Antecedents of Organic Food Consumption among the Indian Customers

Shiney Chib, Kanchan Dewal, Kanchan Artani, Sneha Turkar

Abstract: Organic food products refers to food raised, grown and stored and/or processed without the use of synthetically produced chemicals or fertilizers, herbicides, pesticides, fungicides, growth hormones and regulators or generic modification. Generally people are aware about the benefits of these products. But still the products have not achieved the market share in India, as expected. This paper is an effort to identify the factors, which influences the purchase of organic food products. For this the researchers have developed a questionnaire and administered on the respondents. Both online and offline data collection was done, to cover the major areas, so that the data can be collected from distinct places. The paper explored the awareness level about organic food products, influence of demographic variables on organic food consumption and factors affecting organic food purchase intention.

Key words: Customer perception, consumption, purchase behavior, purchase intention.

I. INTRODUCTION

The term Organic food products was first derived in 1940s, and refers to food raised, grown and stored and/or processed without the use of synthetically produced chemicals or fertilizers, herbicides, pesticides, fungicides, growth hormones and regulators or generic modification. Organic Farming may be a certifiable farm management system with controls and traceability that is harmonical with the native atmosphere victimisation land farming techniques like soil-conservation measures, crop rotation and also the application of agronomical, biological and manual strategies rather than artificial inputs. This is different from Traditional Farming, which is often subsistence oriented using few or no purchase inputs.

II. LITERATURE REVIEW

Mehra S., Ratna P.A., (2014), cleanliness, freshness of food products, price, quality, variety, packaging, and all season availability encouraged the customers to purchase it.

Mukherjee D., (2012), concluded that, product attributes has an impact on new food product adoption among Indian consumers. Expected value, perceived value, and purchase intentions influences purchase intentions. Oroian C. E., (2013), studied the purchase pattern of innovators, early adopters and non-innovators. Income was taken as the main variable to distinguish between each category.

Bordeanu B. M. (2017), discuss antecedents to new food product purchasing behaviour among innovator groups in India. Chandrashekar H.M., (2014) elaborated on the factors affecting purchase decisions for major categories of food products in India, perception of quality about various categories of food products and whether there is a change in the food consumption habit when people move to different regions. Value for money, overall quality, taste, variety of products availability at same place, seasonality, flavor, good display of products, nearby availability and good ambience were some other parameters, which were rated highly by respondents. Parameters like promotional offer and products produced in other country were not considered as very important by respondents. Ahmed R., Rahman K. (2015), studied role of consumer Innovativeness and Personal Influence Related Constructs, investigate purchase behaviour in the light of such variables as consumer innovativeness, related perceived risk and the personal influence, demographic factors and time of adoption. Baladhandapani K.,Sivalingam N (2017), said per capita income, urbanization and globalization are changing the consumption pattern in developing countries.

III. GAPS IN LITERATURE

Literature on food consumption in India is scarce with very little research work done on organic food. Studies on organic food in India are found in reports by organizations like IFAD, NABARD etc. which have an orientation towards the upliftment of the poor or export promotion.

IV. OBJECTIVE OF THE STUDY

The main objective of this study is to find the impact of behaviour on organic food consumption. The objectives of the study are as follows:

1. To study the awareness level with respect to organic food among the people in Nagpur.
2. To check whether demographic variable have an influence on organic food consumption.
3. To identify the factor effecting the purchase behavior of organic food.

V. DATA COLLECTION

The study has used both primary and secondary data.

A. Primary Data:

A self-prepared questionnaire having 55 questions used to collect the primary data.
B. Development of Instrument:
The questionnaire included questions/variable extracted from the literature review. Total 55 questions were there and was divided into four parts as below:

| Number of demographic questions | 11 |
|--------------------------------|----|
| Number of questions related to awareness of organic food products | 6 |
| Number of questions related to intention of purchase organic food products | 3 |
| Number of topic related questions | 35 |

Reliability test was conducted thereafter. Cronbach’s alpha was .982, representing a high level of reliability. Value should be above .7.

| Reliability Statistics |
|------------------------|
| Cronbach’s Alpha        | N of Items |
| .982                   | 35 |

VI. DEMOGRAPHIC ANALYSIS

Below table demonstrates the demographic profiling of the respondents. Demographic variables included gender, age, qualification, religion, occupation, monthly house hold income, marital status and number of children.

| Table : 4 : Demographic characteristics of the Respondents |
|----------------------------------------------------------|
| Variables and categories N=350                          |
| %                                                       |
| Age                                                     |
| 18-25 yrs                                               | 126 | 36 |
| 26-33 yrs                                               | 117 | 33.4 |
| 34-41 yrs                                               | 28  | 8  |
| 42-49 yrs                                               | 35  | 10 |
| 50 – 57 yrs                                             | 29  | 8.3 |
| 58-65 yrs                                               | 9   | 2.6 |
| Above 65                                                | 6   | 1.7 |
| Gender                                                  |
| Male                                                    | 190 | 54 |
| Female                                                  | 160 | 46 |
| Qualification                                           |
| Under Graduate                                         | 41  | 11.7 |
| Graduate                                               | 176 | 50.3 |
| Post Graduate                                          | 96  | 27.4 |
| Doctorate                                              | 37  | 10.6 |
| Occupation                                              |
| Private service                                        | 129 | 36.9 |
| Public service                                         | 60  | 17.1 |
| Self employed                                          | 24  | 6.9 |
| Business                                               | 81  | 23.1 |
| Others                                                 | 56  | 16 |
| Monthly Income                                         |

Objective 1: To study the awareness level with respect to organic food

Null Hypothesis: People are not aware of organic food products.
Alternate hypothesis: People are aware of organic food products.

GENDER

Out of 350 respondents, 190 were male and 160 were female. Percentage Male respondent was 54.3% and female percentage was 45.7%.

GENDER * Awareness_level Crosstabculation

Cross tabulation is done to analyze the awareness level about the organic food products among the respondents.
Out of 190 male respondents, 179 were aware of organic food products and 11 were not aware. So the awareness percentage among the male respondents was 94.21%. Out of 160 female respondents, 152 were aware of and 8 were not aware of. Awareness percentage among female was 95%. This shows that female are more aware than the male respondents. This may be due to the high level of health consciousness level among the females. Out of 350 respondents, 331 were aware of organic food products. The significance value obtained is more than 0.05 in all the cases, which says organic food products among the respondents was 95%.

Hence this study says that ‘There is high level of awareness about the consumer food products among the people’.

Objective 2: To check whether demographic variable have an influence on organic food consumption.

| Null Hypothesis | Alternate hypothesis |
|-----------------|----------------------|
| Demographic variable has no influence on the organic food consumption. | Demographic variable has an influence on the organic food consumption. |

| Independent Samples Test | Levene’s Test for Equality of Variances | t-test for Equality of Means |
|--------------------------|----------------------------------------|-----------------------------|
|                          | F       | Sig. | t  | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |
| Gender                   |         |      |    |    |               |                |                   |                                    |
| Equal variances assumed  | 4.34    | .03  | .38 | 167| .70            | .08            | .22               | -.36                   | .53                       |
| Equal variances not assumed |        |      |    |    |               |                |                   |                                    |
| Age                      | 2.51    | .11  | 1.45| 167| .14            | .86            | .59               | -.31                   | 2.04                      |
| Equal variances assumed  |         |      |    |    |               |                |                   |                                    |
| Equal variances not assumed |        |      |    |    |               |                |                   |                                    |
| Qualification            | .648    | .42  | -.29| 167| .77            | -.11           | .38               | -.87                   | .64                       |
| Equal variances assumed  |         |      |    |    |               |                |                   |                                    |
| Equal variances not assumed |        |      |    |    |               |                |                   |                                    |
| Religion                 | 3.67    | .05  | .87 | 167| .38            | .37            | .42               | -.46                   | 1.21                      |
| Equal variances assumed  |         |      |    |    |               |                |                   |                                    |
| Equal variances not assumed |        |      |    |    |               |                |                   |                                    |
| Occupation               | 2.46    | .11  | -1.31| 167| .18           | -.93           | .70               | -2.3                   | .46                       |
| Equal variances assumed  |         |      |    |    |               |                |                   |                                    |
| Equal variances not assumed |        |      |    |    |               |                |                   |                                    |
| Monthly income           | 2.46    | .11  | -1.45| 167| .14           | -1.58          | 1.08              | -3.72                  | .55                       |
| Equal variances assumed  |         |      |    |    |               |                |                   |                                    |
| Equal variances not assumed |        |      |    |    |               |                |                   |                                    |

The above table shows that, demographic variable is not having any influence on intention of the customer to buy the organic food products. The significance value obtained is more than 0.05 in all the cases, which says that ‘There is sufficient evidence to accept Null Hypothesis.’ Hence the study proves: Demographic variable has no influence on the organic food consumption.

Objective 3: To identify the factor effecting the purchase behavior of organic food.

VII. RESULTS

Factor analysis was conducted in order to identify the factors that affect organic food products consumption. Factors were identified using the Eigen value criteria that suggests extracting factors with Eigen value greater than 1.0 and Varimax Rotation were considered for obtaining a component matrix. For confirming the adequacy and sphericity of the data set, Kaiser-Meyer-Olkin(KMO) and Bartlett’s Test values were also obtained.

KMO and Bartlett’s Test

| Kaiser-Meyer-Olkin Measure of Sampling | .951 |
| Approx. Chi-Square df Sig. | 15779.1 630 .000 |

Principal Component Analysis and Varimax Rotation were considered for obtaining a component matrix. For confirming the adequacy and sphericity of the data set, Kaiser-Meyer-Olkin(KMO) and Bartlett’s Test values were also obtained.

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KMO score is 0.951. It is above the recommended value of 0.5. Further Bartlett’s Test of Sphericity exhibits significance value of less than 0.05 (.000). Thereby ensuring the appropriateness of factor analysis.

\[
\begin{array}{c|cc}
\text{Comunalities} & \text{Initial} & \text{Extraction} \\
\hline
\text{VAR001} & 1.000 & .778 \\
\text{VAR002} & 1.000 & .862 \\
\text{VAR003} & 1.000 & .797 \\
\text{VAR004} & 1.000 & .798 \\
\text{VAR005} & 1.000 & .730 \\
\text{VAR006} & 1.000 & .677 \\
\text{VAR007} & 1.000 & .697 \\
\text{VAR008} & 1.000 & .733 \\
\text{VAR009} & 1.000 & .693 \\
\text{VAR010} & 1.000 & .548 \\
\text{VAR011} & 1.000 & .603 \\
\text{VAR012} & 1.000 & .649 \\
\text{VAR013} & 1.000 & .771 \\
\text{VAR014} & 1.000 & .763 \\
\text{VAR015} & 1.000 & .827 \\
\text{VAR016} & 1.000 & .703 \\
\text{VAR017} & 1.000 & .833 \\
\text{VAR018} & 1.000 & .756 \\
\text{VAR019} & 1.000 & .750 \\
\text{VAR020} & 1.000 & .832 \\
\text{VAR021} & 1.000 & .780 \\
\text{VAR022} & 1.000 & .728 \\
\text{VAR023} & 1.000 & .737 \\
\text{VAR024} & 1.000 & .748 \\
\text{VAR025} & 1.000 & .771 \\
\text{VAR026} & 1.000 & .795 \\
\text{VAR027} & 1.000 & .753 \\
\text{VAR028} & 1.000 & .811 \\
\text{VAR029} & 1.000 & .699 \\
\text{VAR030} & 1.000 & .798 \\
\text{VAR031} & 1.000 & .721 \\
\text{VAR032} & 1.000 & .787 \\
\text{VAR033} & 1.000 & .844 \\
\text{VAR034} & 1.000 & .797 \\
\text{VAR035} & 1.000 & .671 \\
\end{array}
\]

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 10 iterations.

\[
\begin{array}{c|cc}
\text{VAR008} & .596 \\
\text{VAR018} & .595 \\
\text{VAR036} & .584 \\
\text{VAR007} & .541 \\
\text{VAR019} & .515 \\
\text{VAR029} & \\
\text{VAR014} & .777 \\
\text{VAR021} & .713 \\
\text{VAR011} & .684 \\
\text{VAR004} & .663 \\
\text{VAR024} & .641 \\
\text{VAR009} & .616 \\
\text{VAR017} & .595 \\
\text{VAR035} & .548 \\
\text{VAR026} & .522 \\
\text{VAR013} & .702 \\
\text{VAR027} & .690 \\
\text{VAR010} & .654 \\
\text{VAR020} & .583 \\
\text{VAR028} & .559 \\
\text{VAR033} & .539 \\
\text{VAR016} & .525 \\
\end{array}
\]

FACTOR -1

\[
\begin{array}{|c|c|}
\hline
\text{Q1} & \text{Organic food products are rich in nutrient value.} & .792 \\
\text{Q15} & \text{Organic food products are potentially healthy} & .725 \\
\text{Q12} & \text{Organic foods have more vitamins} & .685 \\
\text{Q22} & \text{Organic foods are free from artificial ingredients} & .660 \\
\text{Q2} & \text{Organic food products is good for health than non-organic food products} & .656 \\
\text{Q5} & \text{Organic food products are tastier than non-organic food products} & .645 \\
\text{Q25} & \text{Organic food products are unadulterated} & .620 \\
\text{Q6} & \text{Organic food products smells goods as compared to non-organic food products} & .611 \\
\text{Q23} & \text{Organic food products helps in controlling diseases like diabetics, hyper tension etc.} & .604 \\
\end{array}
\]

FACTOR -2

\[
\begin{array}{|c|c|}
\hline
\text{Q32} & \text{Organic food has very less varieties} & .787 \\
\text{Q34} & \text{There are very less outlets for organic foods} & .767 \\
\text{Q31} & \text{Organic food has less market penetration due to its high cost} & .753 \\
\text{Q3} & \text{Organic food are not easily available} & .679 \\
\end{array}
\]
Organic food are not available everywhere.621
Common people are not aware of the benefits of organic food.596
Groceries generally don’t stock organic food products.595
Consumption of organic food is more in metros.584
Organic food products are having comparably same shelf life as non-organic food products.541
Organic food products are not conveniently available.515

FACTOR -3

I do not believe that all Organic food products labelled as “organic” are really organic.777
A variety of organic food products are available.713
Organic food products are free from contamination.684
Organic food products do not have additives and preservatives.663
Organic food products do not contain any food additives.641
Organic food products are very costly as compared to non-organic food products.616

Variance Explained

| Component | Initial Eigenvalues | Extraction Sums of Squared Loadings | Rotation Sums of Squared Loadings |
|-----------|---------------------|-------------------------------------|-----------------------------------|
|           | Total               | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1         | 22.18               | 61.61        | 61.61        | 22.18 | 61.61        | 61.61        | 7.48  | 20.77        | 20.77        |
| 2         | 1.84                | 5.13         | 66.74        | 1.84  | 5.14         | 66.74        | 7.32  | 20.33        | 41.11        |
| 3         | 1.77                | 4.92         | 71.66        | 1.77  | 4.92         | 71.66        | 6.29  | 17.47        | 58.58        |
| 4         | 1.21                | 3.37         | 75.04        | 1.21  | 3.37         | 75.04        | 5.92  | 16.45        | 75.04        |
| 5         | 0.99                | 2.77         | 77.81        |       |              |              |       |              |              |
| 6         | 0.86                | 2.41         | 80.22        |       |              |              |       |              |              |
| 7         | 0.66                | 1.85         | 82.08        |       |              |              |       |              |              |
| 8         | 0.61                | 1.71         | 83.79        |       |              |              |       |              |              |
| 9         | 0.52                | 1.44         | 85.23        |       |              |              |       |              |              |
| 10        | 0.46                | 1.30         | 86.53        |       |              |              |       |              |              |
| 11        | 0.42                | 1.18         | 87.72        |       |              |              |       |              |              |
| 12        | 0.42                | 1.18         | 88.90        |       |              |              |       |              |              |
| 13        | 0.36                | 1.01         | 89.91        |       |              |              |       |              |              |
| 14        | 0.35                | .98          | 90.90        |       |              |              |       |              |              |
| 15        | 0.35                | .93          | 91.83        |       |              |              |       |              |              |
| 16        | 0.29                | .80          | 92.64        |       |              |              |       |              |              |
| 17        | 0.25                | .70          | 93.34        |       |              |              |       |              |              |
| 18        | 0.23                | .64          | 93.98        |       |              |              |       |              |              |
| 19        | 0.22                | .62          | 94.61        |       |              |              |       |              |              |
| 20        | 0.19                | .55          | 95.16        |       |              |              |       |              |              |
| 21        | 0.19                | .53          | 95.70        |       |              |              |       |              |              |
| 22        | 0.17                | .48          | 96.18        |       |              |              |       |              |              |

FACTOR -4

I rely on natural products.516
Due to health consciousness I prefer organic food.702
Organic food is not easily available.690
Organic food products are same in nutrition as compared to any non-organic food products.654
A growing concern for the environment makes me purchase organic food products.583
People consider consumption of organic food as style symbol.559
People have less awareness about organic food.539
Organic food products are safe for consumption.525
Antecedents of Organic Food Consumption among the Indian Customers

In total 35 items were considered for study and the items were converged into 4 factors. Researcher have the autonomy to give names to the variables looking to the way the questions have been asked. Below table exhibits the same.

| Factor No. | No. of Items | Factor Name       |
|------------|--------------|-------------------|
| Factor 1   | 9            | Nutrient Value    |
| Factor 2   | 10           | Availability      |
| Factor 3   | 8            | Customer Perception|
| Factor 4   | 8            | Customer Ideology |

Component Transformation Matrix

| Component | 1   | 2   | 3   | 4   |
|-----------|-----|-----|-----|-----|
| 1         | .533| .525| .473| .466|
| 2         | -.661| .537| .435| -.292|
| 3         | .254| -.496| .702| -.444|
| 4         | -.463| -.435| .308| .708|

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Correlations

|              | Intention          | Nutrient Value | Availability | Customer Perception | Customer Ideology |
|--------------|--------------------|----------------|--------------|---------------------|------------------|
| Intention    | Pearson Correlation| .197           |              | 1                   |
| Sig. (2-tailed) | .000              |                |              |                     |
| N             | 350                |                |              |                     |
| Nutrient Value| Pearson Correlation| -.278          | .769         | 1                   |
| Sig. (2-tailed) | .000              | .000           |              |                     |
| N             | 350                | 350            | 350          |                     |
| Availability | Pearson Correlation| .227           | .774         | .818                |
| Sig. (2-tailed) | .000              | .000           | .000         | 1                   |
| N             | 350                | 350            | 350          | 350                 |

The four factors namely nutrient value, Availability, customer perception and customer ideology has a positive correlation on the customer purchase intention of Organic Food Products. From this research, the researcher want to propose the below model for Organic Food Product Consumption. Companies dealing in organic food products need to pay attention to the following factors to promote the organic food consumption.

Findings: The study reveals various facts by respondents while purchasing the organic products in the markets.
- Demographic variable has no influence on the organic food consumption.
- There is high level of awareness about the consumer food products among the people.
- Influencing factors for consumer consumption of organic food are their belief on the following factors.
VIII. CONCLUSION

Marketers of organic foods need to be innovative and dynamic in order to compete with the changing purchase behavior of the customers. Study showed that even though awareness level is very high, among the respondents, the consumption rate is not grown as expected. So the companies dealing in organic food products, need to formulate promotional strategies which are realistic and moral. Consumers are willing to pay price premium for organic products which could be viewed as the cost of investment in human health. Special drives to create awareness about organic products will create a positive perceptions about the product and, ultimately, influence the buying decisions of the consumers.

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