for not buying organic food, followed in order by high price, taste and popularity;
- consumers expressed greater overall satisfaction with organic food than with non-organic food;
- perceived health benefits of organic food provided the most satisfaction;
- satisfaction is also derived from product quality and additional factors which include taste, freshness, variety and product information; and
- product value is increased by environmentally-friendly contents and packaging.

Additional scrutiny identified three consumer clusters:

- The first cluster included people who felt highly satisfied with the product information provided and delivery of the product. Their satisfaction with the taste and quality of organic food, its freshness, availability, size and variety is moderate.
- High satisfaction with all attributes of organic food was indicated by consumers in cluster 2. Optimism and a very positive attitude towards organic food was evident among these consumers.
- Optimism about organic food appears low for consumers in this final cluster. Moderate satisfaction was expressed for taste and quality. With regard to freshness, availability, packaging and size needed, attitude was neutral. Some dissatisfaction was apparent for variety, product information and delivery.

That different consumers attach varying levels of importance to different factors proves that marketers need to devise segmentation strategies in order to effectively target each cluster. However, making all consumers aware of the health benefits of organic food is an ideal starting point. The authors note the importance attached to availability and urge providers to ensure that consumers have access to organic food at their preferred outlets. Marketers should also emphasize the benefits of such food in order to ensure that consumers remain willing to pay a higher price for it. It is additionally suggested that providing information about the taste, quality, freshness and positive environmental impact of organic food could help attract new consumers.

(A précis of the article “Consumer behavior and purchase intention for organic food”. Supplied by Marketing Consultants for Emerald.)