

**DECISIONAL FACTORS DRIVING INTENTION TO BUY  
ORGANIC FOOD AND ITS IMPACT ON ACTUAL BUYING  
BEHAVIOUR**

A Thesis

Submitted in partial fulfillment of the requirements for the  
award of the degree of

**DOCTOR OF PHILOSOPHY**

in

**Business Management**

By

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**LOVELY PROFESSIONAL UNIVERSITY  
PUNJAB  
2020**

## **Declaration**

I hereby declare that this thesis with the title of “Decisional factors driving intention to buy organic food and its impact on actual buying behaviour” is submitted by Deepak Pandey in fulfillment of the requirement of the degree of Doctor of Philosophy from Mittal School of Business of Lovely Professional University.

I hereby also declare that the entire work is original and is carried out under the supervision of my guide Dr. Mohd. Farhan, Associate Professor, Mittal School of Business, Lovely Professional University.

This research work is not presented anywhere else to get a degree or award.

Deepak Pandey

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## **Certificate**

It is certified that the thesis entitled “Decisional factors driving intention to buy organic food and its impact on actual buying behaviour” by Deepak Pandey is submitted in fulfillment of the requirement for the degree of Doctor of Philosophy in Management from Mittal School of Business of Lovely Professional University, Punjab, India is an original piece of work carried out under my guidance and supervision.

Signature of the Supervisor

Dr. Mohd. Farhan

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## Abstract

Sustainability is a term that is well known to the learned society these days. Achieving profit used to be the mantra of any business but now people are more concerned about achieving it sustainably. No one has the right to pollute or damage our environment for attaining business goals. Adopting sustainable practices becomes the need of the hour. People perceive those organisations as responsible which take care of environmental issues.

Not only in the business world but now in personal or household consumption process people are taking care of environmental issues and adopting all possible steps which can save the environment for ourselves and our future generation. Going green is the need of the hour. Most of us have already started acting responsibly and taking all small steps which are important to keep our environment intact.

The way the current lifestyle is changing people is happily embracing it. Gone are those days when we use to pollute our environment through our day to day activities like cleaning our car or motorbike by a continuous flow of water pipe, instead of this most of us have started using dry cleaning. Instead of using single-use polyethylene bags we have adopted jute bags or reusable biodegradable bags. Household garbage is now segregated by us in the form of dry garbage and wet garbage. Municipality after collecting these two types of garbage decompose it or recycle it. We have seen electricity generation plants in some parts of the country by using this garbage. Slowly we are shifting our preferences to the same old pattern of being natural. We are adopting the lifestyle of yoga, herbal medicines, and consuming green products. These green products are mostly consumable.

‘*Jaivik*’ or ‘organic’ is another word that has become very popular in the last two decades globally. These organic food products are grown in a natural process by adopting the same traditional farming methods but certainly with the help of using technically advanced tools. Soil does not get affected badly while organic farming as it does not use any harmful chemicals like synthetic fertilisers and pesticides, rather it uses natural manure and compost, it also uses freshwater for irrigation so it does not contaminate the water table.

Hence this farming method saves our natural resources and human health. When it comes to our health we become serious about our daily consumption. While at the same time green products are those products that are produced using sustainable practices. These products minimise the environmental impact during their life cycle from its procurement to decomposition. It reduces waste creation and it also helps in maximising the efficiency of the available resources.

The world has started showing seriousness towards environmental issues and human health arising from our consumption pattern. Consuming green products is the need of the hour and so organic foods relevance comes into the picture. This variant of food has become popular first in European countries and the Americas but now its importance and need are seen globally and hence Indians also started accepting this food. The Indian government has also shown seriousness towards this food variant and formed a governing body for organic foods which helps and promotes organic food producers. As this food has started showing great demand globally hence the organic food suppliers have started exporting it too. The question then arises among the organic food producers and suppliers to look for the reasons behind customer's preference for this food. Researchers are already working on these reasons globally and they are helping this industry to understand the buying pattern of this niche market. India also needs more of such work which can help this industry. The fast-developing country like India also wants to understand the shift in the buying pattern in food items as Indian customers are not buying the food items in the same old manner. The study was also required to understand the consumer's requirement so that it helps this industry.

This Study has worked on the same lines and understood the problem in this industry as explained above. This problem has indicated questions for research which has helped the researcher to formulate the research objectives defined as under:

- 1) To study the level of awareness towards organic food in Punjab, India.
- 2) To study the key factors that affect consumers' intention to buy organic food products.

- 3) To establish the relationship between decisional factors driving the actual buying behaviour of organic foods in Punjab, India.
- 4) To examine the role of demographic characteristics of the respondents on the actual buying behaviour of organic food products.

These objectives have directed the way to frame the null hypotheses. All the below mentioned null hypotheses are being framed to achieve all four research objectives of this study:

*H<sub>01</sub>: There is no level of awareness among the customers towards organic foods.*

*H<sub>02</sub>: There does not exist any significant difference among the age groups brackets of organic food customers towards the level of awareness.*

*H<sub>03</sub>: There does not exist any significant difference among the genders of organic food customers towards the level of awareness.*

*H<sub>04</sub>: There does not exist any significant difference among the marital status of organic food customers towards the level of awareness.*

*H<sub>05</sub>: There does not exist any significant difference among occupations of organic food customers towards the level of awareness.*

*H<sub>06</sub>: There does not exist any significant difference among the household income brackets of organic food customers towards the level of awareness.*

*H<sub>07</sub>: There does not exist any significant difference among the educational level of organic food customers towards the level of awareness.*

*H<sub>08</sub>: There does not exist any significant difference among the family size groups of organic customers towards the level of awareness.*

*H<sub>09</sub>: There does not exist any significant difference among the organic food customer's district towards the level of awareness.*

*H<sub>010</sub>: There does not exist any significant difference among the organic food customer's living environment towards the level of awareness.*

*H<sub>011</sub>: Organic food customer's awareness will not affect the trust-building towards organic food.*

*H<sub>012</sub>: Information revealed through organic labelling will not influence trust in organic food.*

*H<sub>013</sub>: Perceived information towards organic food will not affect the trust-building for organic food.*

*H<sub>014</sub>: The current lifestyle of organic food customers will not affect the trust-building for organic food.*

*H<sub>015</sub>: Trust will not affect the purchase intention of organic food.*

*H<sub>016</sub>: Attitude towards organic food will not affect the intention to buy them.*

*H<sub>017</sub>: Subjective norms towards organic food will not affect its purchase intention.*

*H<sub>018</sub>: Perceived behavioural control towards organic food will not affect its purchase intention.*

*H<sub>019</sub>: Purchase intention of organic food will not affect the actual buying behaviour of organic food customers.*

*H<sub>020</sub>: There does not exist any significant difference among the age groups brackets of organic food customers towards actual buying behaviour.*

*H<sub>021</sub>: There does not exist any significant difference among the genders of organic food customers towards actual buying behaviour.*

*H<sub>022</sub>: There does not exist any significant difference among the marital status groups of organic food customers towards actual buying behaviour.*

*H<sub>023</sub>: There does not exist any significant difference among the occupation groups of organic food customers towards actual buying behaviour.*

*H<sub>024</sub>: There does not exist any significant difference among the household income brackets of organic food customers towards actual buying behaviour.*

*H<sub>025</sub>: There does not exist any significant difference among the educational level groups brackets of organic food customers towards actual buying behaviour.*

*H<sub>026</sub>: There does not exist any significant difference among the family size groups of organic food customers towards actual buying behaviour.*

*H<sub>027</sub>: There does not exist any significant difference among the organic food customer's district towards actual buying behaviour.*

*H<sub>028</sub>: There does not exist any significant difference among the living environment groups of organic food customers towards actual buying behaviour.*

### **Nature and Scope of the work**

Conventional food deficiencies have opened a path for searching for alternatives for the marketers, but it was not an easy task as even after some problems the customer was familiar with the conventional food items and there was huge acceptability in the families regarding the food we used to eat since ages. Altering the food requirement was challenging but as slowly people started realising the harmful effect of fertilisers, pesticides, added colours, preservatives, etc. it has given a chance to think of the food items consumption.

People found various reasons for looking for alternatives like animal welfare, environmental concern, health issues.

In total consumers started realising the need for an alternate food option which was natural. Organic farming slowly being pushed by the governments, policies were made and implemented, awareness was created by the marketers and these efforts started showing good signals of acceptability of organic food among customers.



The need of organic food alternatives is slowly becoming so obvious that the customer has to switch from the conventional food to the healthier option available, which will further motivate the demand of the organic food and helps in lowering down the cost of production as the concept of economies of scale will come into the picture.

India is also showing the same pattern of consumption as the per capita income of Indian people are increasing year on year, awareness among customers regarding organic options are increasing, peer pressure also works in some of the cases and further the changing lifestyle is helping in the overall growth of organic food segment in India.

Sometimes it becomes difficult for a manufacturer or a marketer to understand the customer preferences and so the role of scientific study becomes obvious. This study has searched the majority of the literature available regarding the determinants and its relationship so that a buying pattern can be understood. The scope of this study also includes understanding the Indian customer especially from the state of Punjab so that a specific buying pattern can be projected using scientific method research.

### **Contribution in the existing literature**

This study has proposed a conceptual framework that was started from the well-established two theories namely “Theory of Reasoned Action” and “Theory of Planned Behaviour”. This research work has extended the existing model of buying behaviour in terms of organic food. This extension of the model is also important as it has surveyed Indian customers to understand their pattern of buying as the geographic region also impacts the buying behaviour. This study has found an interesting pattern of buying towards organic food and it was as per the proposed model. New factors were found which influenced people from Punjab (India). A new relationship among the factors influencing organic food buying intention was also established by testing the proposed hypothesis. The impact of buying intention on actual buying behaviour was also established by the statistical test of PLS SEM.

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# Chapter 1

## Introduction

## **1.0 Introduction**

An Agriculture sector is important for every country as it provides food security to the people. Food is always known as the most basic and important need of humankind. We get energy from food and we can do other tasks only when we contend with the food. Agriculture contributes to nation-building and we have examples of many countries doing good only because they are self-sufficient in terms of feeding their citizens (Kumar and Ali, 2011).

India after becoming an independent nation in 1947 was struggling for their citizens' food needs, the democratic government came into power was struggling very hard for feeding their people, they took help for some time from other countries, but later on, India realised that everyone has to fight their own battle. India started focussing on agriculture but it was having lots of issues in terms of lack of agricultural education, tools, and machinery, seeds availability, small and divided lands, dependency on monsoon for irrigation, etc. Even after all these issues Indian farmers were committed to feeding their citizens as they were carrying a huge responsibility. The government had understood this issue of food availability for the large population of India and tried forming and implementing agriculture-based policies to cater to the need of the country.

### **1.1 A background of Green Revolution**

India has faced a major challenge in the production of food after independence until 1960. As a country, we understood until 1958 that something bigger was required in terms of food production. Taking a big leap was the demand of the time. Mr. Mankombu Sambasivan Swaminathan, who was known as the father of the green revolution in India tried to come up with a variety of wheat and rice which was a high-yield seed. Farmers of Punjab, Haryana, and Uttar Pradesh have shown great efforts in achieving high-yield production of these two crops. Increasing the production of crops and fulfilling the requirements of people was the major challenge in front of Mr. Swaminathan (Pingali,

2012). This revolution has aimed to achieve self-sufficiency in terms of the overall production of these basic crops for the nation. Time was demanding the improvement and achievement of the following things:

- high yielding variety seeds;
- irrigation facilities;
- fertilizers; and
- securing and assembling scattered land holdings.

This was the time when Indian farming was required to work as an industrial system, farmers tried adopting new technologies, new methods of farming, they learned and practiced the usage of tractors and other machines on farms. Farmers also focused on high yielding seeds variants which have shown good results (Chandrashekar, 2010). The major output India achieved was high yield variant of wheat production as this country was majorly dependent on wheat for our food patterns, especially the north part of the country was more dependent on wheat and then comes the crops like rice, nuts, and pulses. Apart from the introduction of better seeds, good quality of fertilizers, and improved irrigation system has pushed our food production capacity. These modern farming methods have increased the self-sufficiency of the country (Nandi et al., 2017).

Once this modern farming method was deployed the then farmers felt enthusiastic by seeing the results of their labour and usage of new technology in farming. The entire story has brought the revolution in the farming sector in India and it was called the green revolution (Dennis et al., 2005).

All this story was not that good as it seemed like, the farmers were very happy seeing the good output of food production and as a result, they kept on using more fertilizers and pesticides on the farms (Ali et al., 2010). The fertilizers and pesticides had no doubt were increasing the production but slowly it has started degrading the quality of soil and even the nearby land. It did not stop there but the components of these fertilizers were gone inside the soil and reached the water table and started contaminated the underground water too. Hence these chemicals have affected our air, soil, water, food, etc. This is such a situation when it becomes very important for everyone to take some action on the

consumption habit and change the situation so that the coming generation can survive on this planet earth. This study has focused on taking necessary action and suggested some changes which are required and it is the need of the hour.

### **1.2 Rationale of Green Revolution in India**

When India became independent the country faced major challenges in terms of food availability, food availability for the citizens, and the low availability of finance. This situation was also got aggravated after two consecutive drought face by India from 1964 to 1966. The situation of the farmers was worst; it was very difficult for a marginal farmer to get credit from the banks. They had to ultimately took a loan from the landlords which were on the high-interest rate, it might have helped them for a short term in getting the input of the farming like seeds, fertilizers, etc. but the production was not giving them such return that they could return the money taken from landlords. Hence for returning this money they had to take another loan and ultimately found themselves in a debt trap.

The low production in farming was also a major reason to push farmers and the nation to look for an alternate mechanism. The situation of India was becoming very poor in terms of feeding the citizens and so with the help of technological advancement, they adopted a modern way of farming which has increased production.

### **1.3 The Profile of Punjab**

It was the state of Punjab where the green revolution was first introduced, at that moment Punjab and Haryana both were a single state called Punjab, it was a bigger state with good quality of soil and a large population was a farmer. In the 1960s the new technology-based improved and modern farming system has transformed the face of agriculture in Punjab. The adoption of new farming methods had drastically increased the overall production of the state and in 1970s Punjab was alone producing 70% of the food output of India. This has increased the income of the farmers of Punjab and the farmers were started becoming richer and bigger. The farmers of the other states of India started taking inspiration from

the farming story of Punjab and involved themselves in the era of the green revolution. Uttar Pradesh has also shown better productivity apart from Punjab.

As this prosperity was achieved based on enhanced production quantity so other states also started replicating the same with the excessive use of fertilizers and pesticides the production was increased in the short term and everyone was happy about it but as time passes the side effect of using excessive chemicals were visible. The quality of the soil started degrading, without fertilizers the soil was not producing efficiently now. The quality of water was also got contaminated as the chemicals polluted it too. The situation was so worse that some of the districts were marked by the government as unfit in terms of the drinking quality (Bajwa et al., 2017). The quality of the water was bad but unknowingly villagers had to drink the same water and thus they started facing water-borne diseases earlier and in some cases, major cancer cases were found in some of the districts. The government took some step but the situation was so severe that it has impacted the health of the citizens very badly.

Farmers now started migrating to other places as their land was not in the condition to produce grains, some of the marginal farmers had to face severe financial instability and took extreme steps like suicide. The financial trap of huge loans taken by the money lenders or landlords was the major reason behind this prolonged debt trap.

As the farms were not that productive because of the usage of chemicals to the extent of 30 times more than the permissible limit, so farmers again started looking for alternatives. Some of them refused using chemical-based fertilizers and returned to the traditional way of manure-based fertilizers. Few farmers also stopped using harmful pesticides and adopted the natural way of production. Scientists have also proved that crop rotation can increase productivity and gives strength to the soil.

Traditional farming in India has never used any chemicals and was dependent on the natural strength of the soil. People realized that this regular farming method was the best. With time agriculture scientists and technology have also evolved and found that natural farming is the best way for the human being and the environment. This practice started saving the quality of soil and water (Kriwy and Mecking, 2012).

## Map of Punjab

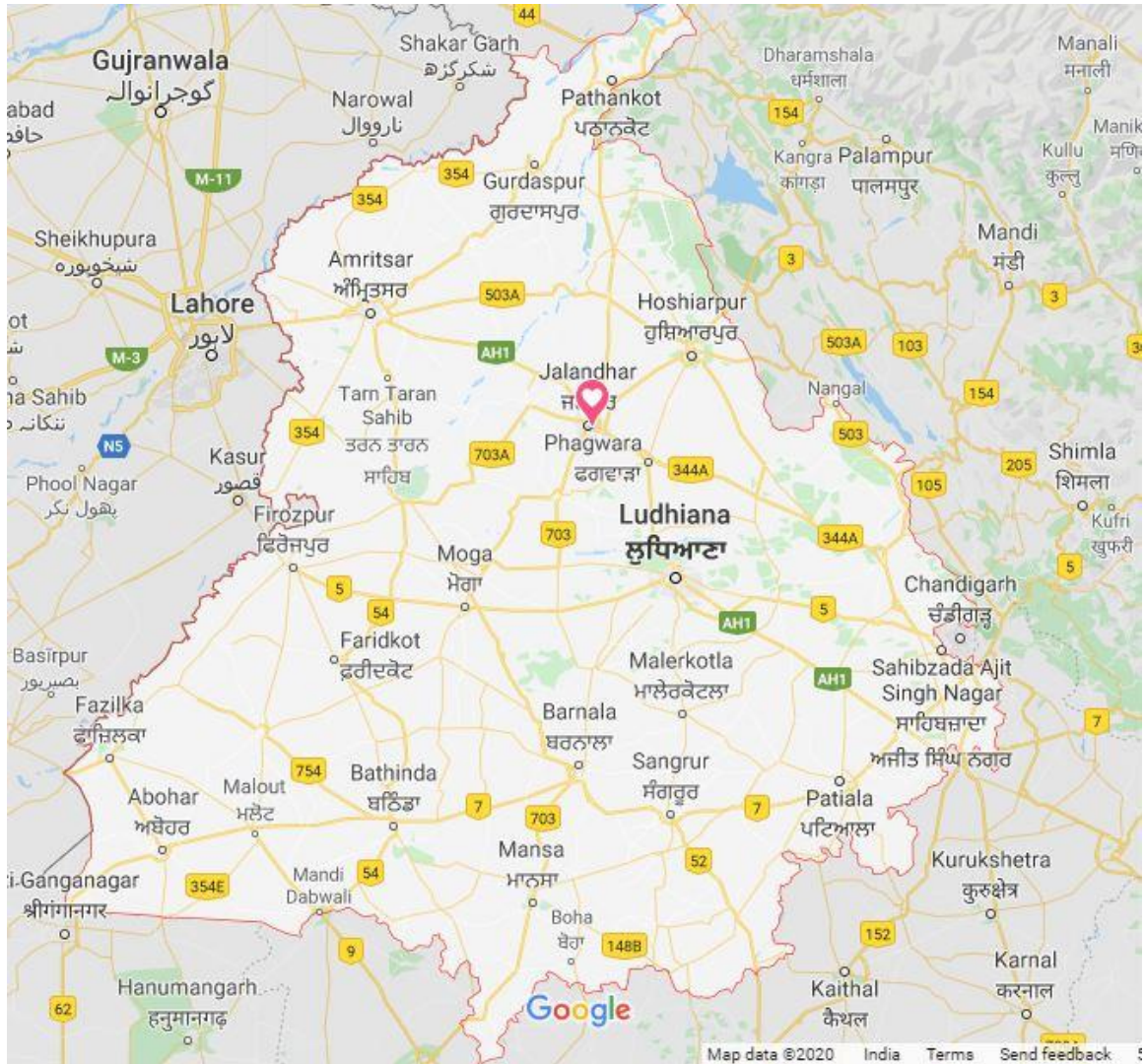


Figure 1: Map of Punjab, India

Agriculture practices based upon natural farming was adopted in the developed countries and it showcased the improved production quality, protected the quality of soil, saved water from contaminated, and protected the overall environment around them. Technology and innovation played an important role and was in search of an alternate way for farming.



This new way of farming has helped the farmers of Punjab and made it a goldmine in terms of crop production but we need to understand this state in detail to get an idea that why this state was chosen by the researcher for conducting this study of consumer behaviour on organic foods. Punjab is surrounded by Jammu and Kashmir, Himachal Pradesh, Rajasthan, Haryana, and Pakistan. Punjab is historically classified in terms of its geographies and it was divided as Majha, Malwa, Doaba, and Poahd areas. These four regions become by the amalgamation of five divisions which include Ferozpur, Faridkot, Jalandhar, Rupnagar, and Patiala. These four geographic regions of Punjab consist of many districts like Majha has four districts, Malwa being the biggest consists of eleven districts, Doaba consist of four districts and Poahd consists of three districts. All these four geographies and 22 districts make a beautiful state called Punjab. This state consists of majorly Indian Sikhs but other religious people are also there. One side of this state has religious and spiritual beauty and on the other side Punjab consists of hard-working farmers. The total geographic area of Punjab is 50,362 square kilometers with a population size of 2.8 crore people. It has a GDP size of Rs. 5.18 lakh crores (US\$ 73B) with a per capita income of Rs. 153,061 (US\$ 2100). Although it looks gloomy when data says that Punjab ranks 14<sup>th</sup> in terms of GDP size among Indian states but at the same time it ranks 3<sup>rd</sup> in terms of Human Development Index. Human Development Index is an indicator of expectancy of Human life, per capita income, and level of education. This 3<sup>rd</sup> ranking tells that people of Punjab live a good quality of life. This state is historically doing good in farming because of the availability of water and fertile soil but with the race of increasing yield of the farmland, it has reduced fertility to a certain extent. Farmers and citizens have seen that chemicals used in the field have started harming the health of Punjab. There exist some pockets in Punjab where local people have faced many diseases originated from excessive use of chemicals in farming. The water table has also got contaminated where heavy metals are found at a dangerous level in these pockets. The only solution for this was to avoid these chemicals further while farming and adopt alternate farming practices. This need has given the emergence of organic food. The evolution of organic food has come into picture which was as per the current requirement of the farmers and consumers both. Organic food was evolved from

the concept of sustainable practices of farming. Adopting sustainable practices is the need of this hour. Countries have understood the importance of sustainability and started implementing it in their practices.

#### **1.4 Sustainability**

We live in a world where every species has an equal right of pursuing their life in their way, but it has been noticed that some of us command it more and impacting other's life by their way of looking at this world. Human beings are impacting other species' life and we are not going to leave this world worth spending a healthy life for our future generation too. The way we are treating our environment is going to be dangerous for our future generation. Drive towards development compels people to cut down trees, whereas construction work nearby rivers, vehicles and factories pollution, etc. is regularly degrading our environment.

Sustainability is meeting “the needs of the present without compromising the ability of future generations to meet their own needs.” (Kates, 2001).

#### **1.5 Sustainable Development Goals**

Understanding sustainability, the United Nations has understood its importance and role in human life and they have come up with the concept of "Sustainable Development Goals" (SDG). UN has crafted 17 important areas for a better life. All the mature economies of the world have taken targets for eradicating the existing deficiencies lies in the World. But it seems more responsibility lies with the fast emerging economies like China and India. These two countries being the most populous in the world, have to behave more responsibly than only humankind can fight with these challenges. History says that only making laws can not help humankind, rather it depends totally on how countries can implement these rules on the ground. These deficiencies are majorly from the daily aspects of human life like poverty, hunger, education, health, sanitation, water, gender equality, climate change,

etc. The detailed blueprint is mentioned in the below-mentioned figure taken from the UN website.

## Sustainable Development Goals



Figure 2: Sustainable Development Goals (Source: UN Website)

This world is a place of 7.82 Billion people but not everyone has equal opportunity and availability for food, clothes, shelter. United Nations with the help of many countries across the globe has finalised 17 important areas of improvement. These identifications of 17 items are based on decades of long research. UN says over 702 million people still live below the poverty line, more than 871 million people have insufficient food to eat, addressing health issues is still a challenge where people need a mass-based vaccination program for the kids. Over 616 million children cannot read and speak English, around one-third of women have faced oral or physical violence sometimes, over 41% of the world population are having insufficient water, around three billion people still lack access to clean cooking gas and efficient energy source. More than 20% of the youth are not properly educated or trained for earning their livelihood. Basic infrastructure like electricity, roads,

sanitation, etc. are still a challenge, more than 41% of the workforce earn less than 24% of the world's income. Around 90% of the people live in cities are under huge pollution. The situation of population and pollution is so worsening that we need around 2 more planets in the next 30 years to maintain the same kind of lifestyle. Global warming is a major challenge which is facing since decades and it is continuously increasing, more than 20% of our population are dependent on seafood and coastal lifestyle but it is getting polluted day by day.

Forests are the sweet home of many species and plants which need to be protected. Around one-tenth of the humans are facing war, persecution, or conflict like situation globally. No one can achieve these goals with the involvement of everyone. Hence participation is key for achieving success for all. This study has taken inspiration from the sustainable development goals and tried to address one of them so that it can contribute to the need of the hour. Green food products or organic foods is going to contribute to society in terms of production without tampering with the quality of food and the environment (SDG Report, 2019).

## **1.6 Green Products**

Green products are generally produced from recycled components and are generally manufactured in more energy conservative way (Singh and Verma, 2017). These are the products that do not harm the environment and human health at the time of production, consumption as well as post-consumption. These products are easily decomposable and recyclable so that they can be reused for further manufacturing, having no adverse impact on the environment and human health (Arvola et al., 2008). Some of the attributes of green products which are helpful for identification of the products that whether the product offered is a green product or not are; they are energy-efficient products, they often have low maintenance requirements and are durable, it does not have any Ozone-depleting chemical and toxic compounds, they do not produce any toxic products which harms the

environment, they are built of recycled materials and are recyclable, they are biodegradable and easily reused partially or as a whole (Tsakiridou et al., 2007).

Defining sustainable products is not simple. In a practical scenario, there are hardly any products that can be called pure sustainable goods, as whatever we consume in our lives create an impact on the human being and environment. Normally we categorize goods according to their impact on human beings and the environment. If a good does not harm mankind and the environment at any of these stages of lifestyle, it is known as a green product or environmentally sustainable product (Ozguven, 2012).

Green is the colour which started signifies the eco-friendliness. Consumers are willing to know the origin of the products and they have started showing concern towards environmental crises at the global level and this creates an opportunity for the companies to attract such consumers. Lots of organizations addressed GPIs (Green Product Innovations) in the process of their product development over recent times. There is various research done on green product consumption and it has reflected that our buying pattern is highly influenced by the perception we have about any product or service. For example, Ottman and Books (1998) depicted a contrast study that some customers do not show a buying pattern because they possess high quality at a higher price.

Tobler et al. (2011) depicted that the customers who were serious about sustainable living, keep a friendly attitude towards the environment, and are health conscious generally show a positive desire towards green food products. An environment concerned consumer and if shows good health consciousness too generally shows a positive attitude towards green food.

## **1.7 Organic Food**

Organic foods are that kind of food item which is grown with a natural process of farming without altering the seeds, environment, or process (Dholakia and Shukul, 2012). These are the foods that do not use any kind of harmful chemicals like synthetic fertilizers, pesticides, additional colours, preservatives, etc. (Xie et. al., 2015).

“Organic food is food produced by methods that comply with the standards of organic farming. Standards vary worldwide, but organic farming features practices that cycle resources, promote ecological balance, and conserve biodiversity (Sahota, 2009). Organizations regulating organic products may restrict the use of certain pesticides and fertilizers in the farming methods used to produce such products. Organic foods typically are not processed using irradiation, industrial solvents, or synthetic food additives” (AMA).

“Organic foods may have higher nutritional value than conventional food, according to some research. The reason: In the absence of pesticides and fertilizers, plants boost their production of the phytochemicals (vitamins and antioxidants) that strengthen their resistance to bugs and weeds” (Pandey et al. 2019).

**Logo: India Organic**



Figure 3: India Organic Logo

“India Organic is a certification mark for organically farmed food products manufactured in India. The certification mark certifies that an organic food product conforms to the National Standards for Organic Products established in 2000. Those standards ensure that the product or the raw materials used in the product were grown through organic farming, without the use of chemical fertilizers, pesticides, or induced hormones (Tsakiridou et al., 2008). The certification is issued by testing centers accredited by the Agricultural and

Processed Food Products Export Development Authority (APEDA) under the National Program for Organic Production of the Government of India. Even though the standards are in effect since 2000, the certification scheme and hence the certification mark came into existence in 2002.” (Gouri, 2004).

### **1.8 The History and Evolution of Organic Food**

Organic food is grabbing the attention of researchers, food companies, and the agriculture department. There was a rapid growth in both consumer and producer demand (Gifford et al., 2005). Organic food is developing and building interest towards marketers and consumers making people aware through media regarding effects of health and effect of environment regarding pesticides, safety food, etc. The Continuous development in the behaviour of people towards organic food which everyone consumes has changed and the attitude regarding organic food has also changed in many papers (ORBOI, 2013). Naturally, by seeing the benefits of producing, raised by million dollars with higher growth rate the global industry put a question to governments regarding interest, for growers, the distributors, for the industry planners, etc. (Hughner et al., 2007). In current years the flavor of these foods has got boost up among consumers. This sector is showing a growing demand and believed to be performing well in the future. According to the studies researchers could find that there is a good response of consumers and the interest of the organic food producer and the consumers who are purchasing organic food regularly (Tarkiainen and Sundqvist, 2005).

Different studies have provided evidence that consumer refers to food which is well recognized the full worth of and there must be many substitutes which the consumer prefer the most (Yiridoe et al., 2005). The new food category which does not include harmful foods supplement colours, chemical preserving agent, etc. People these days are showing more concern regarding their health and environment which has increased the attraction towards organic food. People buying organic food are the ones who take care of the health issues and also have concerns regarding animal welfare. The trust which comes after

reading the content or ingredients on the packaging of organic food compels the customer to look for organic foods. Changing lifestyle is also one of the main factors why people are personally getting into organic products. Peers at the workplace or neighbors sometimes influence us to follow the new culture of adopting a healthy lifestyle which also includes consuming healthy foods (Magnusson et al., 2003).

### **1.9 Adoption of Organic Food in the World**

In the last couple of decades, it has been observed that the growth of organic food has shown a drastic expansion. Health issues and environmental concerns have promoted organic food products and now they are in good demand with sales keeps on increasing in double-digit globally (Willer et al., 2018). The response was tremendous due to this response the North American expansion of the market was up by 10% and the international market sale was increasing more and more day by day (Lernoud and Willer, 2019). In Europe, its sales crossed the valuation in billion Euros in the year 2012, whereas, in North America, it has shown significant growth. The manufacturing of organic food is implementing for million the manufacturing is done over many countries and in every part of the world (Gil and Battershill, 1998). The circumstance of local marketing, Europe, and Asia was succeeded as North America's largest market was evaluated in billion Euros and it was also third in ranking and was appreciated by billion Euros. The largest organic food market in the countries is China, France, the United States, and Germany and all the country's valuation is in billion Euros. The world's dominant market compartment of organic food products is into vegetables, fruits, meat, beverages, milk, bread, etc. (Hoppe et al., 2013). The manufacturing of organic grains globally had an extended expansion track, embracing a few areas with millions of hectares. The manufacturing of organic grains is the largest catching apartment in European countries there is the various commanding category of organic grains which are like corn, rice, wheat, oats, barley, millet, rye, sorghum, buckwheat, and triticale. China and the United States are the world's largest manufacturer of organic grains. Lithuania and Romania have the largest market share in



wheat in the year 2014. In Europe, there are millions of hectares of organic crops but grains have the highest market share so that is more in concern as it helps to generate millions of shares (Soler et al., 2002). Organic food consumptions and sales both continuously grew at a good pace, the overall sales dropped at US\$ 50B and it was an obstacle seen in the growth of this niche market in the year 2007-08. Customer's interest leftover floating in another region, despite the fact part of countries has been concerned with the monetary downturn. The global markets have a strike on organic food products due to a monetary emergency (Marques et al., 2013). Due to progress hooked on unemployment, there is a decrease in purchaser spending in various countries. Acknowledgment influences have impacted the business, there is a decrease in the speculation and the current business along with the innovative competitors are incapable of employment improvement investments. The degradation in innovative manufactured goods discharge also innovative employments commence raises has to be recognized after all. The introduction of the study found a conclusive expansion maintain during persecute in impoverished in financially viable humidity (Von Borell and Sorensen, 2004). Greater expansions charges in the advertisement are anticipated for forwarding to maintain the financial system globally for getting back the monetary emergency. The majority of expansions are familiar with Europe as gradually the anticipated are away from inflation in the countries.

Organic manufacturing organizations are established on definite and particular requirements of manufacture, agro following the leading, painless to continue in the conclusion of the collective, environmental and economic (Zanoli et al., 2012). Organic is an identified describe that evidence commodity manufactured down organic manufacture fundamental and approved by a lawfully establish remains the power for this observed. Essential determination is to develop organic agriculture for health and to develop the plants, humans, soil, and animals for capacity for the collective association. Three functions serve by the certification of organic products. Firstly, the products been assured that they are diverse from other nonorganic goods that are produced, packaged, and processed and they are environment friendly and have followed the rules that help to protect the environment. Secondly, the producers assure that conscientiously premium

price market share does not defraud the term organic which could be depending on the qualified food. Thirdly, it aware the producer to consumer the channel of marketing and how the market is becoming more efficient, basically it helps the consumer to be aware of what they are purchasing. The convincing process of certification must satisfy these functions. Dalby, Michaud, and Redman brief about their standard-setting, inspection is done to verifying the standard of the facility which they are providing as well as the operating details it is done by taking the approval from the processor and the producer. The certifier labeling on manufactured goods after the approval is confirmed by showing the license. Labeling creates a positive impact on the consumer mind and it displays the production procedures to the consumers and the intermediaries. If label assurances exist, then the only premium price for organic is paid. As days are changing by we can see how rapidly the market is growing and how the information is transfer so fast due to expansion. Organic goods manufacturers and exporters are considered by Latin America; anyhow domestic business is created to gradually expand. Africa is for export business approximately all organic products are manufacture there (Muposhi and Dhurup, 2016). The organic product manufacture maintains for the push up globally; the little category is familiar to participation completed manufacture. Organic food and drink global sales are development at accelerated charges, encompassing the sales by billion dollars. Counselor of organic food sales forecast to surround billion dollars. Despite manufacture are currently appearing beyond globally, application remainder complete in Europe and North America (Kuhar and Juvancic, 2010). The two countries are distinguishing below supply on behalf of manufacture within these commerce section is not competition application. The exports of a huge number are landing in many different countries. The industrial region manufactures establishing globally are increasingly rapidly charged. For example, the farmland of organic has expanded drastically by triple numbers in Asia, Latin America, and Africa over huge numbers, if we compare with the double-digit improvement it has recognized other parts of the countries. The application of commodity in organic largely appears in the prosperous regions. A customer of little to the greatest insubstantial income is the greatest wasters for consumers of organic products. Global revenue is comprised of

many regions. The inequality bounded by the manufacture and expenditure of organic products puts the business in a possibly delicate position. This business can give up determination for advertises shut down in export, generate oversupply of a drop in organic products appraise. The products of the organic manufacturer in different countries like Africa, Latin America, and Asia considered in developing into lower conditional expand on export constitutional in marketing for the commodity manufactured. Customers could assistance or by approaching the provincially manufacture products of organic. Leadership can also safeguard globally the products of organic business regions for the growth of stability from stability.

### **1.10 European Organic Food Market**

Europe is a huge market, with a good number of sales values, moreover, the organic market has been growing with good numbers, market sales are growing with an increasing rate than before (Baker et al., 2004). The leading market is Germany whose share is 11.4 percent share of total volume, France in the second number whose share is 7.3 percent. Sales are increasing, also the production is having met the demand, production of all organic food farmland has only increased only in the capitals of countries with 15 percent. In the case of organic meat production is having a small share of all livestock, to be very particular in pork is which has a small share of 0.6 percent. However, in Europe, organic crop production is most of the cereals and as a part of permanent crop production is mainly of olives and grapes (Gil et al., 2001). Consumers in Europe have great levels of knowledge of natural organic food, with a future increase with a good number of near about 11 percent; as a result, the numbers are increasing for buyers of organic packed food also drinks products with an equal share that are having high-quality food. The organic food market in Europe comes into view from the development stage and countries of the eastern part are its maturity stage. Organic food demand in the European market has doubled the numbers of sales in the last century (Willer and Kilcher, 2011). The organic food business is becoming important because people are showing greater interest in both a good as well as

diet. In the first century, this organic food sector has seen growth and developments of agricultural policy have been increasing in making it a good sector for the betterment of the people (Squire, 2007).

They give more attention to the welfare of animal health. Grazing land helps to improve animal health and limit the use of drugs in this process of production. Naturally grown animals are always better in terms of health. For animals, it is very important to eat in a natural environment like grazing in an open field. Organic farming style is becoming more environment friendly than before it used to be (Willer et al., 2009). European organic farming has been increasing for decades but it has not yet reached good numbers for the share and a proportion of farm animals have been added to organic production systems of livestock. The organic farming system is better than the conventional farming system. There are some strict organic demands rules by governing body of organic food which is the main limitation in this sector. From the experience, it is very clear that the livestock has no guarantee of animal health and their welfare (Kuhar and Juvancic, 2010). Quality assurance programs should be developed for the betterment of animals to maintain some standards. The health risk factor is a major need for livestock for the betterment of the animals. Ventedirecte in France is a quality food sector for organic food products in which farmers directly sell their productions to the final consumers without any middleman by which demand has increased and even customers are satisfied. Organic certification logos are a tool for information in the productions labeling, certified organic product is most preferred by the consumers (Rosati and Aumaitre, 2004). Many schemes for labeling the packaged goods in the European market have proved a better influence on consumers. Consumer perceptions for organic labeling schemes are active and for some cases totally out of active knowledge. Labeling of organic products should be done with reputed organic certification logos company that consumer trust (Janssen and Hamm, 2012).

### **1.11 Organic Food Market in America**

Demand for organic foods in the American market is continuously growing at an increasing rate, U.S farmers of organic products has huge market potentials. Food products of organic food are available in more than 20,000 retail stores. Organic sales in the U.S. have surpassed more than 5 percent of their total sales in the food sector. Consumers of organic food products is having different nature but some research has been done for understanding the customer's inclination regarding purchasing the foods fall in the organic category (Onyango et al., 2007). They are sold in three different ways of a grocery store, direct channel sales, and food stores of natural products. The price of the premium products is maintaining a high price in the U.S. market at the same time demand for the products is also increasing. Products that are sold the most are fresh vegetables and fruits this are also the top-selling units in the organic segment (Paul and Rana, 2012). These are the countries where customers won't mind paying more for the goods which are good in quality (Krystallis and Chryssohoidis, 2005). To understand customers better many studies are conducted on demographics like age, gender, etc. Some of the major outcomes which are observed that organic food consumers prefer this because of their health consciousness and also love for the environment and welfare for the animal. (Escobar-Lopez, 2017).

Consumption of these foods is growing at the increasing rate along with the production in the last few years. Spain consumers have very little demand for organic food which is 1 percent of the expenditure they make for food (Gil and Soler, 2006). Some main objective seems that faces problems for organic food are the awareness about these products and its unavailability in the market which makes it difficult for the consumers. Most studies have told that these food categories are preferred because of the kind of value they add in the life of the consumers (Lea and Worsley, 2005). Consumption habits are correlated with the kind of benefits offered and its premium pricing. The motivating factors of buying organic food by consumers were associated with organic milk, fruits, and vegetables with organic products. Consumer's also perceived the kind of quality of the product they are expecting and the amount they are paying for the same (Huang et al., 1995).

## 1.12 Organic food Market in Asia

The food and Beverages market is growing rapidly across Asian countries. Although the development of the natural segment is fundamentally determined far markets, nearby markets are supposedly taking off in huge numbers in the urban areas. In nation-building, exercise production of grains acts as motors of development. With a lively territorial economy and a significant number of the greatest urban communities on the planet situated in Asia, more prominent area development can be normal for the prompt future (WAI, 2010).

Shopper attention to natural nourishments is rising mostly as a result of the high frequency of wellbeing alarms lately. The panics are some including nourishments, are raising purchaser consciousness of medical problems and invigorating customer interest for natural items (Al-Swidi et al., 2014).

Majorly there are two types of organic produce in Asia:

1. Local items, for example, rice, crisp produce, sugar, herbs, and therapeutic plants;
2. Imported items, for example, counter-regular new produce, infant nourishment, breakfast oats, refreshments, and dairy items.

The organic farmland under cultivation in Asia is around 2.9m hectares. Farmland data dedicated to organic farming is not available for every country in Asia, however, a few nations, wherein information were not recently recorded, presently have factual data accessible (Cadilhon and Officer, 2009). Most of exercises and advancement in the locale is happening without advertising guideline and affirmation.

Some of the Asian countries have started making organic farming norms including India, Thailand, and Taiwan, whereas Japan, Korea, and the Philippines have already done that. Only two countries Israel and now India have achieved the status with the EU guideline (Willer and Lernoud, 2017). Almost 66% of the farming land in Asia is natural or organic (practically 2.95 m hectares). Coffee production is seemed to be the important produce, foods grown from the grounds are very few like grapes. Enormous regions of broad

brushing land are in China. Asia is turning into a significant district for natural nourishments. Nations like China and India are turning out to be worldwide wellsprings of natural fixings, while nations like Taiwan and Singapore are turning out to be enormous purchasers (Sondhi and Vani, 2007). The Japanese market contains the greater part of the US\$ 750 m of incomes (a modification of earlier years' gauge as information that is progressively exact became profit capable). Interest for natural items is packed in industrial nations like Singapore, Taiwan, Japan, South Korea, and Hong Kong (Chan, 1998). Interestingly, creation is chiefly in farming nations like Thailand, Indonesia, India, and China. For the most part, essential harvests are developed in these nations, primarily for a fare to North America and Europe (Willer and Lernoud, 2017). Conventional food items are cheaper than their organic versions in Asian markets. The four areas will take a gander at patterns that may affect the improvement of natural creation in the locale: interest for more noteworthy sanitation, worldwide temperature alteration moderation, oil value shakiness, and the current monetary emergency (Cadilhon and Officer, 2009). The Asian market is described by this import of a lot of prepared natural items. These are moderately increasingly industrialized nations from the area. In December 2006, Natural Screen announced a yearly division development between 30 to 40 percent in an article titled 'Asia's natural nourishment industry transitions'. Area development has without a doubt been great, yet not similar everywhere throughout the district. Most ensured creation, except in Japan as detailed beforehand, keeps on being for sending out. As indicated by Natural Screen, up to 90 percent of guaranteed creation from nations like Indonesia, Vietnam, and the Philippines is sent out - to a great extent to Europe and North America (Aryal et al., 2009). Incidentally, imported handled items are fueling household advertise development, even in China, the main wellspring of natural fixings with around 84 percent of the area's natural farmland. Absolute deals from the district are required to stretch around US\$ 800m in 2006 as per natural screen, twofold the estimation of the year 2001. The Japanese organic market, representing around 60 % of the area, remains most important in the district. Two South Korean bodies are currently IFOAM licensed (ACBs), looking up the aggregate from 3 to 5 ACBs in the district, mirroring the developing support of the

locale in between country exchange (Willer and Lernoud, 2017).

### **1.13 Need of the Study**

This research work was started from a social and cultural issue noticed by the researcher once while traveling to Bathinda, Punjab. It was being noticed that a train starts every night from a railway station of Bathinda, Punjab and it travels all night for its destination called Bikaner, Rajasthan. This train was full of passengers majorly week and elderly people of Punjab travels on this train to Bikaner. There was a common thing noticed in all of these passengers that no one was looking happy, after talking to some of the researchers has found that they were having one more common reason for traveling to Bikaner. All of them were either suffering from cancer or feared that they have cancer. Traveling to Bikaner was having a reason and it was a Government's regional cancer center. Somebody said that this train was called by the name "The Cancer Train" (Zwerdling, 2009).

The researcher was surprised to see the horrifying scene of this train and was curious to talk to some of the passengers. One old person said the cancer was earlier assumed to be a disease of an urban area but it has spreader its impact in the villages too. This man said that he fears that this disease started in villages by their own mistakes. Earlier they used to use natural farming methods but in early 1970s farmers with the help of the Government has started adopting American farming methods to increase the crop yield from the same field. Farmers started using chemical-based fertilizers to increase the output of the farmland. For saving the crop from the pests' farmers used chemical-based pesticides, Farmers also used high-yield seeds for getting better results. Ignoring natural methods of farming like usage of natural fertilizers and pesticides has started pushing farmers in the wrong direction. Another major reason was shared by the other passenger where he discussed that all these chemicals were used more than their permissible limits. The farmer said they were not that literate to understand the ill effect of using this chemical more and they were happy with the crop output in the short term. Third-person mentioned that they were being misguided by the shopkeepers of these fertilizers and pesticides too. Shopkeepers have earned more



money by selling these chemicals in more quantity and suggested farmers to use more to get much better results (Schlebecker, 1975).

The use of these dangerous chemicals has not only affected farmlands but the entire water table got contaminated. The water used for irrigation has absorbed the heavy metals dangerous chemicals from the soil and reached deep inside the earth and got mixed with the drinking water reservoirs. This water has polluted ponds and rivers too.

Conventional food deficiencies have opened a path for searching for alternatives for the marketers, but it was not an easy task as even after some problems the customer was familiar with the conventional food items and there was huge acceptability in the families regarding the food we used to eat since ages. Altering the food requirement was challenging but as slowly people started realising the harmful effect of fertilisers, pesticides, added colours, preservatives, other forms of chemical residuals, etc. it has given a chance to think of the food items consumption. In the case of health issues, nobody wants to take risks. Some customers were more concerned about the environment and so chosen an alternate food option. Animal welfare becomes the reason for some of us to think that are we eating the right thing.

In total consumers started realising the need for an alternate food option which was organic. Organic farming slowly being pushed by the local governments, policies were made and implemented, awareness was created by the marketers, government, and regulatory bodies, and these efforts started showing good signals of acceptability of organic food among customers.

All these efforts were not sufficient as the demand was still very small and so the producers and marketers started looking for the methods so that demand can be pushed for organic food products. For pushing demand understanding the need or creating the need for organic food was required and so it becomes very important for these marketers to understand their set of customers first. This study becomes relevant as it focuses on this part of the organic food market. The researcher is trying to find out the key areas responsible for understanding

the intention of the buyers towards packed and processed organic foods (Rezai, et al., 2012). This study wants to look at those factors which can help a customer to decide between buying organic foods. This study also tried measuring the role of these factors and the kind of impact these factors are making while checking the actual buying behaviour. Finally, this study will test the need of extending the Theory of Planned Behaviour in the context of organic foods buying in the state of Punjab, India.

#### **1.14 Scope of the Study**

The need of organic food alternatives is slowly becoming so obvious that the customer has to switch from the conventional food to the healthier options available, which will further motivate the demand of the organic food and helps in lowering down the cost of production as the concept of economies of scale will come into the picture. The cost of this food category is still high in India because the yield of this crop is lesser than the yield of the conventional crops from a similar size of cultivation land. It becomes a niche category of food as it is assumed to be consumed only by the creamy layer of customers in India because of its premium pricing.

The marketers have realised this farming and consumption pattern of organic food in India and started exploring this niche food category to harness more profit. This concept was earlier appraised by the western world and hence customers of these countries have enjoyed a better category of food and that is why the world has seen the handsome growth of organic food in this decade across globe. India is also showing the same pattern of consumption as the per capita income of Indian people are increasing year on year, awareness among customers regarding organic options are increasing, peer pressure also works in some of the cases, growing health consciousness of Indian customers has also fueled this food category, increase in the environmental concern is positively impacting it and further, the changing lifestyle is helping in the overall growth of organic food segment in India. All these discussed aspects from the previous studies have shown a scope on these lines.

Sometimes it becomes difficult for a producer, manufacturer, or marketer to understand the customer preferences and so the role of scientific study becomes obvious. India itself is producing organic food with farm area under cultivation over 5.70 million hectares and due to this India stands at 9<sup>th</sup> position. India ranks first in terms of the number of organic producers and this shows the interest in this niche food category. Conventional farming methods are getting transformed by understanding the responsibility towards the environment and society. India's export of certified organic food is over 1.36 million MTs (<https://jaivikbharat.fssai.gov.in/>).

This study has searched the majority of the literature available regarding the determinants and its relationship so that a buying pattern can be understood. The scope of this study also includes understanding the Indian customer especially from the state of Punjab so that a specific buying pattern can be projected using a scientific method of research. The study proposes that the findings might help organic producers in understanding their real customers. The marketers will also get insights into the buying pattern of organic customers. The study will try explaining the demographics characteristics of the organic food buyers and the rationale of buying trend shifts. The research gap has been identified in the RoL chapter for reaching to the objectives mentioned below.

### **1.15 Research Objectives of the Study**

This study aims to achieve the below-mentioned objectives:

- 1) To study the level of awareness towards organic food in Punjab, India.
- 2) To study the key factors that affect consumers' intention to buy organic food products.
- 3) To establish the relationship between decisional factors driving the actual buying behaviour of organic foods in Punjab, India.
- 4) To examine the role of demographic characteristics of the respondents on the actual buying behaviour of organic food products.

### **1.16 Hypotheses for Research**

The below mentioned null hypotheses have been framed for this study so that all the targeted objectives can be achieved:

*H<sub>01</sub>: There is no level of awareness among the customers towards organic foods.*

*H<sub>02</sub>: There does not exist any significant difference among the age groups brackets of organic food customers towards the level of awareness.*

*H<sub>03</sub>: There does not exist any significant difference among the genders of organic food customers towards the level of awareness.*

*H<sub>04</sub>: There does not exist any significant difference among the marital status of organic food customers towards the level of awareness.*

*H<sub>05</sub>: There does not exist any significant difference among occupations of organic food customers towards the level of awareness.*

*H<sub>06</sub>: There does not exist any significant difference among the household income brackets of organic food customers towards the level of awareness.*

*H<sub>07</sub>: There does not exist any significant difference among the educational level of organic food customers towards the level of awareness.*

*H<sub>08</sub>: There does not exist any significant difference among the family size groups of organic customers towards the level of awareness.*

*H<sub>09</sub>: There does not exist any significant difference among the organic food customer's district towards the level of awareness.*

*H<sub>010</sub>: There does not exist any significant difference among the organic food customer's living environment towards the level of awareness.*

*H<sub>011</sub>: Organic food customer's awareness will not affect the trust-building towards organic food.*

*H<sub>012</sub>: Information revealed through organic labelling will not influence trust in organic food.*

*H<sub>013</sub>: Perceived information towards organic food will not affect the trust-building for organic food.*

*H<sub>014</sub>: The current lifestyle of organic food customers will not affect the trust-building for organic food.*

*H<sub>015</sub>: Trust will not affect the purchase intention of organic food.*

*H<sub>016</sub>: Attitude towards organic food will not affect the intention to buy them.*

*H<sub>017</sub>: Subjective norms towards organic food will not affect its purchase intention.*

*H<sub>018</sub>: Perceived behavioural control towards organic food will not affect its purchase intention.*

*H<sub>019</sub>: Purchase intention of organic food will not affect the actual buying behaviour of organic food customers.*

*H<sub>020</sub>: There does not exist any significant difference among the age groups brackets of organic food customers towards actual buying behaviour.*

*H<sub>021</sub>: There does not exist any significant difference among the genders of organic food customers towards actual buying behaviour.*

*H<sub>022</sub>: There does not exist any significant difference among the marital status groups of organic food customers towards actual buying behaviour.*

*H<sub>023</sub>: There does not exist any significant difference among the occupation groups of organic food customers towards actual buying behaviour.*

*H<sub>024</sub>: There does not exist any significant difference among the household income brackets of organic food customers towards actual buying behaviour.*

*H<sub>025</sub>: There does not exist any significant difference among the educational level groups brackets of organic food customers towards actual buying behaviour.*

*H<sub>026</sub>: There does not exist any significant difference among the family size groups of organic food customers towards actual buying behaviour.*

*H<sub>027</sub>: There does not exist any significant difference among the organic food customer's district towards actual buying behaviour.*

*H<sub>028</sub>: There does not exist any significant difference among the living environment groups of organic food customers towards actual buying behaviour.*

# Chapter 2

## Review of Literature

## **2.0 Introduction: Review of Literature**

The food & beverage industry is growing very fast across the globe and concern towards the environment and health has started motivating people to go for these products. The production and consumption of organic variants are getting witnessed across the globe. Seeing this trend, the bright future of this segment from the modern food and beverage industry can be estimated by marketers. Assuming the fast growth of this sector, Lampkin (1999) has estimated that the organic farming sector could expand from the level of over 2.2 percent of organic farmland in 1997-98 to over 10.5 percent by 2005-06 and will reach above 30.8 percent by 2010-2011. The fast growth of organic food is being witnessed across the globe in the overall food and beverage market. In South Asian and European countries, the same growth has been replicated by this market (Al-Swaid et al., 2014). The organic food industry has witnessed a handsome growth of around 10 percent from 2000 to 2012 both in production and sales volume (Willer and Kilcher, 2011). In the process of finding relevant constructs in the area of actual buying behaviour for organic food, some theories were explored by the researcher. Theory of Reasoned Action (TRA) has given Attitude and Subjective Norms for forming Intention; whereas Theory of Planned Behaviour (TPB) has added Perceived Behavioural Control as one more construct for explaining Intention. Going forward Intention formed Behaviour. Moreover after referring these two classical theories of behaviour more published literature was searched for finding relevant constructs. An in-depth review of the literature was conducted and below mentioned ten constructs have given a direction to the study.

### **2.1 Effect of Awareness on the Trust**

*“Awareness is the ability to directly know and perceive, to feel, or to be cognizant of events. More broadly, it is the state of being conscious of something”*

People will buy the food products only when they are fully aware of the food variant, the knowledge or awareness about organic food was very low in the 90s among Indian customers. This segment started picking up in the 21<sup>st</sup> century when marketers and farmers started talking about it. Indian customers have started showing a positive inclination



towards organic food when they started understanding this food variant (Choo et al., 2004). Slowly they started understanding the importance of processed and packaged organic food items. This research has indicated that around 64 percent of expert has discussed health and nutritional aspect of organic food, 21 percent talked about the environment friendliness aspect of organic food, most of them also stressed on the fact that it does not contain artificial colours, fertilizers, pesticides, preservatives, etc. Respondents in this study also stressed the role of advertisements and events for increasing awareness among the potential buyers of organic food (Willer and Lernoud, 2017). The role of marketers becomes very crucial when we talk about creating awareness.

Changing lifestyle is pursuing the users to gain more knowledge about the healthy product and the food items which are good for health. Understanding the role of knowledge and awareness created for organic food items has been reflected in the study of Asif et al. (2018). This study has also compared the purchase intention shown by organic customers. The study focussed on collecting data from the countries of the middle east and Europe. Comparing the positive relationship between environmental awareness and perceived quality of organic food has created more interest among researchers to deep dive into this area. A study on Organic food purchases in the USA has shown a relationship between ethnicity and income. This intense study was conducted on US organic food buyers of 44,000 households and found that education impacts organic food buying. Income, gender, and the status of respondents have also found the key factors influencing this study.

Misra and Singh, (2016) have discussed the importance of increasing organic farming, offer better food choices to customers, and save the environment. All these things will happen only when society will get more aware of organic food. This exploratory study was done in the area of NCR, India. The collected data were analysed using factor and regression analysis and results show that with other decisional factors the lack of awareness lever was found in the area of NCR which is supposed to be literate as this is the capital of India.

Organic food buyers understand that these food categories are those which take care of the environment in a better manner, it does not contaminate the water but at the same time, the

conventional food production process contaminates water and this contaminated water reaches to our water table and further leads to the reason of bringing diseases in human life. These customers also understand that the organic food production process takes care of animal health too as the cattle used in this type of farming are kept in a natural environment that secretes positive energy among them. This end-user also understands that these foods are produced without using any fertilizers, pesticides, and preservatives. The traces of chemicals are not found in these products. The farmers engaged in organic farming and the customer buying it understands that these items increase biodiversity. Since the buyer is comparatively more informed in the era of information so they know that the organic standards may differ from one country to another and in every country certification agencies exist. The government of that country regulates and manages the organic farming industry, issue guidelines to the accreditation agencies, and certifying agencies too. Organic logo and certification work towards creating trust among buyers. As time is passing by, people have started collecting more information about the food variants which is good for them. The food variants carrying fewer chemicals and more nutrients are becoming the demand of the time. Marketers have also created awareness about organic food benefits. In the last 2 decades' government of India has also created a drive towards motivating people towards accepting organic food and follow a healthy lifestyle. Once the consumer will be informed and know it will certainly help in building trust towards healthy food variants.

## **2.2 Effect of Revealed Information on the Trust**

*“the description of the organic food item mentioned on its packaging”.*

Processed and packaged organic food carries information shared by the manufacturer which gives specific knowledge to the buyer about the content and ingredients used in the food item. Organic certifications and logos are also displayed on the packaging by the company which helps the customer to build confidence in the product. Countries have their criteria of organic certifications, most of the countries have their standards and parameters for providing organic certifications to the manufacturer.

Alvensleben (1998) discussed in this study that the trust of a customer can be built if the packaging clearly shows the organic labelling with relevant information revealed on the food packet. Hughner et al. (2007) revealed on the packets more will be the trust and more will be the intention of buying them. The consumer's inclination is majorly influenced by the personal and social factors, where both are found equally important and it is generally formed by attitude reflected by the customer and their subjective norms attached.

To have an understanding of the buying pattern of the organic foods all the important factors need to be taken care of, trust seems to be an important factor in this, and information revealed on the packaging contributes significantly to generating trust among customers. The customer can collect information and gather knowledge by looking at the labelling on the packaging of the product. Even the current studies in the area of organic food consumption have revealed that the role of revealed information like organic labelling information influences customer trust significantly and when it gets combined with other factors it gives us a clear indication of purchase intention and then buying it.

The reason for this paper is to see how data related to the ingredient of the food items or the packaging information which reflects the content of the product influences the shopper's trust and frames of mind towards organic food buying process, which thus together with attitude and controlling factors impacted buying intentions. The survey studies were controlled to customers at modern grocery stores and organic foods specialty stores in urban areas. Altogether, around 700 surveys were conducted which has given output of 81.5 percent. This survey has reflected that the trust will only get build if the information revealed on the packaging is available. Therefore, attention to the best way to utilize information to upgrade shopper's trust in organic food is recommended as a powerful advertising technique for the organic food industry. In this paper, the researcher presented a study on the factors determining the buying decisions. As buyers' enthusiasm for nearby availability of organic food has consistently expanded in the previous fifteen years, so has the quantity of research thinks about on customers' frames of mind and buy conduct concerning the buying process of organic food. An examination was done on three online indexes utilizing the pursuit terms 'attitude', 'health consciousness', 'intention to buy',

and 'buyer's perception', (Feldmann and Hamm, 2015). In this paper, Semi organized meetings are directed to comprehend why customers purchase those foods which are better for health. The discussion with discoveries is steady with existing hypothetical frameworks for clarifying the environmental concern. Discoveries show that organic food customers are spurred by qualities, convictions, and the formation of standards. Notwithstanding, the empirical results showed that information, data gathering regarding organic food, and propensity are likewise significant in understanding why shoppers pick natural or organic food. Joining socioeconomics too, the subsequent theories of consumerism has displayed as another system to direct the buying conduct of organic food users (Schifferstein and Ophuis, 1998).

Marketer plays an important role in getting the customer to understand the benefits of the organic product by revealing all necessary information about this category of food. It has been found in studies that customer also looks at the date of manufacturing and try to gauge that how old is this product, they check the freshness of the food items and this was evident in their buying behaviour reflection in various studies referred (Rodiger et al., 2016). Aware customer understands that the old food items contain less nutrition. With the approaching date of expiry, the food items leave their nutritional benefits and even can possess an ill effect on human health. A study has shown that the ingredients if written properly on the labeling increases the trust of the customer towards those products. The organic logo and certification make this trust stronger. Certification of organic food increases the component of trust among buyers.

### **2.3 Effect of Perceived Information on the Trust**

*"the information gathered by someone based on various facts and perception"*

Consumers perceive organic foods safe and that is the reason the growth of organic food looks promising. As there are no chemical foreign bodies are added in these types of foods so consumers treat it safe for consumption. The safety of the families' health is becoming one very important aspect of our lives. These days' people are ready to spend more on

healthier things. The current lifestyle has changed the way we used to think about food products (Wee et al., 2014).

Food safety has also added an aspect of quality. Consumers now perceive that the food grown with a natural process is better than the conventionally grown foods. The output of the crop decreases once the farmer starts producing organic food but consumers know that the quality will be better. Customer understands the fact that if the overall cost of production increases then they might have to spend more money to purchase these products. Not just quality, regular users of organic foods say that it tastes better than the conventional foods and that is one motivation for them for their repeat purchase. Although the taste preference varies from consumer to consumer and some customers say that they have not found any significant difference between the tastes of both these types of food (Wandel and Bugge, 1997).

Indian customers are facing a shortage of variety in organic food as there are fewer organic food producers in India. At the same time with the government's motivation and understanding of the shift in the taste of consumers, producers are shifting fast towards organic foods (Zanoli and Naspetti, 2002). The major problem lies in the availability of these foods as these foods are generally found in modern food outlets and specialized stores only. The local grocery stores in Indian colonies or community stores are still not keeping it. A lot of work towards spreading the knowledge of the availability of local grocery stores to the local customers are still required. One very strange pattern has also been observed these days, as the same customer buys organic food from the supermarket but they don't try it from local grocers.

Understanding repurchase intention and perceived value of organic food was conducted by Toni et al. (2018) which was useful for marketers in understanding the buying behaviour. Health and concern towards the environment are shifting consumption pattern of the society in large towards those products which are perceived as healthy goods (Rezai et al., 2012). Concern towards food intake has started shifting towards healthy foods, these are those foods which are fresh, provides balanced nutrients, and are environment friendly. It

has also created a demand for food without chemicals. India has also started showing interest in these newly evolved food segment. According to "India Organic Food Market Forecast & Opportunities, 2019," the targeted revenue for an organic category of food segment can grow up to 25 percent from 2014 to 2019.

This food category does not add any chemicals in the production process, they are environment-friendly products, safe for human beings and animals, nutritious and produced by the responsible suppliers. Nature-friendly customer is always concerned about ecological issues.

Understanding animal welfare and concern for the environment are increasing the interest of consumers in organic food production. The conviction of the groups can be understood by visiting their websites like ([www.soilassociation.org](http://www.soilassociation.org)), "In organic farming practice synthetic (chemical) based fertilizer is prohibited and farmers increase the fertility of the soil by using composite and natural manure."

In this paper author utilized the hypothesis of arranged conduct to inspect the impacts of purchaser esteems and past encounters on shopper's buy goal of natural individual consideration items, this investigation intends to consider further the directing impact of apparent social norms (Josiassen et al., 2008). An overview of related board individuals and numerous relapse investigations was utilized to test the connections towards the factors into consideration. The expansion of past encounters as an indicator of procurement aim and saw social norms and acted as a mediator in the study of buying influenced by the attitude of the customers. In this paper, the researcher explored the impacts of apparent item quality and by and large fulfillment on buy expectations. Additionally, the immediate and aberrant impacts of qualities and inclusion on buy goals were studied. The test comprised of 197 understudies who reacted to an unknown survey. Five theories were tried and four of them were affirmed by the information. Seen quality had an immediate and a round-about impact (through in general fulfillment) on buying goals, by and large fulfillment directly affected the buy expectations and contribution indirectly affected by aims through in general fulfillment and saw quality. The after-effects of the investigation give a few hypothetical and pragmatic ramifications. The paper presents halfway outcomes

from an Italian examination on shopper recognition and information on natural nourishment and related conduct. Utilizations the methods end tie model to connect credits of items to the requirements of customers. To give bits of knowledge into customer inspiration in obtaining natural items, respondents were tasked with utilizing a "hard" laddering way to deal with the estimation of means-end chains.

Consumer health consciousness also influences the inclination of customers, the more concern a person is showing it motivates the consumer and its family to go for it. In today's world, every consumer wants to have a healthy lifestyle for which they prefer having healthy food. Educating the consumers about organic food is also important so that they understand its role in the coming future. Consumption of organic food is determined by the knowledge and health consciousness of the consumers. The consumption of naturally grown food highlights that the consumer is willing to go for it (Teng and Wang, 2015). Preference-based on its nature friendliness is also considered by some consumers for that they intake more of organic foods (Michaelidou and Hassan, 2010). Its consumption is considered as proof that people are now taking care of their health which is achieved by having healthy food, so consumers who intake organic food as regular intake are generally those families who take care of these things.

Customers with health concerns also have concerns about the environment like they want to protect the environment for this they prefer having organic food. As compared to the general consumer, the members of the welfare society for the environment have more concerns and hence they prefer having it regularly and also suggest to their associates. Consumer positive attitude towards cooking and shopping was also a factor for decision making (Pivato et al., 2008). Purchase decisions were made based on the production of the products which were good for health. Customer prefers those products which are environment friendly as well as healthy to maintain a healthy lifestyle. Foods and other products which take care of society in producing it are generally most liked and preferred by the customers over other variants (Chen, 2009).

## **2.4 Effect of Current Lifestyle on the Trust**

*“the way in which a person lives life”*

Rezai et al. (2012) worked on the aspect of the customer's shift in the buying pattern these days. As with times the motivators are changing, gone are those days when people use to see things available in the local market and they used to bring it home, consume it and then test it. Now in the era of information people are getting aware day by day and they are looking for only those products which can help them in maintaining a certain standard in their society. When customer see their friends and colleagues are consuming products which have some quality they also get influenced by it and they also want to replicate it through their lifestyle.

Sriwaranun et al. (2015) also discussed that taste and preference, quality, perceived health and related factors influence a customer to maintain a certain lifestyle. Whatever is the era our society has always influenced us, now the time has come when people look for the nutritious content and its impact on the environment before trying it.

The motivation of this research was to inspect the model of the purchaser's buying goal towards natural nourishment in Indonesia. Its model has displayed the relationship among sound utilization way of life, the frame of mind toward natural nourishment, and the purchasing aim of natural nourishment (Kurniawati and Savitri, 2019). This examination utilizes review information gathering from 200 mothers who have kids. Results demonstrated that sound utilization way of life is a decent indicator for demeanor towards natural nourishment, then mentality toward natural nourishment straightforwardly impacted to purchase aim toward natural nourishment (Suprpto and Wijaya, 2012).

In this paper, the researcher investigates the presence of various natural nourishment related way of life fragments. Utilizing universal instruments and a group investigation, five unique fragments were discovered which contrast in purchasing thought processes, quality parts of the nourishment, purchasing choices, cooking strategies, and utilization circumstances. They additionally vary in socio-demographic qualities. These sections are required to change later on, in size, and the attributes of conduct concerning natural nourishment related ways of life, (Kesic and Piri-Rajh, 2003). This research coordinated



natural nourishment related way of life approaches and points of view from the hypothesis of arranged conduct to research the profiles of buyers who buy natural nourishment on the web and to investigate contrasts in the related practices of buyers with various natural nourishment ways of life. An aggregate of 950 surveys was conveyed, and 753 legitimate examples were acquired (Liang, 2016).

## **2.5 Effect of Trust on the Purchase Intention**

*“A firm belief in the reliability, truth, or ability of someone or something”*

The various factors discussed by Kim and Sherman (2008) for buying organic food finally develop trust towards it. Developing trust is important; once customers develop trust then they don't test it again and keep on buying the same product again and again. Revealed information through labeling on the packaging develops further trust in the eyes of the customer. Developing trust among Indian customers is always challenging but once it is established then it gets reflected in their purchase intention and finally in buying behavior.

The majority of the key factors which motivate and persuade the organic food buyer have to travel through a stage where a customer develops trust by seeing the product labels, information revealed on the packaging, and organic food knowledge or awareness perceived. Anisimova et al. (2019) worked on trust and perceived organic food purchase and checked it on the stimuli generated through communication.

Consumers generally have more trust for green products which are grown organically, some of the consumers have more trust in organic foods which are having premium prices (Farhan et al., 2019). The most important factor is the trust which needs to be built by the food producer or processor. The decision to buy the food which is grown naturally is largely dependent on the perception that the overall benefits will be good and customer trust plays an important role in it. The relation between trust and knowledge of the products is also determined before buying decisions. An increase in knowledge and benefits regarding this new food variant can build the right attitude of the consumers. The main focus is on how the knowledge of the consumer will boost the trust of organic food. The quality of the food

which is grown naturally can be subjective as per various consumer's feedback but it is the trust which comes into picture whenever we are deeply involved in it. These foods which come with an organic certification have a better influence on the trust factor.

The trust which builds up by various factors like understanding the product better, getting more involved in it, talking and referring it to our social circle, adapting it as a part of our life and perceiving various things as per our knowledge. And once this trust is built then we keep on enjoying the benefits of such products and rather become a loyal customer.

## **2.6 Effect of Attitude on the Purchase Intention**

*“it is the degree to which the person has a favorable or unfavorable evaluation of buying”*

Consumer's attitude is just the representation of choice or inclination towards the choices available. Attitude is reflected by one's liking, they tend to purchase if they like it. Attitude is responding towards something favourably or unfavourably. Attitude includes characteristics that help in establishing a relationship between a person and an object (Mehra and Ratna, 2014).

Sachdev and Mahna (2014) conducted a study of over 500 consumers in Haryana Province to check their attitude. The study revealed that educated individuals are more in favour to buy green products. Moreover, people having higher income prefer to buy green products and understand environmental issues well.

Stock and Hoyer (2005) depicted the concern and challenges for natural food characteristics like food quality and freshness. Consumer's beliefs and attitudes were the two factors studied in detail. These are the factors that can influence a decision of the buying process.

Understanding consumer behavior is always being an attractive thing for marketers. Where measuring the attitude of consumer looks important while studying their buying behaviour. In many cases it has been found that concern towards health is growing these days and so

the role of health consciousness in creating demand for organic food has also become one area of study. Research involves a detailed view of dimensions of health consciousness and the direct relation of health consciousness with consumer attitude and consumer behaviour. Thus, the market should spread awareness about the health benefits of organic foods (Singhal, 2017).

Studying the Indian customer perspective is important for understanding the size of this niche market and organic crop cultivation process. Purchase behavior process is looking or studying the consumer behaviour for organic foods in the Indian domestic market by examining trends, and it's potential. Analysing the key challenges and opportunities of the organic food sector. All these aspects help to understand the role of attitude in the consumption of naturally grown foods (Johlke and Iyer, 2017).

In America the consumers are rapidly changing their consumption of dietary routine as well as habits of food as everyone is becoming health conscious. Previously consumers were not so much concerned about nutrition coming from the food but now consumers are becoming more conscious regarding these things, consumers are looking for their protection and values about the consumption of food (Aertsens et al., 2009). In many food pesticides are used which are harmful to health and for this type of reason made the consumer focus towards organic product and now consumers also started preferring environment-friendly products (Vieira et al., 2013). For health consciousness and environment-friendly products the demand has increased for an organic product. Consumers also found that consuming chemicals as pesticides are a risk factor towards their health. Attitude always depend upon our behavior (Xie et al., 2015). Behaviour of purchasing the organic food products also depends upon our attitude while purchasing which has lots of pieces of evidence or rather prove in this research paper. The intention of the consumer shows that it depends upon the forecast of our attitude regarding that product (Bredahl, 2001). The attitudes for buying any products depend upon our intentions regarding those products which show the connections between attitude and intentions. This research paper shows the relationship between attitude and intentions which is positive. In

this research it also found the demand does not change with the attitude and even the purchase does not change with attitude yet there exists a positive relationship between attitude and intention. Health consciousness, environment-friendly products, and protective products show how intentions are affecting the mindset of the people. Most of the research shows the interest of organic customers and various other papers describe the role of attitude in decision making. After knowing the benefits of organic products 65% of respondents are showing interest in buying organic food and the other 35% are still observing what are those changes. Consumers need to collect the proper information on organic food products or proper awareness programs should be available for the consumers. Only if the consumers know the development and evolution of the organic food then they can act responsibly. Knowing and understanding that pesticides free products are safe for human health. Refusing conventional foods helps in protecting the environment from pollution. For protecting the environment consumers will be ready to pay a higher price which can only be extracted if they are well informed. While doing survey the researcher noticed that consumers are paying less price in conventional foods as compared to paying the higher price for organic foods (Willock, 1999).

## **2.7 Effect of Subjective Norms on the Purchase Intention**

*“perceived social pressure arising from one’s perception for buying organic food products”*

Thogersen (2009) studied consumer attitude which leads to buying intention is supported by the subjective norms. Tarkiainen and Sundqvist (2005) have studied Subjective norms and attitude and it was found that the inclination of the customer is mainly driven by key forces; attitude, subjective norms, pricing, and perception of availability. Customers from the age group of 18-80 were 55% but the frequent buyers were only a small part of the group whereas the majority of respondents were just aware or tried organic food once. This study says subjective norms and attitude affects the actual behavior reflected by the consumers of organic foods.

Apart from subjective norms, the other important factor considered for research was the liking or disliking of the customer. They also studied the attitude and the formation of trust by their society. The implication of this study says that the organic industry should understand the demand of consumers. This study found factors that are largely dependent on the influence of decision making because of friends and relatives.

The study has found a positive relationship between Subjective norms and purchase intention of the customer for buying products of organic nature. The buying of foods which are of organic in nature was found dependent on the attitudes with a positive effect on subjective norms. An individual displays their tendency whatever it should be accepted as they search for group references and to maintain relations of the group. Subject norm's direct effect will be TPB fundamentals, the relation stuck between TPB be reasonable in subjective norms (Aertsens, 2011). The influences of the public maintain encourage the purchasing purpose and apparent behavioural and purchasing purpose and outlook (Al-Swidi et al., 2014). Behaviour and attitude are having a positive relationship which indicates the level of positive or hostile of a person's valuation of judgments the questions related to the consumption of these green foods. Behaviour and attitude have a positive aspect of the behaviour and the intention of the consumer has a stronger thought towards this niche product. Buying organic food products have a positive impact on the consumer and the consumers also have a positive impact regarding attitude. Buying these products also depend upon consumer perception and health factor. Concern over health found an important variable for purchasing organic food because every consumer wants some foods which are pesticide and chemical-free. Health consciousness has also contributed to increasing the sales of organic food products (Tarkiainen and Sundqvist, 2005).

## **2.8 Effect of Perceived Behavioral Control on the Purchase Intention**

*“an individual's perceived ease or difficulty of performing the particular behavior”*

Organic food doesn't have any common definition as the standards of the different countries are different. This research paper tried exploring and supporting the consumption

behaviour of organic food. Researchers have tried to look for potential markets for organic foods, the perception of the consumers, and the limitations in promoting organic products. Mysore city from India got selected as a place of data collection where researchers collected data from the customers of organic food at various retail outlets (Chandrashekar, 2014). Studies based on attitude and subjective norms of customers towards organic food have shown a strong relationship, later on adding perceived behavioral control formed a better conceptual framework and has shown an increased intention of the buyer towards these food products.

The behaviour of an individual defines how they can stick to one decision and how capable they are to stick in one decision that all depends on nature and popularly called perceived behavioural control. For a customer the price component is very crucial and in some of the studies it has been observed that the price of these foods which are more nature friendly are comparably higher than the conventional foods. The consumer mostly prefers those foods whose prices are less and so the chances of getting these products picked first are more. If the price of organic food products is moderated or managed to some extent, then there are chances that the demand for organic food products can increase. Since the organic food products are priced at a premium level which is mostly seen as a negative factor for organic food products. Buying of organic food products also depends upon two factors that are perceived ability of perceived behavioural control as well as perceived problems of the consumer of perceived behavioural control. For organic food products there are two major problems one is availability another is a price for which consumers do not organic food products. Another problem for perceived abilities is the financial condition of the consumer. Financial condition plays the most important role in showing interest in these expensive products. The household income will generally showcase the willingness and inclination of the customer towards this premium product. Purchasing of organic food products depends upon the intention of the consumer which has a positive effect on consumer perceived behavioural control (Al-Swidi et al., 2014). Buying organic food products depends upon availability, consumer's intention gets impacted when the organic food products are not available their observation changes. Self-efficacy for consumers is

the most complex perceived among various types of behavioural control. The external control is to purchase organic food products which are dealing with perceived control. Internal control is to purchasing organic food products which are deal with self-efficacy perceived control (Mutchler, 2019). Price is an obstacle for low-income consumers for which they cannot consume organic food products. Price becomes unattractive for low-income consumers which should be taking care of. Even knowing that organic foods do not harm the environment but still, it cannot motivate the low-income customer as they decide as per their financial condition (Tarkiainen and Sundqvist, 2005)

## **2.9 Effect of Purchase Intention on the Actual Buying Behaviour**

*“willingness of a customer to buy a certain product”*

There is a need for better awareness programs to arise the purchase intentions among the consumers. Rehman and Dost (2013) stated that man's nature orientation can have a considerable effect on its purchase intentions towards naturally grown foods. Store image was also regarded as the most important variable for purchase intention towards green products.

The various factors discussed for buying organic food finally develop trust towards it. Developing trust is important; once customers develop trust then they don't test it again and keep on buying the same product again and again. Revealed information through labeling on the packaging develops further trust in the eyes of the customer. Developing trust among Indian customers is always challenging but once it is established then it gets reflected in their purchase intention and finally in buying behavior. At one side attitude of organic food, customer affects purchase intention and on the other side, trust plays an important role in forming the intention towards purchase. A study has shown that role of revealed information, perceived information, and subjective norms are significant in the formation of trust towards the purchase intention of organic foods (Pandey et al., 2019).

In this paper, a researcher has used the hypothesis to form an intention to buy on analysing the impacts of buyer esteems and past experiences on shopper's overall experiences and expectation towards organic food stores, this investigation expects to consider further the

directing impact of apparent social control on the intention to buy. Utilizing the hypothesis of behaviour of customers who consider and think for the environment before consuming or disposing of consumable products, the researcher has analysed the impacts of purchaser esteems and past experiences on shopper's buying intention, this investigation plans to consider further the directing impact of apparent social control levels. This research endeavours to look at the purchaser's observation, buy aims, and actual buying behaviour. The interrelationship between them with regards to Organically grown foods.

Given the TPB, the key stages of the customer buying process while examining the perceived behavioural control which says how easy or tough it is that event for that customer to behave in a certain manner. This theory also measures the attitude of the customer which can further influence the intention, social norms which explains the role of nearby people on the behaviour of that customer too. This paper has studied 18 variables from four constructs built to quantify the purchaser's observation towards organic food intention to buy. Out of these 18 variables, the researcher has found 6 variables that were utilized to gauge their intention, and another 6 variables were used to measure the deciding factors towards purchase intention.

Information was gathered in grocery stores for encompassing regions in South Asia. Around 300 respondents were approached with a structured data collection tool to collect information, utilizing the actual presence of customers in the specialty stores of organic foods. The outcome showed that the aim to buy these niche food category items was fundamentally affected by the customer's environmental concern, health consciousness, and animal welfare. This Research intended to distinguish key thought processes behind organic food buying intention of more seasoned purchasers. The researcher has consolidated an under the examined area, self-introduction, a mental inspiration, with sanitation concerns, natural concerns, and customer's personality, to research its relative significance in more established purchasers' expectations towards intention to buy organic foods. The outcomes demonstrated that self-introduction and sanitation concerns are important thought processes in more seasoned customers' buy aims, while natural concerns



and moral self-character don't improve their purchasing expectations. What's more, a correlation with more youthful shoppers uncovered extra bits of knowledge into the job of moral buyer character. The motive of this study was to consider the areas of buyer's frame of mind to purchase that niche product that thus influences the obtaining aim. The hypothesis of Theory Planned Behaviour was utilized to check and measure the variable under consideration (Madden et al., 1992). The investigation factors incorporate concern towards environment, ecological awareness, perceived value, a frame of mind, animal welfare, goals to buy organic foods, and sexual orientation. The study technique was utilized, with the example containing 200 respondents planning to buy this niche product in Surakarta City, Indonesia (Effendi et al., 2015). The investigation technique utilized was co-variance based structural equation model (SEM). The after-effects of research demonstrated that wellbeing awareness and ecological cognizance were the determinants of a person's uplifting frame of mind to purchase natural nourishment. The impact of sex distinction on a frame of mind, goal, and conduct of acquiring natural nourishment affirmed the past examinations spellbindingly expressing that sex influences the natural nourishment obtaining conduct (Pandey et al., 2019). The ramifications of the study are that later on, the advertisers should uncover the convenience of natural nourishment for wellbeing and ecological support to make the objective buyer increasingly roused to purchase natural nourishment. Also, advertise portioning ought to be done dependent on sexual orientation (Irianto, 2015).

## **2.10 Actual Buying Behavior**

*“consumer's behavior in the marketplace while purchasing a product or service”*

At one side attitude of organic food, customer affects purchase intention and on the other side, trust helps in forming the intention towards naturally grown food items. A study has shown that role of revealed information, perceived information, and subjective norms are significant for the trust-building towards the formation of customer intention which goes for such foods (Pandey et al., 2019). Going forward understanding actual buying behavior

is very important for organic food marketers. The role of TRA and the impact of TPB has established the key antecedents of buying behavior but these theories are open to add more factors responsible for actual buying behavior (Ajzen and Driver, 1991). The current study has tried exploring more factors as with times customers have become more informed and they are getting influenced by a lot of other factors too before taking buying decisions (Misra and Singh, 2016).

As the days are passing by the most important thing which is being noticed is the concern of the people towards health. The knowledge attained by today's generation regarding the foods which are good for health and the environment has changed the perceptions of the consumers. It will never solve the problem of people unless they stand up and understand the role of these products in our life (Boztepe, 2012). Time has come to refuse all types of conventional foods which contains chemical. Food products containing lots of pesticides and synthetic fertilisers are harmful to our health. Consuming organic food products can help to avoid many health diseases that happen due to consuming conventional foods. Seeing the intensity of health concerns, people these days have started changing their consumptions pattern towards organic food products. This will not only address health risks but also save the environment. Consumers are not using organic products which are the main reason for effecting the environment. Due to which now the consumer is consuming environmentally friendly products. In most of the paper the writer focuses on the environment and health-conscious due to which the attitude of the consumers is changing towards these products. These improved food items not only help the human being but also the animal and overall environment (Kapuge, 2016). If only conventional foods are used by the consumers, then the environment gets polluted due to which the animals need to suffer the most. Environment problem, health consciousness, and welfare of animals have pushed the people to think rationally and adopt organic products for their day to day need. Consumption of organic products will not only help individuals but also animals and the environment. Due to all this problem the attitude of the consumer is changing slowly and consumers have started showing consumption patterns towards organic products items and due to this the sale of organic food has got increased (Singh and Verma, 2017). In the last

two decades the growth in the total revenue of these organic processed and packed food items has seen a significant jump. The overall benefits of the organic food items have also attracted more customers and a clear shift in the buying pattern has been noticed (Chekima et al., 2019). The prices charged by these foods must be attractive else it will not show significant growth. Only if the prices are at an acceptable level then we can expect its demand and so availability has to improve.

### **2.11 Demographic factors**

Indian families have seen the trend of a mother going for the shopping of grocery products, a father may accompany her but they have a limited stake in the decision making as they feel like they have limited knowledge about the grocery requirement of the family and the choice of a variant in foods. Researchers have discussed it in many studies of organic food buying that demographic variables play an important role (Laheri, 2017). This study has seen that females visit shopping centres more for buying organic foods (Tsakiridou et al., 2008). Females take the responsibility of food requirements and health of the family members, that is why marketers have always focused females to lure for the food items sales.

Age also comes into picture when we talk about demographic factors, after mothers the next important members of the family in terms of buying food items are children. Kids are the influencers and the age of kids plays an important part in understanding the behaviour of its regular users (Seegebarth, et al., 2016).

Segmenting the organic food market is also the area of interest where researchers have tried to explore various market segments available in Australia. The variables under study were income, age, education, buying frequency, perception, weekly expense, perceived values, a period of consumption, the self-image of organic food (Belk et al., 2005). This study helps marketers to design organic market segmentation strategies. The segmentation approach was used to study the buyers of naturally grown foods in the geographic location of Bosnia and Herzegovina by Pestek et al. (2018) by using snowball sampling. The study

has found four different segments of organic buyers and these segments were termed as “enthusiastic Social-seekers, enthusiastic moralists, hostile seldom shoppers, and hostile heavy shoppers”.

Millock and Hansen (2002) stressed the role of marital status, occupation, location, working condition, etc. of the Danish organic food customers. They collected data from 400 randomly selected households. It was observed that the females participate more in the purchase decision, they are the main influencers in the buying process (Doll and Torkezadeh, 1991). Household income has a significant role in selecting organic foods for the family as it is expensive than conventional food items (Chakrabarti, 2010).

## **2.12 Research Gap**

The extensive review of literature has identified some gaps which can be used for this study:

- 1) Tarkiainen and Sundqvist (2005) have worked on the role of subjective norms, attitude and intention of the Finland based organic customers but this study was limited on only two organic food products i.e. organic bread and flour products. It is difficult to generalize the result for the entire range of organic products if a study is done on two food products. Other studies that were referred to while the review of literature have also found that studies generally consider one or two variants of organic food. Hence this study aims at including all the packaged and processed organic food items.
- 2) A little work was found in the literature for checking awareness hence this doctoral study will check the level of awareness of the customers towards organic foods.
- 3) Xie et al. (2015) measured the organic food buying behaviour in only one format of retail chain i.e. hypermarket which gives a limited scope to study, if a study can be done across various retail chain like supermarkets, specialty store, grocery stores, hypermarkets, and the local market then we can address various price levels, products availability and this may have an impact on the consumption pattern of its

regular users. Hence this study is planning to consider all the retail formats of the organic food sellers.

- 4) Liang (2016) has found out the relationship among the price points of organic food items, the certification involved in organic food regulation, and the intention shown by its users. This study was conducted in Taiwan and researcher has mentioned in his studies' limitations that future study across culture may give different results as different culture affects the buying behaviour of consumers differently. Hence this study will target the certified organic food items by the Indian government across the culture of Punjab.
- 5) Janssen (2018) explained in the research that was limited to hypermarkets only and it was suggested that if we use various other retail channels like supermarkets and organic stores it would give different results. Going forward it was found by Janssen (2018) that path analysis can be used to study the various factors responsible for intention to buy, it was also found addressing only three aspects in this study and explained around 54% of the intention, it means there is a large scope of finding more variables on the same subject. Other studies in the related area also studied various other factors, this study will focus on understanding all the factors which can help customers to decide on the purchase intention.
- 6) De Toni et al. (2018) also studied that the perceived information of the customers helps in decision making towards buying organic foods, the other factors were also found to be the key factors which helped in building intention to buy. The majority of the study has undergone with few factors responsible for forming an intention to buy, very few checked the actual buying behaviour. The studies which checked the buying behaviour have concentrated their research in one format of retail only. This doctoral study will focus on the decisional factors affecting buying behaviour.
- 7) Moreover, checking only one or two types of organic food items also adds constraint among generalising the buying behaviour of the customer. Most of the studies which happened in matured economies have focused on factors which were little different as developing economy like India has its flavour when it comes to

buying premium food products. Indian customers are always perceived as price-conscious customers but it doesn't mean they don't buy premium products. Hence this study will also consider checking the role of the price point of the organic foods.

- 8) India is a diverse collection of taste and preference it has always given a welcome to the futuristic products. This doctoral research will concentrate on studying various factors responsible for purchase intention, finding some key factors will be the target. Factors will be taken into consideration which can first contribute towards purchase intention and finally helps in building buying behaviour.
- 9) Without analysing the actual buying behaviour this study will not complete. Hence this study will focus on the process of buying organic food products.
- 10) The study will focus on all the formats of retail be it traditional or modern. The researcher will collect data from all the formats of retail to check the variation if it exists.
- 11) Majorly all the processed and packaged organic food will be considered in this study to generalise the results. Although this study will not include non-vegetarian organic food items, organic variants of fresh fruits, and organic vegetables.

This study aims at contributing to the literature on organic food buying behaviour.

# Chapter 3

## Research Methodology

### **3.0 Introduction: Research Methodology**

This section elaborates on the overview of the methodology adopted by the researcher to execute this research work. The research methodology section starts with taking a clue from the need for this study discussed earlier. Any research work can only be justified if there exists a genuine need for that work for their stakeholders. These stakeholders can be academicians and future researchers, an organisation producing, packaging and marketing their product and services, it can be a supplier or vendor associated with that organisation, it can be the traders which are making those products to reach till customer, it can be the buyer, it can be the end-user who is consuming it and it can be the farmer or producer who is working on those products. After explaining the need for this study the researcher has tried to look for the scope of work that exists for this research work. Understanding and explaining the scope of the work in a thesis is very crucial for society as a whole.

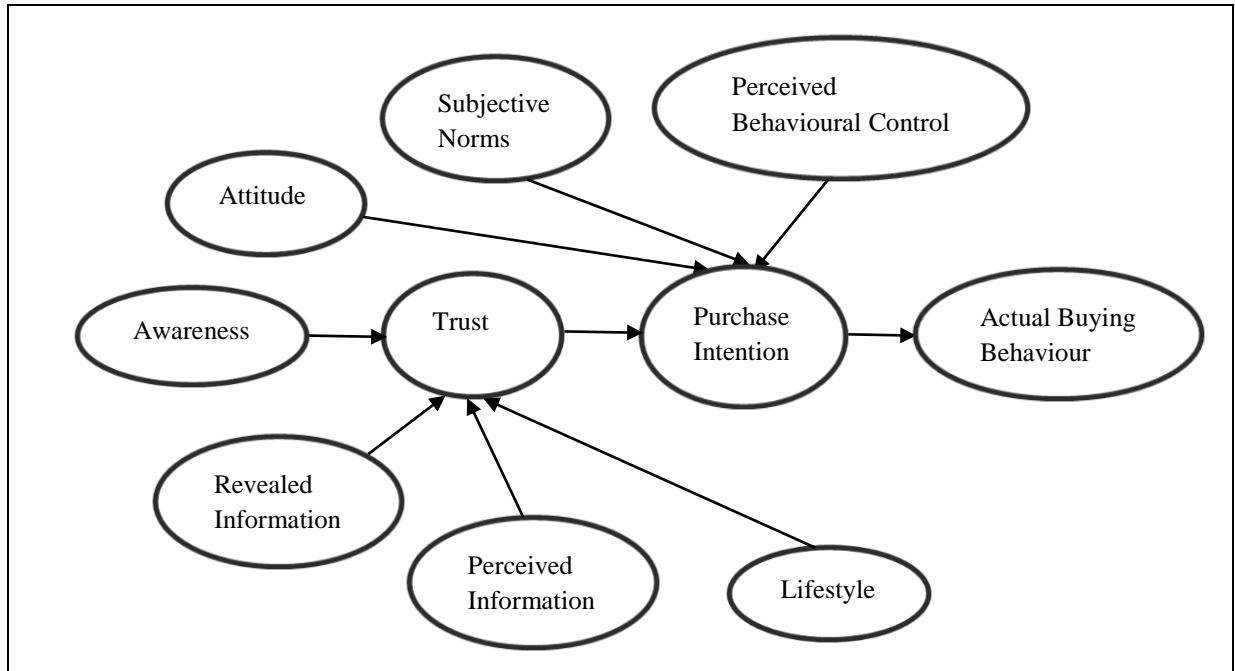
Understanding the actual buying behaviour of a customer is a crucial aspect to work upon for the marketer. It becomes very important to understand those aspects where lies the scope of improvement. Successfully identifying these gaps that exist and gives a scope of work is explained in this part of the thesis. Moving further this scope has helped the researcher to identify the objectives of the research and these research objectives have shown the path to the researcher to form hypotheses so that specific questions can be answered. These hypotheses have helped the researcher in formulating the conceptual model because this causal model has to ultimately lead the way and direct researcher to develop and test the causal relationship among identified constructs. The applicable research design was framed to execute the given research work and then the data collection tool was worked upon. The data collection tool which is a questionnaire in this case has taken a clue from the previous studies and it has adapted various variables, factors, and constructs. The sampling technique becomes very important to discuss as research cannot be done on the entire population. Individual data collection methods were discussed finally as all four objectives demand a different kind of statistical tool and test. Hence this chapter will elaborate on all these discussed aspects in a sequential method.



### **3.1 Methodology**

An extensive review of literature always helps a researcher in terms of providing awareness about various aspects of the study. In the same process, the researcher has explored various literature and found that different aspects of studies conducted in the geographies like Americas, Eurozone, Australia, New Zealand, few countries of Africa, some part of the middle east, People Republic of China, Malaysia, India, and some other Asian countries. The earlier researches have mostly considered only one or two variants of organic foods for conducting research. Research has mostly happened in the developed economies. Developed economies have evolved to some extent and the customers have accepted the organic foods. They are also ready to fetch more money on the variants of food if they found it good in quality. It was always a challenge in India to sell food variants at a premium price. If a customer in India is ready to spend more money than that customer wants to see the measurable and verified results. In terms of organic food, it is very difficult to find measurable results in the short term. One more challenge found in India was to conduct a study on fresh organic vegetables and fruits because of its availability and comparison with other variants. Fresh organic meats availability is also rare in India. The availability and acceptance of organic grocery items are in abundance across different states of India. If the research needs to be conducted, then this is the one organic food variant that can be targeted. Processed and packaged organic foods items and that too from grocery segment can be compared. Moving forward, literature has given a direction for this study which is already discussed in the research gap. Gaps identified through studies have given a direction to form the objectives of this study, which may be tested by forming various hypotheses for the study. The four research objectives of this study have helped the researcher to form 28 hypotheses which need to be tested. The hypotheses formed have given a direction to propose a conceptual model. This model was also referred from the various other related studies. The final model decided is mentioned here.

### 3.2 Proposed Conceptual Model



(Ajzen, 1991; Wee et al., 2014; Liang, 2016; Tarkiainen and Sundqvist, 2005; Teng and Wang, 2015)

Figure 4: Proposed Conceptual Model

### 3.3 Population and Sample

This study is focussing on a variety of processed and packed organic foods from grocery segments available in organic food stores like grains, pulses, nuts, spices, etc. The study has not considered non-veg food items, fresh fruits, and vegetables, or any other un-processed foods.

The population for this study is all those customers residing in Punjab who are a regular buyer of processed and packaged organic food. The researcher has approached these customers personally in a one to one survey approach by visiting mentioned data collection points at various locations of Punjab with the help of self-administered structured questionnaire to understand their level of awareness, perceived knowledge, revealed information, trust, subjective norms, attitudes, perceived behavioural control, lifestyle,

purchase intention and actual buying behaviour towards organic food. The researcher has collected the data by getting the questionnaire filled by the target respondents in a one to one process. These target respondents are the sample for this study. For becoming a sample, the respondents need to qualify on certain criteria that are mentioned in this study in the sampling technique. This study is concerned with the regular buyer of organic customers only. Before getting the survey questionnaire filled by the respondents it was asked from these customers weather they buy and consume organic foods on a regular basis or not. Only the qualified customers will become the sample for this doctoral research.

### *Research Design*

Descriptive research was used in which information was collected from the customers of organic food without altering the environment.

In this study, the behaviour of the people was under consideration and it was studied in the context of identification of those variables which will help in the decision making process towards the purchase of organic food.

### **3.4 Data Collection Instrument Designing**

A structured questionnaire based on the various constructs was adapted from various earlier studies. This questionnaire was directly administered by the researcher for the data collection initially for the pilot study and then for the actual data collection on the spot from the suggested data collection points.

Based upon the review of literature done on various constructs, items were identified for measurement in the form of a structured questionnaire, the below-mentioned table explains the source of measurement items being selected and then modified as per the requirement of this doctoral research. A 5 point Likert scale-based questionnaire was used for data collection (Ajzen, 2002).

### Construct's Adaption

Constructs/Factors	Adapted from
Level of Awareness	Rousseau and Venter, 1995
Attitude towards organic food	Dias et al., 2016; Teng and Wang, 2015; Al-Swidi et al., 2014; Gil et al., 2000
Subjective norms	Teng and Wang, 2015; Al-Swidi et al., 2014
Perceived Behavioural Control	Al-Swidi et al., 2014
Revealed Information	Teng and Wang, 2015
Perceived Information	Misra and Singh, 2016; Wee et al., 2014; Teng and Wang, 2015; Oroian et al., 2017; Janssen 2018; Sultan et al., 2018; De Toni et al., 2018
Lifestyle	Chakrabarti 2010; Misra and Singh, 2016
Trust and Certification	Teng and Wang, 2015, Siegrist, 2000
Purchase Intention	Wee et al., 2014; Al-Swidi et al., 2014
Actual Buying Behaviour	Dias et al., 2016; Wee et al., 2014

Table 1: Adaption of Constructs and Factors

The questionnaire was formed in 11 sections; the first section was formed with the combination of 9 measure items checking the level of awareness among the organic food customers. Different customers show different kind attitudes hence their attitude was important to measure so 10 questions were used to measure this in the second segment of the questionnaire. Every individual got influenced by others in the process of buying behaviour so checking subjective norms became important, 6 questions had helped the researcher to check this in the third segment of the data collection instrument. For an individual buyer there are always some control checks and so to measure perceived behavioural control 5 questions were used in the fourth section of the questionnaire. In a buying process, the manufacturer needs to display important information on the packaging which helps the buyer to understand the product better, that's why the researcher has used 5 measurement items to check revealed information in the fifth section of this questionnaire. Before buying organic food a potential buyer always perceives some of the

information which helps in decision making and so measuring perceived information was important, 17 questions were used in this segment to measure this. Various lifestyle patterns influence buyers differently and so it was measured using 6 questions in the seventh section of the questionnaire used. The eight sections become important because it has measured the role of trust and certification in the buying process with the help of 4 questions (Siegrist, 2000). All of the above-mentioned constructs have helped the researcher in measuring the intention of purchase and so 7 individual questions were used to measure it. Intention forms the buying behaviour and so 7 questions were further used for calculating the buying behaviour among the organic foods buyer (Homer and Kahle, 1988).

11<sup>th</sup> and the last section was used to collect demographic details of the respondent which included knowing the place they reside, the kind of work they do, their monthly household income, the status of marriage, sex, age, the level of education they carry, size of their family, the district they belong to, living environment and their contact information.

All the demographic questions asked in the last section of the questionnaire were closed-ended so that respondents can give a quick response.

Responses collected in the first 10 sections of this questionnaire were in 5 points Likert scale where they selected “SD” if they are disagreeing from the statement strongly, they selected “D” at all those items when they genuinely disagreed, they opted “N” when they found themselves on neither sides, where “A” means the statements which got their affirmation and “SA” was for all those statements where they agreed strongly. Responses were collected in the form of putting a tick mark in the boxes as per the choice of organic food customers (Ajzen, 2006).

### **3.5 Content and Face Validity**

Once the data collection instrument was framed it was then validated by taking the help from senior-level executives from the Food & Beverages Industry who are particularly looking for organic food segments in their organisation. Senior faculty members from academics who are engaged with the related work for their research interest are also

approached for the validation of content. In total 16 senior-level people were approached for getting the content of the questionnaire validated. Face validity was also checked by these people and based on their suggestions all possible changes were made by the researcher. In this process 2 senior-level executives with more than 14 years of experience were approached for improving the data collection instrument. 14 senior academicians with more than 10 years of experience were also approached in this validation process.

A detailed list of these executives and academicians are mentioned in appendix 3 of this research work.

### 3.6 Sample Size Determination

Getting the idea of sample size for any study is important and so initially researchers used online software (<http://www.surveysystem.com>) and (<http://www.raosoft.com/>) for calculating sample size. As per census 2011 data, the population of Punjab was 27.70 million so the minimum sample size calculated on this population was 384. Since the entire population of Punjab is not the target population for this study and there is non-availability of related data of organic food consumers so the study seeks help from the literature.

A detailed study is being conducted in the relevant area to identify sample size, data is collected from the paper got published across the globe. These studies were done in the countries where organic food was adopted in the early stage. People understood it's importance as consumers are more aware of the benefits of organic food.

References from the twelve relevant studies were captured in the below-mentioned table for computing sample size.

#### List of Related Studies

S. No.	Research Title	Author	Survey Location	Survey Location Population	Sample Size
1	“Consumer perceptions and attitudes of organic food products in Eastern China.”	Xie et al., 2015	Nanjing and Shanghai, East China	392 m	396
2	“Attitudes and behavior towards organic products: an exploratory study.”	Tsakiridou et al., 2008	Thessaloniki, Greece	0.78 m	660

3	“An analysis of factors affecting the growth of organic food.”	Misra and Singh, 2016	Delhi NCR	21.7 m	150
4	“Decisional factors driving organic food consumption: Generation of consumer purchase intentions.”	Teng and Wang, 2015	Taiwan	23.52 m	693
5	“Subjective norms, attitudes and intentions of Finnish consumers in buying organic food.”	Tarkiainen and Sundqvist, 2005	southeast Finland	1.23 m	220
6	“Potential Vietnamese consumers’ perceptions of organic foods.”	Truong et al., 2012	Vietnam	89.71 m	264
7	“Organic Food Perception: Fad, or Healthy and Environmentally Friendly?”	Petrescu and Petrescu-Mag, 2015	North-West, Romania	2.24 m	420
8	“Predicting intentions to purchase organic food: the moderating effects of organic food prices.”	Liang, 2016	Taiwan	23.52 m	507
9	“Mediating role of opinion seeking in explaining the relationship between antecedents and organic food purchase intention.”	Pandey and Khare, 2015	10 Tier-1 cities from across India	115.8 m	541
10	“Customer value perception of organic food: cultural differences and cross-national segments.”	Seegebarth et. al., 2016	1 US and 2 German City	NA	446
11	“Consumers Perception, Purchase Intention and Actual Purchase Behavior of Organic Food Products.”	Wee et al., 2014	Malaysia	29.72 m	288
12	“Consumers’ willingness to pay for organic products in Thailand.”	Sriwaranun et al., 2015	Bangkok	8.28 m	502
	Average Sample Size				5087/12=423.91

Table 2: List of 12 relevant studies done for finding sample size

Since the calculated average sample size i.e. 424 is for this study so based upon the study done on 12 pieces of research in the same field at various locations and by taking previous studies as a reference, 500 responses are considered for this study. These respondents were customers who are existing users of organic foods.

Data collection was based upon the fact that organic foods are expensive and it is consumed by more aware and educated citizens (Mahesh, 2013). Higher per capita income and cities with higher literacy rates got selected for sample collection and the framework for the same has been shown in the below-mentioned table (Nagaraju and Thejaswini, 2014; Sachdev and Mahna, 2014).

### 3.7 Sampling Framework

Every research is concentrated on some specific geographic location; hence this study has tried to approach a state where farming is in culture. Punjab also being selected as this has contributed in green revolution and now participating in organic food farming, processing, and export. The review of literature has clearly shown that there are two very strong criteria among organic food buyers are literacy rate/awareness towards organic food and their income level. The choice of the customers towards organic food was majorly dependent on the awareness/literacy rate and income level of the customers. The sales of organic food are more prominent in those states/countries which qualify on the mentioned criteria. Hence the ranking of Districts of Punjab according to 'Literacy Rate' and 'Per Capita Income' has been extracted from the Human Development Report, Department of Planning, Government of Punjab in the sampling process, and mentioned in Table 3.

#### Proposed Sampling Districts of Punjab

Selected Top 10 Districts of Punjab	Literacy Ranking	Income Ranking
Hoshiarpur	1	9
Pathankot	2	11
SAS Nagar (Mohali)	3	6
Jalandhar	4	7
Ludhiana	5	3
Rup Nagar (Ropar)	6	13
Shaheed Bhagat Singh Nagar (Nawanshehar)	7	1



F. G. Sahib	8	4
Kapurthala	9	5
Gurdaspur	10	19

Table 3: Proposed Sampling Districts

\*Combined table for Literacy and Income (Source: Economic Adviser, Govt. of Punjab, 2012)

These 10 districts got qualified from the state of Punjab by a scientific method and review of the literature. In total Punjab has 22 districts now in 2019. Classification of the geography of Punjab was done as Majha, Malwa, Doaba and Poadh areas. These four regions become by the amalgamation of five divisions which include Ferozepur, Faridkot, Jalandhar, Rupnagar, and Patiala. These four geographic regions of Punjab consist of many districts like Majha has four districts, Malwa being the biggest consists of eleven districts, Doaba consist of four districts and Poadh consists of three districts. All these four geographies and 22 districts make a beautiful state called Punjab. This state consists of major Indian Sikhs but other religious people have also found their home in Punjab. One side of this state has religious and spiritual beauty and on the other side, Punjab consists of hard-working farmers.

### 3.8 Sampling Techniques

The sampling style adopted for data collection was ‘Criterion sampling’ which is a specific form of ‘Purposive sampling’. Criterion sampling as explained by Palys (2008), “involves searching for cases or individuals who meet certain criteria”.

Since this study seeks responses only from those individuals who are an existing buyer of organic food, hence the study is concentrated on the users of processed and packed organic food grocery items. Customers were approached to answer the questions asked in the questionnaire from the data collection points of the targeted cities based upon their buying patterns. In this data collection process, only those customers were approached which was having organic food lying in their shopping carts. At some of the stores, the researcher got permission to collect the data from their customers but in some cases, the questionnaire was got filled in the parking area. More than 550 respondents were approached in the data

collection process but only 500 responses were finally selected as they had filled complete information.

### **3.9 Statistical Tool used**

Tarkiainen and Sundqvist (2005) has found a relationship between attitude displayed by the customer, subjective norms reflected by the users and the purchase intention shown by the consumers in the buying process of organic food and also tested the extension of the theory of planned behaviour in an organic food buying context using Structured Equation Modeling (SEM). In this study, the nature of constructs and their relationships has given a clear indication that a multivariate data analysis method can be used for analysing the key factors responsible for the purchase intention of organic food customers.

Taking reference from another study by Anderson and Gerbing (1988) which tried to measure the predicted relationship of causality among the latent constructs through a structural model. confirmatory factor analysis was used to check the role of indicating variables towards constructs studied. The model fit was established. The multivariate data-based study was being analysed by the statistical test of structural equation modeling. This study has used partial least squared structural equation modeling for analysing various dependent and independent factors. This study has also tried to analyse the level of awareness of the organic food customers of Punjab and this one-sample t-test is used to know the mean difference. The study has also checked the level of awareness according to the various demographic variables used in the questionnaire, one-way ANOVA is used for checking the level of awareness according to demographic characteristics. Understanding the role of demographic characteristics was also important as this make researcher understand the buying behaviour more clearly.

### **3.10 Sources of Data**

In the process of this doctoral study, various types of data got collected by the researcher from the below-mentioned data collection sources:

1) Primary Data:

- a. A questionnaire-based survey was conducted in a face to face data collection process from the respondents.

2) Secondary Data:

- a. Literature was referred from the various related textbooks.
- b. Published authenticated reports of Government and Institutions were referred.
- c. Literature from articles published in newspapers and magazines.
- d. Literature from the published research articles and case studies of the peer-reviewed journals.
- e. Literature from relevant and authenticated websites.

### 3.11 Pilot Study

Once the questionnaire was framed and validated with the help of relevant people from Industry and Academics, a small survey was required to check the measurement scale's reliability. A total of 50 respondents were approached for getting the questionnaire filled to establish reliability. After the data collection of 50 respondents, the Cronbach's Alpha was checked and found acceptable to move further for the actual data collection.

#### Construct's Validity and Reliability

S. No.	Constructs	Cronbach's Alpha
1	Awareness	0.824
2	Attitude	0.87
3	Subjective Norms	0.775
4	Perceived Behavioral Control	0.725
5	Revealed Information	0.883
6	Perceived Information	0.838
7	Lifestyle	0.868
8	Trust	0.815
9	Purchase Intention	0.69
10	Actual Buying Behaviour	0.787

Table 4: Validity and Reliability

### **3.12 Data Screening**

Once the data was collected from the specific data collection points then the data cleaning process was conducted so that qualified data can be achieved with no concerns of validity, reliability, and usability for checking the causal relationship among the identified variables. A total of 19 questionnaires were found with wrong or incomplete data, hence these questionnaires were removed (Diamantopoulos et al., 2012).

# Chapter 4

## Results and Discussion

## **4.0 Introduction: Data Analysis**

This study has collected data from secondary sources for understanding the food & beverage industry. The importance, role, and contribution of organic food in the entire industry was also checked from the published research articles, books, Government of India reports, and relevant and authenticated websites. The data was also collected for doing the review of the literature and understanding the amount of work done till now the related area. The extensive review was conducted for understanding the contribution of organic food in the food & beverage industry. Research methodology and sampling technique processes have also included referring to various published articles and books.

Apart from collecting and understanding secondary data, this study has collected primary data from the respondents too. This primary data collection was a tedious process that included reaching 500 organic food customers. The survey method of the primary data collection process included taking responses from these respondents without altering their buying environment. The researcher has approached organic food customers individually either at the time of billing or after shopping in the parking area. While collecting data it was found that not more than 5-6 percent of people are buying organic food in a modern retail format. This data was more in specialty stores as these stores majorly keep organic and natural products only.

The collected data is processed further in terms of feeding it in MS-Excel and SPSS 21.0 software. The collected data was also used in Smart PLS-SEM 2.0 for processing it further. The collected data was used for measuring the demographic characteristics by using MS-Excel. The overall contribution of respondents according to their profile and demography was presented. The collected data has helped in studying the key factors responsible for purchase intention. This data has identified the decisional factors affecting actual buying behaviour. This part of the research work has also analysed the collected data for bringing results by establishing a causal relationship among the identified and verified variables for the actual buying behaviour. It has also identified and measure the impact of intention to buy on the actual buying process.

#### 4.1 Demographic Analysis

The researcher has received the demographic data which was a little different on some of the parameters, that is why it is said that different geographic populations act differently on the same parameters. This study has found that there exists some difference in terms of gender as organic food customers. Female participation was found 43.60 percent which was quite surprising as males were seen much in numbers in hypermarkets and specialized stores. Males were found 55.40 percent as a regular organic customer.

#### Demographic Profile of Respondents

Characteristics	Category	Sample details	
		Actual Count	Percentage (%)
Gender	Male	277	55.40
	Female	218	43.60
	Transgender	5	1.00
Age Group	Less than 18	48	9.60
	19-29	244	48.80
	30-39	145	29.00
	40-49	58	11.60
	More than 50	5	1.00
Marital Status	Unmarried	210	42.00
	Married	283	56.60
	Separated/Divorcee	7	1.40
Occupation	Salaried	220	44.00
	Self-employed	104	20.80
	Retired	19	3.80
	Homemaker	58	11.60
	Others	99	19.80
Household Income	Below 30,000	161	32.20
	30,001-60,000	204	40.80
	60,001-90,000	91	18.20
	90,001 and above	44	8.80
Educational Level	Below High School	17	3.40
	12 <sup>th</sup>	104	20.80
	Graduate	195	39.00
	PG and above	184	36.80
Family Size	1-2 Members	83	16.60

	3-4 Members	272	54.40
	5-6 Members	108	21.60
	7 and above	37	7.40
District	Hoshiarpur	48	9.60
	Pathankot	40	8.00
	SAS Nagar	48	9.60
	Jalandhar	76	15.20
	Ludhiana	48	9.60
	Rupnagar	45	9.00
	SBS Nagar	40	8.00
	Fatehgarh Sahib	52	10.40
	Kapurthala	54	10.80
	Gurdaspur	49	9.80
	Living Environment	Urban	326
Sub-Urban		127	25.40
Rural		47	9.40

Table 5: Demographic Profile of Respondents

The study has observed that the younger generation was buying organic food more frequently and in good numbers also, as the age group of 19-29 were almost half the sample. The second best age group (30-39) was of young and married people who are earning more and ready to spend more on their healthy lifestyle. Married people were seen more with a cart full of organic food as they were 56.60 percent. This was the segment that was buying organic food and found comparing it with conventional food too. Although the study is not rejecting the role of unmarried organic food customers as they were also 42 percent and made a significant contribution towards buying an alternate food variant.

The salaried people are found following the current lifestyle as their participation was 44 percent in the total sample but at the same time, the self-employed were also 21 percent and making a good number of purchases. Whenever we observe the grocery items purchase we cannot ignore the role of homemakers, in this study too they contributed around 12 percent. Income was always considered to be a crucial factor while buying this niche food category as it is a little expensive than the conventional foods, this study has observed that the middle-income group people were the actual buyers of this category of foods. People with household income in the range of 30,001 to 60,000 were found to be contributing



almost 41 percent. The second best buyer segment was the people with income less than 30,000. Initially, this observation was found little surprising as this was different than the literature as most of the studies found that higher-income people buy more organic food but the data of Punjab has shown little different trend. Literature also supports the fact that geographic locations can give a different result.

Literature explained that people who are educated and aware show positive intend towards buying this food, it has also supported the same with 39 percent buyers are graduates, and around 37 percent of buyers were having the education level of PG and above.

One interesting fact that was observed through results was the 54.40 percent buyer coming from the segment of 3-4 members' family, it means the nuclear families was preferring more organic food. This study was exactly replicating the trend from other countries which are more developed as it has shown a similar buying pattern. The researcher has tried collecting equal data from all ten selected districts of Punjab but somehow the people from Jalandhar were found more at other locations of Punjab too. The Urban people were found more aware and knowledgeable about the benefits of this category of food and shown their presence more on these food counters with a percentage of almost 65 percent. At the same time, an interesting fact was observed that the people from villages have also shown their good contribution to around 10 percent and increasing. Punjab villagers are having better per capita income and a good lifestyle and it was shown in their buying pattern.

#### **4.2 Results and Discussion: Level of Awareness**

It was found through the review of literature that the segment looks for organic food are those people who have sufficient knowledge about this product. These sets of customers are aware of the attributes of the product and understand its benefit. The level of awareness was measured in this study with the help of nine measurement items which has formed the construct 'awareness'.

*Null Hypothesis (H<sub>01</sub>): A null hypothesis was formed for one sample t-test which states that there is no level of awareness among the customers towards organic foods.*

For measuring the level of awareness, this study has computed the difference of “sample mean” with the “average mean of the population” which was assumed as 3. The researcher assumes that on a five-point Likert scale “3” means neutral and if respondents average means come close to “4” then they are aware, the average mean moving towards “5” means that they are strongly aware of organic foods and its benefits. A one-sample t-test can help in calculating this mean difference (Aschemann-Witzel et al., 2013; Basha, et al., 2015; Krystallis and Chryssohoidis, 2005; Linder et al., 2010). Checking assumptions of this test was important, hence the researcher has found that all the observed values of respondents were independent. The dependent variable was continuous. The data were normally distributed, with no outliers.

Before measuring the level of awareness from the 9 statements of the construct awareness, an average awareness column was formed which was a collective average of all 9 statements for 500 responses.

The below mentioned one sample statistics table has given the result as under:

The awareness level score (M=4.50, SD=0.415) is higher than the population average score of 3.

### **Descriptive Statistics**

<b>One-Sample Statistics</b>				
	N	Mean	Std. Deviation	Std. Error Mean
Awareness_Avg	500	4.5002	.41517	.01857

Table 6: Descriptive Statistics

The first row of one sample t-test explains the population awareness mean which is 3. The researcher has found the value of  $p < 0.05$  ( $p = 0.00$ ) which means that population awareness

mean is statistically significantly different. The awareness level score is statistically significantly higher than the population mean of 3,  $t(499)=80.80$ ,  $p=0.00$ .

### One Sample t-test

One-Sample t-test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Awareness_Avg	80.800	499	.000	1.50022	1.4637	1.5367

Table 7: One-Sample t-test

Since there exists a statistically significant difference between the observed mean of 4.50 which is higher than the population mean of 3 at  $p<0.00$ . Hence the null hypothesis ( $H_{01}$ ) was rejected and it was concluded that there exists a significant difference in the level of awareness of the customers of Punjab.

The responses of the customers have reflected the level of awareness by calculating their mean in the table, where it has been found that customers are highly aware of the organic foods and its benefits.

Measuring the level of awareness using a one-sample t-test has given results that were checked on 5 points Likert scale instrument. It will be an incomplete task if the researcher does not compare and contrast the level of awareness of the sample population. The response of 500 organic customers was captured in this study using 9 demographic/geographic variables. Hence, this study leads towards checking the level of awareness of the organic food customers according to their demographic characteristics. Since each demographic variable was measured using three or more parameters/groups hence ANOVA can be used (Gupta, 2004; Janssen and Hamm, 2014; Keles and Ozer, 2016; Ozden, 2008;).

#### 4.2.1 Analysis of Variance (ANOVA)

When study demands to compare one means to another the t-test is sufficient but when there is a need of comparing the mean of three or more groups or independent variable level, one-way ANOVA gives the right results (Carver and Nash, 2011). Researchers have used ANOVA for finding out the level of significance of various variables, it is also used to derive the estimates of the population variance. The ratio of estimates is used and statistics are being measured. At one side ANOVA gives *between-group variance* which calculates the effect of independent variable with error variance, on the other side *within-group variance* calculates the error variance only. Statistical calculations are reflected with the help of F-ratio, which is the ratio between groups and within groups variance only. While using ANOVA if the null hypothesis is rejected we can say there exists a significant difference and then we go ahead and check the Post Hoc analysis (Gupta and Gupta, 2011).

For analyzing data research uses statistical tests and for every test, we check there exist some assumptions. One-way ANOVA has below-mentioned assumptions:

- a) The normalcy of population: Normalcy of population can be measure in two ways, it can be done using graphical representation and statistical test. Test of Normalcy was conducted in this study using the Kolmogorov-Smirnov test, which bears a null hypothesis that the population is normally distributed. Test statistics data did not reject the null hypothesis which means the null stands true for this study and hence we can say that the data was normally distributed.
- b) Independent samples: This assumption checks that the samples collected for the study should be independent with each other. This assumption was also satisfied in this study; this is explained in the analysis further.
- c) Homogeneity of variance: The test assumes that there should be homogeneity among the variances understudy, this was separately calculated every time while conduction a one-way ANOVA test for every demographic variable. Lavene statistics test was used every time in conducting ANOVA.

This study has taken a clue from various past studies for checking the level of awareness as per their demographics by using ANOVA (Janssen and Hamm, 2014; Keles and Ozer, 2016; Ozden, 2008; Singh and Verma, 2017; Williams et al., 2006). Some studies have also used a t-test since they were comparing the mean difference between 2 groups only. This research has checked the one-way ANOVA results for measuring the level of awareness on every demographic variable. First of all, an average column for the level of awareness was measured using a compute variable to test in SPSS. This average level of awareness is termed as “Awareness\_Avg” for checking ANOVA results.

**4.2.2 Age wise level of awareness:** The researcher has measured the level of awareness of the organic food customers according to their age brackets. This study has checked that weather all age group customer has the same level of awareness or any particular age group reflects any significant difference for level of awareness.

*Null Hypothesis (H<sub>02</sub>):* The null hypothesis for this test assumed there does not exist any significant difference among the age groups brackets of organic food customers towards the level of awareness.

## Descriptives

Descriptives								
Awareness_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below 18	48	4.4907	.38136	.05504	4.3800	4.6015	3.11	5.00
19-29	243	4.3763	.52465	.03366	4.3100	4.4426	1.67	5.00
30-39	145	4.6460	.14639	.01216	4.6219	4.6700	4.22	5.00
40-49	59	4.6403	.14196	.01848	4.6033	4.6773	4.33	5.00
50 and above	5	4.7333	.12669	.05666	4.5760	4.8906	4.56	4.89
Total	500	4.5002	.41517	.01857	4.4637	4.5367	1.67	5.00

Table 8: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the age brackets concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of below-mentioned table:

### Test of homogeneity of variances

Test of Homogeneity of Variances			
Awareness_Avg			
Levene Statistic	df1	df2	Sig.
30.619	4	495	.060

Table 9: Homogeneity of variances test

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 30.619 at a p-value of 0.60. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each age group are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

### ANOVA

ANOVA					
Awareness_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.245	4	2.061	13.120	.000
Within Groups	77.767	495	.157		
Total	86.012	499			

Table 10: ANOVA

The above table of ANOVA explains the F statistics of 13.12 at a p-value of .00. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one age

group of the customers. For checking which group is showing significant difference we go ahead for post hoc test.

### Post Hoc Test

Multiple Comparisons						
Dependent Variable: Awareness_Avg						
Tukey HSD						
(I) Age		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Below 18	19-29	.11443	.06261	.359	-.0570	.2858
	30-39	-.15524	.06600	.131	-.3359	.0255
	40-49	-.14956	.07704	.297	-.3605	.0614
	50 and above	-.24259	.18626	.690	-.7526	.2674
19-29	Below 18	-.11443	.06261	.359	-.2858	.0570
	30-39	-.26966*	.04159	.000	-.3835	-.1558
	40-49	-.26399*	.05753	.000	-.4215	-.1065
	50 and above	-.35702	.17907	.271	-.8473	.1333
30-39	Below 18	.15524	.06600	.131	-.0255	.3359
	19-29	.26966*	.04159	.000	.1558	.3835
	40-49	.00568	.06121	1.000	-.1619	.1733
	50 and above	-.08736	.18029	.989	-.5810	.4063
40-49	Below 18	.14956	.07704	.297	-.0614	.3605
	19-29	.26399*	.05753	.000	.1065	.4215
	30-39	-.00568	.06121	1.000	-.1733	.1619
	50 and above	-.09303	.18462	.987	-.5985	.4124
50 and above	Below 18	.24259	.18626	.690	-.2674	.7526
	19-29	.35702	.17907	.271	-.1333	.8473
	30-39	.08736	.18029	.989	-.4063	.5810
	40-49	.09303	.18462	.987	-.4124	.5985

\*. The mean difference is significant at the 0.05 level.

Table 11: Post Hoc Test: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results conclude that level of awareness of the “19-29” age groups customers have a significant difference as compared to the age groups of “30-39” and “40-49”.

### Homogeneous subsets

Awareness_Avg			
Tukey HSD <sup>a,b</sup>			
Age	N	Subset for alpha = 0.05	
		1	2
19-29	243	4.3763	
Below 18	48	4.4907	4.4907
40-49	59	4.6403	4.6403
30-39	145	4.6460	4.6460
50 and above	5		4.7333
Sig.		.198	.297
“Means for groups in homogeneous subsets are displayed.”			
“a. Uses Harmonic Mean Sample Size = 20.097.”			
“b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.”			

Table 12: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the age groups “40-49” and “30-39” of organic customers have shown a statistically significant difference in their level of awareness as compared to the “19-29” groups of respondents. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(4,495) = 13.120, p = 0.000$ ]. Tukey post hoc test has explained that the level of awareness among the age groups of “40-49” and “30-39” was statistically significantly higher as compared to the age group of “19-29” customers. Hence it is concluded that the null hypothesis ( $H_{02}$ ) is rejected and this test has confirmed that the level of awareness differs according to the age bracket groups.



**4.2.3 Gender wise level of awareness:** The researcher has measured the level of awareness of the organic food customers according to their gender. This study has checked that weather all the customer genders had the same level of awareness or any particular gender had reflected any significant difference for level of awareness.

*Null hypothesis( $H_{03}$ ):* The null hypothesis for this test assumed that there does not exist any significant difference among the genders of organic food customers towards the level of awareness.

### Descriptives

Descriptives								
Awareness_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Male	275	4.4901	.44040	.02656	4.4378	4.5424	1.67	5.00
Female	218	4.5066	.38680	.02620	4.4550	4.5583	2.44	5.00
Transgender	7	4.7111	.12669	.05666	4.5538	4.8684	4.56	4.89
Total	500	4.5002	.41517	.01857	4.4637	4.5367	1.67	5.00

Table 13: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the genders concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity of variances

Test of Homogeneity of Variances			
Awareness_Avg			
Levene Statistic	df1	df2	Sig.
1.179	3	496	.317

Table 14: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene’s test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 1.179 at a p-value of 0.317. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each age group are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

### ANOVA

ANOVA					
Awareness_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.315	3	.105	.608	.610
Within Groups	85.697	496	.173		
Total	86.012	499			

Table 15: ANOVA

The above table of ANOVA explains the F statistics of 0.608 at a p-value of 0.610. This result is not significant and hence we cannot reject the null hypothesis and conclude that the above table does not provide any substantial evidence that there exists a significant difference of at least any one gender of the customers. The researcher will check with the help of post hoc that is there any significant difference exists or not.

### Post Hoc Test

Multiple Comparisons						
Dependent Variable: Awareness_Avg						
Tukey HSD						
(I) Gender		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Male	Female	-.01652	.03769	.972	-.1137	.0806
	Transgender	-.22101	.18757	.641	-.7045	.2625
Female	Male	.01652	.03769	.972	-.0806	.1137

	Transgender	-.20449	.18801	.697	-.6891	.2802
Transgender	Male	.22101	.18757	.641	-.2625	.7045
	Female	.20449	.18801	.697	-.2802	.6891

Table 16: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results conclude that level of awareness of any gender of customers has no significant difference as compared to other genders.

### Homogeneous subsets

Awareness_Avg		
Tukey HSD <sup>a,b</sup>		
Gender	N	Subset for alpha = 0.05
		1
Male	275	4.4901
Female	218	4.5066
Transgender	7	4.7111
Sig.		.808
“Means for groups in homogeneous subsets are displayed.”		
“a. Uses Harmonic Mean Sample Size = 5.648.”		
“b. The group sizes are unequal. The harmonic mean of the group sizes is used.” “Type I error levels are not guaranteed.”		

Table 17: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that there does not exist any statistically significant difference between the level of awareness among various genders. Hence the null hypothesis ( $H_{03}$ ) did not get rejected in this scenario and we can conclude that the level of awareness does not vary according to the gender of the organic food customers.

**4.2.4 Marital Status wise level of awareness:** The researcher has measured the level of awareness of the organic food customers according to their marital status. This study has

checked that weather marital status of organic customers has the same level of awareness or any particular marital status reflects any significant difference for level of awareness.

*Null hypothesis(H<sub>04</sub>): The null hypothesis for this test assumed that there does not exist any significant difference among the marital status of organic food customers towards the level of awareness.*

### Descriptives

Descriptives								
Awareness_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Unmarried	268	4.3752	.51960	.03174	4.3127	4.4377	1.67	5.00
Married	225	4.6420	.14565	.00971	4.6228	4.6611	4.11	5.00
Separated/Divorcee	7	4.7302	.12599	.04762	4.6136	4.8467	4.56	4.89
Total	500	4.5002	.41517	.01857	4.4637	4.5367	1.67	5.00

Table 18: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the genders concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances			
Awareness_Avg			
Levene Statistic	df1	df2	Sig.
69.917	2	497	.000

Table 19: Homogeneity of variances

The above table of homogeneity of variances explains that the population variances for the groups are significantly different from each other as we have got the result of the Levene statistic is 69.917 at a p-value of 0.00. Since the p-value is less than 0.05 hence we will reject the null hypothesis. Now we can say that the population variances for each age group are not equal. After checking the test of homogeneity the next step is to check the ANOVA table.

## ANOVA

ANOVA					
Awareness_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.080	2	4.540	29.328	.000
Within Groups	76.933	497	.155		
Total	86.012	499			

Table 20: ANOVA

The above table of ANOVA explains the F statistics of 29.32 at a p-value of .00. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one marital status of the customers. For checking which group is showing significant difference we go ahead for post hoc test.

## Post Hoc Test

Multiple Comparisons						
Dependent Variable: Awareness_Avg						
Tukey HSD						
(I) Marital_Status		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Unmarried	Married	-.26677*	.03557	.000	-.3504	-.1831
	Separated/Divorcee	-.35495*	.15064	.049	-.7091	-.0008

Married	Unmarried	.26677*	.03557	.000	.1831	.3504
	Separated/Divorcee	-.08818	.15100	.829	-.4432	.2668
Separated/Divorcee	Unmarried	.35495*	.15064	.049	.0008	.7091
	Married	.08818	.15100	.829	-.2668	.4432
*. The mean difference is significant at the 0.05 level.						

Table 21: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results conclude that level of awareness of the married customer varies as compared to the level of awareness of Unmarried and separated/divorcee customers. The above table has shown a significant difference in results.

### Homogeneous subsets

Awareness_Avg			
Tukey HSD <sup>a,b</sup>			
Marital_Status	N	Subset for alpha = 0.05	
		1	2
Unmarried	268	4.3752	
Married	225	4.6420	4.6420
Separated/Divorcee	7		4.7302
Sig.		.084	.760
"Means for groups in homogeneous subsets are displayed."			
"a. Uses Harmonic Mean Sample Size = 19.863."			
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."			

Table 22: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the marital status groups of “Separated/Divorcee” and “Married” of organic customers have shown a statistically significant difference in the level of awareness as compared to the “Unmarried” groups of respondents. There exists a statistical significant difference between groups was calculated

by one-way ANOVA [ $F(2,497) = 29.328, p = 0.000$ ]. Tukey post hoc test has explained that the level of awareness among marital status groups of “Separated/Divorcee” and “Married” was statistically significantly higher as compared to the marital status group of “Unmarried” customers. Hence it is concluded that the null hypothesis ( $H_{04}$ ) was rejected and we can say that the level of awareness of customers varies as per their marital status.

**4.2.5 Occupation wise level of awareness:** The researcher has measured the level of awareness of the organic food customers according to their occupation. This study has checked that whether the occupation of the customer has some level of awareness or any particular occupation reflects any significant difference for level of awareness.

*Null hypothesis( $H_{05}$ ): There does not exist any significant difference among occupations of organic food customers towards the level of awareness.*

## Descriptives

Descriptives								
Awareness_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Salaried	220	4.6444	.14582	.00983	4.6251	4.6638	4.11	4.89
Self employed	104	4.4092	.50463	.04948	4.3111	4.5073	2.44	5.00
Retired	19	4.7018	.13381	.03070	4.6373	4.7662	4.44	5.00
Housewives	58	4.4885	.41519	.05452	4.3793	4.5977	3.00	5.00
Others	99	4.2435	.57356	.05764	4.1292	4.3579	1.67	5.00
Total	500	4.5002	.41517	.01857	4.4637	4.5367	1.67	5.00

Table 23: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the occupations concerning its standard deviation to understand how do various groups look like. Hence

the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances			
Awareness_Avg			
Levene Statistic	df1	df2	Sig.
37.344	4	495	.070

Table 24: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 37.344 at a p-value of 0.070. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each type of occupation are approximately equal. After checking test of homogeneity the next step is to check the ANOVA table.

### ANOVA

ANOVA					
Awareness_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.740	4	3.185	21.516	.000
Within Groups	73.272	495	.148		
Total	86.012	499			

Table 25: ANOVA

The above table of ANOVA explains the F statistics of 21.516 at a p-value of .00. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one type of occupation of the customers. For checking which group is showing significant difference we go ahead for post hoc test.



## Post Hoc Test

Multiple Comparisons						
Dependent Variable: Awareness_Avg						
Tukey HSD						
(I) Occupation		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Salaried	Self employed	.23526*	.04578	.000	.1099	.3606
	Retired	-.05731	.09200	.971	-.3092	.1946
	Housewives	.15594*	.05679	.049	.0005	.3114
	Others	.40090*	.04656	.000	.2734	.5284
Self employed	Salaried	-.23526*	.04578	.000	-.3606	-.1099
	Retired	-.29257*	.09599	.020	-.5554	-.0298
	Housewives	-.07932	.06305	.717	-.2519	.0933
	Others	.16564*	.05402	.019	.0177	.3135
Retired	Salaried	.05731	.09200	.971	-.1946	.3092
	Self employed	.29257*	.09599	.020	.0298	.5554
	Housewives	.21325	.10170	.223	-.0652	.4917
	Others	.45821*	.09636	.000	.1944	.7220
Housewives	Salaried	-.15594*	.05679	.049	-.3114	-.0005
	Self employed	.07932	.06305	.717	-.0933	.2519
	Retired	-.21325	.10170	.223	-.4917	.0652
	Others	.24496*	.06362	.001	.0708	.4191
Others	Salaried	-.40090*	.04656	.000	-.5284	-.2734
	Self employed	-.16564*	.05402	.019	-.3135	-.0177
	Retired	-.45821*	.09636	.000	-.7220	-.1944
	Housewives	-.24496*	.06362	.001	-.4191	-.0708

\*. The mean difference is significant at the 0.05 level.

Table 26: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results conclude that level of awareness of the salaried, self-employed and housewives have a significant difference as compared to that of retired and other occupation of customers.

### Homogeneous subsets

Awareness_Avg					
Tukey HSD <sup>a,b</sup>					
Occupation	N	Subset for alpha = 0.05			
		1	2	3	4
Others	99	4.2435			
Self employed	104	4.4092	4.4092		
Housewives	58		4.4885	4.4885	
Salaried	220			4.6444	4.6444
Retired	19				4.7018
Sig.		.174	.826	.227	.940
"Means for groups in homogeneous subsets are displayed."					
"a. Uses Harmonic Mean Sample Size = 53.115."					
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."					

Table 27: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the occupation groups “Salaried” and “Retired” of organic customers have shown a statistically significant difference in their level of awareness as compared to the “Housewives” and “Self-employed” groups of respondents. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(4,495) = 21.516, p = 0.000$ ]. Tukey post hoc test has explained that the level of awareness among the occupation groups of “Salaried” and “Retired” was statistically significantly higher as compared to the occupation groups of “Housewives” and “Self-employed” customers. Hence the null hypothesis ( $H_{05}$ ) got rejected and so we can conclude that the different occupation customers have a different level of awareness for organic foods.

**4.2.6 Household income-wise level of awareness:** The researcher has measured the level of awareness of the organic food customers according to their household income. This

study has checked that weather all household income groups customers have the same level of awareness or any particular group reflects any significant difference for level of awareness.

*Null hypothesis( $H_{06}$ ): The null hypothesis for this test assumed that there does not exist any significant difference among the household income brackets of organic food customers towards the level of awareness.*

### Descriptives

Descriptives								
Awareness_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below Rs 30,000 pm	161	4.3844	.50644	.03991	4.3056	4.4632	1.67	5.00
Rs 30,001 - Rs 60,000 pm	204	4.4602	.41375	.02897	4.4031	4.5174	2.67	4.89
Rs 60,001 - Rs 90,000 pm	91	4.7082	.13522	.01418	4.6800	4.7363	4.33	5.00
Rs 90,001 and above	44	4.6793	.13172	.01986	4.6392	4.7193	4.44	5.00
Total	500	4.5002	.41517	.01857	4.4637	4.5367	1.67	5.00

Table 28: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the household income brackets concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances
Awareness_Avg

Levene Statistic	df1	df2	Sig.
19.842	3	496	.200

Table 29: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 19.842 at a p-value of 0.20. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each household income group are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

## ANOVA

ANOVA					
Awareness_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.832	3	2.611	16.563	.000
Within Groups	78.180	496	.158		
Total	86.012	499			

Table 30: ANOVA

The above table of ANOVA explains the F statistics of 16.563 at a p-value of .00. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one household income group of the customers. For checking which group is showing significant difference we go ahead for post hoc test.

## Post Hoc Test

Multiple Comparisons
Dependent Variable: Awareness_Avg
Tukey HSD

(I) Household_Income		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Below Rs 30,000 pm	Rs 30,001 - Rs 60,000 pm	-.07584	.04185	.269	-.1837	.0321
	Rs 60,001 - Rs 90,000 pm	-.32378*	.05207	.000	-.4580	-.1896
	Rs 90,001 and above	-.29489*	.06754	.000	-.4690	-.1208
Rs 30,001 - Rs 60,000 pm	Below Rs 30,000 pm	.07584	.04185	.269	-.0321	.1837
	Rs 60,001 - Rs 90,000 pm	-.24794*	.05005	.000	-.3770	-.1189
	Rs 90,001 and above	-.21905*	.06599	.005	-.3892	-.0489
Rs 60,001 - Rs 90,000 pm	Below Rs 30,000 pm	.32378*	.05207	.000	.1896	.4580
	Rs 30,001 - Rs 60,000 pm	.24794*	.05005	.000	.1189	.3770
	Rs 90,001 and above	.02889	.07290	.979	-.1590	.2168
Rs 90,001 and above	Below Rs 30,000 pm	.29489*	.06754	.000	.1208	.4690
	Rs 30,001 - Rs 60,000 pm	.21905*	.06599	.005	.0489	.3892
	Rs 60,001 - Rs 90,000 pm	-.02889	.07290	.979	-.2168	.1590

\*. The mean difference is significant at the 0.05 level.

Table 31: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results conclude that level of awareness of “Rs. 60,001-Rs 90,000” and “Rs. 90,001 and above” household income groups of customers have a significant difference as compared to the “Rs 30,001-Rs 60,000” and “Below Rs 30,000” groups.

### Homogeneous subsets

Awareness_Avg			
Tukey HSD <sup>a,b</sup>			
Household_Income	N	Subset for alpha = 0.05	
		1	2
Below Rs 30,000 pm	161	4.3844	
Rs 30,001 - Rs 60,000 pm	204	4.4602	
Rs 90,001 and above	44		4.6793
Rs 60,001 - Rs 90,000 pm	91		4.7082
Sig.		.579	.962
"Means for groups in homogeneous subsets are displayed."			
"a. Uses Harmonic Mean Sample Size = 89.227."			
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."			

Table 32: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the household income groups “Rs. 90,001 and above” and “Rs. 60,001-Rs 90,000” of organic customers have shown a statistically significant difference in their level of awareness as compared to the “Rs 30,001-Rs 60,000” and “Below Rs 30,000” groups of respondents. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(4,495) = 16.563, p = 0.000$ ]. Tukey post hoc test has explained that the level of awareness among household income groups “Rs. 90,001 and above” and “Rs. 60,001-Rs 90,000” of organic customers was statistically significantly higher as compared to the household income groups of the “Rs 30,001-Rs 60,000” and “Below Rs 30,000” customers. Hence it is concluded that the null hypothesis ( $H_{06}$ ) got rejected and it can be concluded that there exists a difference in the level of awareness of customers according to their household income.

**4.2.7 Educational level-wise level of awareness:** The researcher has measured the level of awareness of the organic food customers according to their educational level. This study has checked that weather all the educational level of customer has the same level of awareness or any particular educational level reflects any significant difference for level of awareness.

*Null hypothesis (H<sub>07</sub>):* The null hypothesis for this test assumed that there does not exist any significant difference among the educational level of organic food customers towards the level of awareness.

### Descriptives

Descriptives								
Awareness_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below high school	17	4.3072	.74900	.18166	3.9221	4.6923	1.67	5.00
12 <sup>th</sup>	105	4.4127	.47932	.04678	4.3199	4.5055	2.78	5.00
Graduate	195	4.4991	.41488	.02971	4.4405	4.5577	2.44	5.00
PG and above	183	4.5695	.30950	.02288	4.5244	4.6147	3.00	5.00
Total	500	4.5002	.41517	.01857	4.4637	4.5367	1.67	5.00

Table 33: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the educational level concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances
Awareness_Avg

Levene Statistic	df1	df2	Sig.
7.252	3	496	.070

Table 34: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 7.252 at a p-value of 0.07. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each educational level are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

## ANOVA

ANOVA					
Awareness_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.317	3	.772	4.577	.004
Within Groups	83.695	496	.169		
Total	86.012	499			

Table 35: ANOVA

The above table of ANOVA explains the F statistics of 4.577 at a p-value of .004. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one educational level category of the customers. For checking which group is showing significant difference we go ahead for post hoc test.

## Post Hoc Test

Multiple Comparisons				
Dependent Variable: Awareness_Avg				
Tukey HSD				
(I) Education_Level		Std. Error	Sig.	95% Confidence Interval



		Mean Difference (I-J)			Lower Bound	Upper Bound
Below high school	12 <sup>th</sup>	-.10551	.10739	.760	-.3823	.1713
	Graduate	-.19196	.10388	.252	-.4597	.0758
	PG and above	-.26233	.10415	.058	-.5308	.0062
12 <sup>th</sup>	Below high school	.10551	.10739	.760	-.1713	.3823
	Graduate	-.08645	.04972	.305	-.2146	.0417
	PG and above	-.15682*	.05029	.010	-.2865	-.0272
Graduate	Below high school	.19196	.10388	.252	-.0758	.4597
	12 <sup>th</sup>	.08645	.04972	.305	-.0417	.2146
	PG and above	-.07038	.04228	.344	-.1794	.0386
PG and above	Below high school	.26233	.10415	.058	-.0062	.5308
	12 <sup>th</sup>	.15682*	.05029	.010	.0272	.2865
	Graduate	.07038	.04228	.344	-.0386	.1794
*. The mean difference is significant at the 0.05 level.						

Table 36: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results conclude that level of awareness of the educational level of “PG and above” and “12<sup>th</sup>” groups customers have a significant difference.

### Homogeneous subsets

Awareness_Avg			
Tukey HSD <sup>a,b</sup>			
Education_Level	N	Subset for alpha = 0.05	
		1	2
Below high school	17	4.3072	
12 <sup>th</sup>	105	4.4127	4.4127
Graduate	195	4.4991	4.4991
PG and above	183		4.5695

Sig.		.088	.220
"Means for groups in homogeneous subsets are displayed."			
"a. Uses Harmonic Mean Sample Size = 50.671."			
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."			

Table 37: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the level of education groups "PG and above" of organic customers have shown a statistically significant difference in their level of awareness as compared to the "12<sup>th</sup>" group of respondents. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(3,496) = 4.577, p = 0.004$ ]. Tukey's post hoc test has explained that the level of awareness among the educational level's group of "PG and above" of organic customers was statistically significantly higher as compared to the group of the "12<sup>th</sup>" level of education. Hence the null hypothesis ( $H_{07}$ ) got rejected and we can say that the level of awareness of customers varies according to their level of education.

**4.2.8 Family size-wise level of awareness:** The researcher has measured the level of awareness of the organic food customers according to their family size brackets. This study has checked that weather all family size group customer has the same level of awareness or any particular age group reflects any significant difference for level of awareness.

*Null hypothesis ( $H_{08}$ ): The null hypothesis for this test assumed that there does not exist any significant difference among the family size groups of organic customers towards the level of awareness.*

## Descriptives

Descriptives							
Awareness_Avg							
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	Minimum	Maximum

					Lower Bound	Upper Bound		
1 - 2 members	83	4.5489	.28794	.03161	4.4860	4.6117	3.33	4.89
3 - 4 members	272	4.4967	.45115	.02735	4.4429	4.5506	1.67	5.00
5 - 6 members	103	4.4574	.43489	.04285	4.3724	4.5424	3.00	5.00
7 and above members	42	4.5317	.32513	.05017	4.4304	4.6331	3.44	4.89
Total	500	4.5002	.41517	.01857	4.4637	4.5367	1.67	5.00

Table 38: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the family size groups concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances			
Awareness_Avg			
Levene Statistic	df1	df2	Sig.
3.289	3	496	.021

Table 39: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 3.289 at a p-value of 0.021. Since the p-value is less than 0.05 hence we will reject the null hypothesis. Hence we can say that the population variances for each age group are not equal. After checking the test of homogeneity the next step is to check the ANOVA table.

## ANOVA

ANOVA					
Awareness_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.430	3	.143	.831	.477
Within Groups	85.582	496	.173		
Total	86.012	499			

Table 40: ANOVA

The above table of ANOVA explains the F statistics of 0.831 at a p-value of .477. This result is significant and hence we cannot reject the null hypothesis and conclude that the above table provides substantial evidence that there does not exist any significant difference among the family size of the customers. Significance difference does not exist in these groups and we go ahead for post hoc test.

## Post Hoc Test

Multiple Comparisons						
Dependent Variable: Awareness_Avg						
Tukey HSD						
(I) Family_Size		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1 - 2 members	3 - 4 members	.05213	.05209	.749	-.0821	.1864
	5 - 6 members	.09147	.06127	.443	-.0665	.2494
	7 and above members	.01712	.07866	.996	-.1856	.2199
3 - 4 members	1 - 2 members	-.05213	.05209	.749	-.1864	.0821
	5 - 6 members	.03934	.04806	.846	-.0845	.1632
	7 and above members	-.03501	.06887	.957	-.2125	.1425
5 - 6 members	1 - 2 members	-.09147	.06127	.443	-.2494	.0665

	3 - 4 members	-.03934	.04806	.846	-.1632	.0845
	7 and above members	-.07436	.07605	.762	-.2704	.1217
7 and above members	1 - 2 members	-.01712	.07866	.996	-.2199	.1856
	3 - 4 members	.03501	.06887	.957	-.1425	.2125
	5 - 6 members	.07436	.07605	.762	-.1217	.2704

Table 41: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results conclude that there does not exist any group of the family size which shows a difference in the level of awareness. Thus the result was confirmed again.

### Homogeneous subsets

Awareness_Avg		
Tukey HSD <sup>a,b</sup>		
Family_Size	N	Subset for alpha = 0.05
		1
5 - 6 members	103	4.4574
3 - 4 members	272	4.4967
7 and above members	42	4.5317
1 - 2 members	83	4.5489
Sig.		.498
"Means for groups in homogeneous subsets are displayed."		
"a. Uses Harmonic Mean Sample Size = 81.230."		
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."		

Table 42: Homogeneous subset

The Tukey HSD or homogeneous subset table also reconfirms that there do not exist any family size groups of organic customers which has shown any statistically significant

different level of awareness. Since the null hypothesis ( $H_{08}$ ) did not get rejected, hence we conclude that the level of awareness of customers does not vary as per their size of families.

**4.2.9 District wise level of awareness:** The researcher has measured the level of awareness of the organic food customers according to the district they belong to. This study has checked that weather all-district group customer has the same level of awareness or any particular district group reflects any significant difference for level of awareness.

*Null hypothesis ( $H_{09}$ ):* The null hypothesis for this test assumed that there does not exist any significant difference among the organic food customer's district towards the level of awareness.

## Descriptives

Descriptives								
Awareness_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hoshiarpur	48	4.5671	.37539	.05418	4.4581	4.6761	3.00	5.00
Pathankot	40	4.5278	.33357	.05274	4.4211	4.6345	3.33	4.89
SAS Nagar	29	4.5862	.20118	.03736	4.5097	4.6627	3.89	4.89
Jalandhar	129	4.4841	.36239	.03191	4.4209	4.5472	3.00	4.89
Ludhiana	48	4.4676	.51810	.07478	4.3172	4.6180	2.44	5.00
Rup Nagar	26	4.5556	.25531	.05007	4.4524	4.6587	3.56	4.78
SBS Nagar	24	4.4815	.40748	.08318	4.3094	4.6535	3.00	4.89
FG Sahib	33	4.5556	.37680	.06559	4.4219	4.6892	2.67	4.89
Kapurthala	88	4.4773	.46661	.04974	4.3784	4.5761	2.78	5.00
Gurdaspur	35	4.3873	.64921	.10974	4.1643	4.6103	1.67	4.89
Total	500	4.5002	.41517	.01857	4.4637	4.5367	1.67	5.00

Table 43: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the districts concerning its standard deviation to understand how do various groups look like. Hence

the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances			
Awareness_Avg			
Levene Statistic	df1	df2	Sig.
3.325	9	490	.001

Table 44: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 3.325 at a p-value of 0.001. Since the p-value is less than 0.05 hence we will reject the null hypothesis. Hence we can say that the population variances for each district are not at all equal. After checking the test of homogeneity the next step is to check the ANOVA table.

### ANOVA

ANOVA					
Awareness_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.226	9	.136	.787	.628
Within Groups	84.786	490	.173		
Total	86.012	499			

Table 45: ANOVA

The above table of ANOVA explains the F statistics of 0.787 at a p-value of .628. This result is not significant and hence we cannot reject the null hypothesis and conclude that the above table provides substantial evidence that there does not exist any significant difference in any districts of the customers. For checking which group is showing significant difference we go ahead for post hoc test.

## Post Hoc Test

Multiple Comparisons						
Dependent Variable: Awareness_Avg						
Tukey HSD						
(I) District		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hoshiarpur	Pathankot	.03935	.08905	1.000	-.2437	.3224
	SAS Nagar	-.01908	.09783	1.000	-.3300	.2919
	Jalandhar	.08306	.07033	.975	-.1405	.3066
	Ludhiana	.09954	.08491	.976	-.1703	.3694
	Rup Nagar	.01157	.10129	1.000	-.3104	.3335
	SBS Nagar	.08565	.10399	.998	-.2449	.4162
	FG Sahib	.01157	.09407	1.000	-.2874	.3105
	Kapurthala	.08986	.07464	.972	-.1474	.3271
	Gurdaspur	.17983	.09246	.638	-.1140	.4737
Pathankot	Hoshiarpur	-.03935	.08905	1.000	-.3224	.2437
	SAS Nagar	-.05843	.10145	1.000	-.3809	.2640
	Jalandhar	.04371	.07528	1.000	-.1956	.2830
	Ludhiana	.06019	.08905	1.000	-.2229	.3432
	Rup Nagar	-.02778	.10479	1.000	-.3608	.3053
	SBS Nagar	.04630	.10740	1.000	-.2951	.3877
	FG Sahib	-.02778	.09782	1.000	-.3387	.2831
	Kapurthala	.05051	.07932	1.000	-.2016	.3026
	Gurdaspur	.14048	.09628	.907	-.1655	.4465
SAS Nagar	Hoshiarpur	.01908	.09783	1.000	-.2919	.3300
	Pathankot	.05843	.10145	1.000	-.2640	.3809
	Jalandhar	.10214	.08549	.973	-.1696	.3739
	Ludhiana	.11861	.09783	.970	-.1923	.4296
	Rup Nagar	.03065	.11235	1.000	-.3264	.3877
	SBS Nagar	.10473	.11479	.996	-.2601	.4696
	FG Sahib	.03065	.10588	1.000	-.3059	.3672
	Kapurthala	.10893	.08907	.968	-.1742	.3920
	Gurdaspur	.19891	.10445	.666	-.1331	.5309
Jalandhar	Hoshiarpur	-.08306	.07033	.975	-.3066	.1405
	Pathankot	-.04371	.07528	1.000	-.2830	.1956
	SAS Nagar	-.10214	.08549	.973	-.3739	.1696
	Ludhiana	.01647	.07033	1.000	-.2071	.2400



	Rup Nagar	-.07149	.08942	.999	-.3557	.2127
	SBS Nagar	.00258	.09247	1.000	-.2913	.2965
	FG Sahib	-.07149	.08115	.997	-.3294	.1864
	Kapurthala	.00679	.05751	1.000	-.1760	.1896
	Gurdaspur	.09676	.07928	.969	-.1552	.3487
Ludhiana	Hoshiarpur	-.09954	.08491	.976	-.3694	.1703
	Pathankot	-.06019	.08905	1.000	-.3432	.2229
	SAS Nagar	-.11861	.09783	.970	-.4296	.1923
	Jalandhar	-.01647	.07033	1.000	-.2400	.2071
	Rup Nagar	-.08796	.10129	.997	-.4099	.2340
	SBS Nagar	-.01389	.10399	1.000	-.3444	.3166
	FG Sahib	-.08796	.09407	.995	-.3869	.2110
	Kapurthala	-.00968	.07464	1.000	-.2469	.2276
	Gurdaspur	.08029	.09246	.997	-.2136	.3742
Rup Nagar	Hoshiarpur	-.01157	.10129	1.000	-.3335	.3104
	Pathankot	.02778	.10479	1.000	-.3053	.3608
	SAS Nagar	-.03065	.11235	1.000	-.3877	.3264
	Jalandhar	.07149	.08942	.999	-.2127	.3557
	Ludhiana	.08796	.10129	.997	-.2340	.4099
	SBS Nagar	.07407	.11775	1.000	-.3002	.4483
	FG Sahib	.00000	.10908	1.000	-.3467	.3467
	Kapurthala	.07828	.09285	.998	-.2168	.3734
	Gurdaspur	.16825	.10770	.866	-.1741	.5106
SBS Nagar	Hoshiarpur	-.08565	.10399	.998	-.4162	.2449
	Pathankot	-.04630	.10740	1.000	-.3877	.2951
	SAS Nagar	-.10473	.11479	.996	-.4696	.2601
	Jalandhar	-.00258	.09247	1.000	-.2965	.2913
	Ludhiana	.01389	.10399	1.000	-.3166	.3444
	Rup Nagar	-.07407	.11775	1.000	-.4483	.3002
	FG Sahib	-.07407	.11159	1.000	-.4288	.2806
	Kapurthala	.00421	.09579	1.000	-.3003	.3087
	Gurdaspur	.09418	.11024	.998	-.2562	.4446
FG Sahib	Hoshiarpur	-.01157	.09407	1.000	-.3105	.2874
	Pathankot	.02778	.09782	1.000	-.2831	.3387
	SAS Nagar	-.03065	.10588	1.000	-.3672	.3059
	Jalandhar	.07149	.08115	.997	-.1864	.3294
	Ludhiana	.08796	.09407	.995	-.2110	.3869
	Rup Nagar	.00000	.10908	1.000	-.3467	.3467
	SBS Nagar	.07407	.11159	1.000	-.2806	.4288

	Kapurthala	.07828	.08491	.996	-.1916	.3482
	Gurdaspur	.16825	.10093	.814	-.1525	.4891
Kapurthala	Hoshiarpur	-.08986	.07464	.972	-.3271	.1474
	Pathankot	-.05051	.07932	1.000	-.3026	.2016
	SAS Nagar	-.10893	.08907	.968	-.3920	.1742
	Jalandhar	-.00679	.05751	1.000	-.1896	.1760
	Ludhiana	.00968	.07464	1.000	-.2276	.2469
	Rup Nagar	-.07828	.09285	.998	-.3734	.2168
	SBS Nagar	-.00421	.09579	1.000	-.3087	.3003
	FG Sahib	-.07828	.08491	.996	-.3482	.1916
	Gurdaspur	.08997	.08313	.986	-.1742	.3542
	Gurdaspur	Hoshiarpur	-.17983	.09246	.638	-.4737
Pathankot		-.14048	.09628	.907	-.4465	.1655
SAS Nagar		-.19891	.10445	.666	-.5309	.1331
Jalandhar		-.09676	.07928	.969	-.3487	.1552
Ludhiana		-.08029	.09246	.997	-.3742	.2136
Rup Nagar		-.16825	.10770	.866	-.5106	.1741
SBS Nagar		-.09418	.11024	.998	-.4446	.2562
FG Sahib		-.16825	.10093	.814	-.4891	.1525
Kapurthala		-.08997	.08313	.986	-.3542	.1742

Table 46: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. No results in the above table have shown any level of significance hence researcher has concluded that the level of awareness does not vary according to the district of the customers they live.

### Homogeneous subsets

Awareness_Avg		
Tukey HSD <sup>a,b</sup>		
District	N	Subset for alpha = 0.05
		1
Gurdaspur	35	4.3873
Ludhiana	48	4.4676
Kapurthala	88	4.4773
SBS Nagar	24	4.4815

Jalandhar	129	4.4841
Pathankot	40	4.5278
FG Sahib	33	4.5556
Rup Nagar	26	4.5556
Hoshiarpur	48	4.5671
SAS Nagar	29	4.5862
Sig.		.528
"Means for groups in homogeneous subsets are displayed."		
"a. Uses Harmonic Mean Sample Size = 38.570."		
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."		

Table 47: Homogeneous subset

The Tukey HSD or homogeneous subset table has also reconfirmed that there does not exist any significant difference in the level of awareness according to their district. Hence the null hypothesis ( $H_{09}$ ) was not rejected and so it can be explained that the level of awareness does not vary according to the district of the organic food customers.

**4.2.10 Living environment wise level of awareness:** The researcher has measured the level of awareness of the organic food customers according to their living environment. This study has checked that whether all living environments of customers have the same level of awareness or any particular group reflects any significant difference for level of awareness.

*Null hypothesis ( $H_{010}$ ): The null hypothesis for this test assumed that there does not exist any significant difference among the organic food customer's living environment towards the level of awareness.*

## Descriptives

Descriptives							
Awareness_Avg							
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	Minimum	Maximum

					Lower Bound	Upper Bound		
Urban	326	4.4932	.44163	.02446	4.4451	4.5413	1.67	5.00
Sub-urban	126	4.5591	.33228	.02960	4.5005	4.6177	2.67	5.00
Rural	48	4.3935	.40806	.05890	4.2750	4.5120	3.11	4.89
Total	500	4.5002	.41517	.01857	4.4637	4.5367	1.67	5.00

Table 48: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the living environment concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances			
Awareness_Avg			
Levene Statistic	df1	df2	Sig.
4.713	2	497	.091

Table 49: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 4.713 at a p-value of 0.091. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each living environment of organic customers are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

### ANOVA

ANOVA					
Awareness_Avg					
	Sum of Squares	df	Mean Square	F	Sig.

Between Groups	.999	2	.500	2.921	.045
Within Groups	85.013	497	.171		
Total	86.012	499			

Table 50: ANOVA

The above table of ANOVA explains the F statistics of 2.921 at a p-value of .045. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one living environment group of the customers. For checking which group is showing significant difference we go ahead for post hoc test.

### Post Hoc Test

Multiple Comparisons						
Dependent Variable: Awareness_Avg						
Tukey HSD						
(I) Living_Environment	(J) Living_Environment	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Urban	Sub-urban	-0.0659	0.04339	0.283	-0.1679	0.0361
	Rural	0.09966	0.06394	0.265	-0.0506	0.25
Sub-urban	Urban	0.0659	0.04339	0.283	-0.0361	0.1679
	Rural	.16556*	0.07015	0.049	0.0007	0.3305
Rural	Urban	-0.09966	0.06394	0.265	-0.25	0.0506
	Sub-urban	-.16556*	0.07015	0.049	-0.3305	- 0.0007

\* The mean difference is significant at the 0.05 level.

Table 51: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results conclude that level of awareness of the rural and sub-urban customers has a significant difference.

### Homogeneous subsets

Awareness_Avg			
Tukey HSD <sup>a,b</sup>			
Living_Environment	N	Subset for alpha = 0.05	
		1	2
Rural	48	4.3935	
Urban	326	4.4932	4.4932
Sub-urban	126		4.5591
Sig.		.224	.518
"Means for groups in homogeneous subsets are displayed."			
"a. Uses Harmonic Mean Sample Size = 94.229."			
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."			

Table 52: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the living environment group of “Sub-urban” organic customers has shown a statistically significant difference in their level of awareness as compared to the “Rural” customers. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(2,497) = 2.921, p = 0.045$ ]. Tukey post hoc test has explained that the level of awareness among living environment groups of “Sub-urban” organic customers was statistically significantly higher as compared to the group of the “Rural” organic customers. Hence the null hypothesis ( $H_{010}$ ) was rejected so we can say that the level of awareness varies as per the living environment of the customers.

This study has checked the level of awareness of customers towards organic food. On one side the first hypothesis was tested to know the level of awareness using a t-test and it was found that there exists a varied level of awareness among organic food customers. The t-test has given statistically significant results in establishing the fact that the level of awareness of customers does vary. On the other side hypotheses,  $H_{02}$  to  $H_{010}$  was used to check the level of awareness among customers as per their demographic characteristics,

where the results have proved that most of the demographic variables have shown the difference in the level of awareness. But at the same time, there are some demographic variables like gender, family size, and district of the customer which did not justify the difference in the level of awareness. The results say the level of awareness does not vary due to the gender and size of the family, it also proved that the level of awareness does not vary due to the district of the organic food customer. Whereas, the test has statistically proved that the level of awareness varies due to their age groups, marital status, occupation, household income, educational level, and the living environment of the customers. Hence this study concludes that the level of awareness of customers towards organic food varies. All the above results and discussion has justified the first objective of this research.

#### **4.3 Structural Equation Modelling**

In a process to achieve the 2<sup>nd</sup> and 3<sup>rd</sup> objectives it was studied that the hypothesis demands a statistical test which can bring the results in the expected direction. These two research objectives, their respective hypotheses, nature of data, and conceptual model has proposed to use Structural Equation Modelling.

Hair et al. (2014) discussed and explained in detail about the usage of Co-Variance based Structural Equation Modelling (AMOS) and Partial Least Squares based Structural Equation Modelling (PLS-SEM). They established the concept of using these methods based upon the need of the study. This study explains that “Both methods differ from a statistical point of view, so neither of the techniques is generally superior to the other and neither of them is appropriate for all situations. In general, the strengths of PLS-SEM are CB-SEM’s weaknesses, and vice-versa. Researchers must understand the different applications each approach was developed for and use them accordingly.”

Ringle et al. (2012) have explained in their study that “The partial least squares structural equation modeling (PLS-SEM) is a method of structural equation modeling which allows estimating complex cause-effect relationship models with latent variables.”

Multivariate data analysis can be done using Structural Equation Modelling (SEM). It supports testing a linear model as well as the additive causal model too (Haenlein and Kaplan, 2004). It is a statistical method used to test the hypothesis based on some structural theory. It emphasizes two important aspects of data analysis: firstly, it establishes the causal relationship with the structural equation and secondly, the pictorial representation of conceptual structural models. The model hypothesized is then statistically tested as the variables identified. In social sciences, the conceptual model cannot be tested directly hence we take help from latent variables. The variables which cannot be observed are generally linked to the one which can be measured. The measurement of the construct is possible through this process. SEM helps in the measurement of indicators of the underlying constructs. It also helps in differentiating the latent variables which are exogenous from the other endogenous variables. The variables which are responsible for creating fluctuations in the value of other variables are known as exogenous latent variables which are also known as independent variables, whereas the endogenous latent variables are those dependent variables that are getting influenced by it. This study calculates the effect of one latent variable on the other while checking the causal model. The proposed model in this study is a combination of measurement and structural model whereas in the case measurement model the latent variables can be linked with the observed measures and in the case of the structural model the variables are linked among themselves (Byrne, 2010).

**4.4 Specification of Model:** Model specification is important for every study, this study is meant for building inner and outer model. The former one is crucial for this study and it is also known as a structural model that establishes the relationship between constructs based upon the theory which is conceptualized in the study (Hair et al., 2014). The outer model which is also known as the measurement model establishes the relationship between items and their respective constructs conceptualized in the study. Once the inner model helps in establishing the relationship between the constructs, the role of the outer model comes into the picture and it helps in establishing the relationship between the items and in their respective constructs (Diamantopoulos et al., 2012; Sarstedt and Wilczynski, 2009).



#### **4.5 Key Factors affecting Consumers' Intention**

This research has focused on the important factors which can affect the intention to buy organic food consumers, these factors were immersed from the various components of this study. While doing a review of literature for this doctoral study researcher has come across various variables which has given a direction towards understanding the key factors influencing customer. These factors were further reflected in the study while formulating hypotheses and conceptualizing a research model. This conceptual research model and hypothesis has given a direction to the researcher for creating a measurement scale. All these aspects of research along with collected data analysis has given some key factors for this study. These key factors are explained below with the results of all the factors affecting the intention to buy.

##### **4.5.1 Outer Model Specification for Intention to Buy:**

An understanding inner and outer model becomes crucial, after developing both the models for analysing the measurement model researcher needs to check the algorithm of PLS-SEM by running it in the next step. This step was important in terms of reliability and validity as both of the things were got established in this step only.

- a) Checking composite reliability as well as the internal consistency of all the studied constructs becomes important first in this process (Henseler et al., 2012). The below-mentioned table has explained the composite reliability values of all the explained constructs in this study, at the same time internal consistency was checked by the observed values of Cronbachs Alpha mentioned. Since the values of internal consistency and composite reliability of all the studied constructs apart from "Lifestyle" were found above the level of 0.70 hence we can say that the model has been established. At the same time, it was found that the internal consistency of Revealed Information was found very strong with a value of 0.80, while the values of Trust and Attitude are also found strong with a value of above 0.79. Even the value of Lifestyle was not that weak as it has shown a value of 0.65.

b) Internal reliability's establishment for all the constructs moves the study further for the second step which is checking and establishment validities of all the involved constructs. Validities of the involved constructs can be measured by convergent validity and discriminant validity. The convergent validity can be measured by the values of the Average Variance Extracted (AVE) of the constructs. Hair et al. (2014) discussed that the acceptable value of AVE should be above 0.50 for all the constructs involved in the study. As all the values of AVE are in an acceptable zone in the below-mentioned table, so the convergent validity of all the constructs was established.

#### 4.5.2 Measurement of Reliability and Consistency

	AVE	Composite Reliability	R Square	Cronbach's Alpha
ATT	0.62651	0.86962		0.79903
AWR	0.59268	0.85296		0.76986
LFSTYL	0.58161	0.80573		0.65429
PBC	0.62649	0.83338		0.70714
PINFO	0.53674	0.85249		0.78453
PINT	0.61349	0.86355	0.502252	0.78876
RINFO	0.63117	0.87235		0.80466
SBNM	0.56201	0.83658		0.74071
TRST	0.61749	0.86576	0.36845	0.79289

Table 53: Reliability and Consistency

The AVE of Attitude and Perceived Behavioural Control was found highest with the respective values of 0.6265 and 0.6264, while the lowest score was for Perceived information with a value of 0.5367. Hence the results have checked and established the validities of all the discussed constructs.

#### 4.5.3 Discriminant Validity

Analysing discriminant validity becomes important while using PLS-SEM as it ensures that the conceptualised model shows the strongest relationship with its indicators as compared to the other constructs (Hair et al., 2017). The value of Attitude with Attitude is 0.79 in the discriminant validity table. This value should be less than 1 but it should be

higher than the values of all other constructs of the same column. As in the case of Awareness with Awareness this value is 0.76 and it is the highest value as compared to all other below mentioned values of the construct “Awareness”. Hence this table has given a result which says that the respective constructs are having the strongest relationship with their indicators as compared to the relation with other constructs in the path model.

### **Discriminant Validity**

	ATT	AWR	LFSTYL	PBC	PINFO	PINT	RINFO	SBNM	TRST
ATT	<b>0.79152</b>								
AWR	0.63382	<b>0.76986</b>							
LFSTYL	0.46874	0.37664	<b>0.76263</b>						
PBC	0.44259	0.41926	0.42443	<b>0.79151</b>					
PINFO	0.63880	0.57324	0.54437	0.47216	<b>0.73263</b>				
PINT	0.59626	0.51861	0.53061	0.46034	0.63168	<b>0.78326</b>			
RINFO	0.38447	0.36851	0.46356	0.39780	0.52190	0.47600	<b>0.79446</b>		
SBNM	0.50115	0.42312	0.46031	0.44420	0.51157	0.48715	0.44379	<b>0.74967</b>	
TRST	0.41581	0.41907	0.41895	0.41018	0.48171	0.56295	0.52952	0.42229	<b>0.78581</b>

Table 54: Discriminant Validity

After discussing the discriminant validities next come is the measurement model, the PLS-SEM bootstrapping gives this measurement model.

#### **4.5.4 Measurement Model for Intention to Buy**

All 9 constructs of this study have shown a relationship in the form of a measurement model. In PLS-SEM there are two types of the measurement model, both the models are used for different purposes. The reflective model is a result of indicators that are formed by their respective constructs and at the same time, the formative model is the result of measured variables which happens to the reason of latent variables (Afthanorhan, 2013).

## Measurement Model

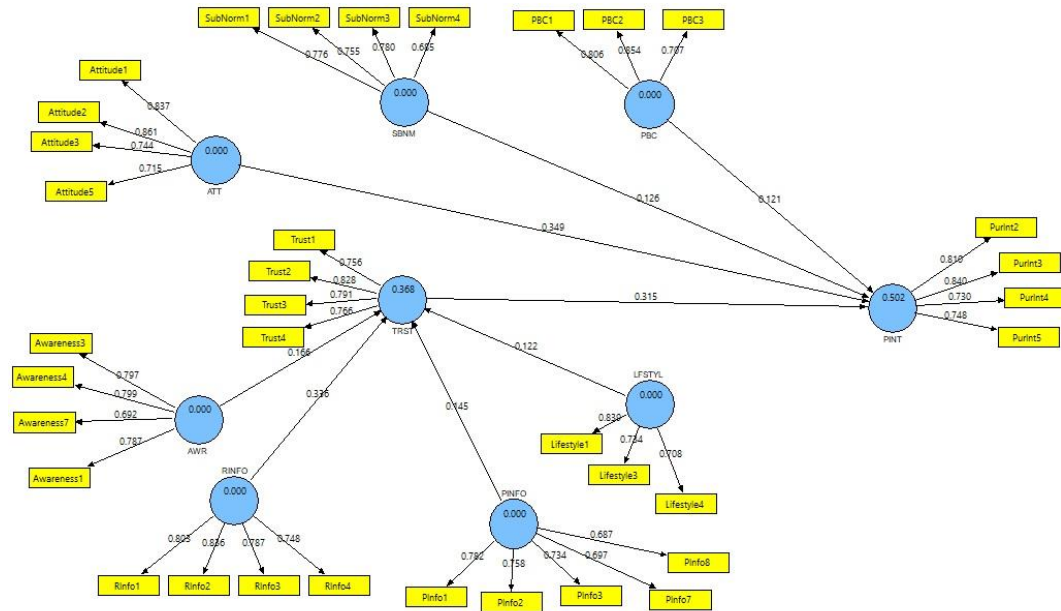


Figure 5: Measurement Model

### 4.5.5 Outer Loading of Purchase Intention

In a reflective measurement model of PLS-SEM it is important to understand the role of estimated relationship (Wong, 2013). This estimation is measured with the help of outer loadings in such models. The relationship displayed with the help of arrows from the latent variables to its indicators in the measurement model figure explains the outer loadings. These outer loadings can be understood as the determination of the contribution of the measurement items towards its constructs (Wong, 2016). The outer loading is reported from the values of the table given below, the detailed variable wise values are reported in the below-mentioned table where the outer loading value more than 0.70 is considered to be highly satisfactory and any value which is higher than 0.50 is considered to be at an acceptable level but we reject the outer loadings with values less than 0.50 (Khoi and Van Tuan, 2018). In this table all other outer loading values are highly satisfactory apart from 7<sup>th</sup> statement of the construct Awareness, 7<sup>th</sup> and 8<sup>th</sup> measurement item of Perceived Information and 4<sup>th</sup> statement of subjective norms construct as their values are little than

0.70 but higher than 0.68. Hence it has been proved that all the values of outer loading are in the range of highly satisfactory limits.

### Outer Loading for Purchase Intention

	ATT	AWR	LFSTYL	PBC	PINFO	RINFO	SBNM	TRST	PINT
Attitude1	0.8371								
Attitude2	0.8606								
Attitude3	0.7439								
Attitude5	0.715								
Awareness1		0.7872							
Awareness3		0.7967							
Awareness4		0.7986							
Awareness7		0.6918							
Lifestyle1			0.8393						
Lifestyle3			0.7338						
Lifestyle4			0.7085						
PBC1				0.8062					
PBC2				0.8541					
PBC3				0.7071					
PInfo1					0.7816				
PInfo2					0.7583				
PInfo3					0.7344				
PInfo7					0.6973				
PInfo8					0.6872				
RInfo1						0.8034			
RInfo2						0.8364			
RInfo3						0.7875			
RInfo4						0.7481			
SubNorm1							0.7759		
SubNorm2							0.7546		
SubNorm3							0.7796		
SubNorm4							0.6847		
Trust1								0.7558	
Trust2								0.8282	
Trust3								0.7909	
Trust4								0.7664	
PurInt2									0.8097

PurInt3									0.8402
PurInt4									0.7299
PurInt5									0.7481

Table 55: Outer Loading for Purchase Intention

**4.5.6 Evaluation of Inner Model:** Establishing the validity and reliability of the outer model is important, so it is also important to check and establish the relationship formed through the hypothesis for the inner model. The model shall be checked by assessment of path coefficients, coefficient of determination ( $R^2$ ) and cross-validated redundancy ( $Q^2$ ). This study has checked the collinearity issues among the constructs as it may arise while applying the test. The value of tolerance was needed to be checked as it should be more than 0.20 and at the same time, the value of VIF should be less than 5. In this study both the below-mentioned tables had reported these values in this limit only and hence no collinearity issues were found.

#### Tolerance and VIF Values for Collinearity

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.373E-05	.036		.000	1.000		
	AWR	.166	.044	.166	3.790	.000	.661	1.512
	LFSTYL	.122	.044	.122	2.759	.006	.656	1.524
	PINFO	.145	.051	.145	2.858	.004	.499	2.005
	RINFO	.336	.043	.336	7.752	.000	.678	1.476

a. Dependent Variable: TRST

Table 56 (a): Tolerance and VIF Values for Collinearity

The above table showing the relationship between independent variables like Awareness, Lifestyle, Perceived Information, and Revealed Information with the dependent variables Trust of the organic food customers. The values of VIF for all of these independent

variables are less than 5 and the values of Tolerance for all respective independent variables are also more than 0.20.

### Tolerance and VIF Values for Collinearity

Model		Coefficients <sup>a</sup>						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.073E-06	.032		.000	1.000		
	SBNM	.126	.039	.126	3.209	.001	.657	1.521
	PBC	.121	.038	.121	3.198	.001	.704	1.421
	TRST	.315	.037	.315	8.498	.000	.730	1.370
	ATT	.349	.039	.349	8.945	.000	.662	1.512

a. Dependent Variable: PINT

Table 56 (b): Tolerance and VIF Values for Collinearity

The value of tolerance in this second model is also more than 0.20 for all respective independent variables like Subjective norms, Perceived Behavioural Control, Trust, and Attitude. At the same time, the values of VIF is also less than 5 for all of these variables.

**Coefficient of Determination ( $R^2$ ):** The degree of predictivity of the model can be represented by the value of  $R^2$ . The combined effect of exogenous variables on the endogenous variable(s) can be measured by the value of  $R^2$ . The various discipline of social sciences uses the value of  $R^2$  as per their requirement and it varies, there exists a rule of thumb which establishes its value at the levels of 0.75, 0.50 and 0.25 as substantial, moderate and weak respectively. Hair et al. (2011) explained these predictive accuracy level and it is getting established by various other studies too. The effect of exogenous variables on endogenous variables with the help of  $R^2$  in this study is at the level of 0.37 to 0.50 which says that the predictive accuracy in all the two relations is weak and moderate.

**Cross-validated redundancy ( $Q^2$ ):** Predictive relevance can be measured with the help of the value of  $Q^2$ . The sample reuse technique can be formed with the help of the value of  $Q^2$ . If the difference between the values of predicted and the observed value is small, then

it is assumed a higher predictive accuracy of the model. The larger the value of  $Q^2$  of an endogenous construct or the higher the number from Zero signifies the path model's predictive relevancy for that respective construct. This study has also proved that the  $Q^2$  value of all the endogenous constructs is more than zero and hence the inner model's predictive relevance was established (Ringle et al., 2012).

Hence the value of  $R^2$  and the value  $Q^2$  has justified that the model.

**Values of  $R^2$  (Co-efficient of Determination) and  $Q^2$  (Predictive Relevance)**

<b>Total</b>	<b><math>R^2</math></b>	<b>SSO</b>	<b>SSE</b>	<b>1-SSE/SSO</b>	<b>Predictive Relevance</b>
<b>PINT</b>	0.502252	2000	1393.51	0.3032	Medium Predictive Relevance
<b>TRST</b>	0.36845	2000	1549.183	0.2254	Medium Predictive Relevance

Table 57: Values of  $R^2$  (Coefficient of Determination) and  $Q^2$  (Predictive Relevance)

The above table has explained the two dependent variables value of  $R^2$ , the value of  $R^2$  explains that the contribution of their respective independent variables towards the formation of their dependent variable. In this model, the first model of independent variables impact was seen in the formation of trust with the  $R^2$  value of 0.37 which means the antecedents of trust are explaining around 37% of the trust. Hence this model was termed as explaining medium predictive relevance relationship. The second model was formed by the antecedents of purchase intention, these factors were explained by an  $R^2$  value of 0.50, which means these factors had contributed around 50% formation of an intention to buy. Hence this relationship was also mentioned moderate in this table. Hence all the two relationships have shown medium predictive relevance.



## T statistics for Hypothesis testing (Structure Equation Modelling)

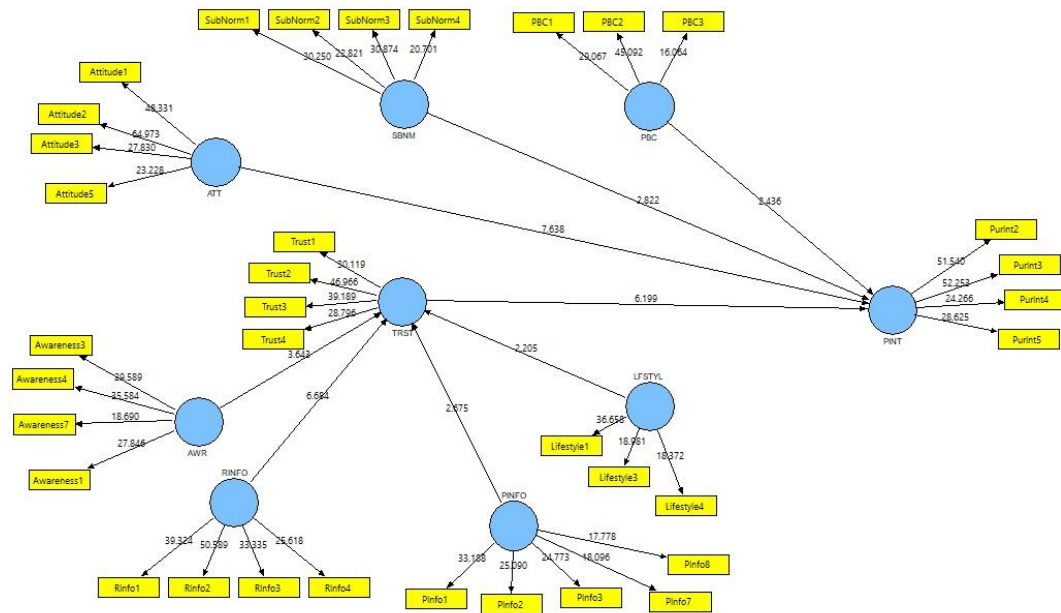


Figure 6: T Statistics for Hypothesis Testing (Structure Equation Modelling)

**4.5.7 Path Co-efficient:** Estimates (T-Statistics) need to be studied and measured while running the PLS model. These T-Stats become important as their values tell the significance of the relationship which is seen in the endogenous and exogenous constructs. It can also be understood as the significance of the hypothesis assumed for the conceptualized relationship of the study. These values of the estimates need to more than the mark of 1.96 to prove the significance of the relationship between the constructs at the confidence level of 95%. While at the same time if the value of t-stats is more than 1.645 determines that the conceptual model is proved significant at the confidence level of 90%. The below-mentioned table reported the significant relationship between all the hypotheses conceptualized earlier in this study.

### Path Co-efficient (Path Model)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics ((O/STERR))	Relationship
ATT -> PINT	0.3487	0.3493	0.0453	0.0453	7.6939	Significant

AWR -> TRST	0.1664	0.1643	0.0479	0.0479	3.4744	Significant
LFSTYL -> TRST	0.1217	0.1214	0.0555	0.0555	2.1915	Significant
PBC -> PINT	0.1209	0.1224	0.0502	0.0502	2.4105	Significant
PINFO -> TRST	0.1445	0.1481	0.0541	0.0541	2.6691	Significant
RINFO -> TRST	0.3364	0.3377	0.0489	0.0489	6.8748	Significant
SBNM -> PINT	0.1255	0.129	0.0462	0.0462	2.7171	Significant
TRST -> PINT	0.3154	0.3113	0.0521	0.0521	6.0491	Significant

ATT: Attitude, PINT: Purchase Intention, AWR: Awareness, TRST: Trust, LFSTYL: Lifestyle, PBC: Perceived Behavior Control, PINFO: Perceived Information, RINFO: Revealed Information, SBNM: Subjective Norm.

Table 58: Path Co-efficient (Path Model)

In alternate hypothesis formulation this study has assumed that there will be a significant relationship between the attitude and the purchase intention towards organic food. The above table explains that the T-Statistics value of the relationship between attitude and Purchase intention has come to 7.69 which is more than the mark of 1.96. Hence it proves that this relationship is significant and very strong. Hence the result has rejected the null hypothesis  $H_{016}$ . Building attitude is one of the keys and decisional factors in terms of the intention of buying organic foods. Organic food user's awareness was checked initially in the study and the hypothesis formulation process tried testing the relationship of awareness on the trust build by the customer of organic food. The results in the above table prove that this relationship is significant with a value of 3.47 which is far above the expected level of 1.96. This result has rejected the null hypothesis  $H_{011}$ . Hence the result establishes that the customer level of awareness has a significant impact on the development of trust towards organic food.

Customers these days are following a different lifestyle as compared to the earlier days and this study has tried establishing the fact that the current lifestyle of the customer will influence the trust development towards organic food. This hypothesis is established with the results shown in the above table that the lifestyle has impacted trust with the value of 2.19 which is above the accepted level. Hence the null hypothesis  $H_{014}$  got rejected. Not only attitude has influenced the purchase intention but perceived behavioral control was also hypothesised to influence intention to buy through an alternate hypothesis. It was

assumed earlier that the organic customer's PBC will impact purchase intention. The results of this study have proved that there exists a significant relationship between perceived behavioural control and purchase intention with a T-value of 2.41 mentioned in the above table. Hence the null hypothesis  $H_{018}$  got rejected significantly.

The customer perceives a lot of things that can be based on either fact or their perception. It was assumed earlier that the perceived information gathered by the organic customer about this food category will positively impact the trust of the customer. It is now proved in the above table that perceived information has influenced the trust-building among customers with a value of 2.67 which is higher than the accepted level of 1.96. This result has rejected the null hypothesis  $H_{013}$  significantly. The information shared on the packaging of the organic foods is termed as revealed information. This information generally includes ingredients or food contents. It was assumed in this study that revealed information will affect the trust-building among customers of organic food. It is mentioned in the results shown in the above table that revealed information is having a significant impact on trust-building exercise. The value of this relationship stands at 6.87 which is much higher than the value of 1.96. Hence the assumed null hypothesis  $H_{012}$  got rejected. At the same time, it was also hypothesized that the subjective norms will influence purchase intention and the results have also shown that with a value of 2.72 which is higher than 1.96. So we can reject the null hypothesis  $H_{017}$  and it got established that the subjective norms influence the purchase intention of customers.

The researcher has found that all the constructs which were forming trust-building for the customer were significantly affecting trust. Hence it was alternatively hypothesised that trust will be going forward positively impact purchase intention. Results have favoured in this relationship too and trust is positively impacting purchase intention towards organic food with a value of 6.04 which is higher than the given value of 1.96. So, we can reject the null hypothesis  $H_{015}$  and accept the alternate hypothesis and can conclude that trust affects intention to buy.

Hence all the 8 hypotheses assumed earlier in the causal model are found significant. It is now proved in Table 14 that at one side attitude, subjective norms, and perceived behavioural control have positively impacted purchase intention and on the other side trust has positively impacted intention to buy. Whereas trust-building of the customer was formed by the awareness level of the customer, their lifestyle, perceived information, and revealed information. Hence the null hypothesis from  $H_{011}$  to  $H_{018}$  got rejected by the path co-efficient table using T-statistics. So, it was concluded that all of these eight relationships were found significant.

Hence the PLS-SEM results have shown a strong relationship with the attitude of customers towards the intention to buy organic food. It has also shown in the results that the role of revealed information on food packaging is influential in building trust among customers. Whereas the antecedents forming trust in this study have a good role in the formation of purchase intention towards organic food. In conclusion we can say that this study has discussed eight constructs that influenced customer intention to buy. The effect of all these factors is also discussed using the statistical tool. These factors have shown a varied level of influence on purchase intention but all these factors were found statistically significant. Thus the 2<sup>nd</sup> research objective of this study is achieved and this objective has helped the researcher in studying all the key factors influencing the intention to buy among organic food customers.

#### **4.6 Decisional Factors Driving Actual Buying Behaviour**

This research work has studied various factors influencing purchase intention. Understanding intention to buy will further help in analysing the actual buying behaviour of the customers looking for organic foods. This part of data analysis has tried studying the factors which can help the customer in deciding on buying organic food. This part will also predict a relationship among the factors responsible for actual buying behaviour towards organic food. This portion of data analysis will start with the outer model specification.

#### **4.6.1 Outer Model Specification for Actual Buying Behaviour:**

In this part of the data analysis process understanding the inner and outer model becomes crucial, after developing both the models for analysing the measurement model researcher needs to check the algorithm of PLS-SEM by running it. This step was important in terms of reliability and validity as both of the things were got established in this step only.

- a) Checking composite reliability as well as the internal consistency of all the studied constructs becomes important first in this process (Henseler et al., 2012). The below-mentioned table has explained the composite reliability values of all the explained constructs in this study, at the same time internal consistency was checked by the observed values of Cronbachs Alpha mentioned. Since the values of internal consistency and composite reliability of all the studied constructs apart from “Lifestyle” were found above the level of 0.70 hence we can say that the model has been established.
- b) Internal reliability’s establishment for all the constructs moves the study further for the second step which is checking and establishment validities of all the involved constructs. Validities of the involved constructs can be measured by convergent validity and discriminant validity. The convergent validity can be measured by the values of the Average Variance Extracted (AVE) of the constructs. Hair et al. (2014) discussed that the acceptable value of AVE should be above 0.50 for all the constructs involved in the study. As all the values of AVE are in an acceptable zone in the below-mentioned table, so the convergent validity of all the constructs are established. At the same time the discriminant validities of all the constructs are analysed separately below.

## Measurement Model for Actual Buying Behaviour

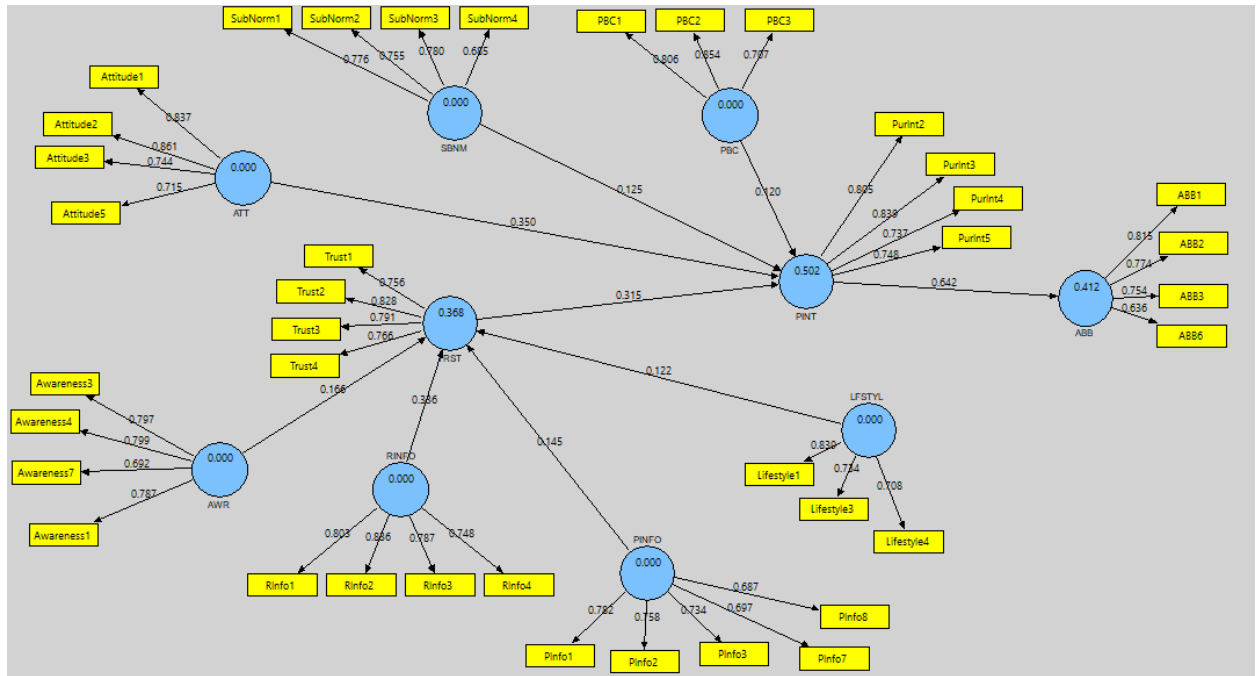


Figure 7: Measurement Model

The above figure of measurement model shows the relationship of Attitude, Subjective Norms and Perceived Behavioural Control on the Purchase Intention towards organic food, while it also reflects the impact of Awareness, Perceived Information, Revealed Information and Lifestyle on the Trust building of the customer, whereas Trust is effecting Intention to Buy and Purchase Intention has an impact on the Actual Buying Behaviour.

### 4.6.2 Measurement Scale and Statistics Summary

	Items	Outer Loadings	Average Variance Extracted	Composite Reliability	Cronbachs Alpha
ABB	ABB1	0.8147	0.559	0.8341	0.7337
	ABB2	0.7738			
	ABB3	0.7539			
	ABB6	0.6358			
ATT	Att1	0.8371	0.627	0.8696	0.799
	Att2	0.8607			
	Att3	0.7442			

	Att5	0.7147			
AWR	Awr1	0.7872	0.593	0.853	0.7699
	Awr3	0.7967			
	Awr4	0.7986			
	Awr7	0.6918			
LFSTYL	Lifest1	0.8393	0.582	0.8057	0.6543
	Lifest3	0.7338			
	Lifest4	0.7085			
PBC	PBC1	0.8062	0.627	0.8334	0.7071
	PBC2	0.8543			
	PBC3	0.7068			
PINFO	PInfo1	0.7816	0.537	0.8525	0.7845
	PInfo2	0.7583			
	PInfo3	0.7344			
	PInfo7	0.6973			
	PInfo8	0.6872			
PINT	PInt2	0.805	0.614	0.8636	0.7888
	PInt3	0.8386			
	PInt4	0.737			
	PInt5	0.7481			
RINFO	RInfo1	0.8034	0.631	0.8724	0.8047
	RInfo2	0.8364			
	RInfo3	0.7875			
	RInfo4	0.748			
SBNM	SbNm1	0.7759	0.562	0.8366	0.7407
	SbNm2	0.7548			
	SbNm3	0.7796			
	SbNm4	0.6846			
TRST	Trst1	0.7558	0.618	0.8658	0.7929
	Trst2	0.8282			
	Trst3	0.7909			
	Trst4	0.7663			

Table 59: Measurement Scale and Statistics Summary

### 4.6.3 Outer Loadings for Actual Buying Behaviour

The outer loading is reported from the values of the table given below, the detailed variable wise values are reported in this table and all the values are in discussed acceptable limits. (Khoi and Van Tuan, 2018).

In this reflective measurement model of PLS-SEM, it is important to understand the estimated relationship (Wong, 2013). These outer loadings can be understood as the determination of the contribution of the measurement items towards its constructs (Wong, 2016). The outer loading is reported from the values of the table given below, the detailed variable wise values are reported in the below-mentioned table where the outer loading value more than 0.70 is considered to be highly satisfactory and any value which is higher than 0.50 is considered to be at an acceptable level and we reject the outer loadings with values less than 0.50 (Khoi and Van Tuan, 2018). In this table majority of the outer loading, values are highly satisfactory apart from 6<sup>th</sup> statement of the construct actual buying behaviour, 7<sup>th</sup> measurement item of awareness, the 7<sup>th</sup> and 8<sup>th</sup> measurement item statement of perceived information are also having less value and 4<sup>th</sup> statement of subjective norms construct is also less but all of these statements have an acceptable level of value, as their values are little than 0.70 but higher than 0.68. Hence it has been proved that all the values of outer loading are in the range of highly satisfactory limits.

#### Outer Loadings

	ABB	ATT	AWR	LFSTY L	PBC	PINF O	PINT	RINF O	SBN M	TRST
ABB1	0.814 7									
ABB2	0.773 8									
ABB3	0.753 9									
ABB6	0.635 8									
Attitude1		0.837 1								
Attitude2		0.860 7								



Attitude3		0.744 2							
Attitude5		0.714 7							
Awareness 1			0.787 2						
Awareness 3			0.796 7						
Awareness 4			0.798 6						
Awareness 7			0.691 8						
Lifestyle1				0.8393					
Lifestyle3				0.7338					
Lifestyle4				0.7085					
PBC1					0.806 2				
PBC2					0.854 3				
PBC3					0.706 8				
PInfo1						0.781 6			
PInfo2						0.758 3			
PInfo3						0.734 4			
PInfo7						0.697 3			
PInfo8						0.687 2			
PurInt2							0.805		
PurInt3							0.838 6		
PurInt4							0.737		
PurInt5							0.748 1		
RInfo1								0.8034	
RInfo2								0.8364	
RInfo3								0.7875	
RInfo4								0.748	
SubNorm1									0.775 9
SubNorm2									0.754 8
SubNorm3									0.779 6
SubNorm4									0.684 6

Trust1										0.755 8
Trust2										0.828 2
Trust3										0.790 9
Trust4										0.766 3

Table 60: Outer Loadings for ABB

#### 4.6.4 Discriminant Validity

As the convergent validity of all the constructs is important but at the same time researcher needs to establish the distinction between one construct from another, hence comes the role of discriminant validity which establishes this distinction empirically. The previous studies have explained a popular method of checking discriminant validity as explained by Fornell and Larcker (1981). The value of discriminant validity can be checked in the below-mentioned table where the AVE values of all the constructs are mentioned separately. This value can be established in any study if the AVE value of construct with itself is higher than the highest squared correlation with all other constructs involved. This highlighted diagonal value can be checked in the below mention table (Homer and Kahle, 1988).

#### Discriminant Validity

	ABB	ATT	AWR	LFSTYL	PBC	PINFO	PINT	RINFO	SBNM	TRST
ABB	0.7475									
ATT	0.5505	0.7915								
AWR	0.4610	0.6338	0.7699							
LFSTYL	0.5589	0.4687	0.3766	0.7626						
PBC	0.4553	0.4426	0.4193	0.4245	0.7915					
PINFO	0.6045	0.6388	0.5732	0.5444	0.4722	0.7326				
PINT	0.6420	0.5964	0.5192	0.5301	0.4597	0.6310	0.7833			
RINFO	0.4875	0.3844	0.3685	0.4636	0.3977	0.5219	0.4750	0.7945		
SBNM	0.5913	0.5011	0.4231	0.4603	0.4441	0.5116	0.4865	0.4438	0.7497	
TRST	0.4936	0.4158	0.4191	0.4189	0.4102	0.4817	0.5627	0.5295	0.4223	0.7858

Table 61: Discriminant Validity

**4.6.5 Evaluation of Inner Model:** Establishing the validity and reliability of the outer model is important, so it is also important to check and establish the relationship formed through the hypothesis for the inner model. The model shall be checked by assessment of path coefficients, coefficient of determination ( $R^2$ ) and cross-validated redundancy ( $Q^2$ ). The researcher has checked the collinearity issues among the constructs as it may arise while applying the test. The value of tolerance was needed to be checked as it should be more than 0.20 and at the same time, the value of VIF should be less than 5. In this study both the below-mentioned tables had reported these values in this limit only and hence no collinearity issues were found.

#### Tolerance and VIF Values for Collinearity

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	7.507E-06	.036		.000	1.000		
	AWR	.166	.044	.166	3.789	.000	.661	1.512
	LFSTYL	.122	.044	.122	2.759	.006	.656	1.524
	PINFO	.145	.051	.145	2.858	.004	.499	2.005
	RINFO	.336	.043	.336	7.752	.000	.678	1.476

a. Dependent Variable: TRST

Table 62 (a): Tolerance and VIF Values for Collinearity

The VIF value of awareness was found at 1.51, lifestyle at 1.52, perceived information at 2.00, and revealed the information at 1.47. Hence all of the VIF values are less than 5. The value of tolerance is also found more than the value of 0.20 as in the case of awareness it was 0.66, for the lifestyle it was 0.65, for perceived information it was 0.49 and for revealed information, it was found to be 0.67, hence all the tolerance value was at an acceptable level.

### Tolerance and VIF Values for Collinearity

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.439E-06	.032		.000	1.000		
	PBC	.120	.038	.120	3.178	.002	.704	1.421
	SBNM	.125	.039	.125	3.189	.002	.657	1.521
	TRST	.315	.037	.315	8.496	.000	.730	1.370
	ATT	.350	.039	.350	8.962	.000	.662	1.511

a. Dependent Variable: PINT

Table 62 (b): Tolerance and VIF Values for Collinearity

The VIF value of perceived behavioural control was 1.42, subjective norms were 1.52, trust was 1.37, and attitude was 1.51. All the values mentioned in the above table were at an acceptable level. The tolerance level of PBC was 0.70, SBNM was 0.65, TRST was 0.73 and ATT it was 0.66. Hence all the values were found to be at an acceptable level.

**Coefficient of Determination ( $R^2$ ):** The degree of predictivity of the model can be represented by the value of  $R^2$ . The combined effect of exogenous variables on the endogenous variable(s) can be measured by the value of  $R^2$ . The various discipline of social sciences uses the value of  $R^2$  as per their requirement and it varies, there exists a rule of thumb which establishes its value at the levels of 0.75, 0.50 and 0.25 as substantial, moderate and weak respectively. Hair et al. (2011) explained these predictive accuracy level and it is getting established by various other studies too. The effect of exogenous variables on endogenous variables with the help of  $R^2$  in this study is at the level of 0.36 to 0.50 which says that the predictive accuracy in all three relations is weak and moderate.

**Cross-validated Redundancy ( $Q^2$ ):** Predictive relevance can be measured with the help of the value of  $Q^2$ . The sample reuse technique can be formed with the help of the value of  $Q^2$ . If the difference between the values of predicted and the observed value is small, then it is assumed a higher predictive accuracy of the model. The larger the value of  $Q^2$  of an

endogenous construct or the higher the number from Zero signifies the path model's predictive relevancy for that respective construct. This study has also proved that the  $Q^2$  value of all the endogenous constructs is more than zero and hence the inner model's predictive relevance was established (Ringle et al., 2012).

**Values of  $R^2$  (Coefficient of Determination) and  $Q^2$  (Predictive Relevance)**

Total	$R^2$	Relationship	SSO	SSE	1-SSE/SSO	Predictive Relevance
ABB	0.4122	Moderate	2000	1575.0811	0.2125	Medium
PINT	0.5019	Moderate	2000	1393.4695	0.3033	Medium
TRST	0.3684	Weak to Moderate	2000	1549.1885	0.2254	Medium

Table 63: Values of  $R^2$  (Coefficient of Determination) and  $Q^2$  (Predictive Relevance)

The above table has explained the three dependent variables value of  $R^2$ , the value of  $R^2$  explains that the contribution of their respective independent variables towards the formation of their dependent variable. In this model, the first sub-model of independent variables impact was seen in the formation of trust with the  $R^2$  value of 0.36 which means the antecedents of trust are explaining 36% of the trust. Hence this sub-model was termed as explaining weak to a moderate relationship. The second sub-model was formed by the antecedents of purchase intention, these factors were explained by  $R^2$  value of 0.50, which means these factors had contributed around 50% formation of an intention to buy. Hence this relationship was mentioned moderate in this table. The last sub-model was formed by all the factors contributing towards actual buying behaviour with the  $R^2$  value of 0.41 which means 41% contribution. Hence all three relationships have shown medium predictive relevance.

## T statistics for Hypothesis testing (Structure Equation Modelling)

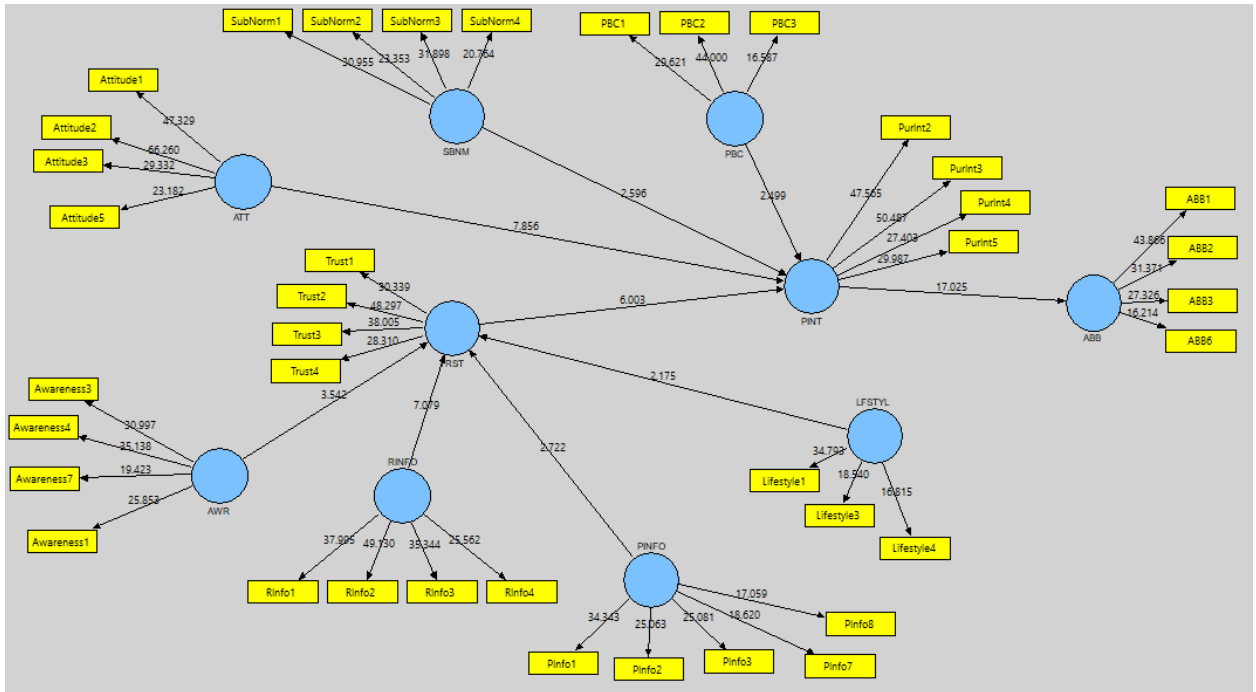


Figure 8: T Statistics for Hypothesis Testing (Structure Equation Modelling)

**4.6.6 Path Co-efficient:** Estimates (T-Statistics) need to be studied and measured while running the PLS model. These T-Stats become important as their values tell the significance of the relationship which is seen in the endogenous and exogenous constructs. It can also be understood as the significance of the hypothesis assumed for the conceptualized relationship of the study. These values of the estimates need to more than the mark of 1.96 to prove the significance of the relationship between the constructs at the confidence level of 95%. While at the same time if the value of t-stats is more than 1.645 determines that the conceptual model is proved significant at the confidence level of 90%. The below-mentioned table reported the significant relationship between all the hypotheses conceptualized earlier in this study.

### Path Co-efficient (Path Model)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics ( O/STERR)	Relationship
ATT -> PINT	0.3495	0.3497	0.0451	0.0451	7.7446	Significant
AWR -> TRST	0.1664	0.1662	0.0487	0.0487	3.4148	Significant
LFSTYL -> TRST	0.1217	0.1216	0.0539	0.0539	2.258	Significant
PBC -> PINT	0.1202	0.1206	0.0514	0.0514	2.3386	Significant
PINFO -> TRST	0.1445	0.1471	0.0538	0.0538	2.688	Significant
PINT -> ABB	0.642	0.642	0.0383	0.0383	16.7773	Significant
RINFO -> TRST	0.3364	0.3373	0.0491	0.0491	6.8559	Significant
SBNM -> PINT	0.1248	0.1273	0.0451	0.0451	2.7679	Significant
TRST -> PINT	0.3154	0.314	0.052	0.052	6.0623	Significant

ATT: Attitude, PINT: Purchase Intention, AWR: Awareness, TRST: Trust, LFSTYL: Lifestyle, PBC: Perceived Behavior Control, PINFO: Perceived Information, ABB: Actual Buying Behavior, RINFO: Revealed Information, SBNM: Subjective Norm

Table 64: Path Co-efficient (Path Model)

The above table explains that the T-Statistics value of the relationship between attitude and purchase intention has come to 7.74 which is more than the mark of 1.96. Hence it proves that this relationship is significant and very strong. Building attitude is one of the decisional factors in terms of behaviour towards the actual buying of organic foods. Organic food customer's awareness was tried testing the relationship of awareness on the trust build by the customer of organic food. The results in the above table prove that this relationship is significant with a value of 3.41 which is far above the expected level of 1.96. Hence these results establish that the customer level of awareness has a significant impact on the development of trust towards organic food.

Customers these days are following a different lifestyle as compared to the earlier days and this study has tried establishing the fact that the current lifestyle of the customer will influence the trust development towards organic food. The results shown in the above table have explained that lifestyle has impacted trust with the value of 2.25 which is above the accepted level. Not only attitude has influenced the purchase intention but perceived behavioural control was also hypothesised to influence intention to buy. It was assumed

earlier that the organic customer's PBC will impact purchase intention. The results of this study have proved that there exists a significant relationship between perceived behavioural control and purchase intention with a T-value of 2.34 mentioned in the above table.

The customer perceives a lot of things that can be based on either fact or their perception. It was assumed earlier that the perceived information gathered by the organic customer about this food category will positively impact the trust of the customer. It is now proved in the above table that perceived information has influenced the trust-building among customers with a value of 2.69 which is higher than the accepted level of 1.96. It was also assumed that intention to buy organic food will also influence the actual buying behaviour. The results shown in the above table have proved this relationship with a very strong value of 16.78 which is higher than the given value of 1.96. Thus this study has established this relationship as a decisional factor in the process of buying behaviour.

The information shared on the packaging of the organic foods is termed as revealed information. This information generally includes ingredients or food contents. It was assumed in this study that revealed information will affect the trust-building among customers of organic food. It is mentioned in the results shown in the above table that revealed information is having a significant impact on trust-building exercise. The value of this relationship stands at 6.85 which is much higher than the value of 1.96. At the same time, it was also assumed that the subjective norms will influence purchase intention and the results have also shown that with a value of 2.76 which is higher than 1.96.

The researcher has found that all the constructs which were forming trust-building for the customer were significantly affecting trust. Hence it was hypothesised that trust will be going forward positively impact purchase intention. Results have favoured in this relationship too and trust is positively impacting purchase intention towards organic food with a value of 6.06 which is higher than the given value of 1.96.

Hence all the 9 indicative relationships proposed earlier in the causal model are found significant. It is now proved through the above table that at one side attitude, subjective norms, and perceived behavioural control have positively impacted purchase intention and



on the other side trust has positively impacted intention to buy. Whereas trust-building of the customer was formed by the awareness level of the customer, their lifestyle, perceived information, and revealed information. Purchase intention formed in this manner has positively impacted the actual buying behaviour. Hence the null hypothesis ( $H_{019}$ ) which assumed that purchase intention towards organic food will not affect the actual buying behaviour of organic food customers got rejected. As the results have shown a statistically significant effect of purchase intention towards actual buying behaviour. The study has thus achieved the third objective by establishing the relationship between decisional factors driving the actual buying behaviour of organic foods.

**4.7 Role of Demographic Characteristics on Actual Buying Behaviour:** Understanding the role of demographics is very crucial as it helps marketers to know their target groups well. The actual buying behaviour was getting influenced by many factors that were already discussed in this study but it becomes crucial for future researchers if the study also measures the role of demographic characteristics on the actual buying behaviour (Slama and Tashchian, 1985). This study has collected data from the respondents using nine parameters of demography. All of these nine parameters had more than three groups hence, the t-test is not sufficient for calculating such groups. Gupta and Gupta (2011) have suggested in their study that in such a situation of comparing means of groups we can use one-way ANOVA (Jamal and Naser, 2003). Hence, this study has used IBM SPSS 21 for conducting this test for all nine characteristics. Some of the past studies have also analysed the role of demographic characteristics on the buying behaviour using ANOVA as a statistical tool (Ahmad and Juhdi, 2010; Ekeng et al., 2012; Puska et al., 2018; Walsh and Mitchell, 2005).

**4.7.1 Role of age variable on actual buying behaviour:** The researcher has measured the actual buying behaviour of the organic food customers according to their age brackets. This study has checked that weather all age groups of customers have the same actual buying

behaviour or any particular age group reflects any significant difference in actual buying behaviour.

*Null hypothesis (H020): The null hypothesis for this test assumed that there does not exist any significant difference among the age groups brackets of organic food customers towards actual buying behaviour.*

### Descriptives

Descriptives								
ABB_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below 18	48	4.2381	.71114	.10264	4.0316	4.4446	2.14	5.00
19-29	243	4.3292	.57945	.03717	4.2560	4.4024	1.43	5.00
30-39	145	4.6167	.21672	.01800	4.5812	4.6523	3.57	5.00
40-49	59	4.5738	.19582	.02549	4.5228	4.6249	3.71	4.86
50 and above	5	4.4571	.30971	.13851	4.0726	4.8417	4.00	4.71
Total	500	4.4340	.50031	.02237	4.3900	4.4780	1.43	5.00

Table 65: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the age brackets concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances			
ABB_Avg			
Levene Statistic	df1	df2	Sig.
27.896	4	495	.100

Table 66: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 27.896 at a p-value of 0.10. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each age group are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

### ANOVA

ANOVA					
ABB_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.509	4	2.627	11.369	.000
Within Groups	114.394	495	.231		
Total	124.904	499			

Table 67: ANOVA

The above table of ANOVA explains the F statistics of 11.369 at a p-value of .00. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one age group of the customers. For checking which group is showing a significant difference towards actual buying behaviour we go ahead for post hoc test.

### Post Hoc Test

Multiple Comparisons						
Dependent Variable: ABB_Avg						
Tukey HSD						
(I) Age		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Below 18	19-29	-.09112	.07593	.751	-.2990	.1168
	30-39	-.37865*	.08005	.000	-.5978	-.1595
	40-49	-.33575*	.09344	.003	-.5916	-.0799

	50 and above	-.21905	.22591	.869	-.8376	.3995
19-29	Below 18	.09112	.07593	.751	-.1168	.2990
	30-39	-.28753*	.05045	.000	-.4256	-.1494
	40-49	-.24463*	.06977	.004	-.4357	-.0536
	50 and above	-.12792	.21719	.977	-.7226	.4667
30-39	Below 18	.37865*	.08005	.000	.1595	.5978
	19-29	.28753*	.05045	.000	.1494	.4256
	40-49	.04290	.07423	.978	-.1603	.2461
	50 and above	.15961	.21866	.949	-.4391	.7583
40-49	Below 18	.33575*	.09344	.003	.0799	.5916
	19-29	.24463*	.06977	.004	.0536	.4357
	30-39	-.04290	.07423	.978	-.2461	.1603
	50 and above	.11671	.22391	.985	-.4963	.7297
50 and above	Below 18	.21905	.22591	.869	-.3995	.8376
	19-29	.12792	.21719	.977	-.4667	.7226
	30-39	-.15961	.21866	.949	-.7583	.4391
	40-49	-.11671	.22391	.985	-.7297	.4963

\*. The mean difference is significant at the 0.05 level.

Table 68: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results show that the age groups “19-29”, “30-39” and “40-49” are having significant difference results as compared to the “below 18” age group.

### Homogeneous subsets

ABB_Avg		
Tukey HSD <sup>a,b</sup>		
Age	N	Subset for alpha = 0.05
		1
Below 18	48	4.2381

19-29	243	4.3292
50 and above	5	4.4571
40-49	59	4.5738
30-39	145	4.6167
Sig.		.093
"Means for groups in homogeneous subsets are displayed."		
"a. Uses Harmonic Mean Sample Size = 20.097."		
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."		

Table 69: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the age groups “19-29”, “30-39” and “40-49” of organic customers have shown a statistically significant difference in actual buying behaviour as compared to the “below 18” age group of respondents. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(4,495) = 11.369, p = 0.000$ ]. Tukey post hoc test has explained that the role of age groups of “19-29”, “30-39” and “40-49” was statistically significantly higher as compared to the age group of “below 18” customers. Hence, the null hypothesis ( $H_{020}$ ) got rejected and it is concluded that age groups of organic food customers play an important role in actual buying behaviour.

**4.7.2 Role of Gender Variable on Actual Buying Behaviour:** The researcher has measured the actual buying behaviour of the organic food customers according to the gender of the organic customer. This study has checked that weather all the genders of customers have the same actual buying behaviour or any particular gender reflects any significant difference in actual buying behaviour.

*Null hypothesis( $H_{021}$ ): The null hypothesis for this test assumed that there does not exist any significant difference among the genders of organic food customers towards actual buying behaviour.*

## Descriptive

Descriptives								
ABB_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Male	275	4.2836	.60473	.03647	4.2118	4.3554	1.43	5.00
Female	218	4.6239	.20859	.01413	4.5960	4.6517	3.57	5.00
Transgender	5	4.5714	.28571	.12778	4.2167	4.9262	4.14	4.86
Total	500	4.4340	.50031	.02237	4.3900	4.4780	1.43	5.00

Table 70: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the genders concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

## Test of homogeneity

Test of Homogeneity of Variances			
ABB_Avg			
Levene Statistic	df1	df2	Sig.
36.777	3	496	.200

Table 71: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 36.777 at a p-value of 0.20. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each gender are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

## ANOVA

ANOVA					
ABB_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14.433	3	4.811	21.600	.000
Within Groups	110.471	496	.223		
Total	124.904	499			

Table 72: ANOVA

The above table of ANOVA explains the F statistics of 21.600 at a p-value of .00. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one gender of the customers. For checking which group is showing a significant difference towards actual buying behaviour we proceed for the post hoc test.

## Post Hoc Test

Multiple Comparisons						
Dependent Variable: ABB_Avg						
Tukey HSD						
(I) Gender		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Male	Female	-.34022*	.04280	.000	-.4505	-.2299
	Transgender	-.28779	.21297	.531	-.8368	.2612
Female	Male	.34022*	.04280	.000	.2299	.4505
	Transgender	.05242	.21346	.995	-.4978	.6027
Transgender	Male	.28779	.21297	.531	-.2612	.8368
	Female	-.05242	.21346	.995	-.6027	.4978

\*. The mean difference is significant at the 0.05 level.

Table 73: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results show that the gender of females and male is having a statistically significant difference in results.

### Homogeneous subsets

ABB_Avg		
Tukey HSD <sup>a,b</sup>		
Gender	N	Subset for alpha = 0.05
		1
Male	275	4.2836
Transgender	7	4.5714
Female	218	4.6239
Sig.		.202
"Means for groups in homogeneous subsets are displayed."		
"a. Uses Harmonic Mean Sample Size = 5.648."		
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."		

Table 74: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the “males” and “females” of organic customers have shown a statistically significant difference in actual buying behaviour. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(2,497) = 21.600, p = 0.000$ ]. Tukey post hoc test has explained that the role of the female as gender was statistically significantly higher as compared to males as a gender. This test has rejected the null hypothesis ( $H_{021}$ ) and hence it is concluded that the gender of organic food customers plays an important role on the actual buying behaviour.



**4.7.3 Role of Marital Status Variable on Actual Buying Behaviour:** The researcher has measured the actual buying behaviour of the organic food customers according to the marital status of the organic customer. This study has checked that weather all types of the marital status of customers have the same actual buying behaviour or any particular marital status group reflects any significant difference in actual buying behaviour.

*Null hypothesis(H022): The null hypothesis for this test assumed that there does not exist any significant difference among the marital status groups of organic food customers towards actual buying behaviour.*

### Descriptive

Descriptives								
ABB_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Unmarried	268	4.3454	.57882	.03536	4.2758	4.4150	1.43	5.00
Married	225	4.5340	.36987	.02466	4.4854	4.5826	1.57	5.00
Separated/Divorsee	7	4.6122	.19716	.07452	4.4299	4.7946	4.43	4.86
Total	500	4.4340	.50031	.02237	4.3900	4.4780	1.43	5.00

Table 75: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the groups of marital status concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances			
ABB_Avg			
Levene Statistic	df1	df2	Sig.

20.603	2	497	.061
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Table 76: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 20.603 at a p-value of 0.061. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each group of marital status are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

### ANOVA

ANOVA					
ABB_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.574	2	2.287	9.446	.000
Within Groups	120.330	497	.242		
Total	124.904	499			

Table 77: ANOVA

The above table of ANOVA explains the F statistics of 9.446 at a p-value of .00. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one marital status of the customers. For checking which group is showing a significant difference towards actual buying behaviour we proceed for post hoc test.

### Post Hoc Test

Multiple Comparisons						
Dependent Variable: ABB_Avg						
Tukey HSD						
(I) Marital_Status		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	

					Lower Bound	Upper Bound
Unmarried	Married	-.18855*	.04449	.000	-.2931	-.0840
	Separated/Divorcee	-.26683	.18839	.333	-.7097	.1760
Married	Unmarried	.18855*	.04449	.000	.0840	.2931
	Separated/Divorcee	-.07828	.18885	.910	-.5222	.3657
Separated/Divorcee	Unmarried	.26683	.18839	.333	-.1760	.7097
	Married	.07828	.18885	.910	-.3657	.5222
*. The mean difference is significant at the 0.05 level.						

Table 78: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results show that the marital status carrying married and unmarried customers are having a statistically significant difference in results.

### Homogeneous subsets

ABB_Avg		
Tukey HSD <sup>a,b</sup>		
Marital_Status	N	Subset for alpha = 0.05
		1
Unmarried	268	4.3454
Married	225	4.5340
Separated/Divorcee	7	4.6122
Sig.		.203
"Means for groups in homogeneous subsets are displayed."		
"a. Uses Harmonic Mean Sample Size = 19.863."		
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."		

Table 79: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that married organic customers have shown a statistically significant difference in actual buying behaviour as compared to

unmarried customers. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(2,497) = 9.446, p = 0.000$ ]. Tukey post hoc test has explained that the role of married customers was statistically significantly higher as compared to unmarried customers. Hence the assumed null hypothesis ( $H_{022}$ ) got rejected and it is concluded that the marital status of organic food customers plays an important role in actual buying behaviour.

**4.7.4 Role of Occupation Variable on Actual Buying Behaviour:** The researcher has measured the actual buying behaviour of the organic food customers according to the occupation of the customers. This study has checked that weather all the occupation groups of customers have the same actual buying behaviour or any particular occupation group reflects any significant difference in actual buying behaviour.

*Null hypothesis ( $H_{023}$ ): The null hypothesis for this test assumed that there does not exist any significant difference among the occupation groups of organic food customers towards actual buying behaviour.*

## Descriptives

Descriptives								
ABB_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Salaried	220	4.3916	.56340	.03798	4.3167	4.4664	1.43	5.00
Self employed	104	4.4574	.44618	.04375	4.3706	4.5442	2.71	5.00
Retired	19	4.6992	.14202	.03258	4.6308	4.7677	4.43	4.86
Housewives	58	4.6034	.23941	.03144	4.5405	4.6664	3.57	5.00
Others	99	4.3535	.52641	.05291	4.2485	4.4585	2.14	5.00
Total	500	4.4340	.50031	.02237	4.3900	4.4780	1.43	5.00

Table 80: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the occupation groups concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances			
ABB_Avg			
Levene Statistic	df1	df2	Sig.
6.235	4	495	.070

Table 81: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 6.235 at a p-value of 0.070. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each occupation group are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

### ANOVA

ANOVA					
ABB_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.096	4	1.024	4.196	.002
Within Groups	120.807	495	.244		
Total	124.904	499			

Table 82: ANOVA

The above table of ANOVA explains the F statistics of 4.196 at a p-value of .002. This result is significant and hence we can reject the null hypothesis and conclude that the above

table provides substantial evidence that there exists a significant difference of at least one occupation group of the customers. For checking which group is showing a significant difference towards actual buying behaviour we go ahead for post hoc test.

### Post Hoc Test

Multiple Comparisons						
Dependent Variable: ABB_Avg						
Tukey HSD						
(I) Occupation		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Salaried	Self employed	-.06586	.05879	.796	-.2268	.0951
	Retired	-.30769	.11813	.071	-.6311	.0157
	Housewives	-.21189*	.07292	.031	-.4115	-.0122
	Others	.03802	.05979	.969	-.1257	.2017
Self-employed	Salaried	.06586	.05879	.796	-.0951	.2268
	Retired	-.24183	.12325	.286	-.5793	.0956
	Housewives	-.14603	.08096	.373	-.3677	.0756
	Others	.10388	.06937	.565	-.0860	.2938
Retired	Salaried	.30769	.11813	.071	-.0157	.6311
	Self employed	.24183	.12325	.286	-.0956	.5793
	Housewives	.09580	.13059	.949	-.2617	.4533
	Others	.34571*	.12373	.043	.0069	.6845
Housewives	Salaried	.21189*	.07292	.031	.0122	.4115
	Self employed	.14603	.08096	.373	-.0756	.3677
	Retired	-.09580	.13059	.949	-.4533	.2617
	Others	.24991*	.08169	.020	.0263	.4736
Others	Salaried	-.03802	.05979	.969	-.2017	.1257
	Self employed	-.10388	.06937	.565	-.2938	.0860
	Retired	-.34571*	.12373	.043	-.6845	-.0069
	Housewives	-.24991*	.08169	.020	-.4736	-.0263

\*. The mean difference is significant at the 0.05 level.

Table 83: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. The “\*” signs are reflecting that salaried with housewives and retired with other categories of occupation have shown a statistically significant different result.

### Homogeneous subsets

ABB_Avg			
Tukey HSD <sup>a,b</sup>			
Occupation	N	Subset for alpha = 0.05	
		1	2
Others	99	4.3535	
Salaried	220	4.3916	
Self employed	104	4.4574	4.4574
Housewives	58	4.6034	4.6034
Retired	19		4.6992
Sig.		.071	.087
"Means for groups in homogeneous subsets are displayed."			
"a. Uses Harmonic Mean Sample Size = 53.115."			
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."			

Table 84: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the occupation groups of “salaried” organic customers have shown a statistically significant difference in actual buying behaviour as compared to the “housewives”. Occupation groups of “retired” organic customers have also shown a statistically significant difference in actual buying behaviour as compared to the “others”. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(4,495) = 4.196, p = 0.002$ ]. Tukey's post hoc test has explained that the role of occupation of “housewives” and “retired” was statistically significantly higher as compared to the occupation of “retired” and “others”. Since the null hypothesis ( $H_{023}$ ) framed got rejected, hence it is concluded that the occupation of organic food customers plays an important role in actual buying behaviour.

**4.7.5 Role of Household Income Variable on Actual Buying Behaviour:** The researcher has measured the actual buying behaviour of the organic food customers according to their household income brackets. This study has checked that whether all household income groups of customers have the same actual buying behaviour or any particular age group reflects any significant difference in actual buying behaviour.

*Null hypothesis(H<sub>024</sub>): The null hypothesis for this test assumed that there does not exist any significant difference among the household income brackets of organic food customers towards actual buying behaviour.*

### Descriptives

Descriptives								
ABB_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below Rs 30,000 pm	161	4.3567	.54213	.04273	4.2723	4.4411	1.57	5.00
Rs 30,001 - 60,000 pm	204	4.3999	.52030	.03643	4.3280	4.4717	1.43	5.00
Rs 60,001 - 90,000 pm	91	4.5981	.28245	.02961	4.5393	4.6569	3.43	5.00
Rs 90,001 and above	44	4.5357	.52024	.07843	4.3775	4.6939	2.43	5.00
Total	500	4.4340	.50031	.02237	4.3900	4.4780	1.43	5.00

Table 85: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the household income brackets concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in



this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances			
ABB_Avg			
Levene Statistic	df1	df2	Sig.
6.486	3	496	.200

Table 86: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 6.486 at a p-value of 0.20. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each household income group are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

### ANOVA

ANOVA					
ABB_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.106	3	1.369	5.620	.001
Within Groups	120.798	496	.244		
Total	124.904	499			

Table 87: ANOVA

The above table of ANOVA explains the F statistics of 5.620 at a p-value of .001. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one

household income group of the customers. For checking which group is showing a significant difference towards actual buying behaviour we go ahead for post hoc test.

### Post Hoc Test

Multiple Comparisons						
Dependent Variable: ABB_Avg						
Tukey HSD						
(I) Household_Income		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Below Rs 30,000 pm	Rs 30,001 - Rs 60,000 pm	-.04316	.05202	.840	-.1773	.0909
	Rs 60,001 - Rs 90,000 pm	-.24142*	.06472	.001	-.4083	-.0746
	Rs 90,001 and above	-.17902	.08395	.144	-.3954	.0374
Rs 30,001 - Rs 60,000 pm	Below Rs 30,000 pm	.04316	.05202	.840	-.0909	.1773
	Rs 60,001 - Rs 90,000 pm	-.19826*	.06221	.008	-.3586	-.0379
	Rs 90,001 and above	-.13585	.08203	.348	-.3473	.0756
Rs 60,001 - Rs 90,000 pm	Below Rs 30,000 pm	.24142*	.06472	.001	.0746	.4083
	Rs 30,001 - Rs 60,000 pm	.19826*	.06221	.008	.0379	.3586

	Rs 90,001 and above	.06240	.09062	.901	-.1712	.2960
Rs 90,001 and above	Below Rs 30,000 pm	.17902	.08395	.144	-.0374	.3954
	Rs 30,001 - Rs 60,000 pm	.13585	.08203	.348	-.0756	.3473
	Rs 60,001 - Rs 90,000 pm	-.06240	.09062	.901	-.2960	.1712
*. The mean difference is significant at the 0.05 level.						

Table 88: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results show that the household income groups “Rs 60,001-Rs 90,000”, “Below Rs 30,000” and “Rs 30,001-Rs 60,000” are having significant difference results as compared to the other available household income group.

### Homogeneous subsets

ABB_Avg			
Tukey HSD <sup>a,b</sup>			
Household_Income	N	Subset for alpha = 0.05	
		1	2
Below Rs 30,000 pm	161	4.3567	
Rs 30,001 - Rs 60,000 pm	204	4.3999	
Rs 90,001 and above	44	4.5357	4.5357
Rs 60,001 - Rs 90,000 pm	91		4.5981

Sig.		.074	.833
"Means for groups in homogeneous subsets are displayed."			
"a. Uses Harmonic Mean Sample Size = 89.227."			
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."			

Table 89: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the household income groups of “Rs 60,001-Rs 90,000” organic customers have shown a statistically significant difference in actual buying behaviour as compared to the “Below Rs 30,000” group. Household income groups of “Rs 60,001-Rs 90,000” organic customers have also shown a statistically significant difference in actual buying behaviour as compared to the group of “Rs 30,001-Rs 60,000”. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(3,496) = 5.620, p = 0.001$ ]. Tukey post hoc test has explained that the role of household income of “Rs 60,001-Rs 90,000” organic customers was statistically significantly higher as compared to the income group of “Below Rs 30,000” and “Rs 30,001-Rs 60,000” organic customers. Since the null hypothesis ( $H_{024}$ ) got rejected by the ANOVA test hence, it is concluded that the level of household income of organic food customers plays an important role in actual buying behaviour.

**4.7.6 Role of Educational Level Variable on Actual Buying Behaviour:** The researcher has measured the actual buying behaviour of the organic food customers according to their level of education. This study has checked that weather all educational level groups of customers have the same actual buying behaviour or any particular age group reflects any significant difference in actual buying behaviour.

*Null hypothesis ( $H_{025}$ ): The null hypothesis for this test assumed there does not exist any significant difference among the educational level groups brackets of organic food customers towards actual buying behaviour.*

## Descriptives

Descriptives								
ABB_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below high school	17	4.4034	.42329	.10266	4.1857	4.6210	3.57	4.86
12 <sup>th</sup>	105	4.2639	.68706	.06705	4.1310	4.3969	1.43	5.00
Graduate	195	4.4857	.41571	.02977	4.4270	4.5444	2.14	5.00
PG and above	183	4.4793	.44145	.03263	4.4149	4.5437	2.14	5.00
Total	500	4.4340	.50031	.02237	4.3900	4.4780	1.43	5.00

Table 90: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the groups of educational level concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

## Test of homogeneity

Test of Homogeneity of Variances			
ABB_Avg			
Levene Statistic	df1	df2	Sig.
11.164	3	496	.120

Table 91: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 11.164 at a p-value of 0.120. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each educational level group are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

## ANOVA

ANOVA					
ABB_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.950	3	1.317	5.399	.001
Within Groups	120.954	496	.244		
Total	124.904	499			

Table 92: ANOVA

The above table of ANOVA explains the F statistics of 5.399 at a p-value of .001. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one group of the educational level of organic customers. For checking which group is showing a significant difference towards actual buying behaviour we go ahead for post hoc test.

## Post Hoc Test

Multiple Comparisons						
Dependent Variable: ABB_Avg						
Tukey HSD						
(I) Education_Level		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Below high school	12th	.13942	.12910	.702	-.1934	.4722
	Graduate	-.08235	.12488	.912	-.4043	.2396
	PG and above	-.07595	.12521	.930	-.3987	.2468
12 <sup>th</sup>	Below high school	-.13942	.12910	.702	-.4722	.1934
	Graduate	-.22177*	.05977	.001	-.3759	-.0677
	PG and above	-.21537*	.06046	.002	-.3712	-.0595
Graduate	Below high school	.08235	.12488	.912	-.2396	.4043
	12th	.22177*	.05977	.001	.0677	.3759

	PG and above	.00640	.05082	.999	-.1246	.1374
PG and above	Below high school	.07595	.12521	.930	-.2468	.3987
	12th	.21537*	.06046	.002	.0595	.3712
	Graduate	-.00640	.05082	.999	-.1374	.1246
*. The mean difference is significant at the 0.05 level.						

Table 93: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results show that the educational level groups of “graduate”, “PG and above” and “12<sup>th</sup>” are having significant difference results as compared to the other available educational level groups.

### Homogeneous subsets

ABB_Avg		
Tukey HSD <sup>a,b</sup>		
Education_Level	N	Subset for alpha = 0.05
		1
12th	105	4.2639
Below high school	17	4.4034
PG and above	183	4.4793
Graduate	195	4.4857
Sig.		.109
"Means for groups in homogeneous subsets are displayed."		
"a. Uses Harmonic Mean Sample Size = 50.671."		
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."		

Table 94: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the educational level groups “PG and above” and “Graduate” of organic customers have shown a statistically significant

difference in actual buying behaviour as compared to the “12<sup>th</sup>” groups of respondents. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(3,496) = 5.399, p = 0.001$ ]. Tukey post hoc test has explained that the role of the level of education groups of “PG and above” and “Graduate” was statistically significantly higher as compared to the age group of “12<sup>th</sup>” customers. As the null hypothesis ( $H_{025}$ ) framed earlier got rejected, hence it is concluded that the level of education of organic food customers plays an important role in actual buying behaviour.

**4.7.7 Role of Family Size Variable on Actual Buying Behaviour:** The researcher has measured the actual buying behaviour of the organic food customers according to the size of the families. This study has checked that weather all family size groups of customers have the same actual buying behaviour or any particular family size group reflects any significant difference in actual buying behaviour.

*Null hypothesis ( $H_{026}$ ): The null hypothesis for this test assumed that there does not exist any significant difference among the family size groups of organic food customers towards actual buying behaviour.*

## Descriptives

Descriptives								
ABB_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1 - 2 members	83	4.4320	.57403	.06301	4.3067	4.5574	2.14	5.00
3 - 4 members	272	4.4112	.51347	.03113	4.3499	4.4725	1.43	5.00
5 - 6 members	103	4.4591	.41801	.04119	4.3774	4.5408	2.43	5.00
7 and above members	42	4.5238	.44360	.06845	4.3856	4.6620	2.43	5.00
Total	500	4.4340	.50031	.02237	4.3900	4.4780	1.43	5.00

Table 95: Descriptive table



The descriptive table has helped the researcher in knowing the mean for all the family size groups concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances			
ABB_Avg			
Levene Statistic	df1	df2	Sig.
1.742	3	496	.157

Table 96: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 1.742 at a p-value of 0.157. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each family size group are not significantly different. After checking the test of homogeneity the next step is to check the ANOVA table.

### ANOVA

ANOVA					
ABB_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.545	3	.182	.724	.538
Within Groups	124.359	496	.251		
Total	124.904	499			

Table 97: ANOVA

The above table of ANOVA explains the F statistics of 0.724 at a p-value of 0.538. This result is not significant and hence we cannot reject the null hypothesis and conclude that

the above table does not provide any substantial evidence that there exists a significant difference of at least one age group of the customers. For reconfirming any difference or similarity in groups towards actual buying behaviour we go ahead for post hoc test.

### Post Hoc Test

Multiple Comparisons						
Dependent Variable: ABB_Avg						
Tukey HSD						
(I) Family_Size		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1 - 2 members	3 - 4 members	.02077	.06279	.987	-.1411	.1826
	5 - 6 members	-.02707	.07386	.983	-.2175	.1633
	7 and above members	-.09180	.09482	.768	-.3362	.1526
3 - 4 members	1 - 2 members	-.02077	.06279	.987	-.1826	.1411
	5 - 6 members	-.04785	.05793	.842	-.1972	.1015
	7 and above members	-.11257	.08301	.528	-.3266	.1014
5 - 6 members	1 - 2 members	.02707	.07386	.983	-.1633	.2175
	3 - 4 members	.04785	.05793	.842	-.1015	.1972
	7 and above members	-.06472	.09167	.895	-.3010	.1716
7 and above members	1 - 2 members	.09180	.09482	.768	-.1526	.3362
	3 - 4 members	.11257	.08301	.528	-.1014	.3266
	5 - 6 members	.06472	.09167	.895	-.1716	.3010

Table 98: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results show that in this table no family size groups are having any significantly different results as compared to the other available family-size groups.

### Homogeneous subsets

ABB_Avg		
Tukey HSD <sup>a,b</sup>		
Family_Size	N	Subset for alpha = 0.05
		1
3 - 4 members	272	4.4112
1 - 2 members	83	4.4320
5 - 6 members	103	4.4591
7 and above members	42	4.5238
Sig.		.479
"Means for groups in homogeneous subsets are displayed."		
"a. Uses Harmonic Mean Sample Size = 81.230."		
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."		

Table 99: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that none of the family size groups of organic customers have shown a statistically significant difference in actual buying behaviour. Since the null hypothesis ( $H_{026}$ ) did not get rejected, so it is concluded that the size of the family of organic food customers does not have any role in actual buying behaviour.

**4.7.8 Role of District of Customer on Actual Buying Behaviour:** The researcher has measured the actual buying behaviour of the organic food customers according to their district they belong to. This study has checked that whether all the districts of customers have the same actual buying behaviour or any particular district's customers reflect any significant difference in actual buying behaviour.

*Null hypothesis (H<sub>027</sub>):* The null hypothesis for this test assumed that there does not exist any significant difference among the organic food customer's district towards actual buying behaviour.

### Descriptives

Descriptives								
ABB_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hoshiarpur	48	4.4702	.41983	.06060	4.3483	4.5921	2.43	5.00
Pathankot	40	4.4679	.44708	.07069	4.3249	4.6108	2.57	5.00
SAS Nagar	29	4.3695	.59335	.11018	4.1438	4.5952	2.14	5.00
Jalandhar	129	4.4219	.51904	.04570	4.3315	4.5124	1.57	5.00
Ludhiana	48	4.5238	.37081	.05352	4.4161	4.6315	3.57	5.00
Rup Nagar	26	4.5000	.41650	.08168	4.3318	4.6682	2.71	4.86
SBS Nagar	24	4.3869	.49573	.10119	4.1776	4.5962	3.00	4.86
FG Sahib	33	4.5714	.31339	.05455	4.4603	4.6826	3.57	5.00
Kapurthala	88	4.2987	.66112	.07048	4.1586	4.4388	1.43	5.00
Gurdaspur	35	4.5143	.32540	.05500	4.4025	4.6261	3.57	4.86
Total	500	4.4340	.50031	.02237	4.3900	4.4780	1.43	5.00

Table 100: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the customer's district concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test

researcher has checked the homogeneity of variances with the help of the below-mentioned table:

### Test of homogeneity

Test of Homogeneity of Variances			
ABB_Avg			
Levene Statistic	df1	df2	Sig.
3.391	9	490	.000

Table 101: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 3.391 at a p-value of 0.00. Since the p-value is less than 0.05 hence we will reject the null hypothesis. Hence we can say that the population variances for each family size group are significantly different. After checking the test of homogeneity the next step is to check the ANOVA table.

### ANOVA

ANOVA					
ABB_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.262	9	.362	1.460	.160
Within Groups	121.642	490	.248		
Total	124.904	499			

Table 102: ANOVA

The above table of ANOVA explains the F statistics of 1.460 at a p-value of 0.160. This result is not significant and hence we cannot reject the null hypothesis and conclude that the above table does not provide any substantial evidence that there exists a significant difference in any customer's district. For reconfirming any difference or similarity in groups towards actual buying behaviour we go ahead for post hoc test.

**Post Hoc Test**

Multiple Comparisons						
Dependent Variable: ABB_Avg						
Tukey HSD						
(I) District		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hoshiarpur	Pathankot	.00238	.10667	1.000	-.3367	.3414
	SAS Nagar	.10078	.11718	.997	-.2717	.4732
	Jalandhar	.04831	.08424	1.000	-.2194	.3161
	Ludhiana	-.05357	.10170	1.000	-.3768	.2697
	Rup Nagar	-.02976	.12133	1.000	-.4154	.3559
	SBS Nagar	.08333	.12456	1.000	-.3126	.4792
	FG Sahib	-.10119	.11267	.996	-.4593	.2569
	Kapurthala	.17154	.08940	.656	-.1126	.4557
	Gurdaspur	-.04405	.11075	1.000	-.3960	.3079
Pathankot	Hoshiarpur	-.00238	.10667	1.000	-.3414	.3367
	SAS Nagar	.09840	.12152	.998	-.2878	.4846
	Jalandhar	.04593	.09017	1.000	-.2407	.3325
	Ludhiana	-.05595	.10667	1.000	-.3950	.2831
	Rup Nagar	-.03214	.12552	1.000	-.4311	.3668
	SBS Nagar	.08095	.12865	1.000	-.3279	.4898
	FG Sahib	-.10357	.11717	.997	-.4760	.2688
	Kapurthala	.16916	.09501	.747	-.1328	.4711
	Gurdaspur	-.04643	.11532	1.000	-.4130	.3201
SAS Nagar	Hoshiarpur	-.10078	.11718	.997	-.4732	.2717
	Pathankot	-.09840	.12152	.998	-.4846	.2878
	Jalandhar	-.05247	.10239	1.000	-.3779	.2730
	Ludhiana	-.15435	.11718	.949	-.5268	.2181
	Rup Nagar	-.13054	.13457	.994	-.5582	.2972
	SBS Nagar	-.01745	.13749	1.000	-.4544	.4196
	FG Sahib	-.20197	.12682	.851	-.6050	.2011

	Kapurthala	.07076	.10668	1.000	-.2683	.4098
	Gurdaspur	-.14483	.12511	.978	-.5425	.2528
Jalandhar	Hoshiarpur	-.04831	.08424	1.000	-.3161	.2194
	Pathankot	-.04593	.09017	1.000	-.3325	.2407
	SAS Nagar	.05247	.10239	1.000	-.2730	.3779
	Ludhiana	-.10188	.08424	.971	-.3696	.1659
	Rup Nagar	-.07807	.10711	.999	-.4185	.2624
	SBS Nagar	.03502	.11076	1.000	-.3170	.3871
	FG Sahib	-.14950	.09720	.876	-.4584	.1594
	Kapurthala	.12323	.06889	.742	-.0957	.3422
	Gurdaspur	-.09236	.09496	.994	-.3942	.2095
	Ludhiana	Hoshiarpur	.05357	.10170	1.000	-.2697
Pathankot		.05595	.10667	1.000	-.2831	.3950
SAS Nagar		.15435	.11718	.949	-.2181	.5268
Jalandhar		.10188	.08424	.971	-.1659	.3696
Rup Nagar		.02381	.12133	1.000	-.3618	.4094
SBS Nagar		.13690	.12456	.985	-.2590	.5328
FG Sahib		-.04762	.11267	1.000	-.4057	.3105
Kapurthala		.22511	.08940	.261	-.0590	.5093
Gurdaspur		.00952	.11075	1.000	-.3425	.3615
Rup Nagar	Hoshiarpur	.02976	.12133	1.000	-.3559	.4154
	Pathankot	.03214	.12552	1.000	-.3668	.4311
	SAS Nagar	.13054	.13457	.994	-.2972	.5582
	Jalandhar	.07807	.10711	.999	-.2624	.4185
	Ludhiana	-.02381	.12133	1.000	-.4094	.3618
	SBS Nagar	.11310	.14104	.999	-.3352	.5614
	FG Sahib	-.07143	.13065	1.000	-.4867	.3438
	Kapurthala	.20130	.11122	.729	-.1522	.5548
	Gurdaspur	-.01429	.12900	1.000	-.4243	.3957
SBS Nagar	Hoshiarpur	-.08333	.12456	1.000	-.4792	.3126
	Pathankot	-.08095	.12865	1.000	-.4898	.3279

	SAS Nagar	.01745	.13749	1.000	-.4196	.4544
	Jalandhar	-.03502	.11076	1.000	-.3871	.3170
	Ludhiana	-.13690	.12456	.985	-.5328	.2590
	Rup Nagar	-.11310	.14104	.999	-.5614	.3352
	FG Sahib	-.18452	.13367	.933	-.6094	.2403
	Kapurthala	.08820	.11474	.999	-.2765	.4529
	Gurdaspur	-.12738	.13205	.994	-.5471	.2923
FG Sahib	Hoshiarpur	.10119	.11267	.996	-.2569	.4593
	Pathankot	.10357	.11717	.997	-.2688	.4760
	SAS Nagar	.20197	.12682	.851	-.2011	.6050
	Jalandhar	.14950	.09720	.876	-.1594	.4584
	Ludhiana	.04762	.11267	1.000	-.3105	.4057
	Rup Nagar	.07143	.13065	1.000	-.3438	.4867
	SBS Nagar	.18452	.13367	.933	-.2403	.6094
	Kapurthala	.27273	.10170	.184	-.0505	.5960
	Gurdaspur	.05714	.12089	1.000	-.3271	.4414
Kapurthala	Hoshiarpur	-.17154	.08940	.656	-.4557	.1126
	Pathankot	-.16916	.09501	.747	-.4711	.1328
	SAS Nagar	-.07076	.10668	1.000	-.4098	.2683
	Jalandhar	-.12323	.06889	.742	-.3422	.0957
	Ludhiana	-.22511	.08940	.261	-.5093	.0590
	Rup Nagar	-.20130	.11122	.729	-.5548	.1522
	SBS Nagar	-.08820	.11474	.999	-.4529	.2765
	FG Sahib	-.27273	.10170	.184	-.5960	.0505
	Gurdaspur	-.21558	.09957	.482	-.5321	.1009
Gurdaspur	Hoshiarpur	.04405	.11075	1.000	-.3079	.3960
	Pathankot	.04643	.11532	1.000	-.3201	.4130
	SAS Nagar	.14483	.12511	.978	-.2528	.5425
	Jalandhar	.09236	.09496	.994	-.2095	.3942
	Ludhiana	-.00952	.11075	1.000	-.3615	.3425
	Rup Nagar	.01429	.12900	1.000	-.3957	.4243
	SBS Nagar	.12738	.13205	.994	-.2923	.5471
	FG Sahib	-.05714	.12089	1.000	-.4414	.3271



	Kapurthala	.21558	.09957	.482	-.1009	.5321
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Table 103: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results show that in this table none of the groups of organic food customer's districts are reflecting any significantly different results.

### Homogeneous subsets

ABB_Avg		
Tukey HSD <sup>a,b</sup>		
District	N	Subset for alpha = 0.05
		1
Kapurthala	88	4.2987
SAS Nagar	29	4.3695
SBS Nagar	24	4.3869
Jalandhar	129	4.4219
Pathankot	40	4.4679
Hoshiarpur	48	4.4702
Rup Nagar	26	4.5000
Gurdaspur	35	4.5143
Ludhiana	48	4.5238
FG Sahib	33	4.5714
Sig.		.326
"Means for groups in homogeneous subsets are displayed."		
"a. Uses Harmonic Mean Sample Size = 38.570."		
"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."		

Table 104: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that none of the organic customer's district groups have shown any statistically significant difference in actual buying

behaviour. Since the null hypothesis ( $H_{027}$ ) did not get rejected, hence it is concluded that there is no role of organic food customer's district on actual buying behaviour.

**4.7.9 Role of Living Environment on Actual Buying Behaviour:** The researcher has measured the actual buying behaviour of organic food customers according to their living environment. This study has checked that whether all the groups of the living environment of customers have the same actual buying behaviour or any particular living environment group reflects any significant difference in actual buying behaviour.

*Null hypothesis ( $H_{028}$ ):* The null hypothesis for this test assumed that there does not exist any significant difference among the living environment groups of organic food customers towards actual buying behaviour.

### Descriptives

Descriptives								
ABB_Avg								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Urban	326	4.4772	.48972	.02712	4.4239	4.5306	1.43	5.00
Sub-urban	126	4.4104	.47638	.04244	4.3264	4.4944	2.43	5.00
Rural	48	4.2024	.57130	.08246	4.0365	4.3683	2.14	4.86
Total	500	4.4340	.50031	.02237	4.3900	4.4780	1.43	5.00

Table 105: Descriptive table

The descriptive table has helped the researcher in knowing the mean for all the groups of living environments concerning its standard deviation to understand how do various groups look like. Hence the final group means are reflecting in the above table. Moving further in this test researcher has checked the homogeneity of variances with the help of the below-mentioned table:

## Test of homogeneity

Test of Homogeneity of Variances			
ABB_Avg			
Levene Statistic	df1	df2	Sig.
4.229	2	497	.065

Table 106: Homogeneity of variances

The above table of homogeneity of variances which is also known as Levene's test signifies that the population variances for the groups are significantly different from each other as we have got the result of Levene statistic is 4.229 at a p-value of 0.065. Since the p-value is greater than 0.05 hence we cannot reject the null hypothesis. Hence we can say that the population variances for each living environment group are approximately equal. After checking the test of homogeneity the next step is to check the ANOVA table.

## ANOVA

ANOVA					
ABB_Avg					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.254	2	1.627	6.647	.001
Within Groups	121.650	497	.245		
Total	124.904	499			

Table 107: ANOVA

The above table of ANOVA explains the F statistics of 6.647 at a p-value of .001. This result is significant and hence we can reject the null hypothesis and conclude that the above table provides substantial evidence that there exists a significant difference of at least one living environment group of the customers. For checking which group is showing a significant difference towards actual buying behaviour we go ahead for post hoc test.

## Post Hoc Test

Multiple Comparisons						
Dependent Variable: ABB_Avg						
Tukey HSD						
(I) Living_Environment		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Urban	Sub-urban	.06678	.05190	.403	-.0552	.1888
	Rural	.27483*	.07649	.001	.0950	.4546
Sub-urban	Urban	-.06678	.05190	.403	-.1888	.0552
	Rural	.20805*	.08392	.036	.0108	.4053
Rural	Urban	-.27483*	.07649	.001	-.4546	-.0950
	Sub-urban	-.20805*	.08392	.036	-.4053	-.0108

\*. The mean difference is significant at the 0.05 level.

Table 108: Multiple comparisons

Post Hoc test helps in knowing that which means is different among other available means. One famous test for checking post hoc analysis is Tukey. Hence the above table results show that the living environment group “rural” is having significant difference results as compared to the “urban” and “sub-urban” groups.

## Homogeneous subsets

ABB_Avg			
Tukey HSD <sup>a,b</sup>			
Living_Environment	N	Subset for alpha = 0.05	
		1	2
Rural	48	4.2024	
Sub-urban	126		4.4104
Urban	326		4.4772
Sig.		1.000	.624
"Means for groups in homogeneous subsets are displayed."			
"a. Uses Harmonic Mean Sample Size = 94.229."			

"b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed."

Table 109: Homogeneous subset

The Tukey HSD or homogeneous subset table explains that the living environment groups “Urban” and “Sub-urban” of organic customers have shown a statistically significant difference in actual buying behaviour as compared to the “Rural” groups of respondents. There exists a statistical significant difference between groups was calculated by one-way ANOVA [ $F(2,497) = 6.647, p = 0.001$ ]. Tukey post hoc test has explained that the role of living environment groups of “Urban” and “Sub-urban” was statistically significantly higher as compared to the age group of “Rural” customers. Since the null hypothesis ( $H_{028}$ ) got rejected, hence it is concluded that living environment groups of organic food customers play an important role in actual buying behaviour.

Hence with the above results of ANOVA, it has confirmed that the “size of the family” and “the district of the customer” does not have any role on the actual buying behaviour among customers of organic food but at the same time the demographic variables like “age”, “gender”, “marital status”, “occupation level”, “level of education”, “household income” and “living environment” has shown statistically significant results towards actual buying behaviour. Thus analyzing the fourth objective has concluded that demographic characteristics of the respondents do play a significant role in actual buying behaviour towards organic food (Ahmad and Juhdi, 2010). Understanding the role of demographics is very crucial as it helps marketers to understand their target groups. The actual buying behaviour was getting influenced by many factors that were already discussed in this study but it becomes crucial for future researchers if the study also measures the role of demographic characteristics on the actual buying behaviour (Slama and Tashchian, 1985). This study has collected data from the respondents using nine parameters of demography. Some of the past studies have also analysed the role of demographic characteristics on the buying behaviour using ANOVA as a statistical tool (Ahmad and Juhdi, 2010; Ekeng et al., 2012; Puska et al., 2018; Walsh and Mitchell, 2005).

# Chapter 5

## Summary and Conclusion

## 5.1 Summary

As it was discussed earlier that this research work was started from a social and cultural issue noticed by the researcher once while traveling through a train in Punjab. It was found after discussion with the passengers that the cancer was earlier assumed to be a disease of an urban area but it has spread its impact in the villages too. Earlier farmers use to use natural farming methods but in early 1970s Indian farmers with the help of the Government has started adopting American farming methods to increase the crop yield from the same field. Farmers started using chemical-based fertilizers to increase the output of the farmland. For saving the crop from the pests, farmers used chemical-based pesticides, farmers also used high-yield seeds for getting better results. It was also found that the chemicals were used more than their permissible limits while farming (Schlebecker, 1975).

The use of these dangerous chemicals has not only affected farmlands but the entire water table got contaminated. Customers use green vegetables and fruits thinking that they are rich in vitamins and minerals but we forgot that we are continuously consuming chemicals with these food items. All the cereals, nuts, and pulses also get treated with chemicals in farmland (Dubey and Lal, 2009). It has become the need of the hour to look for the alternate category of food items for daily consumption. People say that organic foods are luxurious food categories due to its premium pricing in India but the day is going to come when the prices will get reduced as there will be more demand among consumers. The level of awareness of Indian customers is increasing day by day and some of them have already started consuming organic foods. This food category is now treated as a niche category but time has come when this food category is going to become a necessity.

This study has targeted this social and cultural problem of India. Food is a necessity of life; no one can survive without it. Marketers have also understood this need of the society and hence we see thousands of organic food producers doing business in India. The export of organic food to developed countries also brings lots of business to these marketers. Organic food producers and marketers always look for reasons which motivate consumers to buy this food category (Sardana et al., 2011). This research is a mini step to explore the organic

food industry and its consumption pattern. This doctoral research has studied key factors that influence organic food purchase intention. It has identified that revealed information creates trust-building among customers and hence marketers must focus on providing all necessary information on the packaging of the organic foods. Customers sometimes perceive few factors and based on that they take decisions, hence this research has also underlined those factors which help in perceiving information. The way the consumption of products and services is happening these days is completely different from the earlier pattern. Hence it was observed in this study that the current lifestyle is impacting the buying behaviour of the organic food customers. The factors help in deciding while buying organic foods. Apart from these factors, it was also found that buying behaviour will only get reflected in those customers which have shown a good level of awareness. It was found that the customer with good educational levels has shown a significant level of awareness. The customer segments with the high-income group have also shown a significant level of awareness. Hence the level of awareness of organic food customers was measured individually as per their demographic characteristics.

## **5.2 Conclusion**

This doctoral research has started understanding the level of awareness of the customers first. The various demographic parameter was checked for all the respondents. The level of awareness was checked as per the customer's demography (Zepeda and Li, 2007). Research has concluded that the new generation of customers are more aware of the organic food while talking to the married couples in the process of a survey it was found that they are more aware of the organic food and its benefit as compared to unmarried or singles. The collected data and its analysis have confirmed that gender has no role in the awareness level of organic food customers. This study has found that the salaried class and retired employees' customers are more aware than housewives and self-employed customers. Results have shown that the higher income brackets people have shown a better level of awareness towards organic food. The size of the family and customer's district was not



found relevant in terms of the level of awareness but at the same time, sub-urban customers were found more aware than the rural customers towards organic food. Hence this study has concluded that level of awareness does vary across customer's demography.

Further, this study has tried to understand the role of various factors helping customers while the formation of purchase intention towards organic food. It has been observed that buying behavior is deeply influenced by the kind of intention that particular customer builds during the process of thinking and deciding about that product. The knowledge gathering about this niche food category has played a crucial role in terms of understanding the demand of the time. It has also been observed that the level of awareness may vary, and with these various levels of awareness, the intention can shift.

As it was discussed earlier that this study has taken a start from the theories of TRA and TPB and hence the role of attitude becomes important. This study's result also reflected that attitude is an important factor in the buying process, a positive attitude always forms a positive intention to buy. It was the impression that our social circle can influence the formation of purchase intention but this research work has clearly shown that the influence of our family members, friends, colleagues, and relatives always influences our decision (Costa et al., 2014). Research has also discussed how easy or difficult it can be for the customer to decide and build intention towards buying, it was clearly explained that the perceived behavioral control of a customer has a big role in this process.

Apart from the existing constructs of the TRA and TPB, the study has found some more relevant constructs which were found important. The information perceived by the customer which was related to health consciousness and environmental concern were found important for buying organic food, similarly, organic food's nutritional factors and food safety was also found critical but at the same time, taste and preferences of the customers was also one of the deciding factors.

The result of this study has reflected the role of manufacturer in providing product information through its packaging. Food content and freshness stood the most critical factors among revealed information. The current lifestyle possessed by the citizen stood

important, it was found as one of the important factor and emerged as a new factor influencing purchase intention. Customers have shown an inclination towards products with verified certification labels and logos, a certified organic food brand is doing better business in India as compared to small brands (Renko et al., 2011).

All these factors help a buyer in forming intention towards buying it and further this intention was getting reflected towards actual purchase. Although this study has tested and discussed the role of demographic variables for actual buying behaviour. The role of each of the nine demographic characteristics were checked using statistical methods towards the actual purchase of organic food. The "size of the family" and "the district of the customer" does not found any role on the actual buying behaviour among customers of organic food but at the same time the demographic variables like "age", "gender", "marital status", "occupation level", "level of education", "household income" and "living environment" has shown statistically significant results towards actual buying behaviour. Hence this study has concluded that there is a clear role of demographics on the actual buying behaviour among organic food customers (Dettmann and Dimitri, 2009).

### **5.3 Social and Managerial Implications**

Research should be in such a way that it should ultimately help the organisations, consumers, suppliers, academicians, etc. If it does not contribute to society then it lies on the shelf of the library only. Hence, social and managerial implications are explained below for various stakeholders for this study:

**For Marketers/Organic Food Producers:** With this orientation, this study has tried to contribute so that the marketers get an understanding of the key decisional factors which a customer looks in a product before buying it. Organisations are also interested in knowing the factors which contribute more in the buying process. This study has shown the contribution of the current lifestyle is little less in the formation of customer trust at the same time revealed information has shown a strong relationship with trust. A marketer can

use this information and work more towards providing relevant information through packaging so that it can create trust among this customer segment. The marketer's role becomes very crucial for the growth of the organic food industry. They look for continuous fuel which can ignite the industry and bring more demand. Hence, the current study will help the producers and marketers in understanding their consumer in a better manner.

**For Supplier & Vendors:** A supplier should also study the customer well and can mend its practices so that the end-user is satisfied. Only if the raw material or unprocessed food is in good quality then only the output or the finished product will add value in the life of the customer and ultimately the industry will prosper. This study will help suppliers & vendors in understanding their real customer.

**For Customers:** A customer should also get a growth story of the organic market, its evolution, and its importance in life. People say that customer is king because they are the main driving force in the industry. A customer should always be made aware first then only they contribute in the right manner. This study will certainly add knowledge in the life of the customer and end users.

**For Researcher and Academicians:** A researcher can look at the conceptual framework given by this study which has tried exploring 10 constructs and establishing their relationship for the formation of the customer's intent. The study has also extended the theory of planned behaviour in the perspective of organic food buying behaviour by adding more relevant variables and constructs in the context of this niche market. This study has also proposed and tested a new relationship/model for buying organic food. This addition in the existing literature can be helpful for future scholars studying the buying behavior process. An academician can also see this research and identify the gap areas for further study and ultimately this study is a small step towards contributing to the society and organic food market (Lee and Goudeau, 2014). This study can be a small help in adding in the existing knowledge base of the researcher and academicians who are working in the same area. Hence researcher has tried to contribute in the area of consumer behaviour specially in organic food market and their key stakeholders.

#### **5.4 Limitations of the Study**

This doctoral study has tried checking the customer's intent. It has also studied the process of purchase shown by the customers of Punjab towards the processed and packaged organic foods, it does not include the fresh fruits & vegetables, meats, and fishes, loose organic grains & spices, etc. Studies limited to some variants might not be applied for the entire industry of food & beverages (Stagl, 2002).

People of Punjab might behave in a particular manner while buying organic foods and might not be generalised for entire India. Although the researcher has focused on all the formats of retail for checking the buying behaviour whether it was modern retail or traditional retail. Time and funds constraint have restricted the researcher to explore more geographies too but at the same time, there is a constraint of organic food customers in Punjab as in modern retail not more than 5% of customers buy organic foods.

#### **5.5 Suggestions for Future Research**

This study was important for checking the antecedents of actual buying behavior and the relationships among the key decisional factors towards the processed and packaged organic foods. Future research can be done on the existing customers of organic food by checking their online buying behavior as this study has only focused on offline buying or physical shopping. E-commerce sites have started selling organic food items in good numbers and it controls the significant size of the total revenue of the organic market. The study under consideration has only targeted brick and mortar shopping for checking actual buying behaviour as it was assumed that interacting opportunity can only be possible when we meet the customer at the market place without changing the external environment. It was found that customers have given relevant answers while doing organic food shopping since they were much involved at that time. But we cannot ignore the growth of online pantry shopping as we have seen many live examples like Amazon Pantry, BigBasket, Grofers, etc. are doing good sales of organic foods (Hasanov and Khalid, 2015).

Researchers can also focus on the extensive study by including various states of India from different geographies, it can give a comprehensive picture of the Indian customers. This study was limited to Punjab but including other states from other regions of India may reflect a diverse buying behaviour. Collaborative study with the researchers of the other part of the World can also give a holistic view of understanding behavior like the eastern world can be compared with some of the western countries. Moving forward, understanding the repeat purchase behavior of organic foods can also be studied by future scholars. Marketers are always interested in understanding the behaviour of repeat customers. Every business is interested in retaining loyal customers; they play business tricks to engage their existing customers. Customer-specific discounts and incentives are the talks of the town, learning the pattern of these loyal customer's behaviour can be an interesting part for future study. All these aspects can be studied by the future scholars that can add value in the life of the organic food companies and finally the benefit can be transferred to the end customers.

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## Annexure 1: Questionnaire

Dear respondent,

I am pursuing doctoral degree (Ph.D.) from Mittal School of Business, Lovely Professional University, Punjab. I am carrying out a customer survey to check “**Actual Buying Behaviour towards Organic Food**”. Kindly spare your valuable time to give appropriate responses to the issues addressed in this questionnaire. The information provided by you will be kept confidential and it will be used for academic purpose only.

*All the below mentioned statements are based on five point likert scale where SD means strongly disagree, D means disagree, N means neutral, A means Agree and SA means strongly agree. Please put a tick mark in the boxes as your response.*

1. The following statements are designed to check the awareness about organic food products in terms of product knowledge and consumer knowledge.

S. No.	Organic food awareness	SD	D	N	A	SA
1	I understand that organic farming boosts biodiversity					
2	I understand that organic foods are produced without using pesticides, fertilizers and preservatives					
3	I know there are government standards for the organic foods in every country					
4	I understand that there are certification bodies which gives certification to organic foods					
5	I know that organic foods can be identified by its unified logo					
6	I know organic food production process prevents water contamination					
7	I check the date of packaging on the organic foods for ensuring its freshness					
8	I keep an eye on various media channels for any new organic food offering that may be useful for me					
9	I am aware of all nearby shopping outlets where organic foods can be found					

2. The next few statements are related to your attitude towards organic food buying, where attitude refers to the degree to which the person has a favorable or unfavorable evaluation of buying”.

S. No.	Attitude towards organic foods	S	D	N	A	SA
1	I believe that the overall benefit of organic foods are higher than that of other types of food					
2	I consider that the quality of organic foods is better than conventional foods					
3	I believe in organic food because it is processed without using any chemicals					
4	I like organic food because it tastes better than conventional food					
5	I believe organic food is more nutritious than conventional food					
6	Organic food increases my immunity and help me fight diseases					
7	I like organic food because it is ecofriendly					
8	I go for organic foods as no preservatives are used to enhance its shelf life					
9	I consider that price of organic food is quite justified					
10	It is exciting for me to buy organic food					

3. The following statements are designed to check subjective norms; it means perceived social pressure arising from one’s perception for buying organic food products.

S. No.	Subjective norms	SD	D	N	A	SA
1	My family thinks I should buy organic food					
2	My friends whose opinion I value thinks that I should buy organic food					
3	My close relatives believe that organic food helps in keeping good health					
4	The trend of buying organic food among people around me is increasing					

5	Celebrity endorsement positively influence my purchase decision towards organic food					
6	Government's motivation positively influences my purchase decision to buy organic food					

4. The following statements are about perceived behavioral control, which means “an individual's perceived ease or difficulty of performing the particular behavior”.

S. No.	Perceived behavioral control	SD	D	N	A	SA
1	I can take the decision independently to buy organic food					
2	I have the financial capability to buy organic food regularly					
3	I can manage my time to go for buying organic food					
4	I have complete information and awareness regarding where to buy organic food					
5	I have the location advantage for buying organic food as it is available in nearby Stores					

5. The below mentioned statements are about revealed information, where revealed information means “the description of the organic food item mentioned on its packaging”.

S. No.	Revealed information	SD	D	N	A	SA
1	Organic labeling provides correct information about organic foods					
2	Organic labeling provides the information about the freshness of the product					
3	Organic labeling provides complete information about organic foods					
4	The information provided by organic labeling content develop trust					

6. The below mentioned statements are about perceived information towards organic foods, where perceived information means “the information gathered by someone on the basis of various facts”.

S. No.	Perceived information	S	D	N	A	SA
1	Organic foods contain more nutrients					
2	Organic foods are healthier than conventional food because it is packed without adding preservatives or artificial color					
3	I tend to feel better when I eat organic food					
4	Organic produce can reduce the food poisoning risk					
5	Organic farming helps in protecting the environment as it does not require any chemicals					
6	I always look for food products produced in environmental friendly ways					
7	Foods grown organically are obtained from sustainable resources					
8	Organic food discharges less pollution into air, water and soil					
9	Organic food has no artificial colors and flavors					
10	Organic food is easily available in shopping outlets					
11	I always look for special offers for organic foods in advertisements, leaflets, etc.					
12	I am ready to pay a bit more for those products that does not harm environment					
13	I buy more when I see a discount is being offered on organic foods					
14	I demand high quality standards when it comes to food					
15	I treat myself to delicacies hence I buy organic food					
16	I like treating myself with fine food hence I buy organic food					
17	Eating organic food is my desire and I am passionate about it					

7. These statements are designed to measure the lifestyle aspects of organic foods, where lifestyle means “the way in which a person lives life”.

S. No.	Lifestyle	S	D	N	A	SA
1	Healthy lifestyle requires that I consume organic food					
2	Wealthy people consume more organic food					

3	Buying organic food is fashionable nowadays					
4	Consuming organic food makes me feel privileged					
5	People with high rank and status consume more organic foods					
6	Offering organic food to friends shows that I have a high social standing					

8. The below mentioned statements are about trust and certification, where trust means “believe in the reliability, truth, or ability of something”.

S. No.	Trust and Certification	SD	D	N	A	SA
1	I think that corporations in the field of organic foods are aware of their responsibilities					
2	I trust those who sell certified organic foods					
3	I trust the quality of organic food label and unified logo					
4	I trust the institutions certifying organic food products					

9. The below mentioned statements are about purchase intention, where purchase intention means “willingness of a customer to buy a certain product”.

S. No.	Purchase intention	SD	D	N	A	SA
1	I am willing to buy organic foods despite their higher prices					
2	I intend to buy organic food products for my long term health benefits					
3	I intend to buy organic food products because they are more safe to eat					
4	I plan to buy more if organic food products are readily available					
5	I plan to buy organic food products because of its quality					
6	I intend to buy organic food products because they are more environmental friendly					
7	I intend to buy organic food products because I am concerned about animal welfare					

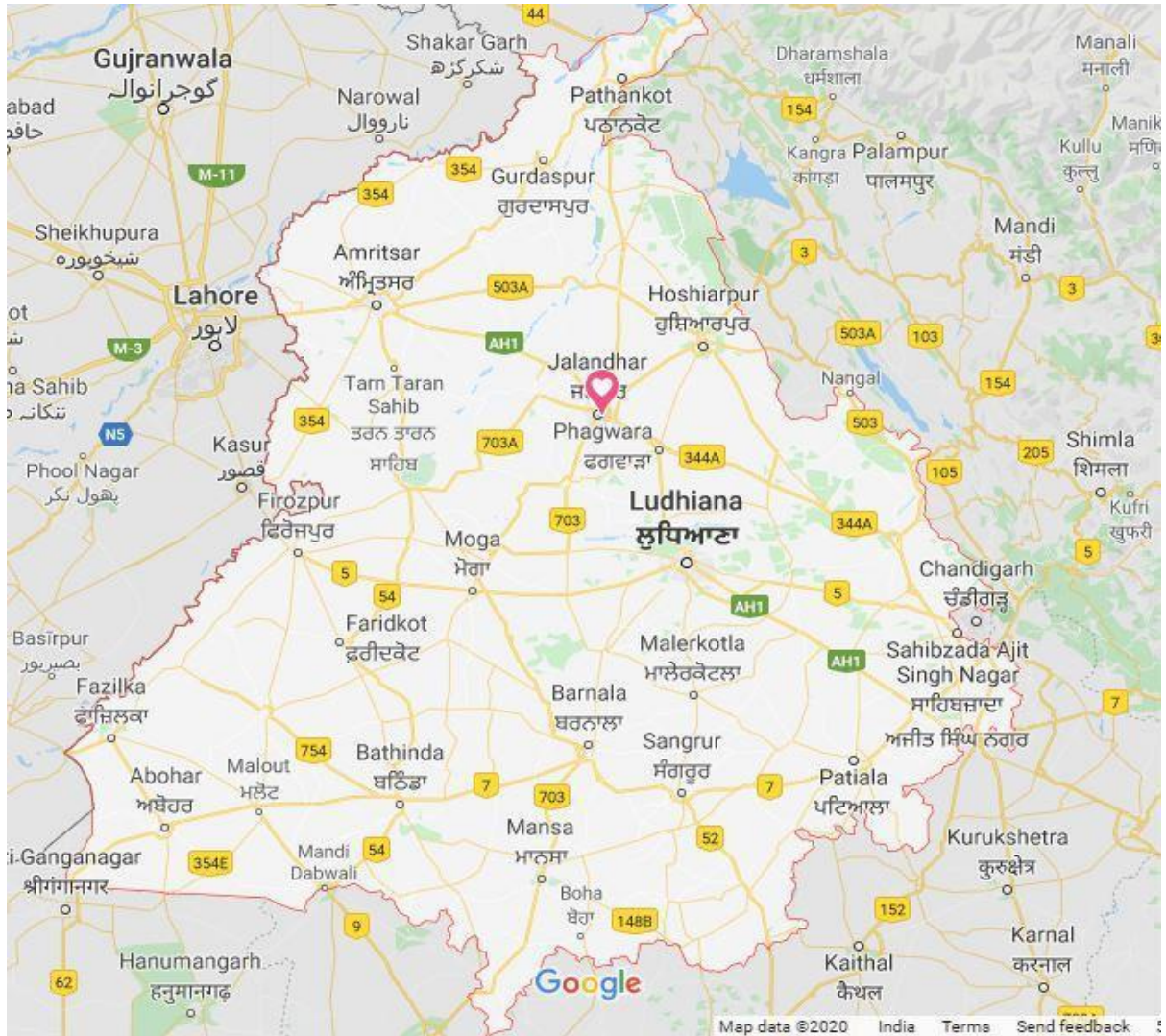
10. These statements are designed to measure the actual buying behavior towards organic foods, which means “consumer's behavior in the marketplace while purchasing a product or service”.

S. No.	Actual buying behavior	S	D	N	A	SA
1	I buy organic food because this is best choice for me and my family					
2	I will keep on buying organic food rather than other types of food					
3	I will keep on going to places that sell organic food					
4	I often buy organic foods that are against animal-testing					
5	I often buy organic foods that are safe to consume					
6	I often buy organic foods because they are more environmental friendly					
7	I will buy organic foods every time I go for shopping for next one year to see its impact on the health of my family members					

**Demographic Details:**

**Age:** Below 18  19-29  30-39  40-49  50 and above  **Gender:** Male  Female  Transgender   
**Marital Status:** Unmarried  Married  Separated/Divorcee  **Occupation:** Salaried  Self Employed  Retired  Housewives  Others   
**Household Income:** Below Rs. 30,000 pm  Rs. 30,001 – Rs. 60,000 pm  Rs. 60,001 – Rs.90,000 pm  Above Rs. 90,001 pm  **Education level:** Below high school  12th  Graduate  Post Graduate and above  **Family Size:** 1-2 members  3-4 members  5-6 members  7 and above members   
**District of Punjab you belong to:** \_\_\_\_\_ **Living Environment:** Urban  Sub-Urban  Rural   
**Contact No:** \_\_\_\_\_ **Email ID:** \_\_\_\_\_

## Annexure 2: Map of Punjab



## Annexure 3: List of Executives/Academicians involved in Face and Content Validity

S. No.	Face and Content Validity	Designation	Affiliation
1	Mr. Chanan Singh	Chief Manager, Marketing	Markfed, Punjab
2	Mr. Prabhu Prakash	Regional Sales Manager	Rich Graviss Products- Food Service
3	Dr. Mohammad Farhan	Associate Professor	Lovely Professional University
4	Dr. Rajesh Verma	Professor & Dean	Lovely Professional University
5	Dr. Harpreet Singh Bedi	Professor	Lovely Professional University

6	Dr. Sunil Budhiraja	Associate Professor	Symbiosis Institute of Business Management
7	Dr. S. Hari Babu	Associate Professor	Symbiosis Institute of Business Management
8	Dr. Dheeraj Nim	Associate Professor	Indore Institute of Science and Technology
9	Dr. Anish Yousaf	Assistant Professor	ICFAI Business School, Hyderabad
10	Dr. Makhmoor Bashir	Assistant Professor	ICFAI Business School, Hyderabad
11	Dr. Mohit Jamwal	Assistant Professor	Lovely Professional University
12	Dr. Avinash Rana	Associate Professor	Lovely Professional University
13	Dr. Supernova Chakraborty	Associate Professor	Lovely Professional University
14	Dr. Vishal Soodan	Associate Professor	Lovely Professional University
15	Dr. Omvir	Professor	Vishwakarma University, Pune
16	Dr. Mithilesh Pandey	Associate Professor	Lovely Professional University

#### Annexure 4: Data Collection Points

<b>Sampling Districts of Punjab</b>	<b>Retail Stores approached for Data Collection</b>
Hoshiarpur	More Supermarket
Pathankot	Excel Store, Nayyar Mart
SAS Nagar (Mohali)	Organic World, Whole 9 Organic Ranch, H2 Organico
Jalandhar	Orgaic Trail, D-Mart
Ludhiana	Grassroot Organic, The Earth Store
Rup Nagar (Ropar)	Harmeet Singh & Co.
Shaheed Bhagat Singh Nagar (Nawanshehar)	O-Store, Sohna Markfed Booth
F. G. Sahib	Damheri Super Market
Kapurthala	Best Price, Reliance Mart
Gurdaspur	Swadeshi Haat, Sunil Grocery Store

#### Annexure 5: Published Research Papers

# Factors influencing organic foods purchase intention of Indian customers

Deepak Pandey & Amit Kakkar & Mohd Farhan & Tufail Ahmad Khan

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**Abstract** These days, consumers are more inclined towards a healthy lifestyle. They understand the quality of food intake directly affects their health. Consuming organic food is a good option available to them. India being a big producer of organic food has started showing interest towards consumption of organic food. Understanding of consumer is very important for marketers for the holistic growth of organic food market. The aim of this study is to comprehend the key factors affecting purchase intention of the Indian organic customers. This study has used a semi-structured questionnaire on 200 organic customers and proposed a research model. The data analysis has used confirmatory factor analysis (CFA) and identified that all the indicating variables have reflected their underlying constructs. After undergoing CFA, it is also established that the acceptable fit to the data has been reflected by the measurement model. Moreover, path analysis was used to check the predicted causal relationship among the latent constructs (structural model). Con-

tribution to the sustainable environment is the target of mature organizations. The proposed relationship model for purchase intention may help organization dealing in an organic food market.

**Keywords** Sustainable products · Organic food · Subjective norms · Perceived risks · Purchase intention

## Introduction

After becoming independent, the major problem faced by India was the dearth of food resources. The early 1960s had witnessed the green revolution to increase the production of different types of crops, helping in meeting the growing demands of food grains of the ever-increasing population (Pingali 2012). The main aim of the green revolution was to become self-sufficient in the field of food grains by developing and using high yielding varieties of seeds and fertilizers, modern irrigation methods, and managing land holdings which were scattered. The agricultural lands of Punjab, one of the states of Northern India; invariably known as the food basket of India has been changed into goldmines because of its hardworking farmers. The farmers of Punjab were the first ones in India to test new seeds, had a faith in using pesticides and fertilizers and introduced mechanized and modern production techniques to make the state “the wheat bowl of India.” In the initial years, the usage of fertilizers and pesticides made the state prosperous, but the continuous and unwanted usage of chemicals in the form of fertilizers and pesticides gradually made the land as well as the water bodies toxic and

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poisonous. The water in some districts of Punjab was so polluted that the underground water of these districts was declared unfit for human consumption by the state government. The percentage of toxic elements like chloride, chromium, uranium, and many other toxic elements (some out of which can lead to cancer) had risen to alarmingly high levels in the water (Bajwa et al. 2015) affecting the physical condition of numerous villagers who were bound to consume the infected water. Due to persistent and excessive and harmful use of chemical fertilizers and pesticides, the productivity of many agri-cultural has either reduced or the fields now lay barren. With the increased usage of pesticides, the pests have also become resistant to pesticides leading to excessive losses to crops. The same was reported a few years back when the cotton crop was attacked and destroyed because of American bollworm in the large farms of Punjab. The panicked farmers now started using huge amount of pesticides to save their crops from being destroyed. The excessive usage of pesticides was recommended by the pesticide dealers to make the best use of the situation. Wherein Punjab Agriculture University, the premier institute of Punjab had recommended only seven sprays for a particular crop; the farmers were using the sprays by more than 32 times ([indiatogether.org](http://indiatogether.org)) for the same crop which resulted in making the land unproductive because of the damaging effects of the pesticides. A large number of cases related to intoxication and spread of many diseases were reported in various parts of Punjab due to excessive usage and exposure to pesticides. To safeguard their crops from different types of pests, the farmers took loans from commission agents as well as from the banks to buy pesticides and other related equipments. The natural resources on one side were excessively used and on the other hand, were continuously polluted affecting the balance of the environment and health of millions of people. Thus, it becomes more evident that we develop such techniques and methods that will help in growing crop without damaging environment. This leads the farmers as well as the government to explore and boost the untried organic food market and to get themselves free from the hazardous cycle of using the pesticides to boost the production on the cost of ecology, environment and more so, of health. The Indian government, as well as different states and many non-government organizations, are encouraging the culture of organic agriculture among the farmers to prevent further damage to land, ecology, food chain, and the

environment by unwarranted utilization of harmful chemicals ([ncof.dacnet.nic.in](http://ncof.dacnet.nic.in)). As researchers regarding preferring and adopting organic food have taken place in the advanced nations, the study should also be conducted from the perspective of Indian customers to determine the bunch of influential factors and inhibiting factors affecting the preference of consumers towards organic food. Moreover, the conclusions and inferences of the present study would help the government to devise policies to reduce the extreme use of chemical pesticide. These days, people have started showing concern towards health and consumption of organic food is helping them to do so. Organic food producers are having a less negative impact on human health as well as environment than conventional products and hence are also called as a sustainable or environmentally friendly product (Gil et al. 2000).

### Organic food

The main reason to develop food products using renewable resources is to conserve soil and water as well as to enhance quality of environment for the present and future generations. Products like organic meat or poultry or eggs or dairy products usually come from animals that are kept in a natural environment and are neither fed with any kind of antibiotics nor are given any growth hormones. The other category of organic food items is those that are produced without using most conventional pesticides or are not fertilized with fertilizers having synthetic ingredients or are not grown through radiations. Before labelling any product as "organic," a government-approved certifier visits the farm to ensure whether the farmer is following all the rules as per the USDA organic standards for developing the organic food or not.

### Growth of organic food in the global market

The organic food market is expanding very fast and it has revenue over 60 billion euros with more than 45 million hectares of land is used worldwide for organic farming. The USA is leading in an organic market with more than 26 billion euros followed by Germany with around 8 billion euros and France with over 4 billion euros. China has also published official data in 2013 and claimed that they stand forth with 2.4 billion euros organic market. Looking at the biggest organic producers worldwide, two million organic producers were reported in 2013. Exactly in the previous year, the

highest producing countries were India (650,000), Uganda (189,610), and Mexico (169,703).

### Scenario of the organic food market in India

According to recently published TechSci Research report namely India Organic Food Market Forecast and Opportunities, 2020; "organic food market in India is projected to register growth at a CAGR of over 25% during 2015–2020. Growing health consciousness is the key factor surging the demand for organic food products in India. Other factors driving growth in the market include higher income levels, improving living standard, and favorable government initiatives aimed at improving the current scenario of organic farming in the country by providing financial and technical support to organic farmers. Rising awareness about the benefits of consuming organic food products coupled with rising health concerns is driving the consumption of organic food products in India (Saini 2013). Though high prices of organic food are hindering widespread adoption, producers are increasing their focus on reducing the price differential between organic and conventional food products. As demand for organic food products rises, increase in production and economies of scale would result in reduced cost of production, further driving growth in India organic food market over the next five years."

Organic food manufacturers always were in search of understanding the factors important for purchase intention. Previous studies have explained some of the decisional factors which help consumer's to form intention towards organic food buying. Researchers also try to understand the relationship among various decisional factors and purchase intention towards organic food buying.

### Review of literature

The organic food market has seen a significant growth in the last decade in India. The study conducted by Misra and Singh (2016) explained that the intention of the organic food customers was majorly motivated by food safety and health concerns, whereas it has also discussed that trust and certification plays a significant role in influencing the customers. More the customer will have information about the organic food they will show better intention, at the same time availability of organic food items is a major concern as Indian customer does not want to travel more for shopping and prefer buying from

a nearby store which generally lacks in organic food availability. The kind of lifestyle people follow is also responsible for their food habit. Lot of research has been done to understand the consumer lifestyle (Sriwaranun et al. 2015) and its effect on buying pattern. As per studies, for some of the consumers, purchase of organic products was a lifestyle as they had the affordability factor. With many other high-end products, organic products were also considered as a status symbol. Prices of organic food items in India are significantly higher than the conventional food items which are a major obstacle in the growth of this market as Indian consumers highly price sensitive and even a marginal increase of price affects the consumption of food items in lifestyle. As discussed (Chakrabarti 2010) earlier that the availability of organic food items is the major challenge in the nearby stores in tier 2 or tier 3 cities in India. Food items are considered to be low involvement purchases so customers do not bother to buy it from nearby stores which generally do not keep varieties of organic foods. In China, there exists the availability of different types of safe food labels in the Chinese food markets. Most of the Chinese consumers are aware of safe food but they have less understanding about safe food, little identification of the appropriate labels, and limited aptitude to identify safe food. Xie et al. 2015 discussed that consumers who are not familiar with the term "organic" or who are not aware of organic certification or organic labelling are less likely to buy organic foods. Most of the Chinese consumers trust the information provided by the shop assistants or they incline towards buying organic food products from the shops that claim to sell such types of products. Researchers have found that gender, one of the demographic aspects from the point of organic product buyers, has an important role to play in the purchase and usage of organic food. The study agrees that it is primarily the women, who buy organic food in larger quantity and more regularly than men (Tsakiridou et al. 2007). This is more evident from the fact that the women usually bear the responsibility of grocery shopping. The prime responsibility of the women is to look at the health of their family members, thus providing healthy food to their family members also become their prime responsibility and in continuation of the same, the demographic variable of gender influences both the prospective and real food consumption (healthy) practices of family and the overall home environment. Seegebarth et al. 2016 discussed that as the concerns about food-related diseases and increased



usage of genetically modified foods have increased among the consumers, the new term “green consumers” has been coined which assimilate environmental considerations while making daily purchases, going for purchasing healthier, safer and better-quality food. Even now, there is a challenge in front of marketing managers to understand the consumer’s behavior towards organic food. Thus, a deeper understanding of the consumer’s perception from the dimension of perceived value in the backdrop of organic food products is required to be developed and later on, developing and implementing successful management strategies leading to converting positive consumer perceptions towards organic foods products to actual buying behavior and satisfaction.

The studies have shown that consumers’ show trust towards organic foods if the revealed information on the labels of packets mentions the content. Revealed information can be the food content information, quality assurance by the manufacturer, health concerns, environmental concern, and price. Study Liang 2015 discussed the impact of trust factor developed by the organic food labelling on the purchase decision of organic food consumers. Teng and Wang 2015 mentioned in the study of organic food consumption that trust serves as an antecedent of attitudes and it has major influence between the relationship shown by revealed information and perceived information with purchase intention. This study has also discussed the role of subjective norms and attitude towards organic foods. Moreover, this study discussed the role of knowledge of organic food on the trust getting generated through it and its impact on the behavior of organic food customers. Sriwaranun et al. 2015 studied that the customers are ready to pay a premium for the purchasing organic food products if they have the past experience of purchasing organic products, they are keeping good health and side by side, and they also have strong ethical and environmental concerns; such type of consumers also think that organic food products have better quality and they are better for health also. Respondents with children, however, are less likely to pay a premium for organic products. The analysis also indicates that the price premium hinders purchase.

Organic food consumption largely depends on subjective norms towards organic food which affects the intention of the buyer through the formation of attitude towards organic food mentioned by Tarkiainen and Sundqvist 2005. These decisional factors responsible for organic food consumption successfully indicate the

involvement of famous Ajzen’s theory of planned behavior which predicts behavioral intention and actual behavior and lays a foundation for this study.

## Research methodology

This descriptive study was conducted in Punjab. Purposive (Judgemental) sampling was used to select the respondents which were organic food existing customers. Data was collected with the help of a structured questionnaire. This questionnaire was divided as per various constructs used in this study: Revealed information, attitude, perceived value, subjective norms, trust, and purchase intention. The respondents’ demographic profile information which contains age, gender, income, education level, and district of Punjab they belong to were also collected using questionnaire. Two hundred completed questionnaire were received and being used for this study. Collected data were analyzed by using statistical technique named structural equation modeling. SPSS AMOS 20 was used with maximum likelihood estimation method as statistical tool.

## Research objectives

- & To study the decisional factors responsible for the purchase intention of the organic food customers.
- & To check the relationship between key decisional factors and purchase intention of the customer’s towards the organic food.

Table 1 represents the demographic description of respondents. The respondents were asked to report their demographic information at the end of the questionnaire which included gender, age, level of education, and monthly income. The respondents were predominantly males, i.e., 64% and females were 36%. It has been found that the maximum number of respondents, i.e., 81% is till 39 years of age which replicates the same trend of the population, i.e., LPU faculties which are mostly young people. Postgraduate respondents are having 46% of the total sample. Majority of respondents who have shown intention towards organic food was from income level 30,000 INR to 70,000 INR and this income group consists of 67% of the entire sample. Full details of the samples can be found in the below-mentioned Table 1.

Table 1 Demographic details

Sample characteristics	Category	Sample details	
		Actual count	%
Gender	Male	128	64
	Female	72	36
Age group	> 30	78	39
	30–39	83	42
	40–49	24	12
	50+	15	8
Education level	Graduate	35	18
	Postgraduate	92	46
	Ph.D.	72	36
	Post Doc and above	1	1
Monthly income	> 30,000	29	1%
	30,001–50,000	72	36
	50,001–70,000	61	31
	70,000+	38	19

Conceptual model (Fig. 1) is explaining the relationship among various decisional factors with purchase intention. The mentioned factors and its effect has been hypothesised in this model.

The hypotheses in this research are as follows:

- Hypothesis 1: Revealed information by organic food items has a significant positive effect on trust.
- Hypothesis 2: Subjective norms about organic food items have a significant positive effect on trust.
- Hypothesis 3: Perceived value of organic food has a significant positive effect on trust.

Hypothesis 4: Trust has a significant positive effect on purchase intention.

Hypothesis 5: Attitude towards organic foods has a significant positive effect on purchase intention.

Hypothesis 6: Revealed information of organic foods has a significant positive effect on purchase intention.

Hypothesis 7: Subjective norms towards organic foods have a significant positive effect on purchase intention.

Hypothesis 8: Perceived value of organic foods have a significant positive effect on purchase intention.

### Results and discussion

Evaluation of reliability, internal consistency, convergent validity, and discriminant validity of the measures was checked followed by the testing hypotheses using structural model. Data analysis was conducted using maximum likelihood estimation through AMOS 20. The Cronbach’s alpha of every construct is between 0.75 and 0.84. It was recommended by Nunnally and Bernstein in 1994 that any value more than 0.70 validates the sufficient internal consistency. Composite reliability (CR) exceeded the threshold limit of 0.6 as suggested by Fornell and Larcker (1981) which proves that there is an acceptable level of internal consistency and reliability. Moreover, the CFA results also support the convergent validity for all constructs. The average variance extracted Fornell and Larcker (AVE) across all the constructs exceeded the 0.5 benchmark suggested by Fornell and Larcker (1981) (Table 2).

Fig. 1 Conceptual framework

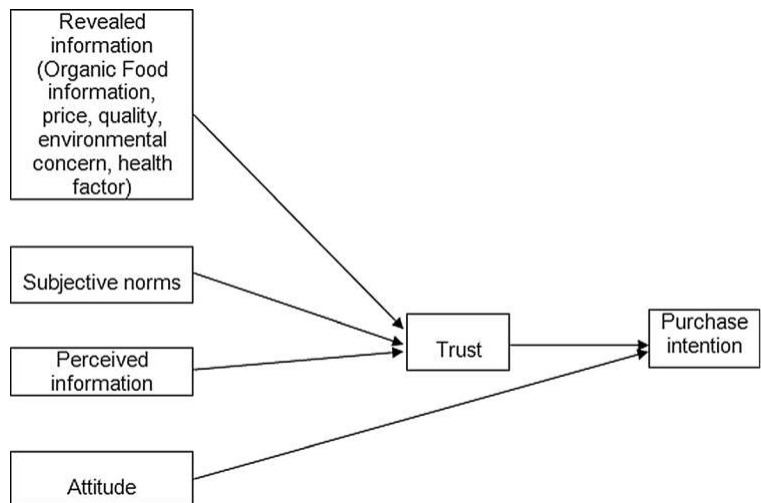


Table 2 Measurement scales and summary statistics

Construct	Cronbach alpha	Composite reliability	AVE (convergent validity)
Revealed information	0.76	0.96	0.52
I believe that information provide by organic labelling is correct			
I believe that information provide by organic labelling is sufficient			
Attitude	0.84	0.95	0.56
I believe that organic foods have lower chemical residues than conventional foods			
I believe that organic foods are safer in comparison to conventional foods			
I believe that organic foods are healthier in comparison to conventional foods			
I believe that organic foods have superior quality in comparison to conventional food			
Perceived value	0.75	0.96	0.51
I believe that an average person of Punjab is very knowledgeable about organic foods			
I believe that government of Punjab has sufficient knowledge about organic foods			
I believe that the food industry has sufficient knowledge about organic foods			
Subjective norms	0.79	0.96	0.6
My family recommends me to buy organic food			
My friends suggest me to buy and consume organic food			
News and magazines influence my purchase decision for organic food			
Local Government support for organic food also affect my decision to buy organic food			
Trust	0.79	0.96	0.6
I trust on certified organic food			
I trust the institutions providing organic food products			
I trust on the logo of organic food			
Purchase intention	0.82	0.96	0.64
In future, I will purchase organic food.			
I will regularly purchase organic food			
I intend to buy organic food products for long-term health benefits			
I intend to buy organic food products because of its food safety concern			
I intend to buy organic food products due to its environment-friendly nature			

The difference in the constructs is measured in this study using discriminant validity. It says if all the items of any constructs are strongly associated with each other as compared to the items of the other constructs then the constructs is believed to show

discriminant validity. As explained in Table 3, shows that the shared variance of different variables is not greater than the square root of the average variance explained. It is proved that discriminant validity exists in this study.

Table 3 Discriminant validity

	Rinfo	Att	Pval	Sub Norm	Trust	Pur Int
Rinfo	0.645					
Att	0	0.6				
Pval	0.219	0	0.604			
Sub Norm	0.168	0.029	0.484	0.51		
Trust	0.203	0	0.278	0.475	0.560	
Pur Int	0.216	0.038	0.073	0.216	0.276	0.52

Table 4 Regression weights: group number 1 - default model

Hypotheses relationship			Estimate	S.E.	C.R.	p	Hypothesis
TrustAvg	<-	RInfoAvg	0.137	0.059	2.318	0.02	Accepted
TrustAvg	<-	SubNormsAvg	0.382	0.074	5.158	***	Accepted
TrustAvg	<-	PerValAvg	0.32	0.079	4.048	***	Accepted
purintavg	<-	TrustAvg	0.22	0.051	4.345	***	Accepted
purintavg	<-	attavg	0.277	0.046	6.068	***	Accepted
purintavg	<-	RInfoAvg	0.159	0.043	3.655	***	Accepted
purintavg	<-	SubNormsAvg	0.175	0.058	3.032	0.002	Accepted
purintavg	<-	PerValAvg	0.295	0.06	4.961	***	Accepted

\*\*\*p@0.001

Structural model

The model fit indexes represented in Table 5 shows reasonable model fit. This study has used AMOS 20.0 (maximum likelihood estimation) to check the hypotheses. Table 4 provides the results of hypotheses of their acceptance or rejection. As per the results, all the hypothesis got accepted.

H1 described that revealed information has a positive association with trust. For the path leading from revealed information to trust (Trust<- RInfo), the unstandardized estimate of the total effect is 0.135, that is statistically significant at the level of 0.02 (Fig. 2). The result of the study supports H1 and corresponding hypotheses based on p value analysis. Table 4 give the details of unstandardized weights for all the relations.

As pner the details provided in Table 4, all the assumptions hypothesized in the paper are accepted. H2 predicted that subjective norms (SubNorms) have a positive association with trust (Trust<-SubNorms), the unstandardised total effect is 0.382, statistically important at the 0.001 level. All the hypotheses are accepted providing enough evidence that all the relationships are positively significant. Table 5 provides enough evidence about the model fit as index values are well within the acceptable limits.

Trust has been found a key factor in this study which got influenced by other decisional factors like revealed information on the packets of organic food items, subjective norms towards organic foods, and customers' perceived information about organic foods. Finally, it has been found in this study that trust has positively

Fig. 2 Structural model

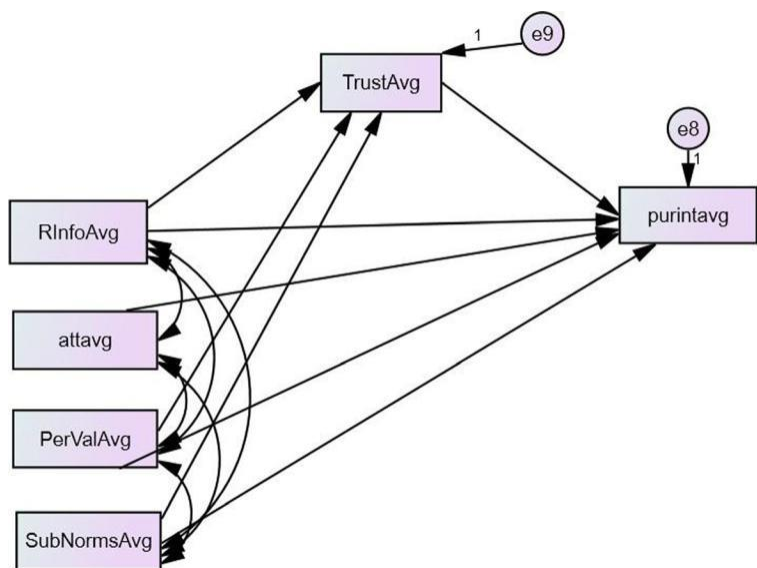


Table 5 Model fit indices

CMIN/DF	GFI	AGFI	TLI	CFI	RMSEA	Pclose
1.092	0.998	0.962	0.998	0.98	0.21	0.407

affected the purchase intention. Whereas attitude is one construct which does not affect trust but directly affects purchase intention of organic foods.

### Social and managerial implications

The key factors for organic food purchase intention identified in this study are important for the marketers and organizations to understand so that it can help them to focus on the target customers. As soon as organic food market expands, it will create economies of scale and will pull down the price of these food items which is currently at higher levels as compared to the conventional food items. This will help organic food market to expand in India and grow with significant growth rate.

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# A Study on Customer Intention to Pay a Premium Price for Organic Food

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## Abstract

The aim of this research is to contemplate the intention of the customers to give a high amount of money for organic food. This study represents the information gathered from the organic food customer of Punjab state of India, in 2018. Data of 500 respondents were collected from supermarkets, organic food shop and departmental stores in different areas of Punjab. The collected information was examined by using factor analysis, multiple regression and descriptive statistics. The outcome of this research shows that the health and food safety are the two most significant factors behind the intention to give a high amount of money, followed by product attribute, promotional activity, income level, awareness level, lifestyle, education level, environment consciousness.

**Keywords:** *organic food, health, environment, lifestyle, awareness, promotion*

## Introduction

Excessive usage of chemicals and fertilizers destroying the environment and human being's health. This is one of the big threats in leading a healthy life for the customer. So the customer is shifting towards high quality and chemical free foods<sup>1</sup>. "Organic foods refer to food raised, grown and store and/or processed without the use of synthetically produced chemicals or fertilizers, herbicides, pesticides, fungicides, growth hormones and regulators or generic modification"<sup>2</sup>. Price of Organic food is generally higher in comparison to conventional food items because it has higher production cost and high fees to obtain certified eco-labels<sup>3</sup>.

India emerged as a highest growing market for organic food<sup>4</sup>. Indian organic food market is approximately USD \$813 million and expected to rise at a compound annual growth rate (CAGR) of over 25% during 2016-2020.

## Review of Literature

Sriwaranun et al. (2015)<sup>5</sup> studied that the customers are agreeable to give an extra amount of money for purchasing organic food if they are health conscious and if they have a strong environmental & ethical concern and realize the better quality and health benefits of it. Sujatha et al. (2013)<sup>6</sup> examined that the customer is ready to pay 20 % extra price for organic food due to its benefits for health. Mohamad et al. (2014)<sup>7</sup> explored that demand for organic food will increase with the increase of awareness about its nutritional values and health benefits. Customers are ready to pay a high price because they think that these products are good for the environments. Rezai et al. (2013)<sup>8</sup> examined that factors like food safety; environmental friendliness, perception, intention, motivation, income, geographical area, income and gender notably have an impact on customer's readiness to pay a premium price for organic foods. Ramesh and Divya (2015)<sup>10</sup> examined that the lack of trust on the authenticity of food and high price is the main obstacle in the expansion the market share of organic food. Higher income of the respondents increases the intention to give an extra amount of money for organic food<sup>11</sup>. But in contrast to this study (Fotopoulos and krystallis 2002)<sup>12</sup> described that higher

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income household does not essentially agree to pay a high amount of money for organic food. Some low-income segments of the society are more enthusiastic buyers. Premium prices of organic food are the major obstacle for further expansion of the marketplace for organic food products<sup>13,14</sup>.

### Research Gap

The impact of quality, price, health consciousness environmental consciousness, awareness, lifestyle, product attributes has been studied in different studies. But these studies did not explain the impact and strength of all these factors on consumer’s intention to give a high amount of money for organic food. Hence, this research examines the relationship of these factors with the intention to pay a high amount of money for organic food.

### Objectives of the Study

1. To analyze the attitudes of customers for organic foods.
2. To analyze the important factors that influences the decision to pay a high amount of money for organic food.
3. To explain the relationship between intention to pay the extra price with other influencing factors.

### Research Methodology

Purposive sampling technique has been used for this research. Information was gathered in grocery stores, organic food shop and departmental stores in various zones of Punjab. This investigation concentrated on organic food items like Juices, Fruits, Processed Food, Rice, Tea, Honey, Dry fruits, Cereals, Spices, Coffee, Vegetables, etc. A sum of 500 respondents was covered

through a structured questionnaire and information was collected on 5 points likert scale. The collected information was analysed by SPSS 22.0. Factor analysis was used as a data reduction technique to find the important factors<sup>15</sup>. Multiple regression analysis uses to explain the relationship between the intention to pay high price with independent variables.

### Data Analysis

Amongst the respondents, 63% of the respondents were among the age group between 21 to 40. 54.6% respondents are male and 45.4% are female. 43.4% respondents have their income between 0 to 20,000. 34.4% of the respondents are private employees and 23.8% are self-employed. 57% of the respondents are unmarried and 41.0% of the respondents are married. 59.4% of the respondents are educated up-to graduation level and 22.8% are post graduated.

### Factor Analysis

**KMO and Bartlett’s Test:** Value of Kaiser-Meyer-Olkin, in table 1 is 0.829. Bartlett’s test of sphericity value for p is 0.00. So the sample is adequate for factor analysis and a relationship present between the variables.

**Table 1: KMO and Bartlett’s test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.829
Bartlett’s Test of Sphericity	Approx. Chi-Square	9014.085
	df	741
	Sig.	.000

Source: SPSS results of sample

In table 2. value of total variance found 80.952.

**Table 2: Total Variance Explained**

	Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
		Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Raw	1	6.140	34.850	34.850	3.207	18.200	18.200
	2	2.560	14.530	49.380	4.629	26.276	44.476
	3	1.443	8.189	57.568	1.689	9.584	54.059
	4	.986	5.596	63.164	1.290	7.324	61.383
	5	.848	4.812	67.976	1.162	6.594	67.976
	6	.740	4.201	72.177	1.013	5.654	73.63
	7	.609	3.454	75.631	0.987	4.244	77.854
	8	.474	2.692	78.323	0.896	3.098	80.952

Source: SPSS results of sample, Extraction Method: Principal Component Analysis.

Results of factor analysis gave eight important factors. These factors are food safety, health consciousness, environmental consciousness, promotional activities, lifestyle, awareness level and product attribute.

factor coming out from factor analyses like food safety, health consciousness, environmental consciousness, promotional activities, lifestyle, awareness level, product attribute were considered independent variables.

### Research Model

A conceptual model has been developed in figure 1, to examine the factor that affects the intention to give a high amount of money for organic foods. Intention to pay was taken as a dependent variable and demographic characters (like age, income and education level) and

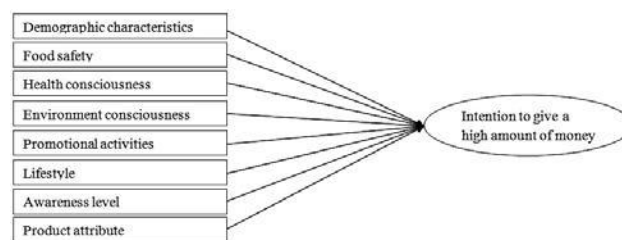


Figure 1: Conceptual model

### Regression Analysis

Table 3: Estimated model coefficients

Model		Coefficients				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.537	.276		6.259	.000
	Health consciousness	0.482	.039	0.389	9.121	.000
	Food safety	0.415	.057	0.389	8.162	.000
	Product attribute	0.398	0.044	0.401	6.591	.000
	Promotional activity	0.251	.032	0.301	8.514	.000
	Income Level	0.249	.036	0.301	5.382	.000
	Awareness level	0.230	.050	0.287	4.63	.000
	Lifestyle	0.167	.032	0.178	4.59	.000
	Education Level	0.156	.056	0.0159	6.197	.000
	Environment consciousness	0.137	.033	0.151	3.64	.000
	Age	-0.076	.059	-0.061	-0.436	0.00

a. Dependent Variable: intention to give a high amount of money

Source: SPSS results of sample

On the basis of table 3, the equation for intention to give a high amount of money in this study is given below:

$$\text{Intention to give a high amount of money} = 1.537 + 0.482 (\text{Health consciousness}) + 0.415 (\text{Food safety}) + 0.398(\text{Product attribute}) + 0.251(\text{Promotional activity}) + 0.249 (\text{Income Level}) + 0.230(\text{Awareness level}) + 0.167(\text{Lifestyle}) + 0.156 (\text{Education Level}) + 0.137 (\text{Environment consciousness}) - 0.076 (\text{Age})$$

### Findings

Health consciousness with the maximum beta value (0.482) is the most important factor that highly affects

the consumers' intention. Food safety is the second most significant variable with the beta value of 0.415. Product attributes like appearance, taste etc. came on the third position, followed by income level, awareness level, lifestyle, education level, environmental consciousness. Age has a significant negative association with the intention to give a high amount of money.

### Conclusion

This research examined the determinants that affect customer' intention to give a high amount of money for organic food. It was found that Health consciousness is the main factor that highly affects the consumers' intention to



give a high amount of money for organic food. Food safety is the second most important variable. Product attributes like appearance, taste etc. came on the third position, followed by Income Level, Awareness level, Lifestyle, Education Level, Environment consciousness. The analyses demonstrate that demographic factors like income and education have a significant positive association with the intention to give a high amount of money.

**Ethical Clearance:** Not applicable in this study because of no patient involvement.

**Source of Funding:** Self

**Conflict of Interest:** Nil

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