

# CONSUMER PERCEPTION, PURCHASE INTENTION AND BARRIERS TO PROMOTE ORGANIC FOOD AMONG SUPER MARKET CONSUMERS IN SRI LANKA

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## **Abstract**

Organic food consumption is increasing day by day among world population, although it is still in infant stage in Sri Lanka. Increasing health hazards occurred by agro chemicals, environmental issues and developing awareness on harmful effect on conventional food act as main reasons for popularizing organic food products. Therefore this study attempts to examine consumer perception and purchase intention on organic food products among supermarket consumers based on the theory of planned behavior, the five steps of consumer decision making process based on previous researches on organic foods, eighteen items of four dimensions were constructed to measure the consumer's perception towards organic food, six items were used to measure their purchase intention and six items were engaged to determine purchasing behavior on organic food products among super market consumers. Data was collected in supermarkets and surrounding areas in the district of Galle, Kaluthara and Colombo in Sri Lanka. A total of 288 completed questionnaires were gathered, representing 96% response rate, using convenient sampling method. The result indicated that intention to purchase organic food was significantly influenced by the consumer's perception of safety, health, environmental factors and animal welfare of the product. Differences were observed in the purchase intention of organic food products according to respondent gender, age, income level, education level. Theoretically, this study supported the view of consumer's perception towards organic food products will influence their purchase intention. Poor awareness, poor availability and lack of confidence were act as significant barriers to promote organic food products. The findings proposed useful information to organic marketers help them to develop marketing strategies to convince organic food products to enhance purchase intention in Sri Lankan super market sector.

Key words: Organic food products, purchase intention, consumer perception, barriers to promot

## 1. Introduction

Organic products are the products which are grown or produced without the uses of synthetic pesticides & fertilizers, irradiation or genetically modified organisms, produced by using method of organic farming. Today extensive use of pesticides it is almost impossible for anyone to avoid daily exposure to low levels of several different pesticides. Researchers have shown that there are many adverse effects can be occur to human beings due to chronic exposure of agro chemicals, although in lower levels. Long term exposure of agrochemicals can cause so many health hazards such as carcinogenicity, mutagenicity, defects on reproductive system, immune suppression hormonal disruption and diminish intelligence. Soil and ground water pollution are the main environmental effects of pesticides. Most fertilizers and other agrochemicals affects badly on insect life cycles. It will cause for breakdown of environmental equilibrium. So,now adays organic food and organic farming became as a global need.

Consumer is defined as consumers who are conscious of and interested in ecological issues (Soonthonsmai, 2007). They perceived and believed that all products and services have environmental impact and their initiative is to reduce the damage as much as possible. They were also willing to change their Demand for organic food has increased considerably during past decades globally, but in Sri Lanka it is not so popular, only contributes few percent of total food consumption. The majority of respondents (57%) mentioned that promotions of organic food products strongly influence their buying decisions.32% respondents have mentioned that promotions of organic food not strongly influence on their buying decisions( Wanninayake & Randiwela ,2008) in Sri Lanka.

Organically produced products is growing throughout the world in response to concerns about conventional agriculture practices, food safety, human health concerns, animal welfare considerations and concerns about the environment. The demand for organic food products is dramatically rising in Malaysia as the population becomes more affluent and more educated about health and wellness issues, leading to greater consciousness in food choices

In past eras Sri Lankans cultivated rice, vegetables, fruits organically for their own consumption by using organic fertilizers, pesticides and holistic methods. After the European occupation system came to Sri Lanka, people give up cultivation by using natural products. Also due to increasing population to get good harvest they cultivate hybrid crops by using chemical fertilizers and agrochemicals. Now a days in Sri Lanka organic farming practices with proper There are 172 farmers were practicing as organic farmers (piyasiri,2002).These organizations supply their products for the supermarket sector in Sri Lanka. Although they are available in the supermarket sector in Sri Lanka, are not well developed and no market statistics properly. It is characterized by lack of continuous supply, lack of certification, poor quality product and lack of awareness (piyasiri,2002).

There are several factors contributing to the lack of organic food purchase by consumers; the main constraints to purchase organic foods are high price premiums, availability and to a lesser extent, lack of information, lack of trust in organic certification schemes and quality.

Thompson and Kidwell (1998) stated that age, gender, and having a college degree just had little impact on a shopper's decision to buy organic food. Due to inconsistent agreement between previous researchers, it is significant to explore the influences of socio-demographic roles on the purchase intention of organic food products.

Since it is important to study purchasing and consumption behavior of consumers towards organic food products and there are limited researches investigating the appropriateness of applying Theory of Planned Behavior in this area. This research developed the research questions as follows: (i) What are the effects of consumer's perception of organic food products on their purchase intention? (ii) How consumers' purchase intention influence their actual purchase? and (iii) Does consumers' purchase intention of organic food products depend on demographic factors ?

So, this research mainly target on consumer perception and purchase intention of organic foods.

## **2.1 Purchase Intention**

Intention is an indication of an individual's readiness to perform a given behavior, is based on attitude toward the behavior, subjective norm, and perceived behavioral control, and it is assumed to be an immediate antecedent of behavior (Ajzen, 1991). Behavior is an individual's observable response in a given situation with respect to a given target (Ajzen, 1991). Ajzen (1991) said a behavior is a function of compatible intentions and perceptions of behavioral control. The Theory of Planned Behavior is presented in Figure 1, and it is used in this study to examine consumers' behavioral intention and purchasing behavior towards organic food products. These behaviors are examined in term of how consumers' perceived of safety, health, environmental factors and animal welfare, and quality of the organic food products, as discussed in the five steps consumer.

However, Geen and Firth (2006) concluded that committed organic consumers tend to be older than the average population in the UK. Shafi and Madhavaiah (2013) emphasized on the facts that affect the consumer decision making process on purchasing imported health food products, in specific demographic effects such as education, income, gender and marital status. Hence, it is necessary to examine the impact of consumer's demographic characteristic on purchase intention since there might be some socio-demographic differences in organic food acceptance and consumption behavior.

## **2.2 Influence of environmental factors for purchase intention**

According to Straughan and Robbarts (1999), Income is generally thought to be positively related environmental sensitivity. The most common justification for this belief is that individuals can at higher income levels. Since the organic products are unwilling to purchase organic products. Certain young customers in Asian countries do not have the purchasing power. However it was identified that non-environmentalists were significantly lower income groups and they tended to be youngsters and male who have received formal education and attitudes. Socio- psychological information has obtained much attention with in the environmental marketing context to promote organic products.

### **2.3 Influence of safety and health factors for purchase intention**

In general, organic production emphasizes the use of renewable resources, conservation of energy and resources, and preservation of the environment, without the use of synthetic fertilizers and pesticides. Therefore, organically produced food is generally regarded as healthier, safer, better tasting and more nutritious than conventionally produced food. It is also typically perceived as product without chemicals that is not intensively produced and is grown as natural.

Normally, people buy organic food because organic food is seen as healthier, more nutritious and safer, no chemicals are used, organic farming is kinder to the environment, and quality better than conventional food. Therefore, perceived safety of organic food products and its positive effect on behavior intention towards the product is proposed. Perceived safety of organic food products will positively affect the purchase intention.

### **2.4 Influence of demographic factors for purchase intention**

Demographic drive certain wants and needs. Segmenting potential consumer through their demographic factor will help marketers to be successful in targeting their potential customers. So, it is not surprising that socio-demographics have been the most widely used variable for profiling purpose. Indeed, there are some socio-demographic differences in organic food beliefs and consumption behavior. For instance, Grunert and Juhl (1995) reported that young consumers are more likely to buy organic food. These outcomes can be explained by the notion that older consumers are characteristically more conservative in trying out new products compared to their more audacious younger cohorts (Govindasamy and Italia 1999). Shafi and Madhavaiah (2013) emphasized on the facts that affect the consumer decision making process on purchasing imported health food products, in specific demographic effects such as education, income, gender and marital status. Hence, it is necessary to examine the impact of consumer's demographic characteristic on purchase intention since there might be some socio-demographic differences in organic food acceptance and consumption behavior.

### **2.5 Influence of educational factors for purchase intention**

Individuals with higher education level generally are more likely to purchase organic food than others people. Although there are numerous research find a positive relation between education and organic food consumption (Cunningham, 2002; Donovan and McCarthy, 2002), while others find a negative relation (Wilkins and Hillers, 1994; Thompson and Kidwell, 1998). Lea and Worsley (2005) find that the impact of education on organic food beliefs is smallest. Also, Arbindra et al. (2005) found that the level of education has no statistically significant influence on organic food purchase patterns.

## **3. Research model and hypotheses**

H1: Perceived health of organic food products will positively affect the purchase intention

H2: Perceived safety of organic food products will positively affect the purchase intention.

H3: Perceived environmental friendly and animal welfare of organic food products will positively affect purchase intention.

H4: Perceived quality of organic food products will positively affect the purchase intention

H5: There is a significant difference between gender variable towards purchase intention of the organic food products

H6: There is a significant difference between income variable towards purchase intention of the organic food products.

H7: There is a significant difference between education variable towards purchase intention of the organic food products.

#### **4. Methodology**

##### **4.1 Data collection , measurements and sampling procedure**

The descriptive survey using questionnaire was employed in this study to examine how consumers perceived organic food products affect their behavior intention to purchase the products. The section A of the questionnaire inquires some demographic data of the respondents.

\*18 questions were developed in the section B to get respondents views on various aspects of organic food products.

\*6 items of behavioral intention to purchase organic food products.

\*6 items to measure respondents actual purchasing behavior

All items were measured using 5 point Likert scale (1 is low and 5 is high). The survey was conducted by questionnaire method. The respondents were selected randomly in the super markets in Colombo, Galle and Kalutara district. According to Hill (1998), in multivariate research the sample size required should be 5-10 time of variables for 10% and 5% margin error. In this study the number of total questions in the developed questionnaire was 30 and therefore the number of samples should be 300 for 5% margin error. Only 288 sets of questionnaire were fully answered and completed by the respondents. The response rate for questionnaire was 96%.

##### **4.2 Data Analysis**

The study data were recorded into IBM-SPSS format for analysis. Data were entered manually to IBM-SPSS for statistical testing using numeric codes defined by the author for analytical purposes. Reliability tests has been carried out for each of the hypothesis factors. Descriptive statistics were used to define the sample profile and research variables to examine how consumers perceived organic food products affect their behavior intention to purchase the products. Percentages and frequencies were calculated to define the gender, highest education level and average monthly income of the sample profile. Means

and percentages were carried out to determine the coverage of consumer purchase intention of organic food.

### **4.3 Sample Profile**

The gender representation of the sample is 54% female (162 respondents) and 46% male (138 respondents). 60% (180 respondents) of the sample population had a highest education background of GCE Advanced Level followed by GCE Ordinary level of 23% (68 respondents). Thus, the majority of the population has only the basic education level. The average monthly income of this population was Rs.25,653/=

### **5.1 Descriptive Statistics**

#### **Hypothesis 1- Health factors**

The first hypothesis was tested in section B of the questionnaire that included four questions relating to effect of health factors in the consumer perception, perception and actual purchase behavior of organic food products. The frequencies for each question in this section are summarized in the below table. Based on the frequencies for each question, the Health factor Index has been designed and its frequencies are calculated.

Based on the information gathered, majority of the respondents have agreed to the statements mentioned in the questionnaire. 86.7% (261 respondents) of the population have agreed to all four statements relating to health factors which influence buyer behavior of organic food products. Hence, it is possible to state that the responses are in favor of this hypothesis.

#### **Hypothesis 2- Safety factors**

The following Table demonstrates the response rate frequencies for the four questions that relates to safety factors which might have an influence over consumers' perception, purchase intention and buying behavior of organic food products.

Based on the frequencies for each question, the Family factor Index has been designed and its frequencies are calculated.

212 respondents (70%) have accepted that the statements of organic food safety are correct and that it will have a significant impact on the consumers' perception, purchase intention and buying behavior of organic food products. Thus, the effect of organic food on safety concerns of buyers are positively related to each other as per the responses recorded via the questionnaire.

#### **Hypothesis 3: Perceived environmental friendly and animal welfare of organic food products will positively affect purchase intention.**

Based on the frequencies for each question, the Index for environmental friendliness and animal welfare has been designed and its frequencies are calculated.

The participants of the survey had mixed responses with regard to the concerns of environment and animal welfare when making decisions on purchasing organic food products. Although only 43% (129 respondents) has answered in favor of all the statements, there is another 31% (94 respondents) agreed to at least two statements out of the three which can still be considered in favor of the hypothesis. The rest of the population disapproves.

#### **Hypothesis 4- Product quality factors**

The fourth section of the questionnaire relates to the statements related to product quality towards consumers' perception, intention and purchase behavior of organic food products. The table below demonstrates the response frequencies for the questions that were asked relatedly.

Based on the frequencies for each question, the Product quality Index has been designed and its frequencies are calculated.

The questions relating to product quality and reduced health risks have been positively responded by the participants of the survey where 42% (126 respondents) agree to all three questions and another 29% (87 respondents) agreeing to at least two out of the three questions. Thus, there is a high probability of accepting the hypothesis as a valid argument to the main question in study.

#### **5.2 Inferential Statistics**

Prior to inferential analysis, tests were carried out in terms of reliability and normality.

The reliability test on the responses received from the sample population was carried out considering the Cronbach's alpha model. The test yielded a significant value of  $p=0.759$  ( $p > 0.7$ ) (Appendix 2). The Cronbach's alpha for the individual health factors, safety factors, environmental friendliness and animal welfare factors and product quality factors reported are 0.619, 0.716, 0.561 and 0.645 respectively. Thus, the overall Cronbach's alpha significance demonstrates that dimensions of perceived organic food products, behavior intention and actual purchase behavior of the products were valid and reliable for further inferential analyses.

A normality test of Kurtosis and Skewness were carried out to determine the results are normally distributed. Normality test was carried out considering the four indexes defined by the author. The results for normality (Skewness and Kurtosis) the four indexes.

The standard significant value of Kolmogorov-Smirnov and Shapiro-Wilks is a p value of less than 0.05 and all of the above factors have a significant p value less 0.05, therefore, the data are considered to be normally distributed.

#### **5.3 General Correlations**

Hypothesis 1 stated that perceived health of organic food products will positively affect the purchase intention. The frequencies for the health index supports that majority of the respondents have agreed in favour of the statements mentioned in the questionnaire. At 5% statistical level health index

has a relationship with the monthly income of the respondents (Chi-square value= 360.997,  $p= 0.000$ ). However, it has no statistical relationship at 5% with gender or educational qualifications.

Hypothesis 2 stated that perceived safety of organic food products will positively affect the purchase intention. 70% of the sample population has responded in favour of the questions presented at the survey. However, there is no statistical relationship at 5% with any of the demographic variables that were tested. It is, however, necessary to mention that the safety factor has a significant relationship with monthly salaries and safety index factor (Chi-square value= 205.229,  $p= 0.065$ ). Therefore, H2 is supported by this.

The third hypothesis states that perceived environmental friendly and animal welfare of organic food products will positively affect purchase intention. At 5% significant level, there is a relationship between environmental friendly and animal welfare factor versus monthly income (Chi-square value=173.785,  $p= 0.009$ ). However, there is no further relationship with the other demographic factors.

Hypothesis 4 stated that perceived quality of organic food products will positively affect the purchase intention. Product quality factor has no statistical relationship with any of the demographic factors that were put into test with the survey. Thus, H4 is not supported entirely through demographic relationships.

### **6.1 Conclusion of analysis and results**

The results of data gathered have been proportionately skewed and normality tests also suggest that the data are valid and reliable for testing. All four factors that were in consideration, health factors, safety factors, environmental friendliness and animal welfare factors and product quality factors have all proven to be accepted significantly and moderately by the respondents of the survey by analyzing the modes of the relevant indices. However, statistically proving the demographics, health factors, safety factors, environmental friendliness and animal welfare factors have a significant relationships with the income earned by the participants. The findings of the data analysis will be further discussed in next chapter.

### **6.2 Discussion**

The objective of this study was to determine if significant relationships exist between consumers' perception, purchase intention, and actual purchase behavior of organic products with health, safety, environmental friendliness and animal welfare and product quality. Correlations test suggests that relationships exist between health, safety and environmental friendliness and animal welfare have significant effect over the consumers' perception, purchase intention, and actual purchase behavior of organic products.

## **6.3 Analysis of the findings**

### **Demographic factors**

The sample population (300 respondents) comprise of 54% female (162 respondents) and 46% male (138 respondents). The distribution of gender among the population is fairly uneven thus, there can be an effect in general listing the study into the industry. However, since the disparity is minimal, the concept can be proven.

The target population of this research was consumers vesting the supermarkets in Sri Lanka. Thus, the age categories, education backgrounds and occupation of the sample were highly varied. Majority of the sample had the highest educational qualifications of GCE Advanced Level.

Statistical arguments suggest that there is significant relationships between the four dependent variables and monthly income of the respondent. However, it is also important to note that there were a considerable number of respondents without any form of monthly income. Considering the simple modes of the four factors, it can be seen that the demographic changes have had an impact on the dispersion of the answers. Thus, the responses received from individuals may have been impacted only due to the basic dispersion of the demographic factors. Hence, the results demonstrates that there is no significant difference in individual perception between any of the factors considered to test the study.

### **Variable factors**

The result of the study highlighted that consumers' perceived organic food products did affect their intention to purchase the products. The simple mode calculation of the four dependent variables predict that most respondents agree to the statements relating to health factors where a majority of 87% of the respondents have answered I favour of the hypothesis that health factors have a significant impact on the consumer perception, purchase intention and actual purchase behavior of organic products.

The results to H2 states that safety is the second most important factor that consumers perceive as a factor that affects the buying behavior of organic food products where a majority of 70% agrees with all statements relating to this section. The results are consistent with earlier studies which suggested that food safety as a reason for consuming organic food products.

Environmental concern purchase intention suggests that consumers are willing to purchase organic food products because they perceive that the products are more environmental friendly and considers of animal welfare. In this study, this factor has received relatively serious attention where 43% of the respondents agree with all three statements and a further 31% agrees to at least two statements. The total percentage (74%) allows us to consider this factor as an important element of the consumers buying behavior of organic food products. Although environmental friendly and animal welfare had minimal effect on the purchase intention, its existence cannot be neglected because considering the individual responses to each question, it can be seen that statements relating to animal welfare has not received an agreement or disagreement from the respondents. Majority of the population have stated "Undecided", which raises no opinion. The environmental friendly (consumer) behavior is often

characterized as ethical or moral behavior, driven by the social norms and the moral considerations. This section of the survey has been poorly attended which exposes the author for further research on this area.

The relationship between perceptions of product quality and purchase intentions is not significant with a mode of only 41% agreeing to the statements relating to this hypothesis. The questions relating to particularly the quality of organic food products have received a fairly vague response as majority of the respondents have undecided opinions. However, the question that testifies the quality on lowered health risks have received more agreement. This demonstrates that the consumers severely consider that organic food is for healthier consumption. This also inevitably approves H1 again.

As a conclusion, perception of consumers is important in the purchase decision of organic food consumption. How consumers perceived the organic food products is crucial because this will determine their intention to buy and consume organic food products. The findings of the study shows that consumers who are conscious on health and food safety are more driven towards buying organic food products within the supermarket customers of Sri Lanka. Environmental concerns and animal welfare is the third most important factor in the purchase intention of organic food. However, all aspects of consumer buying behavior cannot be entirely assumed with this study alone as sensitivity to prices, taste, etc. have not been considered.

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