CONSUMERS' PREFERENCES FOR BUYING ORGANIC FOOD

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ABSTRACT

These days consumers are more concerned about the quality and safety of the food they eat; and are paying attention towards organic food. The trend of organic food that was initiated in developed countries of Europe and North America is now expanding to developing countries of Asia like China and India. Many of the organic food products are grown and exported from Asia, Latin America, and Africa. Although, export is one of the key drivers of growth of organic food products, with rising awareness and disposable income, Indian consumers are also becoming conscious about their health and organic food is gaining wide acceptability. The size of the domestic organic food market is expected to grow in the coming years. Many factors influence consumers' decision-making for buying organic food. This study aims to examine preferences of the consumers for major attributes of organic food products with the help of conjoint analysis. The analysis is performed on five attributes: Brand, Certification, visual appearance, retail format, and price. It is found that retail format is the most important attribute, consumers prefer 'exclusive organic food stores' the most. The second important attribute for consumers is 'certification', as certified products are preferred over uncertified. The third important attribute is 'brand', reflecting branded organic products are preferred vis-à-vis unbranded.
Keywords: *Organic food, Consumer Preferences, Retail format, Conjoint analysis, India*

INTRODUCTION

These days consumers are more concerned about the quality and safety of the food they eat; and are paying attention towards organic food. The trend of organic food that was initiated in developed countries of Europe and North America is now expanding to developing countries of Asia like China and India (Techsci, 2013). In 2014, global retail sales of organic food products marked 80 billion US dollars (Organic Monitor report, 2014). Developed countries of North America and Europe constitute whopping ninety percent of the sales. However, many of the organic food products are grown and exported from Asia, Latin America, and Africa. With over 6,50,000 producers, India has the largest number of organic food producers in the world. (Willer & Lernoud, 2016). In the year 2015-16, India exported organic food products worth 298 Million USD (APEDA, 2016).

Although, export is one of the key drivers of growth of organic food products, with rising awareness and disposable income, Indian consumers are also becoming conscious about their health and organic food is gaining wide acceptability. The size of the domestic organic food market was 0.36 Billion USD in the year 2014 (Assocham & TechSci Research, 2015) and is expected to grow by about forty percent in the coming years (Wai, 2016).

This reflects the potential of organic food market in the coming years. But the possibilities of an individual to consume and adopt organic food is dependent on many factors such as price, availability, trust, and visual appearance etc. Across the globe, including India, many studies have been conducted to examine consumers' perceptions, purchase intentions and buying behavior towards organic food. This study aims to contribute to the literature by examining preferences of the consumers for major attributes of organic food products with the help of conjoint analysis.

Literature Review

Previous researches suggest that many factors influence consumers' decision-making for buying organic food. Being made without chemical fertilizers and pesticides organic food is considered a healthy alternative. Most of the researchers found that the primary reason for consuming organic food is food safety and health benefits. Apart from healthiness of organic food, many other factors affect consumers'

preferences and decision-making, viz., price, availability, trust, and visual appearance etc. It is found that other than healthiness, consumers don't have common preferences for all other factors. Some of the factors are discussed below:

Price

Literature suggests that majority of consumers have a positive attitude towards organic food, but only a few buy it on a regular basis (Magnusson, 2004). Many studies cite price premium as one of the major obstacle in buying it (Byrne et al., 1992; Tregear et al., 1994; Roddy et al., 1996; Magnusson et al., 2001; Zanoli and Naspetti, 2002, Shafie and Rennie, 2012). In India, the price premium for organic food ranges from 10 to 100 per cent (Narayanan, 2005). Nikolić et al. (2014) & Paul and Rana (2012) found that organic food consumers believe that the food is the basis of health and they should eat better food even if it is more expensive.

Retail Format

Consumers fear of being cheated by unscrupulous sellers when products are claimed as 'green' or 'organic' (D'Souza, 2007; Ellison, 2008). Image of seller helps in building trust (Voon, Ngui & Agrawal, 2011). Paul & Rana (2012) found that neighbourhood store was more convenient for the purchase of inorganic food while Malls are an easier place for the purchase of organic food. Departmental and kirana stores are seen almost equally comfortable for both categories of food.

Certification

Certification and labelling signals consumers about the standards followed by producing the organic food and are considered as the pre-purchase conditions (Essoussi and Zahaf, 2008). Certification adds cost for the producer. Krystallis and Chryssohoidis (2005), Van Loo et al. (2011) found that consumers are willing to pay a higher price premium for the organic logo than for a generic organic label. But some European studies found that consumers tend to distrust certification bodies, leading them to question the genuineness of organic products (Canavari et al. 2002; Lockie et al., 2002; Aarset et al. 2004).

Visual appearance

As organic food is produced without the use of chemical fertilizers and pesticides, it has spots, marks and blemishes. Hughner et al. (2007) found that consumers are not willing to accept the blemishes or imperfections often present in organic produce. Thompson and Kidwell (1998), also found that cosmetic imperfections tend to discourage consumers to purchase organic products. While Kuhar and Juvancic (2010) found that consumers are often willing to sacrifice superior visual attractiveness for organic.

Brand

For many years, organic food was exclusively sold by small independent farmers, but now big businesses have entered the market with their brands of organic food (Hughner, 2007). Krystallis and Chryssohoidis (2005) found that brand name is important for the consumers who are willing to pay the price premium.

With the growth and promotion of organic food and various initiatives by the government of India, like Parmparagat Krishi Vikas Yojna, Organic Value Chain Development, there is a possibility that there may be change in the pricing of the organic food, as well as the number of brands catering to this market may also increase in future. The retail format may also undergo change, owing to rising technological awareness and governmental programmes like Digital India. This study aims to understand consumers' preferences for all these attributes.

RESEARCH METHODOLOGY

To study the preferences of the consumers towards different attributes associated with the organic food products, a survey was conducted with the help of conjoint approach. Conjoint approach helps to understand the psychology of consumers towards different attributes of organic food products.

The attributes related to organic food products were selected by reviewing the literature and discussion with industry experts. Within each attribute there are different choices available. The conjoint layout designed in the study is shown below in the table 1.

Table 1: Conjoint layout

Attributes	Alternative Choices
Brand	Branded
	Unbranded
Certification	Certified
	Not Certified
Visual Appearance	Clean and Attractive
	Not Attractive
Retail Format	Organic Farmers' Bazaar
	Super Market
	Exclusive Store
	Online Market
Price	Reasonable
	Expensive

With the help of selected organic food attributes and choices, a conjoint questionnaire was designed with the help of SPSS. This specially designed questionnaire consists of the different profiles involving different choices of the organic food. 239 organic food consumers effectively participated in the survey. The consumers were asked to rate the different profiles on a scale of 1 to 10, where 1 represents the least preferred profile and 10 represents most preferred profile of the organic food. The organic food profiles are shown in the below table 2:

Table 2: Organic Food Profiles

	Brand	Certification	Visual Appearance	Point of Purchase	Price	Rating 1=low, 10 = high/good
1	Unbranded	Certified	Attractive	Supermarket	Expensive	
2	Unbranded	Uncertified	Attractive	Exclusive Store	Expensive	
3	Branded	Uncertified	Attractive	Exclusive Store	Reasonable	
4	Branded	Certified	Attractive	Exclusive Store	Reasonable	
5	Unbranded	Certified	Attractive	Internet	Expensive	
6	Unbranded	Uncertified	Attractive	Organic Farmers' Bazaar	Expensive	
7	Unbranded	Certified	Unattractive	Exclusive Store	Reasonable	
8	Branded	Certified	Unattractive	Internet	Expensive	
9	Unbranded	Uncertified	Unattractive	Internet	Reasonable	
10	Branded	Certified	Attractive	Organic Farmers' Bazaar	Reasonable	
11	Branded	Uncertified	Unattractive	Exclusive Store	Expensive	
12	Unbranded	Uncertified	Unattractive	Supermarket	Reasonable	
13	Branded	Uncertified	Unattractive	Organic Farmers' Bazaar	Expensive	
14	Branded	Certified	Unattractive	Supermarket	Expensive	
15	Unbranded	Certified	Unattractive	Organic Farmers' Bazaar	Reasonable	
16	Branded	Uncertified	Attractive	Internet	Reasonable	

PROPOSED WORK

The multiple regression model is applied where the consumer rating is considered as the dependent variable

and different choice of organic food attribute are considered as independent variables. The multiple regression model is shown below:

$$Ratings_i = \alpha + \beta_{1i} X_{1i} + \beta_{2i} X_{2i} + \beta_{3i} X_{3i} + \beta_{4i} X_{4i} + \beta_{5i} X_{5i}$$

The results of the regression model are shown below in table 3:

Table 3: Regression Results

Dependent variable	Independent variables	Regression Coefficients	T stats (p-value)	F statistics (p-value)	R Square
Consumer Ratings	(Constant)	8.637	12.082 (0.000)	7.273 (0.006)	86.4 %
	Unbranded	-1.918	-3.677 (0.006)		
	Uncertified	-2.413	-4.426 (0.002)		
	Unattractive	0.958	1.665 (0.134)		
	Supermarkets	-1.351	-1.688 (0.130)		
	Specialised Stores	0.673	0.936 (0.376)		
	Internet	-2.092	-2.889 (0.020)		
	Expensive	.599	1.148 (0.284)		

The result of multiple regression model applied on the ratings and organic food choices indicate the estimates differential cardinal utilities of selected choices considered in the regression model. For example, in the case of brand of organic food, branded organic food is considered as a reference choice, and cardinal utility of unbranded organic food is found to be 1.918 less than the utility of a branded organic food. Similarly, the cardinal utility of specialized stores is 0.673 more as compared to organic farmers' bazaar. The f-Statistics of 7.273 and significance value 0.006 indicates that the regression model has reasonable statistical fit. The R square of the model is found to be 86.4 percent which indicates that 86.4 percent variance in consumer rating can be explained with the help of regression model. a, b, c, d and e represents the cardinal utilities of organic food choices of different attributes. The cardinal utilities of all the considered choices in the conjoint layout are estimated with the help of the following equations:

For the attribute "Brand"

a1 + a2 = 0

a2 - a1 = (-)1.918

For the attribute "Certification"

b1 + b2 = 0

b2 - b1 = (-)2.413

For the attribute "Visual Appearance"

c1 + c2 = 0

c2 - c1= 0.958

For the attribute "Point of Purchase"

d1 + d2 + d3 + d4 = 0

d2 - d1 = (-)1.351

d3 – d1 = 0.673

d4 – d1 = (-)2.092

For the attribute "Price"

e1 + e2 = 0

e2 - e1 = 0.599

Using the above mathematical equation, the utilities of each organic food choice of selected attributes are estimated. It is assumed in the conjoint analysis that the sum of cardinal utilities is zero. Therefore, some of the utilities are supposed to be negative, and few are to be positive. The negative cardinal utilities found in the analysis indicate that the consumers consider these choices inferior (less utility) as compared to the other available organic food options. Also the positive utilities of the choices indicate that the consumers consider these choices superior as compared to the other available organic food choices. The difference

between maximum utilities of an organic food choice and minimum utility is known as range of the choice. Higher estimated range of organic food attribute indicates the more importance of that specific attributes in decision making. The estimated values of the cardinal utilities along with the range of the organic food attributes are shown below in table 4:

Table 4: Relative Importance of Attributes

Attributes	Alternative Choices	Utilities	Range	Relative Importance
Brand	Branded	0.959	1.918	22.17%
	Unbranded	-0.959		
Certification	Certified	1.206	2.412	27.88%
	Not Certified	-1.206		
Visual Appearance	Clean and Attractive	-0.479	0.958	11.07%
	Not Attractive	0.479		
Retail Format	Organic Farmers' Bazaar	0.692	2.765	32.0%
	Super Market	-0.659		
	Exclusive Store	1.365		
	Online Market	-1.4		
Price	Reasonable	-0.299	0.598	6.91%
	Expensive	0.299		

From the above analysis, it is found that retail format is the most important attribute for organic food consumers. Consumers prefer 'Exclusive Organic Food Stores' the most, followed by 'Organic Farmers' Bazaar'. Consumers don't prefer 'Super Markets' and buying 'Online' is not the preference. The second important attribute for consumers is 'Certification'. It is found that certified products are preferred by consumers. The third important attribute is 'Brand', it reflects that consumers prefer branded organic products vis-à-vis unbranded. The fourth important attribute is 'Visual Appearance'. Consumers prefer organic food with marks, blemishes and spots, whereas, clean and attractive food is not considered as organic, hence is not preferred. The least important attribute is 'Price', indicating consumers prefer and expect organic food to be expensive than regular conventional food.

CONCLUSION

The study throws light on consumer preferences for organic food in India, specifically on the preferred retail format, certification, brand, visual appearance and price. By far price and visual appearance are not the most significant attributes. Consumers are willing to accept organic food even if it is not clean and attractive, as it implies non-use of chemical fertilizers and pesticides. Consumers are also willing to pay high prices as it outweighs the benefits of organic.

The retail format is the most important attribute; consumers prefer exclusive organic food stores and organic farmers' bazaar, as these are the places, where consumers can interact with the sellers and the producers, it helps them in gaining confidence about the genuineness of the food. Both private players and government should consider opening more exclusive outlets and dedicated areas for organic farmers' bazaar. This trust completely lacks in online buying and in supermarkets too. Although online buying removes the constraint of easy availability and accessibility of organic food, it is found that consumers don't prefer it, as there is a lack of personal touch and fear of uncertainty about the genuineness of the food. Certification of the organic food is another important attribute. It helps in building trust and act as a heuristic for consumers to judge the genuineness. Moreover, it helps in building brand also, which is another important attribute preferred by the consumers. Knowledge and awareness about certification and certification process may help in building trust for online sellers too. To promote organic food, and create awareness about the production process, certification and certification procedure, sellers and policy makers

should connect with the prospective consumers and producers through digital sources like the internet and social media.

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