A STUDY ON CONSUMER BEHAVIOR TOWARDS ORGANIC FOOD PRODUCTS IN PONDICHERRY

Thesis Submitted to the Pondicherry University in Partial Fulfilment of the Requirements for the Award of the Degree of

DOCTOR OF PHILOSOPHY
in
MANAGEMENT (INTERNATIONAL BUSINESS)

By

S.SARUMATHI
Ph.D Scholar (Full Time), R 20838

Under the Guidance of

DR. M. BANUMATHI
Associate Professor
Department of International Business
School of Management

PONDICHERRY UNIVERSITY
PONDICHERRY 605014
OCTOBER - 2015

PONDICHERRY UNIVERSITY
DEPARTMENT OF INTERNATIONAL BUSINESS
(SCHOOL OF MANAGEMENT)

Dr. M. Banumathi
Associate Professor
Research Guide

R V.Nagar, kalapet
Puducherry – 605 014
Ph: 0431- 2654731
e-mail : mbanumathi_5@yahoo.co.in

CERTIFICATE

This is to certify that the dissertation entitled **—** "**A study on Consumer Behavior towards Organic Food Products in Pondicherry**" submitted to the Pondicherry University, in partial fulfillment of the requirement for the award of Doctor of Philosophy in Management (International Business) is a record of original research done by Ms.S.Sarumathi during her study (academic year 2009-2015) in the Department of International Business, School of Management, Pondicherry (Central) University, Puducherry, under my supervision and guidance and the dissertation has not formed the basis for the award of any Degree/ Diploma/ Associateship/ Fellowship or similar title to any candidate of any other university.

Signature of the Guide

Dr. P. Sridharan
Head
Department of International Business
School of Management
Pondicherry University

Dr. R. Prabhakara Raya
Dean
School of Management
Pondicherry University

DECLARATION

I hereby declare that the dissertation entitled "**A study on Consumer Behavior towards Organic Food products in Pondicherry"** submitted to the Pondicherry University, in partial fulfillment of the requirement for the award of Doctor of Philosophy in Management (International Business) is a record of original research done by me under the guidance of Dr.M.Banumathi, Associate Professor, Department of International Business, School of Management, Pondicherry University, and that is it has not formed the basis for the award of any Degree, Diploma, Fellowship or other similar title of recognition in this or any other University.

Place: Puducherry **Signature of the Candidate**

Date:

(S. SARUMATHI)

TABLE OF CONTENTS

LIST OF TABLES

LIST OF CHART

LIST OF APPENDIX

ACKNOWLEDGEMENTS

I would like to express my deep and sincere gratitude to my Supervisor Dr.M.Banumathi, who guided me very patiently throughout the course. I thank her for the moral support and for the help she extended in each and every stage of the research. Her understanding, encouragement, and guidance have provided a good basis for the research. I shall remain grateful to her eternally.

I wish to express my warm and sincere thanks to my Doctoral Committee members Dr.Mariappan and Dr. Yarlagadda Srinivasulu for their valuable suggestions, timely support and encouragement. My sincere thanks also goes to Dr. P. Sridharan Head of the Department of International Business.

I sincerely thank the other academic staff members of International Business. My deep sense of appreciation to office assistants Mr. Kichetane, Mr, Sivasanakran and Mr.Nagamuni for their timely help.

I am forever grateful to Mr. Mohan K Pillai (late) for his kindness and guidance during the initial stages of my Research. I extend my thanks to co scholars Mr. Arokiaraj, who helped in analysis and all stages of work, Ms. L.Kavitha, Mrs. P. Jeevitha and Mr.I.Prakash. I also thank Mr. Shaiju Charoth for his extended and timely help in documentation.

I gratefully acknowledge Mr. Bhupendra Maru, and Mr. Gnanasundaram who helped me during data collection period. Without their timely support, I could have not completed my work.

Finally I sincerely acknowledge my parents Mr. V. Sabapathy and Mrs. Gomathi for their kindness and continuous moral support throughout this period. My brother Mr. S Gopathy and my husband Mr. K Vijayabaskar for their unlimited support and encouragement during the period of research.

Above all, I owe my gratitude to the Almighty, on whom ultimately I depend for sustenance and wisdom.

PREFACE

Changing food consumptions patterns of consumers seems to be one of the big threats for leading healthy life. Usage of chemicals and fertilizers ruins the environment and human being's health. As a result of organic agriculture started booming up in many world countries. Now consumers started using organic food as their daily intake. Hence, this research focuses on Consumer Behavior towards organic food products. Further it analyzes the consumer's willingness to pay premium for food articles.

This study focuses on consumers of organic food products. It is analysed from the view of their knowledge, perception, attitude and trust towards organic food products. Partial Least Squares Structural Equation Model (PLS- SEM), Regression analysis, ANOVA and T-test was performed to analyze the behavior of 202 Indian and 204 Foreign organic food consumers in Pondicherry.

Adding to this, consumer's willingness to pay premium for organic food products were examined separately with the help of descriptive and chi-square test. Consumers were asked how much percentage they are willing to pay extra for organic food.

In brief, it is concluded that both Indians and Foreigners are knowledgeable about organic food. But in terms of attitude foreigners hold positive attitude further it influences their buying behavior which is not in case of Indians. It is found that Foreigners willingness to pay depends on their perception but Indians willingness is based on their trust and perception towards organic food.

Keywords: Organic food products, Consumer behavior**,** Willingness to pay.

ACRONYMS, ABBREVIATIONS, AND INITIALISMS

ATT	Attitude
BEH	Behavior
HEA	Health
KNO	Knowledge
PER	Perception
TRU	Trust
WTP	Willingness to pay
AVE	Average Variance extracted
SRMR	Standardized Root Mean square Residuals
DV	Discriminant validity
CR	Composite reliability
PLS	Partial least squares
SEM	Structural equation model
FMI	Food marketing institute
NOP	National organic program
FAO	Food and agriculture organization
CII	Confederation of Indian Industry

SYMBOLS AND NOTATION

α	Alpha
$\beta 0$	Beta Constant
χ^2	Chi-Square
β	Exponential Beta
H^0	Null Hypothesis
R^2	Regression Square
$	United States Dollar

CHAPTER - I
INTRODUCTION

In the twenty first century, sustainability is regarded as most important public health issue (American Public Health Association, 2007). The challenge towards building the healthier communities starts with environmental concern and the combined execution of eco friendly behavior, since the choices made by consumers regarding the environment have an impact on the quality of life and health for both future and current generations (Royne M. B, Marian and Jenifer 2011). In the current scenario, the concern for creating a healthy and sustainable environment triggered the interest in environmental issues of academics, corporate, media, government and non government organizations. The seriousness of these issues has brought about awareness among consumers to become conscious of their consumption behavior which causes the green movement, practices and also to perform green behavior. A person who practices environment behavior will encourage healthier communities, therefore understanding the concerns with regard to environment amongst the consumers can encompass a significant influence on public well being.

As per American Marketing Association (AMA) "Green marketing involves developing and promoting productions and services that satisfy customers want and need for quality, performance, affordable pricing and convenience without having a detrimental input on the environment" hence there is a need to educate the consumers to make them aware of the environmental threats. In today's context consumers worry about world's future and as a result of this most of them have a preference towards environmental friendly products.

The production, trade and consumption of food products have been recognized as critical contributors to many environmental issues among the environmentally important activities (Carmer Tanner, Sybille W.Kase 2003). Regarding food products "green" means organically grown food. Organic food purchases are motivated because they are perceived to be healthier, more nutritious, better tasting than non organic foods. Organic

production corners out the set of consumers that perceive both added social benefits (environment) and personal benefits (health) from its products (Straub, M. O., & Thomassin, P. J.2006). Most of them perceive that green products under the category of food articles (ingestible products) such as snack food, frozen food, canned food, soft drink, cereals, juices, backed foods, coffee, chocolate, children food, dairy products, sea food, fresh meat and vegetables are of high quality than conventional alternatives.

Globally there are various institutions and organizations were established particularly in developed countries to make sure of food safety and public health. Increasing awareness with regard to environment along with the concerns about food safety has directed the people to question the practices of modern agriculture. The noticeable hazards of modern agriculture practices such as the usage of pesticides, chemicals and their residues in food seem to have a long term association and unidentified health effects (Miles & Frewer, 2001; Wilkins & Hillers, 1994; Williams & Hammit, 2001) and in turn this has a reflection in increasing demand for organically grown produces. The major reason among the public to buy organic food is the concern with regard to improvement in health or health maintenance (Schifferstein and Oude Ophuis, 1998; Tregear et al., 1994).

Customers want to buy organic food because of their lifestyle, environment and the health benefits (Leila H.M and Mehdi zahaf 2009). Most of them have lack of trust on companies as a result they prefer to buy from local producers (open market) and sometimes from specialty store or supermarket. But they identify and recognize the difference between organic and non organic food with the help of label information and certifications.

Consumers are more concerned about the health, nutrition and the food quality and healthiness has become as the most important measure and quality parameter among the food purchasers (Magnusson et al., 2001; Wandel and Bugge, 1997). They hold positive attitudes toward organic food products because they conceive that organically grown foods are healthier and safer than conventional alternatives (Beharrel and MacFie, 1991; Jolly et al., 1989).

The studies conducted recently disclose that the organic foods comprise of high levels of beta carotene, cancer fighting antioxidants, health-promoting polyphones, vitamins C, D and E, necessary fatty acids and minerals that avoids heart disease. According to Organic Consumers Association it has more iron (73%), calcium (63%), molybdenum (178%), potassium (125%), chromium (78%), magnesium (118%), zinc (60%) and phosphorus (91%) than conventional products and grown products. Spangler et al., (2012) stated that the benefits of organic food are still unclear. Baranski (2014) recommends that opting organic food can see a remarkable increase in the consumption of nutritionally desirable antioxidants boosts immune system and reduces risks of heart diseases. It prevents premature ageing, cancer, ensures safe and healthy world for future generation and also promotes animal welfare. Despite the fact that the concept of "organic food" is well recognized by most of the consumers (Roddy et al., 1996; von Alvensleben, 1998), the percentage of consumers who buy organic food on a regular basis is very less (Grunert, 1993; Wandel and Bugge, 1997; Roddy et al., 1996; Fotopoulos and Krystallis, 2002).

In accordance with the BCG report (2009) around fifty percent of consumers choose not to buy environmental friendly green products for various reasons such as unaware of green products (34%), only few option (16%) that too it is expensive (11%). Few felt (2%) the quality of the products are poor comparing with the conventionally produced and some of them don't trust (4%) the label information and the certification. Generally green products are costlier than the conventional products because higher cost is acquired by the process, material and to obtain certified eco labels (Ling, C. Y 2013). Hence we can conclude that the important considerations among the consumers when they buy organic food are taste, health and environmental benefits, whereas the price and availability of such products are the major obstacles (Lockie et al., 2002; McEachern and McClean, 2002).

Global organic food market

Globally more than 165 countries produce certified organic food in 32 million hectares of land with 1.2 million producers. The global organic food market is predicted to grow US$ 105 billion in 2015 at an estimated growth rate of 13%. The major reasons behind the growth of global organic food market is increasing consumer awareness regarding organic food products, number of organic farmers. In the world, hike in organic food retailers who provides a range of organic food products and execution of government regulations (International Federation for Organic Agriculture Movement). More than 90% sales were concentrated in North America and Europe. The countries with the largest market for organic food are the USA followed by Germany and France. The highest per capita consumption in the world is Switzerland followed by Denmark and Luxembourg (IFOAM). On the other hand, Asia Pacific is predicted to be the fastest growing market for organic food and beverages at an estimated growth rate of 29% from 2014 to 2020. According to IFBL report India has largest number of organic food producers in the World (600,000).

Indian scenario on organic food

India faced food scarcity in 1950s due to the population explosion and natural disasters. To overcome this in 1960s the Green Revolution was started, which increased the agricultural production with the introduction of high yielding variety seeds and by using fertilizers and pesticides.

Pesticides can cause a wide range of human health hazards starting from headache to chronic diseases like cancer (Brouwer et al, 1999). Even a minimum exposure of pesticides in the environment causes chronic health effects after years (Toxic action centre). In worldwide, 1 in 8 deaths is caused due to cancer which is becoming a global epidemic. If this trend doesn't transform, the cancer burden is predicted to swell 21.7 million cases and 13 million deaths by 2030 (American Cancer Society). Annually 7 lakh people die of cancer in India (WHO, 2015) with million new cases reported every year it is anticipated to increase fivefold by 2025. Krishnan Nair, Cherian Vargheese and R. Surendran found that risk factors for cancer are; tobacco, alcohol, diet and pollution.

People suffering from diabetes are more in India (51 million) followed by China (43) and USA (27). In the country's population nearly 9% of people are projected to be affected by this disease (International Diabetes Federation). This trend will continue till the next 20years. Researchers says that high occurrence of cancer is caused by both internal like hormonal and reduced immune system, genetics along with external and environmental like industrialization, food habits, lifestyle and excess growth of population. It is highly evident in the literature that the risk factor for higher occurrence of chronic disease is due to poor diet (Ezzati M, Riboli E, 2012). Therefore the awareness of balanced diet is essential for "Good health".

India is good on its heath care system and tends to develop even more in the future. Instead of developing health care system one should try to prevent himself from the diseases. "Prevention is better than cure". Hence avoiding the sickness through various prevention methods helps to keep us healthy. The foremost method is food habit. Balanced diet and intake of rich nutrients is therefore important, which can be gained from having organic foods. Organic foods are more nutritious and rich in anti oxidants and cure many diseases.

India undergoes a massive contradiction with regard to organic food products. On one hand, it is rising as an important player in the global market, particularly in Europe, on the other hand the home market for organic food is still at infant stage. India started its exports in the early 90's by exporting tea to Europe and sets its first joint venture with German organic food companies. At present a huge variety of nearly 300 products are available in almost 20 product categories. Some of them are tea, fruit, corn, rice, vegetables and spices to finished products and also organic cotton. More than 40% of the products are exported to Europe, and other trading partners are Canada, the USA, Australia, New Zealand, Japan, Switzerland, Korea and countries in the Middle East and Southeast Asia. Export is a mainstay of organic marketing and is expected to reach a volume of USD 1 billion by 2015.

In emerging economies like India, food consumption pattern has drastically changed due to a rise in the per capita disposable income, urbanization, global interaction, communication and information technologies, changes in life style and family structure, education and health awareness, movement of households towards higher income groups. (2000), Shetty (2002), Deshingkar et al., (2003), Vepa (2004), KPMG (2005) Kaushik (2005), Kaur and Singh (2007) and Pingali (2007).

As per the ORG – MARG (2002) study, the household sales account when compared with the total organic production was less than 10%. Shortage of availability and substantial price differentials were considered as the main cause for lack of awareness. An organic product with respect to domestic market was not grown as healthy when compared to the export market and it is complex to guesstimate the size and trends in the growing market. Commonly, metros such as Kolkata, Delhi, Mumbai, Hyderabad, Chennai and Bangalore remain as the major market for organic products.

The earlier studies reveal the fact that there is an increase in production of organic food and its export for the past decade. But in other hand consumption has not grown up to that extent. Therefore, there is a need to understand the Indian organic food market to identify the reasons for the low level of consumption in non metros.

Need for the study

From the literature reviewed it is found that most of the studies focused on the impact of demographic and social factors on the consumption behaviour and only few studies answers the question that why they are not willing to pay more even though they had knowledge regarding the benefits organic food. Hence, the current study on "A study on Consumer Behaviour towards Organic Food products in Pondicherry" was undertaken to gain knowledge about organic consumers' perceptions, attitudes, and behavior.

Objectives of the Study

1. To understand the organic food products market in India.
2. To understand the consumer's knowledge, perception and attitude towards organic food products.
3. To analyze the factors influencing consumer behavior towards organic food products.
4. To examine the consumers' willingness to pay for organic food products.
5. To suggest suitable strategies to promote the organic food products.

It is hoped that the findings of this study will be useful to the marketers and policy makers to identify the factors influence the consumers to buy organic food and their willingness to pay premium for the same.

CHAPTERIZATION

The thesis consists of five chapters. The Introduction chapter provides an over view on the changing food patterns among the consumers and the hazards of the food produced with chemicals and fertilizers. The benefits of organic food products are discussed followed by the Global and Indian organic market scenario.

The second chapter (Review of Literature) deals with the literatures reviewed for this study. It highlights the importance of organic food products. It lists out the factors influence the consumers' behaviour. The trend in Global and Indian organic food market is also described to reveal the scope of this industry.

The third chapter (Research Methodology) elucidates the sampling and data collection methods. The results of normality and reliability tests are undertaken to know the nature of the data. The list of variables identified and used for the study has been introduced. The relevant statistical methods used for the analysis is explained briefly.

The fourth chapter (Results and Discussions) starts with the profile of organic food consumers Consumer's knowledge, perception, attitude and the factors influencing their behavior towards the organic food products were identified. Further consumers knowledge on eco labels and their willingness to pay premium were also discussed.

The major findings of the study along with the summary are given in the fifth chapter (Summary of the study). Further it suggests suitable strategies to promote the organic food among the customers. Finally the report is concluded with the conclusion and scope for further studies.

CHAPTER – II

REVIEW OF LITERATURE

The Literature reviewed for the study "Consumer Behavior towards Organic Food Products" is obtained from various reports and articles and presented under different heads as follows:

A. Importance of Organic food
B. Trend in Organic Food market
C. Factors influencing the Consumer's Behavior
D. Related Articles

A. IMPORTANCE OF ORGANIC FOOD

Food is primary requirement in our lives. All the necessary energy is derived from the food intake for all the mental and physical activities of an individual. Balanced diet and healthy eating keeps the body and mind fit and active. Diet helps us to attain and maintain a healthy weight in addition with the physical activity. It also reduces the threat of chronic diseases and supports the overall health.

Number of studies have shown that diet play an important role in preventing cancer, birth defects, cataracts and coronary heart diseases. The methodology of food systems has witnessed spectacular changes in the past decades. It is highly recognized that these had repercussions for food security, nutrition and environmental sustainability.

As per National Institutes of Health, many form of cancer which includes colon, bladder and breast cancers are partly caused due to poor dietary habits. Worldwide, food-borne diseases are a major health burden leading to high morbidity and mortality. The term "Food-borne diseases", includes intoxications, infections, illnesses acquired through consumption of contaminated food, and food poisoning. The use of pesticides and chemicals during the cultivation and production process of food articles cause various damages to the human life. Therefore in most of the countries today, the usages of those

dangerous chemicals are strictly banned. “Prevention is better than cure”. Hence avoiding the sickness by various prevention methods helps to keep us healthy. The foremost method is food habit.

Balanced diet and intake of rich nutrients is therefore important, which can be gained from having organic foods. Organic foods are more nutritious and rich in anti oxidants and cure many diseases. Hence this study focuses on knowledge and attitude of consumers towards organic food products to increase the consumption to save the society and the environment.

The organic movement started in early 19th century by a small set of farmers in reaction to the progress of pesticides and fertilizers usage (Natural Foods Investor, Rana, 2014) and they joined together in establishing various types of associations. In Germany, Demeter International initiated a certificate program to encourage biodynamic farming. Later, a society named Australian Organic Farming and Gardening Society was established in Australia (Paul, John, 2008), then Rodale Press in the United States and the Soil Association in UK was started. The above mentioned organizations united and formed the “International Federation of Organic Agriculture Movements” (IFOAM) in 1972. In the current scenario, the demand for the conversion of organic farming has been driven by environmental awareness and increased health consciousness among consumers(S Padel, C Foster, 2005) and in the other hand Government provide agricultural subsidy to support the organic farming.

In 1940, Lord Northbourne in his book “Look to the Land” introduced the term “organic farming”. Later, Jerome Rodale a publishing entrepreneur started the world’s first organic periodical “Organic Farming and Gardening” in 1942. Lady Balfour commenced an experiment (1943) and compared organic and conventional farming. Based on her research she published a book “The living soil” (Soil Association).In 1944, the first organic association was established in Sydney named “The Australian Organic Farming and Gardening Society” (AOFGS) which aims at promoting organic agriculture (Paull 2014).

The International Federation of Organic Agriculture Movement (IFOAM) was founded in France in 1972. In UK the "Soil Association" framed the first set of "Organic Food Standards" in 1974 (Institute of Food Science and Technology 2009). Organic labels and certification started developing in the 1980s, with organic grocery products which moved from health food specialists to the mainstream of distribution during the 1990s (Andrew Dodds, 2009).

The organic movement is more of a renaissance than a revolution (The organics institute). Later in 1980's and 90's organic products were offered only through health food stores.

The knowledge of "organic" subject gradually improved and spread among farmers and consumers. At present, organic products are in the prime shelf of the big chain supermarkets (Esther Lok, UNCTAD).

Definitions of Organic Agriculture and Organic foods

According to Codex definition (FAO), "organic agriculture is a production management system, which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and biological activity. It emphasizes the use of management practices in preferences to the use of off-farm inputs, taking into account that regional conditions require locally adopted systems. This is accomplished by using, where possible, on-farm agronomic, biological and mechanical methods, as opposed to using synthetic materials to fulfill any specific function within the system".

"Organic agriculture is a system of farm design and management to create an eco system, which can achieve sustainable productivity without the use of artificial external inputs such as chemicals, fertilizers and pesticides" NPOP INDIA

"Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved" — IFOAM.

The US Department (1980) defined the concept of Organic agriculture as "*a production system which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators, and livestock feed additives".*

Organic methods make sure that food is produced without artificial and conventional pesticides, antibiotics, genetically modified organisms (Curtis and Misner. 2006, Mary V. Gold, 2007). Also, it is free from contamination and food additives during the entire process (Rana, 2014). In limited farmers markets and small grocery stores these food item are sold. Organic food production focuses on environment concerns, restricting the use of harmful chemicals and pesticides in food (Transparency market research). Thus the production of organic products has numerous benefits to environment.

"Organic food is distinguished from non organic food based on the methods of production and process rather than by observable or testable characteristics" (Lohr, 2001). On the other side many people are unaware of the differences between the organic and traditional practices. The below table reveal the basic differences between the two methods of cultivation.

Table- 1

Differences between Organic and Traditional Farming

Common in organic and traditional method	**Organic method in traditional farming**	**Specifically in organic farming**
No use of chemical fertilizers, insecticides, fungicides, herbicides, growth promoters etc	Closed nutrient cycles, low external inputs	Use of microbial preparations for pest management
No use of genetically engineered plants and animals	Recycling of biomass through mulching or composting	Release or efficient attraction of beneficial insects
Use of animal manures	Mixed cropping and/or crop rotations	Use of high yielding, but disease resistance varieties/breeds of crops/animals
	Sustainable management of resources: soil, energy, water	Introduction of efficient green manures, cover crops and nitrogen fixing trees
	Maintenance of soil fertility, prevention of soil erosion	Use of improved tools for soil cultivation, weeding, sawing etc
	Animal friendly husbandry practices	Application of improved compost methods and bio fertilizers

Food Marketing Institute affirms that USDA makes no declaration on the food that is organically grown is safer or highly nutritious than conventionally produced food and in fact several organic foods like meat, milk, butter, ice cream are more or less matches their counterparts in calories and fats. Spangler (2012) concluded that they were unable to find any strong evidence supporting the perception of consumers that organically produced articles are more nutritious than conventional products. The major motivators are chemical and food allergies and intolerance to preservatives.

Duancey (2002) highlighted the reason to consume organic food is safer and it is better for the wildlife and soil. Crinnion (2010) stated in his study that organic food contains high level of prosperous, iron, magnesium and vitamin C with low pesticide residues and more antioxidants. Others like Yiridoe et al (2005), Hughner et al (2007), Zander & Hamm (2010) also concluded that consumers prefer organic because it does not have any pesticides.

Table - 2

Organic food Vs Conventional food

Parameters	Organic food	Conventional food
Pesticides and chemicals	Grown without synthetic pesticides and chemicals	Grown with extensive use of synthetic pesticides and chemicals which may lead to diseases like cancer
Food Additives	Only x preservatives are permitted which include Thiamine, Iron, Nictonic acid which has health benefits.	Additives are used to improve the taste of the food Use of artificial colorings and sweeteners leading to allergies and headaches
Hydro generated oils	No fatty acids and oils	Contains fatty acids which increases risks of heart attacks
Vitamins	Has more vitamins	Less vitamins
Minerals	Contains essential minerals such as calcium, magnesium and iron.	Low minerals.

Source: Organic food market in India, 2010

The above table explains the benefits of organic food products comparing with the conventional counterparts it indicates that organic food and vegetables consists of more minerals and vitamins which are required for human well being. Most of the people felt that there is no major difference between the organically and conventionally grown food articles (Organic Facts, Organic Consumers Association). The survey conducted by International Competence Center for Organic Agriculture (ICCOA) articulates that the labeled natural products at times are considered as organic and there is no guarantee that it is grown organically. Only source is certification, symbol and label information.

According to the Food Marketing Institute, natural food is free of artificial sweeteners, flavors, color and additives such as hydrogenated oils, emulsifiers and stabilizers. However, there is no assurance that the label details are true. It is stated by Hermes (2015) that the phrase 'natural' generally does not relate to cultivation methods or the utilization of preservatives, instead organically cultivated foods have stringent set of laws in these areas. In contrast, natural foods are referred as those foods which are not chemically distorted or fabricated in any means. Thus, natural food need not be organic and vice versa.

Table- 3

Differences between Organic and Natural foods

	Organic	Natural
Toxic persistent pesticides	Not allowed	Allowed
GMO's	Not allowed	Allowed
Antibiotics	Not allowed	Allowed
Growth hormones	Not allowed	Allowed
Sludge and Irradiation	Not allowed	Allowed
Animal welfare requirements	Yes	No
Cows required to be on pasture for pasture season	Yes	No
Lower levels of environmental pollution	Yes	Not necessarily
Audit trial from farm to table	Yes	No
Certification required, including inspections	Yes	No
Legal restrictions on allowable materials	Yes	No
Shelf life	More shelf life	Less comparing with organic food
Food labels	Has legal implications	Used freely by manufacturers
Production	By using organic means	Minimally synthesized
Food demand and availability	High demand and easily available	Less demand and easily available

Source: Organic Facts

From the above table we can observe that toxic persistent pesticides, antibiotics, growth hormones, irradiations are not allowed in case of organic but they are allowed in natural food products. Hence, it can be stated that organic foods are healthier, environmental friendly and superior than natural foods. Though it is healthier and safe for environment the only disadvantage it faces among consumers is its price. Therefore it is essential to understand the major reasons which are discussed below.

There are various reasons for the high cost of organic food products. Valliant (2014) stated the major reasons why organic food is expensive than conventional food items. They are (i) cost of organic manures, (ii) crop rotation, (iii) post harvest handling cost, (iv) organic certification. FAO and India farms blog (2014) listed the Industry

perspective and its estimation on the additional cost incurred in producing organic food they are as follows:

- 8-10% goes to farmer training on about the process and production methods of organic food production
- 10-15% premium are paid to farmers since organic method takes long time to yield crops.
- 4-6% is incurred by processing cost where the produces are processed without additives.
- 6-8% goes to Inventory holding cost including storage losses as no chemicals fumigants are used during the holding time.
- Around 6% is paid to logistics and distribution because the volume of production is small.
- 3% of cost goes to packing to ensure quality and shelf life because it has short shelf life.
- Demand for organic food is higher when compared to its production.

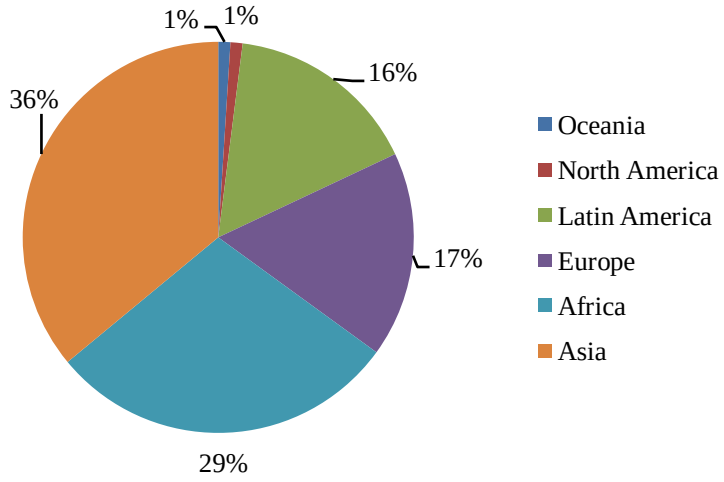
B. TREND IN ORGANIC FOOD MARKET

Across the World, Organic farming is carried out in 164 countries. The world wide organic food sales has increased fivefold in the last decade from US $18 billion (2000) to US$ 78 billion in 2013 and has reached US $ 105 billion in 2015. More than 90% sales take place in North America and Europe. USA, Germany and France hold the highest share and Switzerland, Denmark and Luxembourg are the top three countries has highest per capita consumption pertaining to organic food (IFOAM). On the other hand, Asia Pacific market is growing rapidly at 29% and projected as the fastest growing market. According to IFBL report India has largest number of organic food producers in the World.

Increased health consciousness among people, food safety, environmental protection, and increase in the usage of organic and natural products are some of the key reasons for the expansion of this market. The other major reason for the growth of this sector is Government's financial support and organic food market association with the private limited companies. The demand for organic food is focused in developed countries where purchasing power of consumers is high. Besides all this there are certain factors limiting the market from growing which are heavy prices, inaccessibility of the products, lack of infrastructure and transportation and the process concerned with certification in the emerging economies.

Chart- 1

Region wise Organic producers in the World

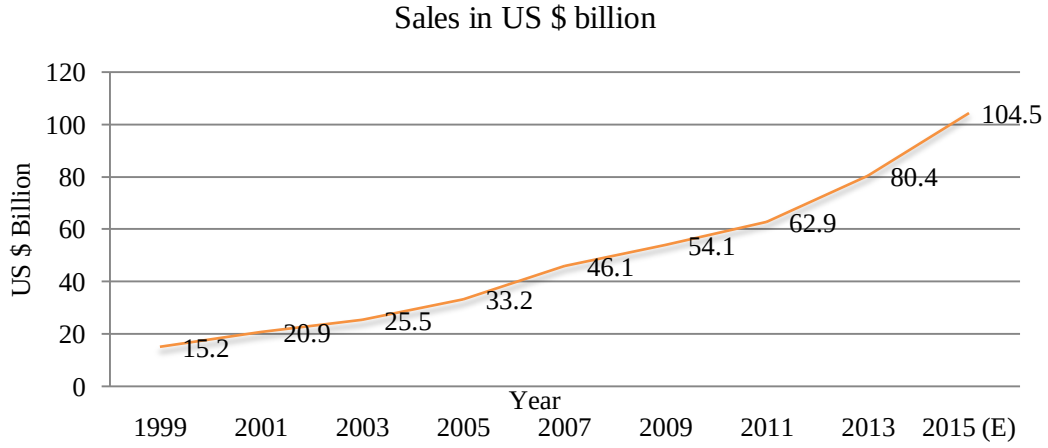


Source: FIBL-IFOAM survey 2015

Globally organic food production takes place in almost all the regions. Asia holds the largest number of producers wherein in Asia India has higher number of organic food producer in the world .Second place held by Africa with 29% followed by Europe (17%).

Chart -2

Trend in Global sales of organic food (1999-2015)

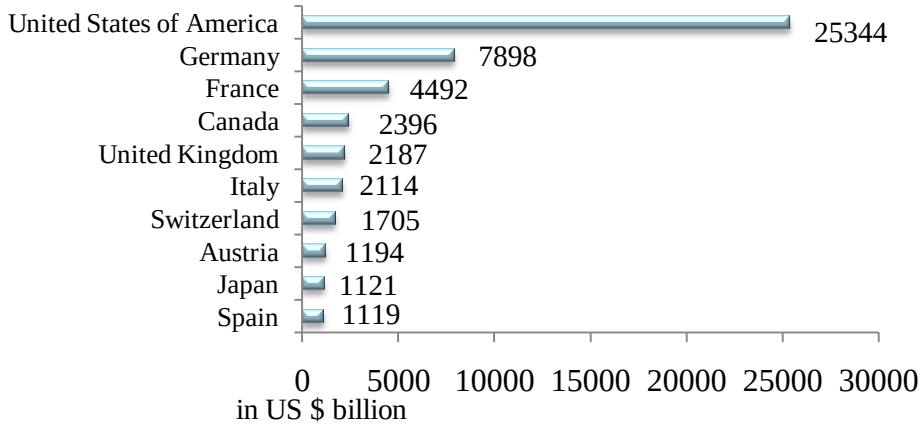


Source: FIBL & IFOAM, 2015.

From the above chart we can understand that global sales of organic food have seen a drastic growth over the last decade. In 2015 the sales is expected to reach around 104 billion US dollars. The major apprehensions for the rising growth of international organic food market includes health consciousness of the people, increased awareness among the consumers regarding the benefits from organic products, improvement in the farming of organic products globally, execution of government regulations and raise in number of retailers providing wide range of organic products.

Chart -3

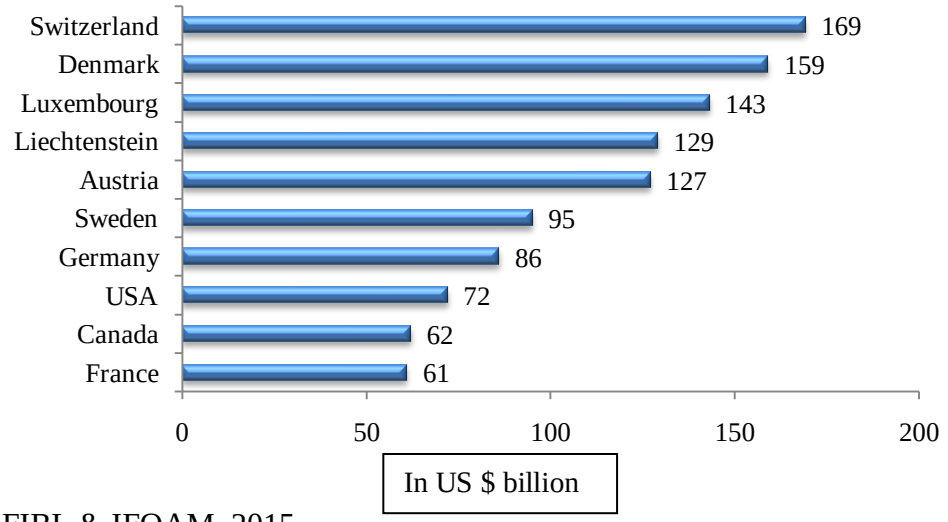
Top ten countries with respect to the market size



Source: FIBL & IFOAM, 2015.

From the above chart it is understood that US consists of large market potential comparing with all the other listed countries. There is a huge difference between US and the follower Germany. But it is interesting to know that even though with the huge market the per capita consumption is far less than many countries. Switzerland's per capita consumption is 169 US billion dollars followed by Denmark's 159 US billion dollars which is due to the size of population and awareness level of consumers and their consumption pattern.

Chart -4
Top Ten countries with the highest per capita consumption of Organic Food

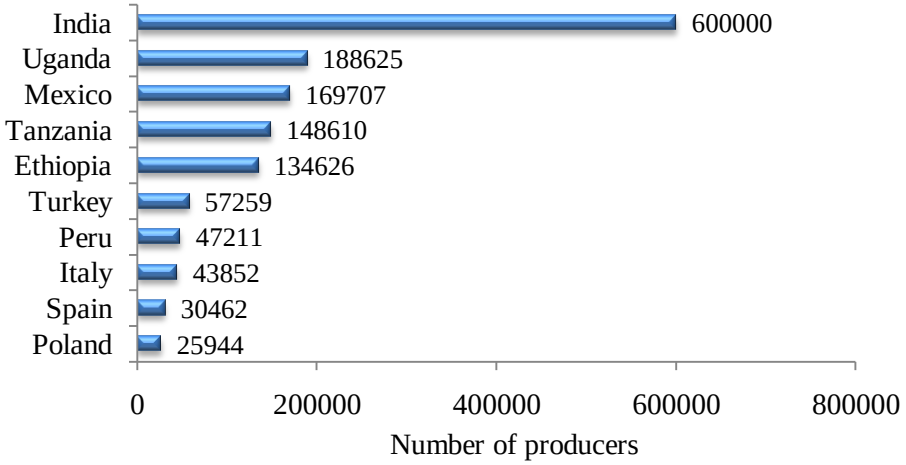


Source: FIBL & IFOAM, 2015

The major country with the highest consumption of organic food is Switzerland, Denmark followed by Luxembourg (Chart-5). It is observed that the number of farmers engaged in organic farming in India is more than all the other countries in the world but the domestic consumption is very low in India. Due to the size of population and poor awareness level among the consumer and large quantity of cultivated articles were exported to European Union instead of domestic sales because the export gives more profit margin which is always high comparing with the domestic price.

Chart -5

Top ten countries with the largest number of producers



Source: FIBL & IFOAM, 2015

India holds the first position in terms of organic food producers all over the world followed by Uganda and Mexico. There is major difference in case of number of producers between India and others which has nearly 6,00,000 of organic producers but Uganda has only around 1,88,625 producers. The other countries produce more with less number of farmers.

Indian organic food market

The Indian economy still depends on agriculture which contributes 14% to the GDP of the country where 60% of the people relying on agriculture. As far as organic revolution is concerned, India is at the doorway in today's context, though the organic food industry in India is still on a budding stage, it has gone through an unwavering expansion in the recent years. As per the CII's (Confederation of Indian Industry) report, the Indian organic food market is escalating at an astounding rate of 400% every year.

According to “India Organic Food Market Forecast and Opportunities, 2017”, the Indian market for organic food products were anticipated to grow around 19% of CAGR during 2012-2017 and is becoming the World’s fastest growing market (Binita singh, 2013).

The demand for organic food product is high in metros like Chennai, Mumbai, Bangalore, Delhi, Pune. The sales have been increased in these cities due to the high demand and the entry of numerous new players. Online mode of organic food purchase is also offered by these players. The major players of Indian organic food market are given in the annexure II. The major challenge faced by the marketer’s is pricing. In India most of the consumers are highly price sensitive but the articles are sold for high price.

Nevertheless, in the mean time, the increase in health concern and the rise in disposable income are constantly supporting the organic food demand among Indians (Research and markets, 2013). Notably, there is a major changeover in organic products consumption. Particularly metropolitans opt for fruits and vegetables (62%) and a remarkable increase to the tune of 95% during the past 5 years (The Economic times, 2013).

Table – 4

State-wise Organic Cultivation in India (2007-2013)

(In hectares)

Name of the State	2007-2008		2008-2009		2009-2010		2010-11	2011-12	2012-13
	Wild Area	Agri. Area	Wild Area	Agri. Area	Wild Area	Agri. Area	Agri. Area	Agri. Area	Agri. Area
Andaman and Nicobar Islands	-	-	-	0	-	0	334.68	0	321.28
Andhra Pradesh	2500	18233.5	3686.9	38599.93	2500	44395.67	14350.62	47456.77	7909.13
Arunachal Pradesh	-	1490.1	-	1200.66	-	1897.27	243.1	520.43	231.49
Assam	-	3863.8	-	3188.9	-	6223.12	2047.09	2048.27	2299.21
Bihar	-	0	-	0.7	-	1096.3	1303.62	188.6	9351.95
Chhattisgarh	-	809.3	-	409.3	16251	29084.97	8448.93	299970.6	98817.31
Delhi	-	19186.9	-	43733.05	-	12734.36	266.32	100238.7	58.4
Goa	-	19161.4	-	10979.77	-	13175.72	13303.7	153684.68	8290.6
Gujarat	-	135229	-	195407	-	102488.4	48518.91	41978.94	47775.62
Haryana	-	7685.8	-	18293	-	21951.6	14763.61	17442.36	7562.16
Himachal Pradesh	297000	1356.8	438000	15435.57	632990	683697.85	631901.99	933798.20	1364655.5
Jammu and Kashmir	30000	33050.1	44242.4	32584.57	-	32687.11	776.48	26834.26	30121.14
Jharkhand	-	0	-	0	-	100	24300	29794.42	35889.94
Karnataka	45540	70548.1	67160	27787.82	70617.2	121507.56	88728.64	118739.7	84607.82
Kerala	-	11350.8	-	14240.41	-	15372.62	6597.65	15790.49	10568.4
Lakshadweep	-	-	-	0	-	0	12.13	891.93	350.68
Madhya Pradesh	1425600	411767	2102400	545124.78	2450361	2829249	2866571.9	432129.5	2582439.75
Maharashtra	-	102000	-	295083.16	40	35449.98	177345.48	245339.3	74409.92
Manipur	-	12228.3	-	10818.07	-	10871.3	2792.03	1296.31	11.25
Meghalaya	-	261.5	-	1935.08	-	2254.12	2419.67	288.23	3580.49
Mizoram	-	9232.3	-	34903.13	-	38674.62	12544.13	7023.97	1182
Nagaland	68084	18585	100407	20556.65	-	29715.28	1603.54	7762.6	9771.96
Odisha	-	57054.2	-	76976.28	80.9	92452.47	24417.55	43868.18	21079.31
Punjab	-	3534.9	-	1203.77	-	5264.23	6025.78	927.28	1601.47
Rajasthan	85140	34436.8	125560	31053.33	147420	260827.88	217712.19	222319.1	483292.33
Sikkim	-	349.7	-	1654.31	-	7393.09	1726.34	25716.55	46560.4
Tamil Nadu	25740	10976.6	37960	9372.12	44137.5	78442.9	34878.09	38554.33	35253.4
Tripura	-	56.4	-	0	-	281.06	348.39	4.05	209.72
Uttar Pradesh	396	12144.9	584	2340167.9	632	26567.68	111644.83	2593821	170353.91
Uttarakhand	-	24652.7	-	27651.08	-	33181.3	105465.98	122880.6	71305.35
West Bengal	-	11065.3	-	14409.62	-	14861.22	6125.72	19095.55	1279.41
India	**1980000**	**1030311**	**2920000**	**3812770**	**3365030**	**4551898.7**	**4427519**	**5550405**	**5211142**

Source: Indiastat

From the above table we can understand that the agricultural area under organic farming has increased year by year. The state wise area under organic certification reveals that out of 47 lakh hectare Madhya Pradesh consists of 37% followed by Himachal Pradesh (35%). Almost all the states are engaged in organic farming because of various supports provided by the Government, NGO's along with the market force.

Table – 5

State-wise Area under Organic Certification (Including Wild) in India (2013-14)

States/UTs	**Area under certification (In Hectare)**
Andaman and Nicobar Islands	321.28
Andhra Pradesh	14325.03
Arunachal Pradesh	71.49
Assam	2828.26
Bihar	180.60
Chhattisgarh	30754.82
Delhi	0.83
Goa	12853.94
Gujarat	49363.89
Haryana	3865.33
Himachal Pradesh	1668176.17
Jammu and Kashmir	39035.38
Jharkhand	37447.30
Karnataka	35450.22
Kerala	15162.33
Lakshadweep	895.91
Madhya Pradesh	1758226.30
Maharashtra	87941.66
Meghalaya	4673.13
Nagaland	12023.16
Odisha	52787.35
Puducherry	2.84
Punjab	1534.39
Rajasthan	599173.07
Sikkim	64296.17
Tamil Nadu	34212.96
Tripura	203.56
Uttar Pradesh	112133.96
Uttarakhand	79779.46
West Bengal	2095.51
India	**4719816.28**

Source: Indiastat

The sales of organic food products are mainly concentrated in metro cities of India where consumer's demand is more due to their income and exposure. Mumbai earns around 120 crores turnover. The study area Pondicherry is included with Chennai which holds third place.

Despite this, India undergoes a huge dichotomy in case of organic foods. One side it is becoming a major player in the global organic market particularly in Europe. But on the other side domestic market is still at an infant stage. India started its exports in the early 1990s to Europe with a single product tea, but today it exports more than 300 varieties of products under various groups.

Table - 6

Category - wise exports of Organic products from India (2013)

Product Category	**Export Volume (Million Tones)**	**% share**
Oil crops(Except sesame)	17966	25.73
Cotton and Textiles	17363	24.86
Processed Food	8752	12.53
Basmati Rice	5243	7.51
Tea	2928	4.19
Sesame	2409	3.45
Honey	2409	3.45
Rice	1634	2.34
Dry fruits	1472	2.11
Cereals	1348	1.93
Spices-Condiments	1174	1.68
Medicinal& herbal plant products	627	0.9
Coffee	320	0.46
Vegetables	167	0.24
Aromatic oil	39	0.06

Source: APEDA

The major crops exported are Oil crops (25%) Cotton and textiles (24%), processed food products (12%), Basmati Rice (7%), Tea (4%), Sesame (3%) and others (APEDA). European Union is the major export destination followed by USA and Asia. Australia and New Zealand import only few and less quantity from India because they are the major leaders in the world.

Table – 7

Continent wise Indian Organic Exports

Continents	Quantity (in Million Ton)	Value (Rs. in Crores)
EU	30814	365
Canada	15061	100
USA	13392	115
Asia	8867	108
Australia	910	8.3
New Zealand	609	1.9
Africa	185	0.9
Total	**69837**	**699**

Source: APEDA, Yes Bank

In India the purchase behavior of consumers has drastically changed due to various reasons like global interaction, urbanization, health awareness among consumers, educational level and moving towards higher income (Rao, 2000; Shetty 2002; Deshingkar et al., 2003; Vepa 2004; KPMG 2005; Kaushik 2005; Kaur and Singh 2007; and Pingali 2007). Even with all these changes the market has not yet progressed like western countries.

According to the ORG-MARG (2002) survey, in India the domestic sales of the total organic production account less than 10%. Major reasons quoted for this are lack of awareness, availability and significant price differentials.

Today, organic farming is growing, due to Indian government's encouragement and initiatives taken by various private institutions. The incorporation of certificates to control the pesticides in vegetables, and expansion in the variety of healthy foods signify that there is a potential market for organically grown produces in India.

Therefore, we can conclude that even though large number of farmers are engaged in organic farming the consumption is relatively very low. The study area Pondicherry is located in the southern region of the country. For many statistical reporting most of the times Pondicherry is included under the state Tamil Nadu. In the southern part of India there are four major states namely Tamil Nadu, Kerala, Karnataka and Andhra Pradesh. Various regional studies revealed that Tamil Nadu has more farmers and products than

others. There are certain issues regarding certification therefore the neighboring states like Kerala has an opinion and doubt on the quality of food articles produced in Tamil Nadu.

For any product, attracting the consumers towards it is more important. The success and the failure of the product are determined by the consumer. Thus consumer and their understanding the behavior of consumer become more essential for the marketer. Since the study deals with organic consumers their behavior towards organic food products is discussed below in detail.

C. FACTORS INFLUENCING THE CONSUMER BEHAVIOR

"The study of consumer behavior reiterates on how the individuals, groups and organizations choose, purchase, utilize and dispose of goods and services to satisfy their desires and needs". It is difficult to understand consumer behavior as the customers change their mind, decision making very often (Philip Kotler, 2000). The absence of customers' knowledge with respect to their motivation, wants, needs and preferences may go for a major mistake. The first and foremost base for marketing philosophy is that the consumer is a person who has to be at the centre of everything the firm carries out (Jim Blythe, 2013). Thus understanding consumer behavior is important for any marketer in order to promote their product successfully.

Consumer behavior has been defined by many authors. Solomon M (1995), Kotler (1999), Blackwell et al (2001), defined Consumer Behavior in the same perspective.
According to Solomon M (1995), *"The process involved when individuals or groups select, purchase, use or dispose of products, services, ideas, or experiences to satisfy needs and desires".*

Engel, Blackwell and Miniard (1995) added a new aspect the 'decision process' and defined it as "*Those activities directly involved in obtaining, consuming, and disposing of products and service, including the decision processes that precede and follow these actions"*

Kotler (1999) "*The study of the ways of buying and disposing of goods, services, ideas or experiences by the individuals, groups and organizations in order to satisfy their needs and wants".*

Also Blackwell et al. (2001) "*Consumer behavior is the activities people undertake when obtaining, consuming and disposing of products and services*" *whereas,*

But in 2010 Schiffman et al, "evaluated the products after using and before disposing" and defined it as "*The behavior that consumer display in searching for, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs".*

Factors influencing consumer behavior towards organic food

Consumer Buying Behaviour refers to the buying behaviour of the ultimate consumer. Many factors, specificities and characteristics influence the consumer in their decision making process and buying behavior. A purchase decision is the result of each and every one of these factors. Factors that influences consumers specifically towards organic food products are discussed below.

Earlier studies revealed that demographic profiles of consumers significantly influence their purchase behavior (Lea & Worsley 2005; Tsakiridou et al. 2008). The socio-demographic profile has an effect on attitudes and their behavior towards buying organic food. These attitudes are based on gender, age, income, educational level (Davis et al., 1995; Wandel and Bugge, 1997; Thompson and Kidwell, 1998; Magnusson et al., 2001; Wier et al., 2003; Tsakiridou et al, 2007). On contrary Magistris (2007) identified that consumer's socio-demographic variables had very less impact with regard to the organic food purchase decision. The effects of several socio demographic variables are discussed below.

Table – 8

Demographic factors influencing consumer behavior

Demographic factors	Authors	Findings
Gender	Mathisson and Schollin 1994; Lockie et al. 2002; McEachern and McClean 2002; Storstad and Bjorkhaug 2003; Davis et al. 1995; Wandel and Bugge 1997; Lea and Worsley 2005, Lockie et al. 2004; Hursti and Magnusson 2003; and Magnusson et al. 2001; Byrne et al. 1991; Davies et al. 1995; Lockie et al. 2002; McEachern and McClean 2002; O'Donovan and McCarthy 2002; Storstad and Bjorkhaug 2003; Arbindra et al. 2005; and Radman 2005; Stobbelaar et al. 2007; Gotschi et al.2007.	Women (particularly teenage) seems to be more interested and also buy regularly and much worried about their health.
Age	Jolly, 1991: Onyango, 2007. Wandel and Bugge, 1997; Thompson and Kidwell, 1998; von Alvensleben, 1998; Fotopoulos and Krystallis, 2002	The buyers of organic food are likely to be young. Elder people are more concerned about their health and also willing to pay additional price.

	Wandel and Bugge, 1997; Thompson and Kidwell, 1998; von Alvensleben, 1998; Fotopoulos and Krystallis, 2002	Age has a significant association in relation with organic food consumption and it also positively correlated with consumer's attitudes and motives.
	Wandel and Bugge 1997.	Young consumers buy due to environmental consideration whereas old consumers buy to take care of their own health.
	Schobesberger et al 2008; Arbindra et al. 2005.	Elder consumers seem to be much serious. But another author found that comparing with the younger respondents; elders were not much inclined to purchase organic food.
	Mintel 2000.	In UK most of the organic food buyers were between the age group of 45-54 years.
	Davies et al. 1995; and O'Donovan and McCarthy 2002.	On the other hand it is identified that there is no much difference among the age groups.
Education- Various studies undertaken in different places in different time period revealed that educational level of the buyers play an important role in purchase decision.		

	Lockie et al., 2002; Storstad and Bjorkhaug, 2003; Schobesberger et al, 2008, Pellegrini, 2009; Jolly, 1991; Wandel et al 1997; Magnusson et al., 2001; Hill et al, 2002; Wier et al., 2003; Coulibaly et al, 2011	Higher the education, better the knowledge and awareness. It changes their attitude and Willingness to pay.
	Byrne et al., 1991; Misra et al, 1991; Buzby and Skees, 1994; Wilkins et al, 1994; Thompson et al, 1998	Education did not play a vital role in their purchase decision.
	Lea et al 2005; Arbindra et al. 2005.	Education has a very minimum impact on organic food beliefs.
Income	Altmann, 1987; von Alvensleben, 1998; Lockie et al., 2002; Torjusen et al., 2001; Dimitri and Dettmann 2012; Grunert and Kristensen, 1991; Magnusson et al., 2001; Schobesberger et al, 2008.	It is proved that organic food claims to have positive association with income level of the consumers. Higher the income greater the consumption. Particularly upper income group households are expected to buy more.
	Fotopoulos and Krystallis, 2002	On contrary to this few lower income groups also seems to be well established purchasers.

Health	von Alvensleben, 1998; Ekelund, 1989; Huang, 1996; Mathisson and Schollin, 1994; Schifferstein and Oude Ophuis, 1998; Tregear et al., 1994; Wandel and Bugge, 1997; Schifferstein and Oude Ophuis, 1998, von Alvensleben, 2001; Squires, Juric, and Cornwell 2001; Chinnici et al., 2002; Harper and Makatouni, 2002; Zanoli and Naspetti, 2003; Mintel, 2003; Millock et al., 2004, Lea and Worsely, 2005; Chryssohoidis and Krystallis, 2005; Padel and Foster, 2005; Shepherd et al., 2005; Verhoef 2005; Botonaki et al., 2006; Ankomah and Yiridoe, 2006, Biemens, 2009, Chen, 2009, Magnusson et al., 2003; Wandel and Bugge, 1997; Tregear et al., 1994.	In general 'health' is considered as the prime motive for the organic food purchase. Consumers' are more concerned on health aspect rather than environmental aspect.

From the above table we can understand that the demographic factors play positive as well as negative in impacting the consumers to buy organic food. This study also considered above mentioned factors and made an attempt to understand the Indian consumers.

i. Gender

Many studies considered the demographic factors to understand the Consumer Behavior and found that the buyers of organic food are likely to be young (Jolly, 1991: Onyango, 2007). Women seems to be more interested and hold more positive attitudes and they also buy regularly (Mathisson and Schollin (1994); Lockie et al. (2002); McEachern and McClean (2002); Storstad and Bjorkhaug (2003), Davis et al. (1995); Wandel and Bugge (1997); Lea and Worsley (2005), Lockie et al. (2004) and Hursti and Magnusson (2003) and Magnusson et al. (2001) Byrne et al. (1991), Davies et al. (1995), Lockie et al. (2002), McEachern and McClean (2002), O'Donovan and McCarthy (2002), Storstad and Bjorkhaug (2003), Arbindra et al. (2005) and Radman (2005). Further Stobbelaar et al. (2007) found that in general women are much worried about their health and concerned on healthy food habits. Particularly teenage girls are tending to be more positive regarding organic foods than boys (Stobbelaar et al. 2007; Gotschi et al.2007).

ii. Age

When we look at the age group of the consumers elder people are more concerned about their health and also willing to pay additional price. On the other hand young people are environmentally conscious but owing to less purchasing power their willingness to pay premium is also less (Wandel and Bugge, 1997; Thompson and Kidwell, 1998; von Alvensleben, 1998; Fotopoulos and Krystallis, 2002). But in Indian context in the recent past the greater purchasing power lies in youngsters than elders.

Some studies have identified that age has a significant association in relation with organic food consumption and it also positively correlated with consumer's attitudes and motives (Hay, 1989; Jolly, 1991; Wandel and Bugge, 1997; Cunningham, 2002; O'Donovan and McCarthy, 2002; Sandalidou et al., 2002; Denver et al., 2007; Yue et al., 2008). Wandel and Bugge (1997) also found that young consumers buy due to environmental consideration whereas old consumers buy to take care of their own health. Further Geen and Firth (2006); Schobesberger et al (2008) found that elder consumers seem to be much serious. But in other hand Arbindra et al. (2005) study concluded that comparing with the younger respondents; elders were not much inclined to purchase organic food.

Mintel (2000) reported that in UK most of the organic food buyers were between the age group of 45-54 years. Davies et al. (1995) and O'Donovan and McCarthy (2002) identified that there is no much difference among the different age groups.

iii. Education

Various studies undertaken in different places in different time period revealed that educational level of the buyers plays an important role in purchase decision. Higher the education, better the knowledge and awareness which leads to a positive change in their attitude (Lockie et al, 2002; Storstad and Bjorkhaug, 2003; Schobesberger et al, 2008, Pellegrini, 2009). They convey and seek more information regarding the organic food production and process methods (Jolly, 1991; Wandel et al 1997; Magnusson et al., 2001; Hill et al, 2002; Wier et al., 2003; Coulibaly et al, 2011) further it is concluded that they are willing to pay more too. Conversely some studies identified education did not play a vital role in their purchase decision (Byrne et al., 1991; Misra et al, 1991; Buzby and Skees, 1994; Wilkins et al, 1994; Thompson et al, 1998).

Lea et al (2005) identified that education has a very minimum impact on organic food beliefs. Adding to this, Arbindra et al. (2005) found education level has no significant effect on the purchase of organic foods. It is clearly evident that highly educated and higher purchasing power people prefer to go for organic food. There is a wide conspiracy with respect to the ideas about food products among the levels of education and revenue. Due to the rapid increase in the field of education, people are highly educated about organic foods in lieu with safe and environment responsibility.

As reported by Dimitri and Dettmann (2012) there seem to be highly positive correlation among the increase in organic food purchase intention and increase in the revenue. Amidst to this, knowledge is considered as one of the prime factor which plays an essential role in influencing the trust of the usage of a new product. Due to the pit fall in the existence of new knowledge, the trust of the consumers seems to be diminished about the information received. It is further stated that in the absence of satisfaction with the

fresh or new information, the consumers will rewind and seek earlier information about their products (Aertsens et al 2011).

iv. Income

It is proved that organic food claims to have positive association with income level of the consumers (Altmann, 1987; von Alvensleben, 1998) higher the income greater the consumption (Lockie et al., 2002; Torjusen et al., 2001; Dimitri and Dettmann 2012). Particularly upper income group households are expected to buy more (Grunert and Kristensen, 1991; Magnusson et al., 2001; Schobesberger et al, 2008). Along with them few lower income group also seems to have well established purchasers (Fotopoulos and Krystallis, 2002).

v. Health consciousness with respect to organic food products

In general 'health' is considered as the prime motive for the organic food purchase (von Alvensleben, 1998; Ekelund, 1989; Huang, 1996; Mathisson and Schollin, 1994; Schifferstein and Oude Ophuis, 1998; Tregear et al., 1994; Wandel and Bugge, 1997; Schifferstein and Oude Ophuis, 1998, von Alvensleben, 2001; Squires, Juric, and Cornwell 2001; Chinnici et al., 2002; Harper and Makatouni, 2002; Zanoli and Naspetti, 2003; Mintel, 2003; Millock et al., 2004, Lea and Worsely, 2005; Chryssohoidis and Krystallis, 2005; Padel and Foster, 2005; Shepherd et al., 2005; Verhoef 2005; Botonaki et al., 2006; Ankomah and Yiridoe, 2006, Biemens, 2009, Chen, 2009). There is a clear evident from the previous findings of the studies that consumers' are more concerned on health aspect rather than environmental aspect (Magnusson et al., 2003; Wandel and Bugge, 1997; Tregear et al., 1994). This health consciousness brings change in consumer's attitude which influences them to buy healthy food articles.

vi. Consumer's perception with respect to organic food products

"Perception is the process by which an individual selects, organizes, and interprets stimuli into a meaningful and coherent picture of the world" (Schiffman et al, 2013). Greater part of the consumers' intention to buy organic food products lies in the perception as organic food is healthy (Hutchins and Greenhalgh, 1997; Squires et al.,

2001; Davies et al., 1995; Zanoli and Naspetti, 2002; Chinnici et al., 2002). The two factors such as consumers' sensory appeal and heath concern is highly provoked by the consumers' to buy organic food (Arvanitoyannis, Krystallis, and Kapirti 2003). The opinion of the existing consumers about the organic food is that it is not much costlier and moreover it is environmental friendly and healthier (Verdurme, Gellynck, and Viaene 2002). Consumer's perception with respect to the appearance, texture and flavor of the organic food usually relates with the sensory attributes.

It is of the general opinion that consumers are knowledgeable and are more acceptable of high prices and inaccessibility (Chang and Zepeda 2005). Lea and Worsley (2005) identified that organic products are mostly healthier when compared with non organic products and consumers judge that organic foods are rich in minerals and vitamins than its conventional alternatives. Makatouni (2002) observed during the chain of interviews with regular consumers and concluded that their health consciousness and concern towards their health only motivated them to buy organic food. Magnusson et al. (2003) revealed that human health benefits are strongly linked with purchase of organic food among the respondents. Harris (2007), through his study identified that most of the public considers that the organic food as healthier.

vii. Consumers Attitude towards organic food products

Schiffman et al, (2013) defines attitude as

> "An attitude is a learned predisposition to behave in a consistently favorable or unfavorable way with respect to a given object"

According to Ajzen (1991) "The more favorable the attitude with respect to a behavior, the stronger is the individual's intention to perform the behavior under consideration". He further defines it as "if the attitude is more desired regarding to behavior then the tendency of individual to act the considered behavior become more" (Ajzen, 1999).

Consumption of organic food has been influenced by many factors which are identified in the relevant literature. It includes: environmental protection, health aspect, pesticides, enhanced taste and flavor of organic items, nutritional concerns as well as apprehension of the chemical remains in conventional food products (Squires et al., 2001).

In addition to this, the attitude towards organic is positively influenced by the past experiences (Roddy et al., 1996). On the whole, the individual factors importance seems to be country specific and/or time specific (Davis et al., 1995). Besides alike attitudes found among different countries, while making decision for purchasing the organic foods, the differences in cultures make consumers to look for different values (Baker et al., 2002).

The study among consumer's reveals the apprehension relates to health is the foremost reason in buying organic foods. Tregar and colleagues (1994) documented that more than fifty percent of Scottish consumers' purchased organic foods concerning their own and family well being and only nine percent declared due to environmental concern. In a study conducted among the consumers of Dutch, Schifferstein and Ophuis (1998) stated that concern about health is considered as the key motive in buying organic foods by incidental buyers rather than heavy buyers and at the same time, both environmental aspect and health concerns played an essential job in the decision of the purchase of organic foods among heavy buyers. Roddy et al., 1996 found that customers who had opted organic foods in the past are likely to have more positive approach when compared with the inexperienced people.

Jolly (1991) study reveals there is a difference in the ratings of the 'quality' of organic food among non buyers and buyers while a comparison was made with its conventional counterparts; and the consumers were more apprehensive on the subject of artificial coloring, food irradiation, additives and preservatives. Hence, health and environmental related aspects seems to be the major motive for buying organic foods which differs among regular buyers and non buyers.

Attitude formation, behavior and cognition are influenced by values. The behavior is highly influenced by the conciliation of beliefs and attitudes in case of organic foods. (Feather, 1982; Kalafatis et al,1999; Pollay and Gallagher, 1990; Lea and Worsely, 2005).

"Attitudes toward behavior have contributed to the level a person possesses a desirable or non-desirable estimation or behavior-based appraisal in question" (Ajzen, 1991). This concept was accepted by Messina and Saba (2003) based on a sample of 974 users of Italy who focus to keep optimistic attitudes in having organic fruits and vegetables. They admitted organic foods were healthier, fresh, tasty, nutritious and environmental friendly when compared with conventional foods. It is evident that high beliefs towards the organic food with the output level carry a high relation in the attitudes forecasting. While consuming organic foods, attitude seems to be an important element as an intention factor. Theory of reasoned action (Ajzen and Fishbein, 1975; Fishbein and Ajzen, 2005) elucidates that "attitude is significant factor of behavioral intention" and this is presented in many researches. With respect to the consumption of organic foods, Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB) assumed to be constant; studies from Dean et al., (2008) Chen (2007), Thogersen (2007a) states that there is an affirmative and significant involvement in regard with the attitude of consumer's to buy organic food through "intention, perceived behavioral control and subjective norms".

Magistris and Gracia (2007) summarized that the organic food purchase which has an important and positive relationship with intention and positive attitude in buying organic food with regard to environmental issues , health and a higher level knowledge and income. It is found in many researches that there exists a positive relationship between the buying behavior and their intention (Sundqvist and Tarkiainen (2005), Saba and Messina (2003), and Throgresen (2007 b). Further it is concluded that the buying intention of customers were purely based on their beliefs when it comes to organic food.

viii. Buyer Behavior towards organic food products

Various studies regarding consumer attitudes and behaviors about organic foods, was identified that the consumers are having trust in organic products. A Swedish study reveals that perceived health benefits were associated strongly with the attitude and purchase decision (Magnusson M, et al., 2003). According to United Kingdom researchers the term "Organic" has an emotional significance among the consumers with respect to healthy diet, personal well being and benefits to the environment (Tregar et al 1994, Padel et al 2005). The progress in consumers' attitudes with respect to organic products, values play a significant and mixed role in the perception of organic products. (Chryssohoidis et al, 2005; Dreezens et al 2005). Dreezens et al. identified that people welfare and protection of nature were positively correlated with organic food. On contrary, Chryssohoidis and Krystallis (2005) found that belonging to society which is considered as external value given least importance when compared with internal values comprised of enjoyment of life and self respect. The perception of consumers varies in terms of appearance, taste and texture. A study by the focus group in Northern Island identified that organic foods are tasteless and colorless, yet some mixed vegetables have attractive flavor and texture (Connor et al, 2005). It is concluded by the researchers in Australia and United Kingdom the organic food tastes better than conventional products and it has sensual qualities.

From the above reviewed articles on importance of demographic variables and factors influencing the consumer behavior towards organic food products it can be summed up that woman tend to buy more organic food compared to men. Young and higher income group people holds positive attitude in regard with purchase of organic food. Highly educated people are more knowledgeable and when it comes to health aspect elder group people are more health conscious.

Thus knowledge, perception and attitude of an individual become very important when it comes to organic food purchase. Further it could be stated that intention plays a major role in the buying behavior of consumers.

Marketing strategies of Organic Products

The organic food markets are rapidly growing in the developed world and it seems that most of the consumers go for healthier products in their regular shopping (Henryks et al, 2013). In organic agriculture the functions of marketing mix elements perform an essential task both on the individual and the national level. "In modern marketing economy the system of organic agriculture becomes a more important factor in the development of domestic and international economic systems" (Zdravko Tolušić et al, 2002). All marketing mix elements are very much linked with each other, which imply that pricing decisions are closely related to product decisions, distribution and promotion (George Atanasoaie, 2012).

i. Product

According to Kotler et al, (2006), "In marketing, a product is anything that can be offered in the market that might satisfy a want or need". Each product or service must have a purpose and it should reflect the real value of the product, reason, difference, usage and function for the end user (Larry Steven Londre, 2009). On the other hand, brand and product have an inseparable relationship. La Londe (1977) observed that product associated criteria is most significant followed by distribution, price and promotion. Many studies substantiate that consumers look forward for new and quality products (Perreault and Russ 1976; Rudder et al, 2001). According to Kotler, the products' market share could be increased by following three basic strategies. First on being, motivating the existing consumers to go for organic regularly. Secondly the strategy of succeeding the traditional and dietary consumers and finally the young consumers could be convinced by conveying the benefits of organic foods.

ii. Price and Willingness to Pay

Needham and Dave (1996) referred price as the amount which the consumers pay for the product. Therefore marketers must be aware of consumer's perceived value about the product when determining the price.

It is clear that the organic food is expensive; some products are even 600% more when compared with conventional products (H. Dolezalova et al, 2009). In purchase of organic food price is one of the most vital and fundamental element (Bhate and Lawler 1997). Studies done by Botonaki et al (2006); Cicia, Giudice & Scarpa (2002); Krystallis and Chryssohoidis (2005) reveal that consumers think the price is an indication of quality. Gifford and Bernard (2011) observed that if the information regarding the qualities of the product reaches the consumers before making purchase, there is a hike in 50% contributions in WTP, where information has a crucial role in willing to pay (WTP) (Hawken 1993).

According to the law of demand price is inversely proportional to demand. Moreover, the demand is affected by not only the price; other than that changes in taste of the customers, accessibility of alternate products which can act as a proxy for organic food products and the customers' income too (Zdravko Tolusic et al, 2002).

Michelsen et al, (2000) reported that countries which have largest market share for organic products and which distributes high percent of those products through supermarkets are likely to have less consumer price premiums. Hence, the fusion of supermarket participation, market size and contributes in the reduction distribution costs, and makes price premiums to be lesser. In today's context, the generally accepted phenomenon is that the consumers has to afford more for organic food when compared with non organic food and at the same time the intensity of hike in price varies and there will be a chance for disparity in setting the price with the source of different costs followed by decisions in the other Ps (Johannes Michelsen et al, 1999).

The Willingness to Pay by the consumers' is affected by the following reason: Quality of the product, trust in certification and the name of the brand (Krystallis and Chryssohoidis, 2005). The study of Sedef Akgungor (2010) in Turkey found that the consumer WTP for organic certified and labeled products is 36%. Xia and Zeng, (2009) findings reveal that consumer WTP for organic food with respect to China is between 6 to 10 %. Weaver et al. (1992) and Hung (1993) mentioned that most of the consumers showed a sign of WTP a premium of minimal 10% for acquiring pesticide free tomatoes. As per Ghorbani and Hamraz (2009) study appearance of the product and the knowledge of consumers will have an adverse effect on the WTP for organic products.

Gracia A. et al (2001) observed that consumers who are alarmed of healthy food and environmental deprivation will mostly opt to procure organic food and are ready to pay more premiums. The consumers with health consciousness are willing to pay more for the products if it consists of nearly 95% of organic ingredients (Batte, et al., 2007). Therefore, successful pricing policy can be attained by determining the target customer groups which will have a cause for buying (Griffth &Nesheim, 2008).

iii. Place

Place mix represents the distribution channels that the organization utilizes to convey their physical products or services to the end user. Place has emerged as a highly significant aspect for organic products. Every country concentrates "Place" on the mixture of sales channels and their effects with regard to the conditions of services insisted by the organic food producers concerning product range transport, inventory and variety (Johannes Michelsen et al, 1999). Distribution channel designer must understand the service output levels that are expected by target customers. It is necessary to have a clear understanding of what, how, why, where, and when customers purchase, his waiting time for the purchase, the convenience that facilities the customer when buying is completed, product variety for the choice and the service backup which represents additional services associated with the product. Distribution can be performed through single channel or multiplicity of channels.

iv. Promotion

According to Kotler (2002) "the activities a company performs in order to communicate to its existing and potential customers. Multiple channels are used to communicate to different parties (Distributors, customers) and different means could be used to do promotion". In general the promotional message should reflect clearly what to say and how to express everything in a simple symbol and also it matters that who says (Salai et al, 2014). Therefore for organic food promotion activities must concentrate on the above said aspects. Aleksandra Nikolic (2014) indicated few measures to promote the organic product market which consists of i) Making clear differences between organic and conventional products and outlining symbolic meaning ii) Clear statements about positive consequences of Organic food consumption iii) Easy and accessible information about organic products iv) Communicating people that it is the way of living.

Org – Marg (2002) reported certain measures to the Government authorities to promote organic market in India. They are to make strategies for organic farming, to provide financial assistance to organic producers, and to reduce documentation, to offer education and training for the producers, to create awareness among Indian consumers in order to promote the market for organic products. Edwardson (2013) found that NGOs have played a crucial role in the "promotion of organic production and marketing as a means of generating improved income for poor and small farmers in developing countries". He also recommends to the Government that organic sector could be further promoted by building confidence among the consumers with the enhancement of "organic standards and certification and by establishing local certification bodies" and also by reducing the certification costs. In Japan the retailers have concentrated the store promotions based on the food safety issues, by advertising the benefits of organic food to their clientele which in turn will corresponds their greatest concern (FAS, 200b).

v. People

Anyone who comes and get in touch with the consumers will create an impression which in turn can have a deep effect on the customer satisfaction which could be either positive or negative. Business reputation lies in people's hand. Therefore they must be properly trained and motivated well in order to obtain the right attitude (Chartered Institute of Marketing, 2009). In case of Organic food the demand is stimulated by the consumers those who are concerned with the environmental protection and food quality (Scialabba et al, 2002).

There are many hindrances in entering Organic food market. In spite of all those an increase in consumer demand and appealing bottom line of organic products are creating more number of retailers to add organic food products to their mix (Food Marketing Institute). In U.S, retail managers who show personnel interest in human health and environment are probably to put forward organic products in their stores (Lohr and Semali, 2000). On the other hand reduced shelf time of the product and packaging are the two foremost reasons making retailers not to stock the organic products (Sondhi and Vani, 2007). Thus consumers and retailers both play a significant role in case of organic food products.

vi. Process

"Process refers to giving service and the behaviors of those who deliver are crucial to customer satisfaction". This 'P' can have an enormous resource if it is used cleverly; but often it is overlooked (Chartered Institute of Marketing, 2009). "The process of service delivery is important since it ensures that the same standard of service is repeatedly delivered to the customers" (Management study guide). Hence the service providers in the organic shops should be very conscious while they service the consumers, since some may less knowledgeable on different brands and benefits of the organic food products.

vii. Physical Evidence

"Service Physical Evidence is defined as the extent to which a service organization is interested in creating a customer friendly atmosphere in their working environment" (Booms and Bitner, 1981; Bitner, 1990, 1992; Kasper et al., 1999).Presentation of a product to the customer, including its atmosphere is very important. Especially the stores which sells a product, must be welcoming, easy to find, must be fancier than any other places if the product is been sold from the pricy side (Johnson, 2014). When it comes to packaging of a product, 'the well-known package that is missing has a negative agency that arises from being excluded and contributes to the overall unfamiliar impression of a shop' (Wagner,2013).

Specific atmosphere is offered to the customers where product is accessible. "It is stated that satisfied customers are the best advertisement about the product and brand. Marketing strategies should involve effective communication for potential customers" (Boom and Bitner).Thus right from the product presentation, the ambience of the store everything plays a vital role in making 'physical evidence' as a successful 'P' in the mix.

All the marketing mix is linked with each other when it comes to organic products. Since the price of organic food is expensive, it becomes a barrier in buying such food products. But still there are some people willing to buy despite the price if it is easily available in the market. Hence promoting the organic products and making it as an easily accessible product is an important factor. Thus 7p's of marketing mix play a vital role in organic food products.

Market of Organic food products

The goal of marketing mainly focuses on satisfying the needs and wants of the targeted customers. “It is the management process responsible for identifying, anticipating and satisfying customer requirements profitably” (Chartered Institute of marketing).

The organic food market consists of only a small part of the general food market for all the products in all countries (Michelsen et al, 1999). Edwardson (2013) says that “A marketing strategy combines product development, promotion, distribution, pricing, public relations and other elements”. The effect of selling organic foods through chain stores has its own merits and demerits when measured with selling in specialized shops. It is noted that advantage of selling organic foods in chain stores has the opportunity to put for sale at a lesser price when compared with specific shops of “healthy nutrition”. Moreover, it is not all the times similar, in some of the cases that organic foods are too costlier when compared with specialized shops.

Over the previous years, it is popular in the midst of consumers that the chain stores symbolize a definite competitive advantage when compared with specialized shops. They set out too as a bigger selling area and enhanced technical equipment. In converse, specialized shops prove to be with improved width and depth in variety, individual intact with customers and they bring on a home atmosphere. They possess advanced sales promotion activities; conducting seminars and trainings with respect to Organic foods and Organic farming (H. Dolezalova et al, 2009). It is implied that the success of organic industry from the time of the start of organic movement is that the consumer market segment of organic products has considerably expanded (Chassy et al, 2014).

As a result, the four Ps covers the major portion of the market developments in common and seems to be significant for the development of well being of organic food markets (Johannes Michelsen et al, 1999). In the year 2014, the organic food industry has seen a remarkable growth globally to the tune of more than $63 billion and is an element of bigger green industry market (SustainableBusiness.com, 2013).

Labeling and Certification of Organic food products

Organic allows selling, labeling, and representing the products as organic. There are various steps involved in getting certification for organic products. The steps are discussed below

i. The organic step is developing an organic system plan is the foundation of the organic certification process. Hence developing an organic system plan is much important to get certification.

ii. Executing by getting review from the certifying agents of state and private bodies which are recognized by NPOP (APEDA). These entity are called certifying agents and are located throughout India who are responsible for the guarantee that the organic food products meet up all organic standards.

iii. The process of every location which is pertained to organic certification is first inspected by a certifying agent. This includes inspection soil conditions, fields, water systems, crop health, storage place and equipments, feed rations, feed production and purchase records, and animal living conditions.

iv. The findings of the certifying agency are presented. Further the inspector also analyses the potential hazards of the soil and make sure that the actions taken are adequate to prevent contamination.

v. If the process fulfills the rules, then the organic certification is issued by the certifying agent with a list of products from that operation which could be sold as organic. This inspection should be done at least once in a year to hold the certification and an updation is required for a farm or facility if there is any modification in the practices.

There are different organic certifying agencies across the world and each country has their own logo for the organic product produced in their country. Some of the countries logos are presented in the below table.

Table no- 9

Countries and their organic product logo

Country	Logo
France	
Australia	
Canada	
Japan	
USA	
Germany	

There are no tests to check the difference between organic and inorganic food. Hence certification is the only way to prove the product is organic. Thus the role of certifying agencies becomes imperative. There are different organic certifying agencies in India in order to ensure that the product sold is ‘organic’. The authorized certifying agents are given below in the table.

Table no- 10

Various Indian certifying agencies and their logo

Certifying agencies	Logo	Certifying agencies	Logo
Bureau Veritas Certification India		Control Union Certifications	
ECOCERT India Pvt. Ltd.,		Uttarakhand State Organic Certification Agency (USOCA)	
IMO Control Pvt. Ltd.		APOF Organic Certification Agency	
Indian Organic Certification Agency		Rajasthan Organic Certification Agency	
Lacon Quality Certification Pvt. Ltd.,		Vedic Organic Certification Agency	
OneCert Asia Agri Certification (P) Ltd		ISCOP (Indian Society for Certification of Organic Products)	
SGS India Pvt. Ltd.		Food Cert India Pvt. Ltd	
Aditi Organic Certifications Pvt. Ltd		Biocert India Pvt. Ltd	
Chhattisgarh Certification Society, India (CGCERT),		Export Inspection Agency(EIA)	
Tamil Nadu Organic Certification Department (TNOCD),		Odisha State Organic Certification Agency (OSOCA)	
Intertek India		Natural Organic Certification Agro Pvt. Ltd.	
Madhya Pradesh State Organic Certification		Fair Cert Certification	

There are totally 24 certifying agencies in India. If any of the product comes with the above mentioned logo indicates that the product is fulfilled with the organic standards and can be sold as organic.

Organic food labels are perceived by consumers as a symbol of guarantee for the product (Magnusson et al. 2001; Torjusen et al. 2001). The official recognition in the form of certification of organic agriculture encompasses the products and its quality (Gunnar Rundgren, 2007). It is observed that organic label is a marketing tool. It is not concerned with the proclamation of food safety (WebMD, 2000).

Consumers inquire about clear, authentic, accurate and reliable information with respect to organic foods that too in label. Normally, it is observed that they would have viewed a label even then they seek more information than what is given (Giannakas 2002; Lin, Smith & Huang 2008). Label may lack trustworthiness even if it is well understood by the consumers (Lohr, 2001). Furthermore, the price and understanding of organic label turn out to be an impediment for consumers when making decision on organic foods purchase. It is because of the confusion among consumers regarding the safe food labels; and the premium price of organic food is not realized by some consumers (Sangkumchaliang et al, 2012). Therefore, a trustworthy label carries the authority of organic food products (Padel and Foster 2005; Wier and Calverley 2002). Further people believe that the product is organic if only it is certified. On the other hand they also expect information to be simple and accurate. Thus it is believed that organic labeling and certification possibly plays a predominant role in purchase decisions. Beside all this there are some barriers for consumers from buying organic food products which are discussed below.

Barriers in organic food consumption

Kotler states that "Potential consumers must have enough income and must have access to the product offer". On contrary, in case of organic food the two common barriers for the purchase of organic food are Price and Availability (Henryks et al, 2013). The debates of the barriers with respect to the purchase of organic foods evolve around the factors such as cost and quality, availability vs access, outer appearance vs product quality and least trust in the production methods of organic foods.

It is found that price as a primary barrier in the organic food purchase (Magnusson et al., 2001; Grunert and Kristensen, 1991). The prevailing differences in price, limited availability is considered as the major barrier for purchasing organic food (von Alvensleben and Altmann, 1987; Jolly, 1991; Mathisson and Schollin, 1994; Tregear et al., 1994; Grunert and Kristensen, 1995; Roddy et al., 1996; Wandel and Bugge, 1997; Lea and Worsely, 2005; Biemans, 2009; Witzel and Zielke, 2014). Several studies indicated that the buyers are ready to pay a little extra that is around 5-10% (Von Alvensleben and Altmann, 1987; Ekelund, 1989; Jolly, 1991; Mathisson and Schollin, 1994; Grunert and Kristensen, 1995; Konsumentverket, 1998; Wandel and Bugge, 1997). Moreover the rationale behind the non purchase of organic food is that consumers are fulfilled with the conventional food supply (Ekelund, 1989; Mathisson and Schollin, 1994) and very little knowledge of organic certification systems (Botonaki et al. 2006; Krystallis, Fotopoulos & Zotos 2006).

Thus price and unavailability of organic products acts as main barriers from consuming such products. This poses as a challenge to marketers in setting up the price and making organic products widely available in the markets.

D. RELATED ARTICLES

The related relevant review articles were classified according to the study variables. The variables are consumer knowledge, perception, attitude, and trust towards organic food products. Their health consciousness and willingness to pay is also discussed. All the variables were discussed briefly.

a) Consumer's knowledge, perception and attitude:

Mei-Fang Chen (2009) conducted a study in *Taiwan* regarding the "attitudes and health consciousness of consumers on organic food". He found that consumer's health consciousness and concern for environment are the two main motives for organic food purchase. Further he has concluded that consumers attitude towards organic food depends upon their health consciousness and attitude towards environment.

Magnusson et al (2001) conducted a study in *Sweden* on consumer's attitudes towards organic foods. 2000 respondents were mailed a questionnaire for the study. Results reveal that young and women respondents indicated a positive attitudes but the frequency of purchase was low. Organic foods were observed as healthier and expensive. Price was reported as a main obstacle in purchasing organic food products. It is suggested that only if perceived belief increase among consumers consumption of organic food shall increase.

Tarkiainen et al (2005) conducted a study in *Finland* on subjective norms, attitudes and purchase intention among consumers regarding organic foods. This study tested the relationship between subjective norms, attitudes and intention to buy organic foods using the extension of the theory of planned behavior (TPB). The projected "modified model of the TPB model fitted the data well than the original model". It is found that "subjective norms influenced buying intention indirectly through attitude formation in buying organic foods". From the results, it is understood that "consumers' intentions can be predicted with their attitudes which can additionally be predicted by subjective norms" in case of organic food purchase.

Chen et al (2007) conducted a study on "determinants and intention of consumers towards organic food products in *China*". Results of this study conveys that product, lifestyle and regulatory significantly affects the organic food purchase. In addition to this, these above said aspects had a straight or not direct affect on pre-purchase assessment and purchase intentions. Consumer's attitudes and beliefs influenced pre-purchase assessment, and pre purchase assessment influenced the behavioral intention of consumers.

Fotopoulos et al (2002) studied about "purchasing motives and profile of the Greek organic consumers in *Greece*". After analyzing the country wide sample, the survey results indicates that three types of consumers subsist in case of attitude and purchase intention towards organic food products. They are unaware buyers, aware non buyers and buyers. Young consumers hold more positive attitude and express high quality and health consciousness. Problems in buying organic food products are cited as price and unavailability of products in Greece.

Tsakiridou et al (2007) examined "attitudes and behavior of consumers towards organic food products in *Greece*". Findings revealed that most of the customers relate organic food with vegetables and fruits and also reveals demographic variables have a minimal impact on consumer's attitudes.

Magistris et al (2008) examined the "decision to buy organic products in *Italy*". Results specify that consumer attitudes regarding organic food products, and the decision making is particularly influenced by health and environmental factors. It is found that organic knowledge positively influences organic attitudes among consumers. Finally, consumers who are health consciousness and like to have balanced life holds more optimistic intention and attitudes in relation with environment and organic food products.

Aertsens et al (2009) have done a study on "personal determinants of organic food consumption among *Belgium* consumers". Results indicate the consumption decisions of organic food can be clarified by connecting organic food qualities with more 'theoretical values such as universalism, security, stimulation, hedonism, conformity, benevolence and self-direction'. These values have a positive impact towards attitudes of organic food consumption. Moreover attitude, personal and subjective norm and perceived behavioral control influences consumption of organic food.

Quah et al (2010) made a study on "consumer purchase decisions of organic food products in *Malaysia*". Data were collected from the 400 shoppers of supermarkets and hypermarkets. Results suggest that demographical and attitudinal factors were affected by the various ethnicities of consumers. In particular, Malay purchase decisions are motivated by females, urbanites, and consumers with higher income levels. In addition their attitude is associated with food-safety concerns, health-supplement expenditures, and those who believe price or availability to be main aspects.

Honkanen et al (2006) examined "ethical values and motives that drive organic food purchase among consumers in *Norway*". Results of the study indicate animal rights and environmental concern strongly influences the attitudes. Respondents who have more positive attitude consume more organic food products. Political motives also influenced the attitudes to some extent.

Gracia et al (2007) conducted a study on consumer's organic food product purchase behavior in south of *Italy*. Data was collected through survey method from 200 consumers of Naples. Results signify that consumers those who are more eager to obtain organic food products are likely to buy a larger quantity of those products. The purchase intention depends on knowledge on organic product and their attitude. Likewise, health and environmental benefits given by organic foods are the two main aspects which drive both intention and final purchase decision among consumers. To conclude, organic knowledge and income have a positive impact in the final purchase decision of consumers in purchase of organic food products.

b) Health consciousness and other factors:

Somnath Chakrabarti (2010) examined the "factors influencing organic food purchase in *India*". Findings of the study convey health motivation got the highest rating among all the other factors. Experts also rated the reputation of store, information associated with certification process; word of mouth and affective commitment are high in the process of consumer's purchase of organic food products.

Lillywhite et al (2013) examined organic food purchases and preferences among Jordan consumers, *USA*. This study is done with primary data which were collected utilizing a mall-intercept survey with sample of 147 from six grocery stores of Jordan. It is found that price and unavailability of products were the main constraints and health, taste and safety concerns are the foremost motto in buying organic food products among Jordanian consumers.

Schifferstein et al (1998) examined the health related determinants with regard to organic food consumption in *Netherlands*. Data was collected from the customers of natural and health stores. Results indicate that better taste, absence of chemicals and environment friendliness were the major reasons to go for organic foods among customers. Organic food purchasers conveyed that consuming organic food is a part of way of life.

Makatouni (2002) studied about the motivators of organic food among *UK* consumers. Data was collected from the supermarkets through interview. The 40 sample participants were the parents with the children aged 4 -12 years. Results illustrates that the central motivating factors among the consumers in relation with organic food purchase are human, animal and environment related factors.

Torjusen et al (2001) made a study on "food system orientation and perception of quality between the producers and consumers of organic food in *Norway*". Data was collected from 286 selected households through mail survey. Results showed quality aspect which consists of freshness and taste considered to be the most important among consumers. Addition to this, consumers who bought organic foods were much concerned about their health, environmental and ethical.

Lea et al (2005) had done a study in *Australia* regarding organic food beliefs, demographics and values. Questionnaire-based mail survey was adopted from random respondents consists of 500 Australian adults. Study found that greater part of the respondents reported organic foods is tastier, healthier and better for the environment. However the major hindrance observed were expensive and lack of availability. Women are likely to hold positive attitude when compare with men. The prime interpreter of the belief with relation to organic food is personal value aspects related to nature, environment, and equality.

Padel et al (2005) made a study in *UK* on "understanding why consumers buy and do not buy organic foods". The study had drawn data from focus groups and laddering interviews with 181 occasional and regular consumers of organic food. Results illustrate that consumer at first link organic only with fruits, vegetables and healthy diet with respect to organic foods. It further shows that the decision making process is difficult when it comes to organic products and the barriers may vary among product categories.

Donovan et al (2002) had done a study on consumer preferences for organic meat in *Ireland*. Data was collected through questionnaire from 250 Irish consumers. Respondents purchased organic meat placed importance their health and food safety. They believed that in terms of value, quality, safety, and labeling and production method the organic meat is superior compared to its conventional counterpart. Further it is found higher income group consumers were more willing to buy organic meat and growing awareness about food safety and pollution are the two main organic food purchase determinants.

Fotopoulos et al (2002) studied about "purchasing motives and profile of the Greek organic consumers in *Greece*". After analyzing the country wide sample, the survey results indicates that three types of consumers subsist in case of attitude and purchase intention towards organic food products. They are unaware buyers, aware non buyers and buyers. Young consumers hold more positive attitude and express high quality and health consciousness. Problems in buying organic food products are cited as price and unavailability of products in Greece.

Davies et al (1995) examined "the profile of the organic food purchasers in *Northern Ireland*". Survey method was adopted and 150 responses were collected. Results show that women are the more expected buyers of organic food rather than men. The presence of children did not act as significant factor. Lower income people wish to be green consumers where don't actually buy organic foods. In addition it is found that people who claim themselves as green consumer and those who take positive steps by purchasing organic food are not same.

Dettmann et al (2010) made a study on demographic characteristics of *US* organic consumers. Nielsen data was used for the study. Results reveal that organic foods are bought by the consumers who holds higher education are more expected to purchase organic vegetables. On the other hand higher income people were not likely to spend more on organics.

Baker et al (2002) examined the values driving consumer's organic food choice in UK. It's a cross cultural study with regard to *Germany Vs UK*. A sample of 32 regular consumers was interviewed from both the places. Study results reveal both the consumers possess similar values with regard organic food. The strongest dominant perceptual orientations of UK consumers are healthiness, heath – related, enjoyment and quality of life. But in case of Germany consumers it is health and enjoyment followed by the faith in nature and animal wellbeing.

Hughner et al (2007) made a study on "why people purchase organic food" from a compilation of review. Studies indicate there are several reasons under which consumers buy organic food products. Reasons consists that organic foods are healthier and has a better taste. Environmental and animal welfare and food safety concern also plays a role. It is further stated that the main reason among consumers for rejecting organic food is it is expensive, lack of availability, satisfaction with current products, and insufficient marketing are some among them.

Essoussi et al (2009) have done a study on decision making process among consumers regarding organic food. Data was collected from the *Canadian* consumers of organic food through in depth interviews. Results illustrates health concern, environment and support for local farmers are the primary motivators for organic food purchase. Results also depict consumers level of trust in organic food is related with country of origin, distribution, certification and labeling.

c) Consumer's trust and willingness to pay towards organic food products:

Cerda et al (2012) studied about "consumer preference and willingness to pay for organic apples in *Chile*". Data was collected from 400 individuals through interviews. This study calculates the consumer's marginal willingness to pay. Results of the study reveal variety and price are likely to the most important criteria for consumers than its production method and flavor. Also identifies consumers has a very positive willingness to pay premium prices for organic apples.

Rezai et al (2013) made a study on "Consumer willingness to pay for green food in *Malaysia*". The result reveals many factors influence consumers' willingness to pay extra price for green foods. They are food safety; environmental friendliness, perception, intention, motivation, income, geographical area, income and gender notably have an impact on consumers' readiness to pay for green foods.

Govindasamy et al (2008) analyzed on "Consumer willingness to pay for organic produce in Northeastern *US*". The results reveals that consumer who are familiar with integrated pest management practices are more likely to pay premium prices for organic food products, and quality of fresh produce influences their willingness to pay.

Coulibaly (2011) studied about "Consumers' Perceptions and Willingness to Pay for Organically Grown Vegetables" in *UK*. The study results indicate that most of the consumers were educated on the subject of the use of synthetic pesticides in the production process of vegetables. Consumers were ready to pay more premium price for organically grown vegetables provided if they are made available in the market. Their willingness to pay premium is stimulated by increase in awareness of health risks connected with the synthetic pesticides.

Doorn et al (2011) examined on "consumers' willingness to pay for organic products in *Netherlands*". This study explored the reasons after consumer's willingness to pay for organic food. Health perception, quality perception and environmental concerns were stated to be the main cause among consumers to pay premium for organic food products.

Mesias Diaz et al (2010) conducted a study on "consumer knowledge, consumption and willingness to pay for organic tomatoes in *Spain*". Data was collected from 361 Spanish consumers through personal interviews. Findings of the study reveal that consumers lack in knowledge and proliferation of labels creates confusion among consumers. Further the study observed that there is an association among organic food knowledge, consumption and willingness to pay premium in case of organic food products. Price acts as an impediment is buying organic foods.

Table no -11

Related articles in table

Author	Year	Country	Results
Tsakiridou et al, Padel et al,	2007 2005	Greece UK	Study revealed that most of the consumers relate and link organic food with only vegetables and fruits.
Magnusson et al, Lillywhite et al, Chakrabarthi, Gracia et al , Baker et, Essoussi et al,	2001 2013 2010 2007 2002 2009	Sweden USA India Italy UK Canada	Found that health is the foremost motto and drives both the intention final purchase decision among the consumers to buy organic food products.
Lea et al, Lillywhite et al, Donovan et al Gracia et al Magistris et al Schiferstein et al Hokanen et al Torjusen et al	2005 2013 2002 2007 2008 1998 2006 2001	Australia USA Ireland Italy Italy Netherlands Norway Norway	Found that greater part of the respondents reported quality aspects like freshness and taste, safety concerns, environmental factors, animal rights are considered to be the most important among consumers to buy organic foods.
Chen 2009 Qual et 2010	2009 2010	Taiwan Malaysia	Found from their study that consumers attitude towards organic food is associated with their health consciousness.
Chakrabarthi Donovan et al	2010 2002	India Ireland	Found that information associated with certification and labeling and production method play a major role in the process of consumer's purchase of organic food products.
Gracia et al Magistris et al	2007 2008	Italy Italy	Found that purchase intention depends on consumer's knowledge and attitude towards organic food products where organic knowledge positively influences organic attitude of consumers.

Diaz et al Cerda et al Rezai et al Govindasamy et al Coulibaly Doorn et al	2010 2012 2013 2008 2011 2011	Spain Chile Malaysia USA UK Netherlands	Found that consumer are very positive towards willingness to pay premium price in order to obtain organic food products and it is associated with organic food knowledge, income, quality of the products like freshness, health perception and environmental concerns are the main reasons among them.

Earlier studies on global organic food market evidences that consumers across the western countries are more aware, knowledgeable and hold more positive attitude with respect to organic food products. Indian organic food market is gradually growing but the consumers are less aware and not willing to pay more premiums to obtain organic food products. Therefore it is very essential to study the differences in the behavior between the Foreign and Indian organic consumers. Thus the above discussed are the various dimensions covered in the area of consumer behavior with respect to organic food products. This study has also taken all the variables reviewed so far by different authors. Hence, the factors considered for this study are Consumers knowledge, attitude, perception, health concern, trust, willingness to pay and their behavior towards organic food products. The selected variables regarding the consumer behavior are analyzed using appropriate statistical tools in order to attain the proposed objectives and to reach the desired results. The results are obtained with the help of statistical tools and are interpreted in the fourth chapter.

CHAPTER – III
RESEARCH METHODOLOGY

Introduction

"Research methodology is a systematic way to solve a problem. It is a science of studying how research is to be carried out. Essentially, the procedures by which researchers go about their work of describing, explaining and predicting phenomena are called research methodology". This chapter explicates the research design of the study, introduces factors and variables included, sample size and statistical tools used for analysis. Reliability and normality were also tested in order to know the nature of the primary data collected. It is concluded with the limitations of the study.

Area of the study

Pondicherry, the head quarters of the Union Territory, located at a distance of 162 km to the south of Chennai .Karaikal is south and Yanam is in north-east of Pondicherry. Mahe lies almost parallel to Pondicherry on the west coast.The UT of Pondicherry holds a population of 9,46,600. One of the major source is agriculture for creating income for the local native population. In Pondicherry about 45 % of the entire population is occupied in agriculture. On the other hand tourism is also one of the important industries and acts as one of the major sources of income to the region.

Tourism has gained various dimension and emerging as the leading industry for employment generation. Pondicherry is regarded as one of the most important tourist destinations in India (Tourism Department, Government of Puducherry). Around 50,000 foreigners were visited in the year 2013 and it has increased up to 8% in the year 2014(Indiastat). The floating populations of foreigners as visitors are approximately 50,000 in the year 2014.

Organic shops in Pondicherry

There are around 120 supermarkets and departmental stores in Pondicherry out of which around 10% of the shops were dealing with organic food products. They sell organic produces that are locally grown, bringing from other states of India and certain imported items. Most of them come from countries like Germany, France, USA and UK. Hence the retail shops of organic food alone considered for the study.

Sample size determination :

Based on Krejcie and Morgan (1970) study the sample for this research is determined by using the given formula.

$$N = \frac{(Z^2\ P\ Q\ N_u)}{\{e^2\ (Nu - 1) + Z^2\ p\ q)\}}$$

$$N = \frac{1.96^2\ X\ (0.98)\ X\ (0.02)\ X\ 9,\ 46{,}600}{\{(0.02)^2\ X\ (9,\ 46,\ 600 - 1) + (1.96)^2\ X\ (0.98)\ X\ (0.02)\}}$$

N = 384

Due to French colonization still Pondicherry has the historical connection and people from France visit Pondicherry regularly. Therefore, 50% of the sample was collected from French people and visitors from Germany seem to be more due to the meditation centre established by international city. Hence the researcher tried to collect information from 202 Indian consumers and 204 foreign consumers. They are from countries such as France (50%), Germany (30%), USA (30%) and UK (10%).

Sampling

Purposive sampling method is used for the primary data collection. Since the focus group is organic consumers, the respondents were purposively chosen as the people who use (or) have used organic food products.

With the help of a structured questionnaire the data was collected from theIndian and Foreign customers visited the major supermarkets which has organic food sections and also from exclusive organic food stores located in Pondicherry. Questionnaire was prepared based on the literature review of authors like Magnusson (2001), Fotopoulos & Krystallis (2002), Radman (2005), Bonti-Ankomah & Yiridoe (2006), Chen (2007) Tsakiridou et al (2008). Survey participants were either regular or occasional organic food consumers who have visited the organic stores during the study period.

Variables of the study

After reviewing the Literature the study variables were finalized and it is given in the table below

Table- 12

Sl.no	Variables	No. of articles Reviewed	Authors
1	Knowledge	11	Efthimia Tsakiridou 2006, Gil 2006, Isaac Cheah 2009, Mesı´as Dı´az 2010.
2	Health consciousness	13	Scifferstein 1998, Emma Lea 2005, Efthimia Tsakiridou 2006, Mei-Fang Chen 2009.
3	Trust	14	Pellizzoni 2005, Efthimia Tsakiridou 2006, Essoussi 2009, Dahm 2010.
4	Perception	12	Lea et al 2005, Yiridoe 2005, Honkanen 2006, Schobesberger 2008, Essoussi 2009, Coulibaly 2011.
5	Attitude	12	Magnusson 2001, Lea et al 2005, Anssi Tarkiainen 2005, Efthimia Tsakiridou 2006 Mei-Fang Chen 2009, Lorenz Probst et al 2010.
6	Buying Behavior	17	Donovan 2002, Faidon Magkos 2006, Su-Huey Quah 2009, Chakrabarti 2010, Jue Chen 2012, Lillywhite 2013.
7	Willingness to pay	13	Laroche et al 2001, Krystallis 2006, Canavari 2008, Ramu Govindasamy 2008, Akgüngör 2010, Coulibaly 2011, Cerda 2012, Essousi 2012.

These variables are used for framing the conceptual model of the study which is presented in chapter- IV. There were many studies undertaken in India and abroad on Buying Behavior. But regarding customers willingness to pay got its importance in the recent past and most of them were foreign studies, hardly few in Indian perspective. Therefore this work focused on willingness to pay. The questionnaire and the proposed model was prepared with the help of above mentioned articles.

Normality Test:

To evaluate the extent of normalityof the data, skewness and kurtosis values were calculated. If the derived values lie between +2 and -2 then statistically we agree that the data is distributed normally (Amna C. Cameron, 2004).

The variables taken for the study were tested for its normality, where all the variables fulfilled the above said condition and were within the acceptable range. The calculated values for the corresponding variables of Indian and Foreign respondents are given in the table below. And it is found that both the respondent group reflected more or less similar tendency of distribution.

Table – 13
Normality Test Resuts

Indian Respondents		
Study variables	Skewness	Kurtosis
Attitude	-1.402	1.210
Perception	-.386	1.267
Health	.521	-.215
Knowledge	.059	-.541
Behavior	1.620	1.546
Trust	-.310	.137
Willingness to pay	-.218	-.754

Foreign Respondents		
Study variables	Skewness	Kurtosis
Attitude	.032	-.926
Perception	-.142.	-.003
Health	896	1.752
Knowledge	-.547	-.054
Behavior	-.411	-.198
Trust	-.235	-.026
Willingness to pay	-.371	-.417

Reliability

Reliability is most important for behavioral studies because most of these studies use opinion, perception as subjective aspects with scaling hence we cannot test scientifically. Therefore there should be minimum reliability in their opinion, which could be tested by using (Rosenthal and Rosnow, 1991).

A commonly accepted method for relating internal consistency such as Cronbach's alpha calculation which indicates that "the extent to which an experiment, test, or any measuring procedure yields the same results on repeated trials" Carmine's et al (1979).

To find the consistency of the data used for this research, Cronbach's alpha values were calculated, separately for Indians and Foreigners. All the corresponding valuesof the study variable were greater than the acceptable level, which indicates that the collected pimary information was reliable and established a high internal consistency among the factors. The result values reveal that tey have scored above .7 therefore we can conclude that the collected information is reliable and could be used for further analysis.

Table - 14

Reliability Test Results

Indian Respondents	Alpha value
Attitude	.740
Perception	.725
Health	.740
Knowledge	.774
Behavior	.754
Trust	.707
Willingness to pay	.807

Foreign respondents	Alpha value
Attitude	.760
Perception	.753
Health	.701
Knowledge	.843
Behavior	.809
Trust	.827
Willingness to pay	.813

Statistical tools used for the study

The collected primary data was analyzed statistically with relevant tools such as t-test, ANOVA, chi square, regression and structural equation modeling. Each test explanation and their application in the study is explained as follows

- T test - "T-test is used to find out the significant difference in the mean score of two independent groups". For this study t-test is used to know the mean difference between the study variables and demographic variables.

- ANOVA - "The basic principle of ANOVA is to test the differences among the means of the populations". For this study ANOVA to know the mean difference between the study variables and demographic variables.

- Chi square test – Chi square test is perfoemed to know whether there is association between two variables. In this study chi-square test was used to understand the association between demographic profile of the consumers with their willingness to pay higher price for organic products.

- Regression- "Regression is the determination of a statistical relationship between two or more variables". Also it reveals the relationship between dependent and independent variables. Here regression equation was derived to identify the factors influence the behavior of the buyers.

- Structural equation modeling - "Structural Equation Modeling is a multivariate method which is the combination of Factor analysis and Multiple regression". In this study partial least square structural equation modeling was perforemed to test the relationship between the selected study variables.

Conceptual model of the study

From the earlier studies it is found that in recent years interest towards organic food production and buying behaviour has increased among consumers. In majority of the earlier studies, consumers have been found to have positive attitudes and interest in organically produced food.

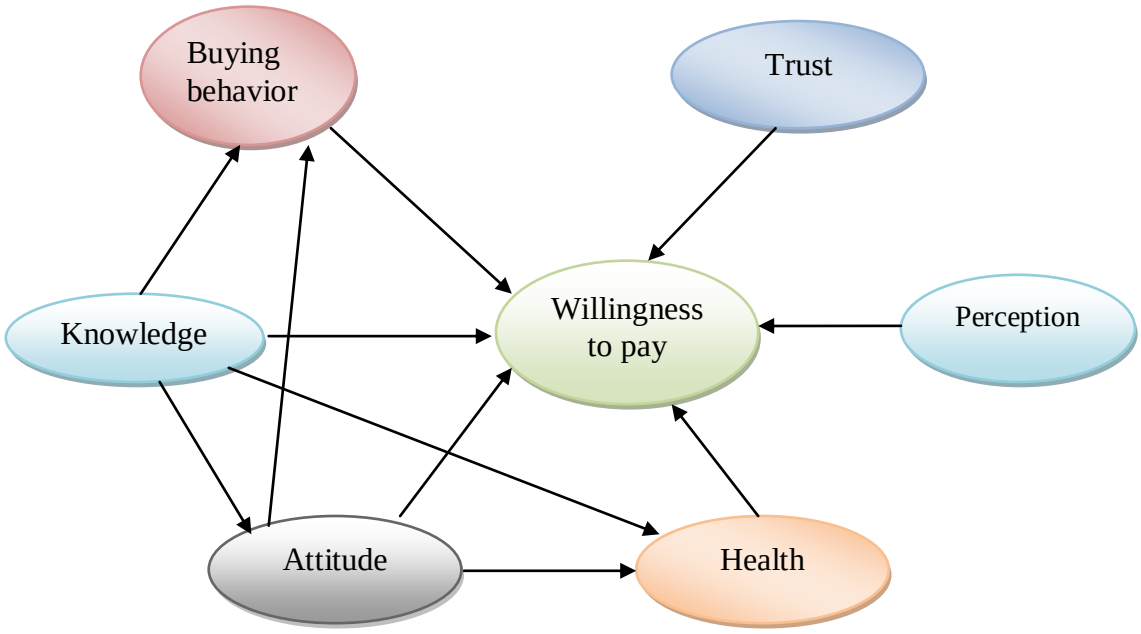
Magistris and Gracia (2008) found that organic knowledge influences attitudes towards organic food products and it directly influences the decision to buy the product. Squires, Juric, and Cornwell (2001); Harper and Makatouni (2002); Verhoef (2005) identified that health consciousness is considered to be a major motivation for buying and consuming organic foods. Healthy lifestyle is identical with positive consumers' attitudes in regard with organic foods (Chen 2009). Further Essoussi, 2009; Krystallis et al, 2005 stated that consumers trust and their willingness to pay towards organic food are based on the certification, country of origin and information in the label. Rezai et al (2013) identified that consumers who have positive perception towards organic food are more likely and willing to pay premium.

However, the proportion of consumers who purchase organic food regularly is reported to be low indicating that having positive attitudes towards organic food does not necessarily lead towards buying them. (Anssi Tarkiainen and Sanna Sundqvist , 2005).

A conceptual model was framed and the relationship were given based on these literatures. Relevant hypothesis was framed and tested. Results are given in chapter IV.

Chart – 6

Conceptual model of the study



Limitations of the study

- The study pertains to Pondicherry only therefore the results may differ in other parts of the country.

- This study focused on consumer behavior and their willingness to pay towards organic food in general not for a specific or for individual product.

- Cultural aspects were not considered which might give different view and better picture on consumer behavior.

CHAPTER – IV
RESULTS AND DISCUSSION

Introduction

This chapter describes the demographic profile of the respondent's, along with the relevant hypothesis framed and tested. Conceptual framework of the study was tested with the help of partial least squares and the results were presented. This chapter also discusses the reasons for buying organic food product from consumer's point of view. The analysis is presented under three classifications as follows.

A. Demographic profiling of the consumers
B. Factors influencing Consumer behavior
C. Consumers Wilingness to pay for Organic food products

A. DEMOGRAPHIC PROFILING OF THE RESPONDENTS

The foreign and Indian consumers demographic details were profiled based on their knowledge, attitude, perception, trust, attitude and buying behavior. The demographic profile of organic food consumers and their purchase patteren are presented in the below table.

Table - 15

Demographic profile of the Respondents

Demographic profile		No of Indians (%)	No of Foreigners (%)
Gender	Male	60	56
	Female	40	44
Age	below 20 yrs	2	8
	21 to 30 yrs	39	53
	31 to 40 yrs	37	21
	41 to 50 yrs	18	9
	51 to 60 yrs	3	4
	above 60 yrs	1	5
Educational Qualification	Schooling	3	13
	Graduates	45	57
	Post graduates	47	27
	Others	5	3
Monthly income (in Rupees)	< 10,000	7	33
	10,000-20,000	34	32
	20,000-30,000	24	12
	30,000-40,000	15	6
	40,000-50,000	10	5
	>50,0000	10	12
Occupation	Govt. employee	29	4
	Private employee	36	26
	Professional	15	18
	Business	8	15
	Others	12	37
Marital status	Married	68	45
	Unmarried	32	55

From the above information we can understand that around 60% of them were male respondents and 75% of them were between the age group of 20 to 40 years and only very few were either above 60 years or below 20 years. Most of the respondents surveyed were graduates and only few school dropouts. Their income classification reveals that they earn between Rs 10,000 to Rs 50,000 per month.

Most of the Indian respondents were (68%) married but in other hand 55% of foreigners were unmarried. Another interesting fact is that 80% of the Indians take non vegetarian and the remaining 20% were seem to be pure vegetarians.

Table – 16

Organic food purchase pattern

Organic food purchase pattern		No of Indians (%)	No of Foreigners (%)
Eating habits	Vegetarian	20	45
	Non vegetarian	80	55
Frequency of food purchase	Everyday	10	19
	Weekly once	41	36
	Weekly twice	21	34
	Monthly once	28	11
Place of organic food purchase	Farmers	18	31
	Local markets	46	45
	Health stores	13	17
	Organic stores	34	52
	Supermarkets	52	47
Consumption of organic food	Past 5 years	16	32
	3-5 years	6	14
	1-3 years	20	19
	Past 1 year	20	16
	Past 6 months	38	19
Sources of information	Media	60	43
	Friends	59	60
	Doctor	27	18
	Display at store	34	45
	Internet	43	62
	Farmers	22	40
	Specialized shops	17	28
	Promotional camps	11	9
	Magazines	40	26
	Ads on social network	24	25
	Newspaper	34	23
	Email forwarded	12	16

There are no organic meat shops in India like western countries. It is clear that India move towards fresh vegetables and fruits instead of red meat. Regarding the purchase pattern Indians buy groceries monthly once and foreigners fortnightly but both of them buy vegetables and fruits either everyday or weekly once.

They purchase organic food articles from specific organic stores and health and medical related articles from health stores. It is found that Vegetables and Fruits were purchased directly from the farmers, sometimes from local markets. Most of the supermarkets deal with imported organic food items along with Indian brands. When we look at the period of consumption Indian consumers started using organic food in the recent past. In the other hand most of the foreigners cosnume for the past 5 years.

It is found that there were many sources to know about the organic food. Media and Internet play a major role in educating the customers regarding the importance and benefits of organic food. Friends were also influencing others to buy the same. Sometimes people tend tobuy when they look at the display at stores. For certain sickness particularly cancer now-a-days medical practitioners suggest them to take organic food. Other published modes like magazines, newspapers, Email forwards were also contributing a lot towards the same. Certain magazines like Organic report are published by Organic trade association in western countries to its members and to its organic community in part of promoting organic food product. Newspapers also publish articles on organic food stating their advantages to human beings and also to the environment. In recent days specialized organic stores are opened more in number. Social media like whatsapp and local radio channels were also taking steps to educate the general public regarding their health and preventive methods to live sustainable healthy life.

The consumers were asked about the different sources from where they got the information about the organic food. 62% of Foreigners came to know through internet followed by friends and media, whereas Indians said that friends and Internet. The other sources like promotional camps, specialized organic shops play a very little role in creating awareness among the consumers.

Demographic profiling Vs Consumer behavior

This section explains the relationship between the demographic variables such as age, gender, occupation, education, income, marital status, and eating habits of the respondents and their purchase behavior towards organic food in Pondicherry. Statistical tools like T-test and ANOVA was used to understand the relationship.

The consumer's attitudes are mostly influenced by demographic variables like age, income, gender, education level. There are many studies particularly Jolly (1991), Wandel and Bugge (1997), Thompson and Kidwell (1998), Magnusson et al. (2001), Wier et al. (2003), Yue et al.(2008), Justin Paul (2012) had considered the above mentioned variables and established the relationship, out of which few studies concluded that the demographic variables such as age, education, marital status and income of consumers significantly influence their perception towards organic food items.

It is found that women seem to be more affirmative in relation to organic food than men Emma Lea et al (2005), Davis et al. (1995), Wandel and Bugge (1997), Jolly (1991). Further it is observed that most of them were youngsters. Elder people are concerned more about health therefore willing to pay more prices to obtain organic food when compared with young consumers. (Fotopoulos and Krystallis, 2002). With these literature evidences relevant hypothesis were framed to find the impact of demographic variables on their consumption behavior.

T test- Demograhic profile and consumer behavior

According to Laerd statistics "The independent-samples t-test compares the means between two unrelated groups on the same continuous, dependent variable". Hence the 'T' test was performed for various profiles like gender, marital status and eating habits of the respondents to understand their organic consumption pattern. "T-test is used to find out the significant difference in the mean score of two independent groups" (Sekaran, 2003).

Analysis of variance –ANOVA

"The basic principle of ANOVA is to test the differences among the means of the populations" (C.R Kothari, 2004). "One-way ANOVA tells us whether there is any significant difference in the mean scores of the dependent variable across the groups. Post-hoc tests were done to find out where these differences lie" (Pallant, 2007). 'F' ratio values "represents the variance between the groups, divided by the variance within the groups". Post Hoc Multiple comparison tests such as Bonferroni, Scheffe's, Tukey, Duncan and Dunnett's are some of the commonly used tests (Sekaran, 2003) to identify the range and specific group has greater variance than others.

The relevant hypotheses were framed to test the relationship. They are:

H_{01}: Demographic variables influences the knowledge of Indian consumers

H_{01a}: Demographic variables influences the knowledge of foreign consumers

H_{02}: Demographic variables influences the trust of Indian consumers

H_{02a}: Demographic variables influences the trust of foreign consumers

H_{03}: Demographic variables influences the perception of Indian consumers

H_{03a}: Demographic variables influences the perception of foreign consumers

H_{04}: Demographic variables influences the health consciousness of Indian consumers

H_{04a}: Demographic variables influences the health consciousness of foreign consumers

H_{05}: Demographic variables influences the attitude of Indian consumers

H_{05a}: Demographic variables influences the attitude of foreign consumers

H_{06}: Demographic variables influences the buying behavior of Indian consumers

H_{06a}: Demographic variables influences the buying behavior of foreign consumers

Table- 17

Results of t test and ANOVA on knowledge and trust

Demographic variables	Knowledge		Trust	
	p value		p value	
	Indians	Foreigners	Indians	Foreigners
Gender	.454	.082	.630	.838
Marital status	.362	.514	.419	.726
Eating habits	.844	.360	.658	.840
Age	.161	.291	.835	.854
Education	.580	.025*	.819	.325
Occupation	.133	.043*	.628	.980
Income	.454	.000**	.069	.328

**. Correlation is significant at the 0.01 level

*. Correlation is significant at the 0.05 level

The above table illustrates that there were no significant differences (p>.05) in the gender, age, education, occupation, income, marital status and eating habits with the knowledge of Indians regarding organic food products. Thus demographic variables of Indians have no influence on their knowledge towards organic food products. Therefore (H_{01} is rejected). In case of foreigner's education, occupation and Income level influences their knowledge with the value of p=.025, 0.43 and .000 which is <.05 respectively, which indicates depends upon the conumers education, occupation and Income level their knowledge differs. We can conclude that higher the education and income they had better awareness and knowledge about the organic products. Further depends upon their occupatiob also it vaired.

Hence Post Hoc test was conducted to find out where the differences lie. Duncan Post Hoc table reveals that respondents holding post graduation as their education level, Government employees and respondents having income range of Rs 40,001- Rs 50,000 are likely to be more knowledgeable towards the organic food products with the mean score of 3.32, 3.4 and 3.7 respectively. Therefore (H_{01a} is accepted).

On the other hand there were no significant differences (p>.05) in the gender, age, education, occupation, income, marital status and eating habits with the trust on organic food both Indians and foreigners. Thus demographic variables have no influence on their trust towards organic food products. Therefore both (H_{02} and H_{02a} is rejected).

Table- 17.1
Duncan test Results- Education

Knowledge	N	Subset for alpha = 0.05
		1
schooling	27	2.80
others	6	2.82
graduate	116	3.06
post graduate	55	3.32
Sig.		.071

Table- 17.2
Duncan test Results - Occupation

Knowledge	N	Subset for alpha = 0.05	
		1	2
Private employee	52	2.84	
Business	30	3.09	3.09
others	75	3.13	3.13
Professional	39	3.3	3.3
government employee	8		3.4
Sig.		.074	.128

Table-17.3
Duncan test Results - Income

Knowledge	N	Subset for alpha = 0.05	
		1	2
less than 10,000	67	2.91	
10,001-20,000	65	2.93	
30,001-40,000	13	3.15	
20,001- 30,000	24	3.19	
40,001-50,000	11	3.4	3.4
above 50,000	24		3.7
Sig.		.062	.098

Table-18

Results of t test and ANOVA on perception and health consciousness

Demographic variables	Perception		Health consciousness	
	p value		p value	
	Indians	Foreigners	Indians	Foreigners
Gender	.636	.546	.748	.636
Marital status	.315	.984	.007*	.816
Eating habits	.180	.425	.773	.003*
Age	.813	.820	.066	.015*
Education	.549	.292	.330	.236
Occupation	.147	.803	.012*	.118
Income	.038*	.066	.007*	.190

**. Correlation is significant at the 0.01 level

*. Correlation is significant at the 0.05 level

Table above illustrates that Levene's test was insignificant for gender, marital status and eating habits with their perception on organic food products. But Income of Indians influences their perception with the value of p=.038<.05 which indicates there were significant differences in Indians perception based on their Income. Hence Post Hoc test was conducted to find out where the differences lie. Duncan Post Hoc result reveals that respondents having income from Rs 40,001- Rs 50,000 are likely to encompass more positive perception with regard to the organic food products with the mean score of 3.34. Therefore (H_{03} is accepted). In case of foreigners there were no significant differences (p>.05) between the demographic variables and perception. Thus demographic variables of foreigners have no influence on their perception. Therefore (H_{03a} is rejected).

It is inferred that marital status of Indians significantly related with health consciousness (p=0.007) which conveys that marital status, occupation and Income level of Indians influences their health consciousness (p=.007, 0.12 and .007 which is <.05) Hence Post Hoc test was conducted and found that Indians who do business and having income range of Rs 10,001- Rs 20,000 are likely to be more health conscious than others with the mean score of 4.53and 3.37 respectively. Therefore (H_{04} is accepted). In case of foreigners eating habits and age of the consuers influences their health consciousness (p=.015 where p<.05) which indicates there were significant differences in their health consciousness depends upon their age group. From the test it is found that 20 to 30 years age group of

conusers are more helath conscious than others with the mean score of 4.02 and (H_{04a} is accepted)

Table- 18.1

Duncan results of Income and perception

Perception	N	Subset for alpha = 0.05	
		1	2
less than 10,000	15	2.9	
20,001- 30,000	44		3.1
10,001-20,000	68		3.2
above 50,000	20		3.24
30,001-40,000	29		3.28
40,001-50,000	14		3.34
Sig.		1.000	.198

Table- 18.2

Duncan results of Occupation and helath consciousness

Health consciousness	N	Subset for alpha = 0.05	
		1	2
government employee	54	4.08276	
Private employee	70	4.10264	
Others	14	4.16429	
Professional	25	4.27631	4.27631
Business	25		4.53538
Sig.		.236	.080

Table-18.3

Duncan Results of Income and helath consciousness

Health consciousness	N	Subset for alpha = 0.05
		1
30,001-40,000	27	3.11
less than 10,000	14	3.13
20,001- 30,000	45	3.13
40,001-50,000	16	3.13
above 50,000	19	3.14
10,001-20,000	67	3.37
Sig.		.060

Table- 18.4

Duncan results-Age and health consciousness

Duncan			
age	N	Subset for alpha = 0.05	
		1	2
above 60	10	3.48462	
51-60	6	3.49744	
41-50	17	3.81267	3.81267
31-40	40	3.85558	3.85558
below 20	15		4.01795
21- 30	98		4.02033
Sig.		.107	.372

Table- 19

Results of t test and ANOVA on attitude and buyer behavior

Demographic variables	**Attitude**		**Buying behavior**	
	p value		**p value**	
	Indians	Foreigners	Indians	Foreigners
Gender	.812	.712	.326	.219
Marital status	.152	.347	.343	.435
Eating habits	.268	.009*	.037*	.578
Age	.923	.090	.926	.359
Education	.632	.411	.655	.054
Occupation	.128	.914	.684	.009*
Income	.238	.116	.330	.000**

**. Correlation is significant at the 0.01 level

*. Correlation is significant at the 0.05 level

Table above illustrates that Levene's test was insignificant for all the factors. The result was greater than .05, thus equal variances are assumed. Therefore, there were no significant differences (p>.05) in the gender, age, education, occupation, income, marital status and eating habits about organic food attitudes between females and males in Pondicherry Indian consumers. Therefore H_{05} is rejected. Whereas for foreigners Levene's test was insignificant for all the factors except eating habits of foreigners (where p=0.09<.05).Thus the eating habits of foreigners influences their attitude towards organic food products. Rest all the demographic variables are insignificant with the attitude of foreign consumers (p>.05).Therefore (H_{05a} is accepted) stating that demographic variables influences attitude of foreigners towards organic food products.

Eating habits of Indians alone influences significantly their behavior towards organic food products (H_{06} is accepted). But in case of foreigners, occupation and Income play a significant role on their buying behavior with the value of (p=.009, 0.000 which is <.05). Further the Post Hoc test was conducted to find out the differences. It reveals that Foreigners who are Government employees and who earn above 50,000 are likely to have a positive behavior towards organic food products than others with the mean score of 9.9 and 10.2 respectively. (Therefore H_{06a} is accepted).

Table- 19.1

Duncan results of Behavior and occupation

Occupation	N	Subset for alpha = 0.05	
		1	2
Private employee	52	7.9872	
Business	30	8.6778	8.6778
others	75	8.7156	8.7156
Professional	39		9.3761
government employee	8		9.9167
Sig.		.250	.056

Table- 19.2

Duncan results of Behavior and income

Income	N	Subset for alpha = 0.05		
		1	2	3
10,001-20,000	65	8.2513		
less than 10,000	67	8.3085		
30,001-40,000	13	8.7692	8.7692	
20,001- 30,000	24	8.9722	8.9722	
40,001-50,000	11		9.6667	9.6667
above 50,000	24			10.2361
Sig.		.283	.163	.347

B. FACTORS INFLUENCING CONSUMER BEHAVIOR

A consumer is one who purchases goods or services from the marketplace in order to satisfy his or her own needs. Consumer behavior is a process of an individual collecting information about the product and the steps to purchase the product. This process is important in order to buy what an individual exactly needs. Factors generally considered and listed in previous studies were gender, age, education, income, price, knowledge, attitude, perception and trust towards the product.

Regression equation is used to identify the factors that influences consumer's buyer behavior. In simple words "Regression is the determination of a statistical relationship between two or more variables" (Kothari C.R, 2004). This "technique can be applied with single or multiple explanatory variables and also categorical explanatory variables" (Hutcheson, G.D, 2011). Ordinary least squares (OLS) regression model gives the "relationship between a dependent variable (Y) and a compilation of independent variables(X_1, X_2, X_3 …)" (Pohlman et al 2003). "The purpose of OLS regression analysis is to calculate and test the intensity of the relationship between X and Y" (Wonjae, 2000).

Coefficient of determination (R^2) is used to assess the accuracy of predictive variables in the regression model. "The coefficient value lie between between 0 and 1" (Hair et al, 2006).The greater the R^2 value, which means the dependent variable is greatly or highly associated with the independent variable that is being used to predict (Brace et al., 2006; Hair et al, 2006).

The F ratio provides a measure of this significance level in the regression analysis. Thus greater the F-ratio higher is the explanation. If the 'p' value is less than 0.05 then the F-ratio is considered as significant (Brace et al., 2006). Higher the 'F' ratio it gives greater the explanation.

In this study, the variables taken for the regression analysis are the demographic profile of the respondents such as gender, age, education, marital status, eating habits, occupation, income, and study variables like attitude, knowledge, health consciousness, perception, price, trust towards organic products and label were taken into consideration to run the Ordinary Least Square (OLS) regression equation.

H_{07}: There is no significant relationship between demographic variables and buyer behavior.

Table- 20

Model summary

R	R^2	Adjusted R^2	Std. Error of the Estimate	Durbin-Watson
.875	.765	.758	.76546	1.924

Table – 20.1

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	729.920	12	60.827	103.812	.000[b]
Residual	223.826	382	.586		
Total	953.747	394			

From the Durbin Watson test it is clear that there is no autocorrelation between the variables because the calculated value (1,924) is so closer to 2 it signifies the findings. Hence the test is free from serial dependence. ANOVA table unveil a p-value of 0.000 which shows that the independent variable can be expected to predict their effect on the dependent variable in a reliable way. The regression has an adjusted R^2 of .758 (at 95% confidence interval) which explains 75% of the variables. β (beta) value has been used to know the effect of independents variables on buying behavior of consumers.

Knowledge p=(.000) and Education (p =.050) influences buying behavior of consumers towards organic food products which indicates nearly 75% of consumers buying behavior depends on their education and knowledge which is justified in the earlier study conducted by Chong (2013). He found that consumer's knowledge and education had a very strong relationship with the intention to purchase organic food items.

Table – 20.2

Regression Co-efficients

Dependent variable	Independent variables	Standardized Coefficients	t	Sig.
		Beta (β)		
Buyer Behavior	(Constant)	.054	.092	.927
	Gender	.015	.590	.555
	Age	.014	.461	.645
	Education	.054	-1.943	.050*
	Occupation	-.036	-1.211	.226
	Marital status	.030	.956	.340
	Income	.003	.094	.925
	Eating habits	.029	1.099	.272
	Health	-.037	-1.352	.177
	Knowledge	.876	32.369	.000**
	Attitude	-.035	-1.034	.302
	Perception	.045	1.285	.200
	Trust	.002	.054	.957
	Price	.003	.116	.908
	Label	.014	.438	.662

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

The derived regression equation:

Buyer Behavior =.054 + .015 (gender) + .014 (age) + .054 (education) - .036 (occupation) + .030 (marital status) + .003 (Income) +.029 (eating habits) - .037 (health) + .876 (knowledge) - .035 (attitude) + .045 (perception) +.002 (trust) + .003 (price) + .014 (label).

From the above regression equation we can understand that knowledge about organic food plays a major role in their purchase decision (buying behavior) followed by the level of educational background. The educational qualification of the respondents, their perception on organic food along with their eating habits influenced the buying behavior of the consumers positively. The income of the respondents and their trust and belief on organic food and its price influenced very low. In other hand attitude and health consciousness of consumes did not influence their buying behavior.

Customers perception on any product depends upon their knowledge. Better knowledge creates strong or weak perception. Many studies revealed that the purchase decision is based on two reasons out of which the foremost reason is the poor knowledge of consumers on organic labeling, which makes consumers not to buy organic food. Next reason is the consumers are unable to differentiate the distinctive features of organically produced from conventionally grown alternatives when they don't find enough explanation about organic food products. "India introduced its organic logo in order to increase the confidence and transparency in organic food products among consumers" (Yiridoe et al, 2005)

The consumer's knowledge on various organic certified eco logos were tested. Consumers were asked to identify certain logos printed in organic food label. [Rashid, (2009) found consumers having positive attitude toward the protection of the environment are likely to have a high awareness on the eco-labels. Consumers prefer to purchase organic vegetables labeled as certified organic (Alizadeh et al, 2008)]. Since organic shops in Pondicherry sells imported products of other countries, organic certification logos of France and Europe were also included. The results are given in the below table.

Table - 21

Consumer's knowledge on various Eco labels

Logos	Certified name	Indian consumers (in %)	Foreign consumers (in %)
	Biodegradable	40	35
	Recyclable	79	96
	Indian organic	8	10
	European Union Organic logo	21	24
	France organic	31	26
	Eco tree	26	12
	Fair trade	7	16
	Carbon footprint	17	30
	Compostable	27	9
	Certifled vegan	12	27
	Vegetarian	50	22

From the list of eco friendly product labels around 80% of the Indian were aware of Recycle symbol and almost all forienger were also aware of it. Around 50% of Indians know Vegetarian symbol followed by biodegradable symbol of 40%. Very less people were able to identify Indian organic (8%) and fair trade logo (7%).

C. CONSUMER WILLINGNESS TO PAY FOR ORGANIC FOOD

From the literatures reviewed it is found that consumers are quite price sensitive. Since organic food products are expensive consumers willingness to pay premium is also examined.

Table - 22

Consumers' willingness to pay premium for organic food products

Willing to pay more	Indian consumers (%)	Foreign consumers (%)
5 %	20	18
10%	28	26
15%	13	13
20%	13	14
25%	7	3
30%	5	11

From the above table it is clear that people are aware and have sufficient knowledge on organic food available in the market. They have listed various reasons why they buy or not along with their expectations and constraints towards the purchase decision. The major reason for not buying was price, they felt it is expensive. Therefore it is essential to understand that up to what extent they are willing to pay more for the organic food. Around 50% of them were willing to pay a premium of 5-10% more. Foreign customers are willing to pay even 30% more than conventionally produced food articles. Hence up to 20% margin is ideal to capture 80% of the market easily.

Chi square test was performed to find out the relationship between the demographic profile of the respondents and their willingness to pay. "Cramer's V, measures the strength of association which normally lie between 0 and 1" (Kothari C.R, 2010).

Literature evidence

Chan et al (2000), Bui.H (2005), Akgungor (2010) from their study found that higher income and highly educated consumer show more interest towards organic products and are more knowledgeable also. Rezai et al, (2013) found that gender and income significantly influence consumers' willingness to pay for green foods. Further Mostafa

(2007) study results reveals that there is a major difference between women and men in overall green purchase attitudes. In particular women have a greater intention towards environmental friendly products and ready to pay more in order to obtain them (Bui.H, 2005).

Chi square test for Indian and Foreign Respondents

H_{08}: There is no association between demographic profile and their willingness to pay among Indian and Foreign consumers

Table-23

Chi square test Results

Demographic variables	**Indians**		**Results**	**Foreigners**		**Results**	**H_{08} Result**
	p value	Cramer's V value		p value	Cramer's V value		
Gender	.451	.053	Accepted	.014*	.172	Rejected	H_{08} is rejected
Age	.663	.127	Accepted	.087	.217	Accepted	
Education	.010*	.237	Rejected	.173	.156	Accepted	
Occupation	.001*	.295	Rejected	.394	.142	Accepted	
Income	.573	.138	Accepted	.634	.034	Accepted	
Marital status	.582	.039	Accepted	.136	.104	Accepted	
Eating habits	.122	.034	Accepted	.240	.085	Accepted	

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

It is inferred from the above chi square test result that education and occupation of Indian consumers have an association with their willingness to pay towards organic food products with (p value of .010 and .001). In case of foreign consumers only gender influences their willingness to pay where (p = .014)

From this we can understand that educated people seem to be aware of the importance and benefit of organic food. Their workplace also gives opportunity to discuss about various health related issues. Therefore they are willing to pay more than others. Further eating habits of the consumers had impact on their willingness which means good eating habits allow the consumer to pay more price because it is difficult to change the habit.

Regarding foreign consumers' willingness indicates that there is no association between their demographic background and willingness to pay except gender.

Further Structural Equation Modeling (SEM) was used to identify the factors influencing the behavior and willingness to pay. Based on the theory and literature the relationships between the constructs were given. Analysis was done separately for Indian and Foreign consumers to understand the difference in their buying behavior.

"Structural Equation Modeling is a multivariate method which is the combination of Factor analysis and Multiple regression" Hair et al., (2010). It helps to concurrently look at a sequence of interrelated dependence relationships among the measured variables and latent constructs.

Partial Least Squares- Structural Equation Modeling (PLS-SEM)

The Partial Least Square is an "alternative estimation approach to Structural Equation Modeling". The constructs are symbolized as composites based on factor analysis result, with no attempt to reconstruct the co-variances among measured items.

Reasons for using PLS-SEM

Chin (2010) study explains that, covariance-based SEM techniques are widely used in marketing depends upon data characteristics, such as data without normal distribution, small sample sizes and the formative measurement of latent variables (Hair et al, 2010).

Reflective and Formative measurement model

"Reflective Measurement Theory is based on the idea that measure variables are caused by latent constructs and thus the error results fail to explain the measured variables. Hence the arrows are drawn from latent constructs to measured variables".

"Formative measurement theory is modeled based on the assumption that the constructs are caused by measured variables". Thus the error is in formative measurement models, where variables measured fails to explain all the construct. Therefore the arrows are drawn from the indicator variables to the construct.

Fit Indices in PLS

i. **Average Variance Extracted (AVE):** "It is a summary of convergence among a set of items representing a latent construct .It is the average percentage of variation explained among the items of a construct". According to Fornell and Larcker, (1981) the AVE should be 0.5 which indicates that the construct is captured to be explained more than half of the variance of its indicators. Hence the values less than 0.5 consist of a measurement residual. All the constructs of tis study scored greater than 0.5 for both Indian and Foreigners. Thus this evidences the convergent validity of the data used in this study.

ii. **Discriminant Validity (DV):** "It is the extent to which a construct is truly distinct from the other constructs" (Hair et al, 2010). Fornell and Larcker (1981) suggested that the square root of AVE in each latent variable can be used to establish discriminant validity, if the value is greater than other correlation values among the latent variables.

iii. **Composite Reliability (CR): "**It is a measure of reliability and internal consistency of the variables representing a construct". All the calculated composite reliability values were greater than 0.7 for both Indians and Foreigners which indicates that there exists an internal consistency among the selected variables.

iv. **Standardized Root Mean square Residuals (SRMR):** The SRMR indicates the differences between the data and model predictions. The calculated SRMR normally ranges from 0.0 to 1.0. SRMR value would be zero if the data perfectly matches the model predictions. SRMR will be very low, closer to zero when the measurement model is clean and has high factor loadings (Anderson & Gerbing ,1984).

Bootstrapping

"Bootstrapping is a nonparametric procedure that can be applied to test whether coefficients such as outer weights, outer loadings and path coefficients are significant by estimating standard errors for the estimates. In bootstrapping, subsamples are created with randomly drawn observations from the original set of data (with replacement)". Then the subsample is used to estimate the PLS path model (Efron, Tibshirani, 1993)

Literature evidence

In recent years, consumer's interest towards organic food consumption has been increased. Numerous studies witness a positive attitude in organically produced food but it does not necessarily influence them to buy (Anssi Tarkiainen and Sanna Sundqvist , 2005; Fotopoulos and Krystallis, 2002; Mei-Fang Chen, 2009).

Magistris and Gracia (2008) found that consumer's knowledge influences their attitude towards organic food which directly determines the intention or decision to buy the product and another reason is their health consciousness (Squires, Juric, and Cornwell 2001; Gracia et al, 2007; Harper and Makatouni, 2002; Verhoef, 2005). Consumers trust and their willingness to pay towards organic food are based on the certification, country of origin and information in the label (Essoussi, 2009; Krystallis et al, 2005).

Therefore, this study focused on the above mentioned variables such as knowledge, attitude, perception, trust. To understand the impact of these study variables in determining their purchase decision and also to identify the factors influencing them to pay more for organic food products the following hypotheses were framed to tested with suitable statistical tools.

H_{09}: There is no significant relationship between consumer's knowledge and attitude

H_{010}: There is no significant relationship between consumer's knowledge and buyer behavior

H_{011}: There is no significant relationship between consumer's knowledge and willingness to pay

H_{012}: There is no significant relationship between consumer's knowledge and health consciousness

H_{013}: There is no significant relationship between consumer's attitude and buyer behavior

H_{014}: There is no significant relationship between consumer's attitude and willingness to pay

H_{015}: There is no significant relationship between consumer's health consciousness and attitude

H_{016}: There is no significant relationship between buyer behavior and willingness to pay

H_{017}: There is no significant relationship between consumer's trust and willingness to pay

H_{018}: There is no significant relationship between consumer's perception and willingness to pay

H_{019}: There is no significant relationship between consumer's health consciousness and willingness to pay

Table - 24

Summary of the measurement results of Reliability and Validity

Constructs	Cronbach α	AVE	CR
Attitude	.834	.544	.877
Knowledge	.844	.681	.895
Perception	.744	.579	.804
Trust	.707	.632	.837
Health consciousness	.752	.572	.842
Behavior	1.000	1.000	1.000
Willingness to pay	.809	.838	.912

The above summary of measurement result shows the reliability and validity of the seven constructs taken for this study. The Cronbach's α value of all the seven constructs were above 0.7 which exhibits the reliability of the data collected and used in this study (Nunnally, 1976). The Average Variance Extracted (AVE) values of the constructs were above 0.5 which reveals the convergent validity of the constructs (Fornell and Larcker, 1981). The composite reliability (CR) values of all the constructs were above 0.7 which indicates the internal consistency of the variables (Netemeyer et al, 2003).

Therefore we can conclude that all the study variables considered for this study were statistically reliable and valid.

Table- 25

Discriminant Validity

Constructs	ATT	BEH	HEA	KNO	PER	TRU	WTP
Attitude (ATT)	**0.737**						
Behavior (BEH)	0.166	**1.000**					
Health (HEA)	0.309	0.024	**0.756**				
Knowledge (KNO)	0.172	0.762	0.029	**0.825**			
Perception(PER)	0.616	0.019	0.233	0.040	**0.761**		
Trust(TRU)	0.120	0.145	0.044	0.088	0.101	**0.795**	
Willingness to pay(WTP)	0.276	0.059	0.261	0.083	0.408	0.185	**0.916**

Since Partial Least Square Structural Equation considers the Fornell-Larcker criteria for the discriminant validity the same has been taken where all the values are greater than other correlation values among the latent variables. In the below table (17.2) the total item taken for each constructs were given and its standardized loadings are presented, where the standardized loading indicates how well each item fit into the respected constructs. The value of all the items were above the accepted level of 0.5. Hence the variables and constructs are valid for further analysis.

Table – 26

Measurement Model Results

Constructs	Item no.	Standardized loading
Attitude	ATT1	.685
	ATT2	.678
	ATT3	.709
	ATT4	.793
	ATT5	.733
	ATT6	.811
Behavior	BEH1	.870
	BEH2	.854
Health	HEA1	.808
	HEA2	.651
	HEA3	.794
	HEA4	.761
Knowledge	KNO1	.878
	KNO2	.823
	KNO3	.787
	KNO4	.812
Perception	PER1	.831
	PER2	.703
	PER3	.733
	PER4	.526
Trust	TRU1	.841
	TRU2	.787
	TRU3	.753
Willingness to pay	WTP1	.897
	WTP2	.934

Goodness of fit for the proposed model

Henseler et al., (2014) found in their study that PLS helps to detect a wide range of measurement model misspecifications as long as a composite factor model is assumed and the SRMR are used for model validation purposes. The SRMR can be up to 0.09 or should be lower; (Hu & Bentler, 1999). Hence the standardized root mean square residual of the composite factor model for Indian consumer is .07.

Table – 27
Results of Path Analyses and 't' tests

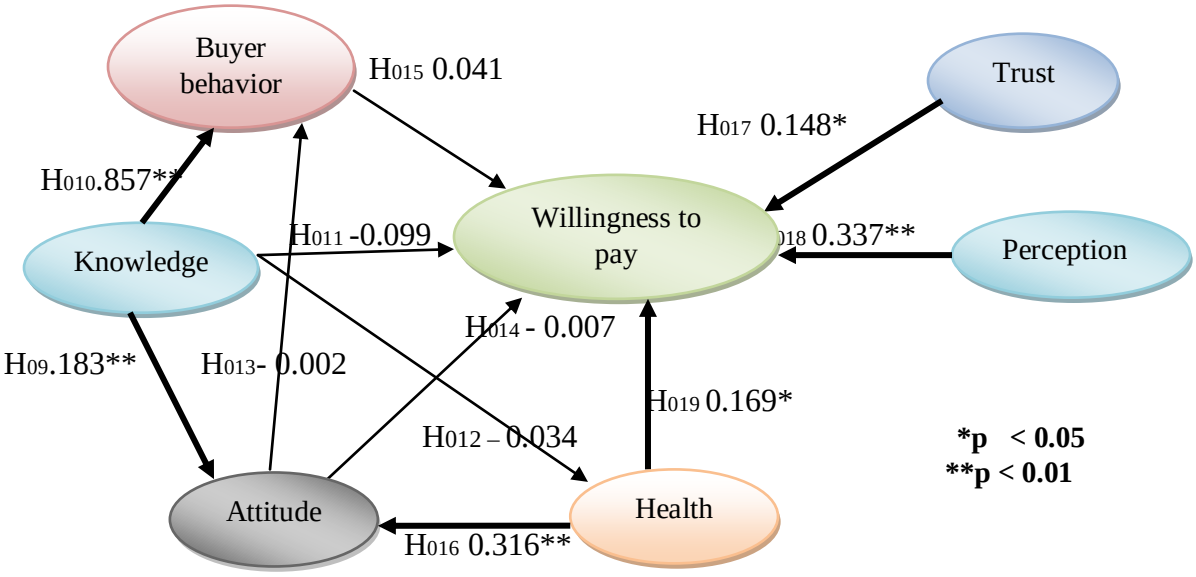
Hypo-thesis	Path From	Path To	Original Sample (O)	Sample Mean (M)	Standard Error (SE)	't' Statistics	'p'	Results
H_{09}	Knowledge-> Attitude		0.183	0.184	0.065	2.824	0.005*	Supported
H_{010}	Knowledge-> Behavior		0.857	0.859	0.022	39.822	0.000**	Supported
H_{011}	Knowledge -> WTP		-0.141	-0.145	0.109	1.290	0.198	Not Supported
H_{012}	Knowledge -> Health		-0.034	-0.030	0.079	0.430	0.668	Not Supported
H_{013}	Attitude -> Behavior		-0.002	-0.001	0.032	0.074	0.941	Not Supported
H_{014}	Attitude -> WTP		0.007	0.016	0.100	0.067	0.947	Not Supported
H_{015}	Behavior -> WTP		0.041	0.040	0.100	0.408	0.683	Not Supported
H_{016}	Health -> Attitude		0.316	0.334	0.073	4.319	0.000**	Supported
H_{017}	Trust -> WTP		0.148	0.152	0.065	2.290	0.022*	Supported
H_{018}	Perception -> WTP		0.337	0.345	0.095	3.548	0.000**	Supported
H_{019}	Health -> WTP		0.169	0.167	0.079	2.145	0.032*	Supported

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

Chart - 7

Hypothesized Structural Results (Indians)



From the SEM results it is clear that customer's knowledge about organic food products changes their behavior towards purchase decision. Wider the knowledge it improves their behavior and in turn attitude too. Attitude depends upon their health which means if people are healthy conscious then automatically it brings change in their attitude, ie, positive changes towards healthy eating or organic food.

According to theoretical perspective the attitude should bring behavioral changes but it does not hold good in the case of Indians. Yes, their knowledge brought changes in their attitude but it did not end up in buying because as we discussed earlier from the past studies and reports revealed that organic food articles are very expensive. Therefore it is essential to understand whether the consumers are willing to pay more.

As per the Law of Demand states, demand and price are inversely related when the price of the commodity is falling in the market the cutomers tend to buy more, which means demand will increase and vice-versa.

The study infers that the consumer's attitude or the health consciousness and behavior did not influence much towards their willingness to pay more. But Indian consumer's willingness to pay depends upon their perception, trust and health consciousness, which means if the consumers perceive the organic food, can improve the health then they are willing to pay more even if the price is higher than the conventionally produced. Further their level of trust on the quality of the food and their belief on the given information on the label regarding the production process and the ingredients along with the nutritional facts determines the consumers willingness to pay. As the result indicates knowledge and attitude does not influence them to pay more and buy organic food unless they are conscious about their health and had trust along with perception.

Therefore instead creating health awareness we must build the consumers trust and beliefs on organic food to raise their perception which will increase the consumption of the ultimately.

Partial Least Square- Structural Equation model results- Foreigners

Various relevant hypotheses were framed to test the relationship between consumers attitude, knowledge, perception, trust, health consciousness and behavior of consumers with their willingness to pay based on the literature.

Table - 28

Summary of the measurement results of Reliability and Validity

Constructs	Cronbach's α	AVE	CR
Attitude	.820	.531	.870
Knowledge	.882	.682	.914
Perception	.723	.528	.813
Trust	.799	.627	.869
Health consciousness	.806	.513	.861
Behavior	1.000	.942	.981
Willingness to pay	.814	.843	.915

The summary of measurement results regarding the foreign consumers on the reliability and validity of the selected constructs are given in table 21. The Cronbach's α value of all the constructs were above 0.7. The average variance extracted (AVE) value for all the constructs were more than 0.5 which indicates the convergent validity of the constructs (Fornell and Larcker, 1981). It reveals the internal consistency of the variables used in this study (Netemeyer et al, 2003).

Table- 29

Discriminant Validity

	ATT	BEH	HEA	KNO	PER	TRU	WTP
Attitude (ATT)	**0.729**						
Behavior (BEH)	0.814	**1.000**					
Health (HEA)	0.409	0.086	**0.717**				
Knowledge (KNO)	0.177	0.800	0.053	**0.826**			
Perception(PER)	0.726	0.214	0.365	0.148	**0.727**		
Trust(TRU)	0.343	0.084	0.329	0.042	0.291	**0.792**	
Willingness to pay(WTP)	0.274	0.056	0.262	0.072	0.297	0.086	**0.918**

The Discriminant Validity of each constructs were calculated, the values ensure that all the constructs has a strong relationship with its own indicators. In the below table (23) the attributes taken for each construct were given with the corresponding standardized loadings. It indicates how well each item fit into the respected constructs. The derived values of all the items were above the accepted level of 0.5. Therefore all the variables with the respective attributes were included in the study for analysis without any change.

Table- 30

Measurement Model Results

Factors	Item no.	Standardized loading
Attitude	ATT1	.784
	ATT2	.786
	ATT3	.582
	ATT4	.781
	ATT5	.797
	ATT6	.655
Behavior	BEH1	1.000
Health	HEA1	0.783
	HEA2	0.601
	HEA3	0.570
	HEA4	0.767
	HEA5	0.858
	HEA6	0.676
Knowledge	KNO1	0.867
	KNO2	0.881
	KNO3	0.707
	KNO4	0.787
	KNO5	0.874
Perception	PER1	0.724
	PER2	0.556
	PER3	0.709
	PER4	0.881
Trust	TRU1	0.840
	TRU2	0.856
	TRU3	0.628
	TRU4	0.823
Willingness to pay	WTP1	0.916
	WTP2	0.921

Table – 31
Results of Path Analyses and its 't' tests

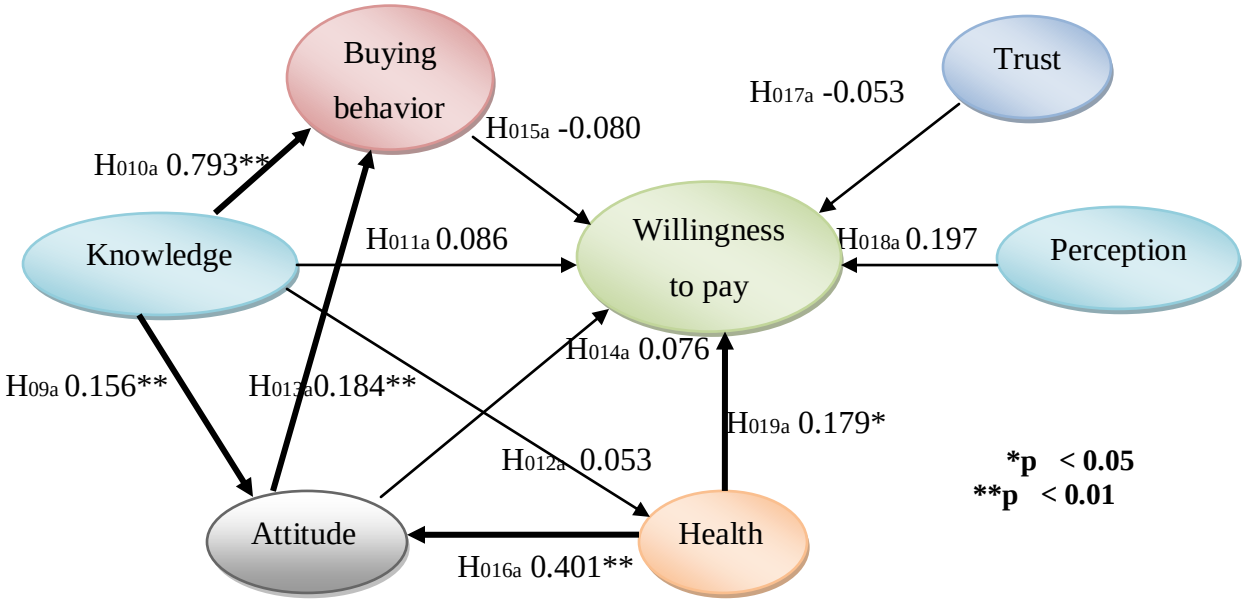
Hypo-thesis	Path From	To	Original Sample (O)	Sample Mean (M)	Standard Error (SE)	't' Statistics	'p' Values	Hypothesis test results
H09a	Knowledge-> Attitude		0.156	0.157	0.063	2.452	0.015**	Supported
H010a	Knowledge-> Behavior		0.793	0.795	0.034	23.068	0.000**	Supported
H011a	Knowledge -> WTP		0.086	0.093	0.124	0.694	0.488	Not Supported
H012a	Knowledge -> Health		0.053	0.052	0.083	0.638	0.524	Not Supported
H013a	Attitude -> Behavior		0.184	0.186	0.069	2.660	0.008**	Supported
H014a	Attitude -> WTP		0.076	0.057	0.097	0.777	0.437	Not Supported
H015a	Behavior -> WTP		-0.080	-0.079	0.126	0.635	0.526	Not Supported
H016a	Health -> Attitude		0.401	0.410	0.064	6.224	0.000**	Supported
H017a	Trust -> WTP		-0.053	-0.019	0.092	0.580	0.562	Not Supported
H018a	Perception -> WTP		0.197	0.219	0.103	1.916	0.056	Not Supported
H019a	Health -> WTP		0.179	0.164	0.081	2.197	0.028*	Supported

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

Chart - 8

Hypothesized Structural Results- Foreigners



From the above SEM results it is inferred that foreign consumers have good knowledge about organic products and it influenced their attitude and buying behavior, which means knowledge alone is not sufficient to take buying decision it should change their attitude and in turn it should enhance their ability to take better decision. Their attitude is not only based on the knowledge which they have but their health consciousness also influenced their attitude. When it comes to their willingness to pay the only reason is their health consciousness. It is found that foreign consumers always perceive that organic food is good for health and they trust the information provided in the label. Hence they are willing to pay more on organic food. We can conclude that the willingness to pay more for organic food of foreign consumers are purely based on their health consciousness than their perception and it does not mean that people those who trust the information are willing to pay more.

Indian Vs Foreign consumer

When we compare the consumption behavior of Indian and Foreigners there are certain similarities and also few differences were identified to understand them in the market. The commonality between them are both of them have knowledge and awareness about the organic food available in the market, which in turn influenced their Attitude and Behavior. The health consciousness helped them to bring positive change in their attitude and also it increased their willingness to pay more on organic food articles.

The major differences between thee two groups are that the Indian consumers attitude did not influenced their Behavior like foreigners. When it comes to their willingness foreigners consciousness towards health allows them to pay more. But in case of Indian consumers unless they perceive the benefits, quality of the product are good with trust in the label information they are not willing to pay more for like foreign consumers.

From the SEM model we were able to understand the consumer behavior towards organic food. But still there are many who are not regular customers, hence we must identify the reasons for not buying the organic food articles regularly even though they have better knowledge and awareness.

The well known reason and universally accepted fact is price. Apart from that there are various reasons which should be looked in seriously and could be solved at greater extent than the pricing.

Reasons for not buying organic food regularly

Researchers found that there are certain barriers among consumers in buying organic food on a regular basis. The main constraints preventing consumers from buying organic food are: price, availability, limited choice and lack of trust [Fotopoulos and Kryskallis (2002), Larue et al. (2004), Verdurme et al. (2002), Wier and Calverly (2002), Marketing Week (2004), Tsakiridou et al (2007)]

Table - 32

Reasons for not buying organic products on regular basis

Indians			Foreigners		
Reasons	**Mean**	**Rank**	**Reasons**	**Mean**	**Rank**
Too expensive	3.82	**1**	Too expensive	3.69	**1**
Non availability	3.68	**2**	Non availability	3.50	**2**
Less variety	3.48	**3**	Less variety	2.94	**3**
Cant store	3.46	4	I don't trust the product is chemical free	2.89	4
Does not last long	3.45	5	Lack of information	2.80	5
Lack of information	3.24	6	Don't trust the certificate	2.79	6
I don't trust the product is chemical free	3.16	7	Not able to distinguish	2.70	7
Not able to distinguish	3.14	8	Does not last long	2.69	8
Don't trust the certificate	3.13	9	Cant store	2.68	9
Tend to forget	3.12	10	Tend to forget	2.65	10
Don't think it makes difference	3.09	11	Don't believe the information	2.63	11
Don't believe the information	3.08	12	Don't think it makes difference	2.42	12
I don't believe the health benefits	2.83	13	I don't believe the health benefits	2.31	13

The study found that the above mentioned list of reasons for not buying organic food regularly. Both Indian and Foreign consumers felt that the organic food products are very expensive comparing with other conventional foods. Therefore they are not in a position to buy regularly even though they are aware of the benefits. At the same time the availability and variety were also another set of major reason for not buying. The similar results were identified by Fotopoulos and Kryskallis (2002), Larue et al., (2004), Verdurme et al., (2002), Wier and Calverly (2002), Marketing Week (2004), Tsakiridou et al, (2007) in their earlier studies.

Other common reasons are: trust in the certificate, label and quality of the products. Of course it is justified that the organic food articles does not have any fertilizers, chemicals and it is not processed with preservatives. But still there is lack of confidence and belief prevailing regarding the certificates and certifying organizations.

Most of the Indian and foreign consumers were not able to distinguish the organic food from others. And it is an accepted fact that we cannot store these products for long period because it does not consist of the preservatives and other chemicals to prevent from the insects. Further both of them fail to believe the information and the benefits of the food.

We can conclude that variety of articles should be produced to cater the needs of the consumers and the price should be reasonable and affordable. Researchers should concentrate on storage methods and techniques without preservatives. Whatever the reasons still people are there to buy organic products regularly. Let us understand them in detail.

Table- 33

Reasons to buy Organic Food regularly in future

Indians			**Foreigners**		
Reasons	**Mean**	**Rank**	**Reasons**	**Mean**	**Rank**
Cheaper prices	4.19	**1**	Cheaper prices	4.27	**1**
Seasonal products	3.99	**2**	Access in the market	4.21	**2**
Access in the market	3.96	**3**	Products from local region	4.17	**3**
Income	3.95	4	Assortment availability	4.01	4
Assortment availability	3.92	5	Seasonal products	4.00	5
Longer shelf life	3.92	6	Income	3.98	6
Trust to origin	3.85	7	Trust to origin	3.88	7
Products from local region	3.83	8	Longer shelf life	3.67	8
Recognizable label and products	3.81	9	Information in the media	3.66	9
Time to look	3.80	10	Time to look	3.64	10
Information in the media	3.79	11	Recognizable label and products	3.63	11
Better appearance and taste	3.72	12	Better label informations	3.55	12
Better label informations	3.53	13	Better appearance and taste	3.48	13

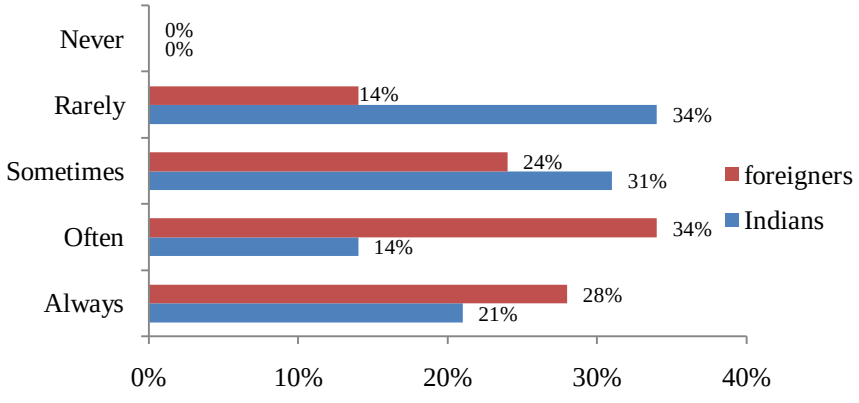
To understand the future market the study identified certain reasons which should help the producers to take necessary steps in order to strengthen their market. According to the survey both the respondents felt that the organic products should be sold at cheaper price than the current market rate with more variety and shelf life. Further the information given in the label should be clear, understandable and also trust worthy.

Consumers were divided based on their attitudes towards usage of food labels as non readers, common sense approach and detail seekers. Non readers are those who spend very little time in reading food labels. Common sense category consumers look into certain keywords or symbol quickly to identify the food items. Detail seekers category are highly aware of the label information and read labels in a detailed manner (Gemma Enright et al, 2010). Further Vijaykumar et al, (2013) found that subjective norms, diet and health concerns were the most important predictors of intention in the food label usage.

In general, consumers are often confused with unclear and incomplete claims on the food labels (Davies et al, 1993). The poor presentation of the information, small font size, difficult terminology, lack of understanding on terms and symbols are major issues. Many of them do not trust the information given on the label (Tanju B, 2012; Singla M, 2010).According to an USA report only 45 per cent of the consumers read nutritional information, and majority of them read occasionally because lack of interest (Ashley Mannell, 2006).

Chart - 9

Frequency of food label usage during the purchase



From the surveyed respondents it is found that around 60% of the foreigners and only 35% of Indians read the label during their purchase, the remaining read very rarely or sometimes. All of them read but not always. Only less Indian customers read comparing with the foreigners due to various reasons. They are given in the below table

Table- 34

Reasons to Read food labels

Reasons	Indians (in percent)	Foreigners (in percent)
When I buy first time	79	88
To compare two brands	68	81
To check nutritional claims	62	65
On special diet for medical reasons	52	52

It is found that there are various reasons for reading the label information carefully during their purchase. Most of them read when they buy first time or if they want to compare the product either with the competitors (or) regular products. Both Indian and Foreign consumers (65%) read the label to check the nutritional values and claims made by the producers. Around 50% of them read when it is prescribed by a medical practitioner or consumed for medical reasons. We can understand that the reasons seem to be the same for looking at the label of any organic product during purchase.

Table – 35

Reasons for not reading the food labels (in percent)

Reasons	Indians	Foreigners
Too confusing	39	27
Time consuming	56	32
Difficult to understand	30	26
Not legible	36	31

From the above table it is clear that most of the Indians felt reading the label details is time consuming. Some felt (39%) it is confusing and difficult to understand and around 30% of both Indian and Foreign consumers said that the information given in the label is not legible to follow. Therefore the information given in the label should simple it could be written in the regional language too.

Table - 36

Consumers Attention on label information (in percent)

Attention on	Indians	Foreigners
Manufacturing data	80	72
Expiry date	87	86
Nutritional information	62	67
Health message	77	64
Net content	73	73
Price	79	86
Country of origin	55	69
Organic certification	50	64

While the consumer reading the food label most (86%) of them look at the expiry date of the product and its manufacturing date followed by the price (80%) and content (73%). Only 50% of the Indian consumers give importance on certification and the country of origin of the product. Foreign consumers are very much concentrated on the price, country of origin and its certification than the Indian consumers. But Indians look in health perspective. Therefore they first read the manufacturing, expiry date along with the health message. They are not keen on the country of origin and the certification like foreigners.

To conclude both the Indian and Foreign consumers are knowledagble and aware of organic products. But the attitude of Indian consumers does not lead them to behave positively towards food consumption. Hence knowledge alone is not enough but also a positive attitude is important to create positive behavior. Consumers seeks more variety of products in reasonable price and they also need the label information to be simple and clear.

CHAPTER V
SUMMARY AND CONCLUSION

There is a change in the pattern of food consumption among consumers across the world due to an increase in health concerns, environmental protection and high awareness about the pesticides used in the food production. Now-a-days consumers are more concerned about the food they take and wish to have more nutritious food which is produced without any chemicals. They are informed about the hazards of pesticides and chemicals to the nature and health through various social media. It cause severe health damages to human being starting from a small head ache to the brutal diseases like cancer and it also exploits the agricultural land and the natural environment. As a result of this consumers started looking for organic foods in the recent past. Since it holds nutrition and contains high levels of minerals, vitamins, anti oxidants and less saturated fat. This led the consumers to buy organic food and later the demand started increasing.

In developed countries consumers are more informed about organic food product than developing countries. As far as organic food is concerned its perceived value among consumers are not same, they look at differently. There exists a major difference in the buying behavior of consumers. Hence this study attempted to know the differences between the Indian and Foeign consumers buying behavior, major factors influenced the behavior along with their willingness to pay more for it.

The key findings of the study were:

Demographic profile of Indian and Foreign organic food consumers

- It is found that only around 10% of the retail stores in Pondicherry deal with organic food products with the price premium of around 20-30%.
- Out of the respondents surveyed 60% of them were Male between the age group of 20-40 years and 80% of them were graduates.

- 70% of the Indian respondents were married and 80% of Indians were non vegetarians but in the case of foreigners only 55% were non vegetarians.
- Indians purchase grocery and food articles either weekly (vegetables) or monthly (grocery). But in case of Foreigners they buy weekly once or twice.
- Most of the foreigners use organic food for the past 3-5 years but Indians started using only for the past 3years. Both came to know about organic food from internet and friends followed by media.
- Both Indian and Foreign customers felt that the organic products are too expensive and not available everywhere. They like to buy regularly if it is cheap in price with more variety. They are willing to pay 5-20% more than the conventional products.

Factors influencing consumer behavior

- It is found that both Indian and foreign consumers buying behavior were influenced by their knowledge and education.
- When the Indians trust the product as healthier and better they tend to buy. But in case of foreigners their knowledge changes the attitude in turn they tend to buy organic food.
- Regarding the knowledge on various eco labels it is found that 80% of Indian were aware of recycle symbol and almost all the foreigners were aware of it.
- Indians read food lables sometimes but most of the foreigners do it often during their purchase.
- Indians perceive the organic food labels are too confusing, difficult to understand and also time consuming. Both Indian and foreigners pay their attention on manufacturer's details, price and expiry and the organic certification.
- The major reasons for not buying the organic food were non availability, less variety and the prices were felt very expensive by the customers. Therefore if the prices becomes little reasonable and cheap they said they will buy more and also regularly.

Conusmers willingness to pay

- Regarding the study factors Indians Willingness to pay is based on their perception, trust and health consciousness. And it is related with their education and occupation.
- It is found that foreigner's health consciousness influences their willingness to pay, it differs among the gender.
- Knowledge and Health consciousness changes the attitude of both Indian and Foreign consumers. But only the foreigner's attitude influenced their buying behavior.
- The findings are relevant from the theoretical as well as in Practical point of view. In both cases it is found that the buying behavior does not influence the willingness to pay as proved by the earlier studies.

Based on the analytical findings and review suitable strategies were **suggested** for all the stakeholders of organic food products such as consumers, retailers, farmers and Government to strengthen the market to prevent the future of the world.

CONSUMERS

As per Kotler's strategy motivating the existing customers, succeeding dietary and young could be convinced to build more customers because the high purchasing power lies in youngsters of India.

As consumers are the ultimate beneficiaries of organic food products it is important to educate them to spend on organic food than for medical treatments through to save their life from diseases.

RETAILERS

It is the retailers who can create awareness among the consumers therefore every retailer should maintain a shelf for organic food articles.

As studies concluded selling in chain store put for sale at lesser price than specific stores but can build competitive advantage. In other hand selling through specialty stores can bring depth and width to solve the problem of variety in one place.

In India there is no much advertisement for organic food products like other conventional products hence; giving TV advertisements with brand ambassadors will attract the customers.

FARMERS

Farmers should concentrate on organic cultivation and supplying it in the local market through direct marketing which will increase the availability and revenue.

Farmers should take initiatives to convert their farmland into organic field now which will raise the cultivable land in the near future.

They should try to produce more variety, quantity which will be cost effective to gain economies of scale.

By introducing organic meat for non vegetarian customers we can expand the market further because they are more in number.

GOVERNMENT

It is important to protect the society against rising health hazards. Therefore, the Government must take major initiatives to transform the organic food industry.

Government should provide subsidy to farmers to cultivate organic food products and price regulation to support the farmers and customers.

Government should advertise and promote the benefits of using organic food and also encouraging the consumer's through social media .

Government should ban certain harmful pesticides, fertilizers and use of genetically modified seeds.

Willingness to pay more for organic food could be increased by building trust and improving their perception on organic food and making them to understand that it is not too expensive comparing with their medical expenses.

Government should insist the schools and colleges to have a special course on green products and its benefits.

Conclusion

It is concluded that health is an important reason for buying organic food. Indian consumers are aware of various organic food and they perceive that it is too expensive comparing with the conventional products. As the study concluded consumers who were at least having a bachelors degree and under the age group of 20 to 40 years with the income of Twenty to Forty thousand rupees per month have a positive perception towards going green. Therefore, it is essential to support the local farmers to produce more organic food and it should be sold in the local market where the small farmers can earn reasonable profit instead of exporting them to various countries.

The study pertains to Pondicherry only. Therefore the results may differ in other parts of the country. This study focused on consumer behavior and their willingness to pay towards organic food in general not for a particular product category. It will give a better understanding if we consider the cultural aspects in the study. Further study could be done through stakeholders like Retailers and Producers with various product categories in detail**.**

References

Aertsens, J., Mondelaers, K., Verbeke, W., Buysse, J., & Van Huylenbroeck, G. (2011). The influence of subjective and objective knowledge on attitude, motivations and consumption of organic food. *British Food Journal*, 113 (11), 1353 – 1378.

Ajzen, I. and Fishbein, M. (2008). Scaling and testing multiplicative combinations in the expectancy-value model of attitudes, *Journal of Applied Social Psychology*, 38 (9), 2222-47.

Akgüngör, S., Miran, B., & Abay, C. (2010). Consumer willingness to pay for organic food in urban Turkey. *Journal of International Food & Agribusiness Marketing*, *22*(3-4), 299-313.

Aleksandra Nikolić (2014) Retailing, marketing & labeling of organic products, Advancing training and teaching of organic agriculture in South-East Europe.

Alizadeh, A., Javanmardi, J., Abdollazadeh, N. & Liaghat, Z (2008) Consumers' Awareness, Demands and Preferences for Organic Vegetables: A Survey Study in Shiraz, Iran 16th *IFOAM Organic World Congress*, Modena, Italy, June 16-20.

Alvensleben, R. V. (1998). Ecological aspects of food demand: the case of organic food in Germany. *Institute for Agricultural Economics, University of Kiel*, *4*, 68-79.

Alvensleben, R. V., & Altmann, M. (1986). Determinants of the demand for organic food in Germany (FR). In *IX Symposium on Horticultural Economics, XXII IHC 203* (pp. 235-242).

Anderson, J. C., & Gerbing, D. W. (1984). The effect of sampling error on convergence, improper solutions, and goodness-of-fit indices for maximum likelihood confirmatory factor analysis. *Psychometrika*, 49, 155−173.

Andrew Dodds (2009) The Evolution of Organic Food and Drinks Growth opportunities, NPD and the impact of the economic downturn, Business Insights.

Arbindra, P. R., Moon, W. and Balasubramanian, S. (2005), Agro-biotechnology and organic food purchase in the United Kingdom, *British Food Journal*, Vol. 107 No. 2, pp. 84-97.

Arvanitoyannis, I.S., A. Krystallis, and A. Kapirti. (2003). Health and environmental consciousness: Greek consumers' attitudes toward the organic, HACCPand ISO14000 certifications on food. *Journal of International Food & Agribusiness Marketing* 15, nos. 1/2: 93–135.

Ashley Mannell, Patricia Brevard, Rodolfo Nayga, Jr, Pierre Combris, Robert Lee, Janet Gloeckner, (2006) French consumers' use of nutrition labels, *Nutrition & Food Science*, Vol. 36 Iss: 3, pp.159 – 168

Baker, S., Thompson, K. E., Engelken, J., & Huntley, K. (2004). Mapping the values driving organic food choice: Germany vs the UK. *European journal of marketing*, *38*(8), 995-1012.

Barański, M., Średnicka-Tober, D., Volakakis, N., Seal, C., Sanderson, R., Stewart, G. B. & Leifert, C. (2014). Higher antioxidant and lower cadmium concentrations and lower incidence of pesticide residues in organically grown crops: a systematic literature review and meta-analyses. *British Journal of Nutrition*, *112*(05), 794-811.

Batte, M.T., Hooker, N.H., Haab, T.C., Beaverson, J. (2007), Putting their money where their mouths are: consumer willingness to pay for multi-ingredient, processed organic food products, *Food Policy*, 32(2), pp. 145-59

Beharrel, B. and MacFie, J.H. (1991). Consumer attitudes to organic foods. British Food Journal, Vol. 93 No. 2, pp. 25-30.

Besler, H. T., Buyuktuncer, Z., & Uyar, M. F. (2012). Consumer understanding and use of food and nutrition labeling in Turkey. *Journal of nutrition education and behavior*, *44*(6), 584-591.

Bhate, S., & Lawler, K. (1997). Environmentally friendly products: factors that influence their adoption. *Technovation*, *17*(8), 457-465.

Bitner, M. 1990. Evaluating Service Encounters: the Effects of Physical Surroundings and Employee Responses, *Journal of Marketing*, 54(2):69-82

Blend, J. R and E. O. van Ravenswaay. 1999. Consumer Demand for Eco-labeled Apples: Results from Econometric Estimation. *American Journal Agriculture Economics* 81:1072–1077.

Bonti-Ankomah, S. and Yiridoe, E. K. (2006) .Organic and Conventional Food: A Literature Review of the Economics of Consumer Perceptions and Preferences, Organic Agriculture Centre of Canada.

Booms, B., and Bitner, M. (1981). Marketing Strategies and Organization Structures for Service Firms', In Marketing of Services: 1981 Special Educators' Conference Proceedings, James Donnelly and William George, (Eds), Chicago, *American Marketing Association*, 46-51.

Botonaki, A, Polymeros, K, Tsakiridou, E & Mattas, K (2006). The role of food quality certification on consumers' food choices, *British Food Journal*, vol. 108, no. 2/3, pp. 77-90.

Brouwer, A., Longnecker, M. P., Birnbaum, L. S., Cogliano, J., Kostyniak, P., Moore, J., & Winneke, G. (1999). Characterization of potential endocrine-related health effects at low-dose levels of exposure to PCBs. *Environmental Health Perspectives*, *107*, 639.

Bui, M.H. (2005). Environmental marketing: A model of consumer behavior. Proceedings of the Annual Meeting of the Association of Collegiate Marketing Educators.

Buzby, J.C. and Skees, J. (1994). Consumers want reduced exposure to pesticides in food. *Food Review.* 17(2): 19-22.

Byrne PJ, Toensmeyer UC, German CL, Muller HR. (1992). Evaluation of consumer attitudes towards organic produce in Delaware and the Delmarva region. *Journal of Food Distribution Research* 23(1): 29–44

Cereal Crimes: How "Natural" Claims Deceive Consumers and Undermine the Organic Label—A Look Down the Cereal and Granola Aisle (2011), Cornucopia Institute.

Chan, R.Y.K., & Lau, L.B.Y. (2000), Antecedents of green purchases: A survey in china, *Journal of Consumer Marketing*, 17.338-357.

Chang, H.-S., and L. Zepeda. (2005). Consumer perceptions and demand for organic food in Australia: Focus group discussions. *Renewable Agriculture and Food Systems* 20, no. 33: 155–67

Chartered Institute of Marketing (2009), Marketing and the 7ps, A brief summary of marketing and how it works, pp 2-9

Charyulu, D. K , Biswas. S (2010), Organic Input Production and Marketing in India – Efficiency, Issues and Policies, CMA Publication No – 239, pp: 69

Charyulu, D. K., & Biswas, S. (2011). *Organic Input Production and Marketing in India: Efficiency, Issues and Policies*. Allied Publishers.

Chassy, B., D. Tribe, G. Brookes, and D. Kershen. (2014). Organic marketing report. In: Academics Review.

Chen, M. F. (2009), Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes, and the mediating effects of a healthy lifestyle, *British Food Journal*, Vol. 111 No. 2, pp. 165-178.

Chen, M. F. (2009). Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes, and the mediating effects of a healthy lifestyle. *British Food Journal*, *111*(2), 165-178.

Chen, M.-F. (2007). Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: Moderating effects of food-related personality traits. *Food Quality and Preference,* 18, 1008–1021.

Chinnici, G., D'Amico, M., & Pecorino, B. (2002). A multivariate statistical analysis on the consumers of organic products. *British Food Journal*, *104*(3/4/5), 187-199.

Chong, C. W. (2013). Factors Influencing on Purchasing Behaviour of Organic Foods. *Human and Social Science Research*, 1(2), 93-104.

Chryssohoidis G, Krystallis, A (2005). Organic consumers' personal values research: testing and validating the list of values (LOV) scale and implementing a value-based segmentation task. *Food Quality and Preference*. 16:585–599.

Cicia, G, Giudice, TD & Scarpa, R (2002) .Consumers' perception of quality in organic food: a random utility model under preference heterogeneity and choice correlation from rank-orderings', *British Food Journal*, vol. 104, no. 3/4/5, pp. 200-213

Connor R, Douglas L (2001) Consumer attitudes to organic foods, *Nutritional Food Science,* 31:254–258.

Consumer preferences and willingness to pay for organic apples Arcadio A. Cerda , Leidy Y. García , Samuel Ortega-Farías , and Álvaro M. Ubilla (2012), ciencia e investigación agraria 39(1):47-59.

Coulibaly, O., Nouhoheflin, T., Aitchedji, C. C., Cherry, A. J., & Adegbola, P. (2011). Consumers' Perceptions and Willingness to Pay for Organically Grown Vegetables. *International Journal of Vegetable Science*, *17*(4), 349-362.

Coulibaly, O., T. Nouhoheflin, C. C. Aitchedji, A. J. Cherry and P. Adegbola (2011) Consumers' Perceptions and Willingness to Pay for Organically Grown Vegetables. *International Journal of Vegetable Science*, 17(4): 349–362

Cunningham R. (2002). Who is the Organic Consumer? A Paper presented at Growing Organic Conference, Red Deer, Alberta, March 11-12 2002.

Curtis, C.S. and S. Misner 2006, Food Safety, Preparation and Storage Tips The University of Arizona Cooperative Extension, Department of Nutritional Sciences.

Davies, A., Titterington, A.J. and Cochrane, C. (1995), Who buys organic food? A profile of the purchasers of organic food in Northern Ireland, *British Food Journal*, Vol. 97 No. 10, pp. 17-23.

Davis, A., Titterington, A.J. and Cochrane, A. (1995), Who buys organic food? A profile of the purchasers of organic food in N. Ireland, *British Food Journal*, Vol. 97 No. 10, pp. 17-23.

Dahm, M. J., Samonte, A. V., & Shows, A. R. (2009). Organic foods: do eco-friendly attitudes predict eco-friendly behaviors?. *Journal of American College Health*, *58*(3), 195-202.

Davies, M. A., & Wright, L. T. (1994). The importance of labelling examined in food marketing. *European Journal of Marketing*, *28*(2), 57-67.

Dean, M., Raats, M.M. and Shepherd, R. (2008), Moral concerns and consumer choice of fresh and processed organic foods, *Journal of Applied Social Psychology*, 38 (8), 2088-107.

Denver, S., Christensen, T. and Krarup, S. (2007). How vulnerable is organic consumption to information?. Paper presented at Nordic Consumer Policy Research Conference towards a New Consumer? Towards a New Policy?, Helsinki

Deshingkar, P., Kulkarni, U., Rao, L. and Rao, S. (2003), Changing food systems in India: response-sharing and marketing arrangements for vegetable production in Andhra Pradesh, *Development Policy Review*, Vol. 21 Nos 5-6, pp. 627-39.

Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R., & Bohlen, G. M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research*, *56*(6), 465-480.

Dimara, E., & Skuras, D. (2005). Consumer demand for informative labeling of quality food and drink products: a European Union case study. *Journal of Consumer Marketing*, *22*(2), 90-100.

Dimitri, C., and Dettmann, R. L. (2012), Organic food consumers: what do we really know about them*? British Food Journal*, 114(8), 1157-1183.

Dreezens E, Martijn C, Tenbult P, Kok G, de Vries N(2005), Food and values: an examination of values underlying attitudes toward genetically modified- and organically grown food products. *Appetite*, 44:115–122.

Edwardson, W., & Santacoloma, P. (2013). Organic supply chains for small farmer income generation in developing countries: case studies in India, Thailand, Brazil, Hungary and Africa. *Agribusiness and Food Industries Series (FAO)*.

Ekelund, L. (1989), Vegetable consumption and consumer attitudes towards organically grown vegetables the case of Sweden", *Acta Horticulturae*, Vol. 259, pp. 163-72.

El-Hage Scialabba, N., & Hattam, C. (2002). Organic agriculture, environment and food security. Environment and Natural Resources Service Sustainable Development Department, UNFAO, Rome. Retrieved September, 2005.

Ezzati M, Riboli E. Behavioral and dietary risk factors for noncommunicable diseases. N Engl J Med, 2013;369:954-64

Faidon Magkos , Fotini Arvaniti & Antonis Zampelas (2006) Organic Food: Buying More Safety or Just Peace of Mind? A Critical Review of the Literature, Critical Reviews in Food Science and Nutrition, 46:1, 23-56.

Food Marketing Institute, Natural and Organic Foods, Food and Drug Administration, US, Vol.1.

Fornell, C., and Larcker, D. F. (1981). "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research* (18:1), pp. 39-50.

Fotopoulos C, Krystallis A. (2002). Organic product avoidance: reasons for rejection and potential buyers' identification in a countrywide survey. British Food Journal 104(3/4/5): 233–260.

Fotopoulos, C. and Krystallis, A. (2002), Purchasing motives and profile of the Greek organic consumer: a countrywide survey", *British Food Journal*, Vol. 104 No. 9, pp. 730-65.

Francisco J. Mesias Diaz, Federico Martinez-Carrasco Pleite and Jose Miguel Martinez Paz, Paula Gaspar Garcia (2010), Consumer knowledge, consumption, and willingness to pay for organic tomatoes, *British Food Journal*, Vol. 114 No. 3.

Geen, N. and Firth, C. (2006). The committed organic consumer, paper presented at Joint Organic Congress, Odense.

Gemma Enright, Hugh Good, and Nick Williams (2010). Qualitative Research to Explore People's Use of Food Labelling Information: Final report, Ipsos Mori.

George Atanasoaie (2012) Price on The Organic Food Market Annals of the University of Petroşani, Economics, 12(4),5-16

Ghorbani, M., & Hamraz, S. (2009), A survey on factors affecting on consumer's potential willingness to pay for organic products in Iran (a case study), *Trends in Agriculture Economics*, 2(1), 10–16.

Giannakas, K (2002) 'Information asymmetries and consumption decisions in organic food product markets', *Canadian Journal of Agricultural Economics*, vol. 50, no. 1, pp. 35- 50.

Gifford, K., & Bernard, J. C. (2011). The effect of information on consumers' willingness to pay for natural and organic chicken. *International Journal of Consumer Studies, 35*(3), 282-289.

Gil J.M., Gracia A, Sánchez M. (2001), Market segmentation and willingness to pay for organic products in Spain", Publicado En *International Food and Agribusiness Management review*, 207-226.

Gil, J.M, and F Soler. 2006. Knowledge and willingness to pay for organic food in Spain: Evidence from experimental auctions. *Food Economics* 3:109-124.

Gotschi, E., Vogel, S., Lindenthal, T., & Larcher, M. (2010). The role of knowledge, social norms, and attitudes toward organic products and shopping behavior: Survey results from high school students in Vienna. *The Journal of Environmental Education*, 41(2), 88-100.

Govindasamy, R., DeCongelio, M., & Bhuyan, S. (2008). An evaluation of consumer willingness to pay for organic produce in the northeastern US.*Journal of Food Products Marketing*, *11*(4), 3-20.

Gracia, A. and de Magistris, T. (2007). Organic food product purchases behaviour: a pilot study for urban consumers in the South of Italy, *Spanish Journal of Agricultural Research*, Vol. 5 No. 4, pp. 439-51.

Gracia, Azucena , and Tiziana Magistris. (2008). The demand for organic foods in the South of Italy: A discrete choice model. *Food Policy* 33:386-396.

Griffith, R., Nesheim, L. (2008) Household willingness to pay for organic products, CeMMAP working papers CWP18/08, Centre for Micro data Methods and Practice, Institute for Fiscal Studies

Grunert, K.G. and Kristensen, K. (1991). On some factors influencing consumers' demand for organically grown foods, in Mayer, R.N. (Ed.), Enhancing Consumer Choice, American Council on Consumer Interests, Columbia, MI, pp. 37-48.

Gunnar Rundgren (2007) Building Trust in Organic, IFOAM biosites.

H. Doležalová, K. Pícha, J. Navrátil (2009) Analysis of the organic food marketing – chain store companies (South Bohemia), *Agric. Econ*. – Czech, 55, (9): 446–458

Halit Tanju Besler, Zehra Buyuktuncer, Muhemmed Fatih Uyar (2012), Consumer Understanding and Use of Food and Nutrition Labeling in Turkey, *Journal of Nutrition Education and Behavior*, Volume 44, Issue 6, pp 584–591

Hamzaoui Essoussi, L., & Zahaf, M. (2008). Decision making process of community organic food consumers: an exploratory study. *Journal of Consumer Marketing*, *25*(2), 95-104.

Hamzaoui Essoussi, L., & Zahaf, M. (2009). Exploring the decision-making process of Canadian organic food consumers: Motivations and trust issues.*Qualitative Market Research: An International Journal, 12*(4), 443-459.

Harper, G. and Makatouni, A. (2002). Consumer perception of organic food production and farm animal welfare", *British Food Journal,* Vol. 104 No. 3/4/5, pp. 287-299.

Hawkin, P. (1993). The ecology of commerce: A declaration of sustainability. *New York: Harpers Business,* (59), 54-61.

Hendrik N. J. Schifferstein & Peter A. M. Oude Ophuis (1998).Health-related determinants of organic food Consumption in the Netherlands, *Food Quality and Preference* Vol 9, No. 3, pp. 119-133, 1998

Henryks , Pearson, David1, Joanna, Sultan, Parves, Anisimova, Tatiana (2013), Organic food: Exploring purchase frequency to explain consumer behavior, Journal of Organic Systems, 8(2).

Henryksl, J., & Pearson, D (2013), Attitude Behavior Gaps: Investigating Switching Amongst Organic Consumers, Conference proceedings Part 2 International Food Marketing Research Symposium, Published by Institute of Food Products Marketing.

Hill, H. and Lynchehaun, F. 2002. Organic milk: Attitudes and consumption patterns. *British Food Journal.* 104(7): 526-542.

Honkanen, P., Verplanken, B., & Olsen, S. O. (2006). Ethical values and motives driving organic food choice. *Journal of Consumer Behaviour, 5*(5), 420-430.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling, 6(1), 1−55.

Huang, C. L. (1993). A Simultaneous System Approach for Estimation of Consumer Risk Perceptions, Attitudes, and Willingness-To-Pay for Residue-Free Produce. In *American Journal of Agricultural Economics* (Vol. 75, No. 5, pp. 1304-1304).

Huang, C.H., 1996. Consumer preferences and attitudes towards organically grown produce. *European Review of Agricultural Economics* 23, 331-342.

Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of consumer behavior, 6*(2-3), 94-110.

Hursti, U. K. K., & Magnusson, M. K. (2003). Consumer perceptions of genetically modified and organic foods. What kind of knowledge matters?.*Appetite, 41*(2), 207-209.

Hutchins, R.K. and Greenhalgh, L.A. (1997), Organic confusion: sustaining competitive advantage, *British Food Journal*, Vol. 99 No. 9, pp. 336-8.

Jahn, G., Schramm, M., & Spiller, A. (2005). The reliability of certification: Quality labels as a consumer policy tool. *Journal of Consumer Policy*, *28*(1), 53-73.

Jay M. Lillywhite , Mohammad Al-Oun & Jennifer E. Simonsen (2013). Examining Organic Food Purchases and Preferences Within Jordan, Journal of International Food & Agribusiness Marketing, 25:2, 103-121

Jessica Aschemann-Witzel, Stephan Zielke (2014). Income and price as a barrier to organic food choice, Proceedings of the 4th ISOFAR Scientific Conference. *'Building Organic Bridges',* at the Organic World Congress 2014, 13-15 Oct., Istanbul, Turkey

John Paull (2013). A history of the organic agriculture movement in Australia, Chapter 3, in Mascitelli, B. & Lobo, A. (Eds.) Organics in the Global Food Chain, Connor Court Publishing, Ballarat, pp. 37-61, 241-244.

Jolly, D. (1991), Differences between buyers and non buyers of organic produce and willingness to pay organic price premiums, *Journal of Agribusiness*, Vol. 9 No. 1, pp. 97-111

Jue Chen and Antonio Lobo (2012). Organic food products in China: determinants of consumers' purchase intentions, *The International Review of Retail, Distribution and Consumer Research*, Vol. 22, No. 3, July 2012, 293–314

Kalafatis, S., Pollard, M., East, R. and Tsogas, M.H. (1999).Green marketing and Ajzen's theory of planned behaviour: a cross-market examination, *Journal of Consumer Marketing*, Vol. 16 No. 5, pp. 441-60.

Kaur, P., & Singh, R. (2007). Uncovering retail shopping motives of Indian youth. *Young Consumers*, *8*(2), 128-138.

Konsumentverket (1998), The general public's knowledge, attitudes, and actions in environmental issues, Report 1998:7, Stockholm, Sweden.

KPMG (2005), Consumer Markets in India: The Next Big Things, Publication No. 213-405, KPMG International.

Krystallis, A. and G. Chryssohoidis. (2005). Consumers' willingness to pay for organic food: Factors that affect it and variation per organic product type. *British Food Journal* 107(5): 320- 343.

La Londe, B. (1977). Distribution Logistics Grows in Importance for Marketers, But Faculty Acceptance Lags, Marketing News, 29, 4.

Laroche, M., J. Bergeron and G. Barbaro-Forleo. (2001). Targeting Consumers who are Willing to Pay More for Environmentally Friendly Products. Journal of Consumer Marketing, 18(6):503-20.

Larry Steven Londre Marketing (2009), Marketing, the Marketing Mix (4P's), and the Nine P's IMC, Advertising, Promotion, Media and More.

Larue, B., West, G. E., Gendron, C. and R. Lambert. (2004). Consumer response to functional foods produced by conventional, organic, or genetic manipulation. Agribusiness 20 (2): 155-66.

Larue, B., West, G., Gendron, C. and Lambert, R. (2004). Consumer response to functional foods produced by conventional, organic, or genetic manipulation", Agribusiness, Vol. 20 No. 2, pp. 155-66

Lea, E. and Worsley, T. (2005). Australian's organic food beliefs, demographics and values, *British Food Journal*, Vol. 107 No. 11, pp. 855-69

Leila Hamzaoui-Essoussi and Mehdi Zahaf (2009). The Organic Food Market: Opportunities and Challenges. Organic Food and Agriculture – New Trends and Developments in the Social Sciences

Lin, B-H, Smith, TA & Huang, CL (2008) Organic premiums of US fresh produce, *Renewable Agriculture and Food Systems*, vol. 23, no. 3, pp. 208-216.

Ling, C. Y. (2013). Consumers' purchase intention of green products: an investigation of the drivers and moderating variable. *Elixir International Journal*, 2014503-14509.

Lockie, S., Lyons, K., Lawrence, G. and Mummery, K. (2002), "Eating "green": motivations behind organic food consumption in Australia", *Sociologia Ruralis*, Vol. 42 No. 1, pp. 23-40.

Lohr, L. (2001). Factors affecting international demand and trade in organic food products. *Changing structure of global food consumption and trade*, 67-79.

Lohr, L., & Semali, A. (2000). Retailer decision making in organic produce marketing. *Integrated View of Fruit and Vegetable Quality*, 201-208

Lorenz Probst, Lisa Aigelsperger, Michael Hauser (2010) Consumer Attitudes towards Vegetable Attributes: Potential Buyers of Pesticide-Free Vegetables in Accra and Kumasi, Ghana , Ecology of Food and Nutrition vol. 49, no. 3, pp. 228-245

Luanne Lohr (2001). Factors Affecting International Demand And Trade in Organic Food Products, Economic Research Service/USDA Changing Structure of Global Food Consumption and Trade / WRS-01-1

Luigi Pellizzoni (2005). Trust, Responsibility And Environmental Policy Trust, Responsibility And Environmental Policy The article aims to reflect on some aspects of environmental policy Starting from its declining social legitimacy I argue for the analytical importance of the concepts of trust and responsibility. Empirical insights provided by some results of a European study on public views of food issues, European Societies 7(4): 567_/594

Magistris, T., & Gracia, A. (2008). The decision to buy organic food products in Southern Italy. *British Food Journal*, *110*(9), 929-947.

Magnusson, M., Arvola, A., Koivisto Hursti, U., Aberg, L. and Sjoden, P. (2001). Attitudes towards organic foods among Swedish consumers, *British Food Journal*, Vol. 103 No. 3, pp. 209-26

Magnusson, M. K., Arvola, A., Koivisto Hursti, U., Aberg, L. and Sjöden, P. O. (2003), Choice of organic foods is related to perceived consequences for human health and to environmentally friendly behaviour, *Appetite*, Vol. 40 No. 2, pp. 109-117.

Makatouni, A. (2002). What motivates consumers to buy organic food in the UK? Results from a qualitative study. *British Food Journal*, *104*(3/4/5), 345-352.

Mannell, A., Brevard, P., Nayga Jr, R., Combris, P., Lee, R., & Gloeckner, J. (2006). French consumers' use of nutrition labels. *Nutrition & Food Science*,*36*(3), 159-168.

Marketing Week (2004). Organic food and drinks: special report, Marketing Week, 26 July 2004, pp. 48-55.

Marija Radman (2005) Consumer consumption and Perception of organic products in Croatia, *British Food Journal* Vol. 107 No. 4, 2005 pp. 263-273

Mary V. Gold, 2007 Alternative Farming Systems Information Center, Organic production/ Organic food : Information access tools

Mathisson, K. and Schollin, A. (1994), Konsumentaspekter pa ekologiskt odlade gronsaker enjamforande studie (Consumer aspects on organic vegetables a comparative study), Report No. 18, Department of Crop Production Sciences, Swedish University of Agricultural Sciences.

Matthew Johnson (2014), Extended Marketing Mix: The 7 Ps of Marketing , Udemy Blog.

Maurizio Canavari , Giuseppe Nocella & Riccardo Scarpa (2005) Stated Willingness-to-Pay for Organic Fruit and Pesticide Ban, *Journal of Food Products Marketing*, 11:3, 107-134

McEachern, M. G., & Mcclean, P. (2002). Organic purchasing motivations and attitudes: are they ethical?. *International Journal of Consumer Studies*, *26*(2), 85-92.

Michelsen, J., Hamm, U., Wynen, E., & Roth, E. (1999). The European market for organic products: Growth and development.

Millock, K., Wier, M. and Andersen, L. M. (2004). Consumer's demand for organic foods attitudes, value and purchasing behaviour, Selected paper for presentation at the XIII Annual Conference of European Association of Environmental and Resource Economics, Budapest, Hungary.

Mintel (2000), Organic Food and Drink Retailing, Market Intelligence Unit of the UK Economic Intelligence Unit, London. *Quality and Preference*, 9, 119 133.

Misner, S., & Florian, T. A. (2013), Organically Grown Foods versus Non-Organically Grown Foods, The University of Arizona Cooperative Extension, College of Agriculture and Life Sciences cooperative Extension, AZ1603

Misra, S. K., Huang, C. L., & Ott, S. L. (1991). Consumer willingness to pay for pesticide-free fresh produce. *Western Journal of Agricultural Economics*, 218-227.

Mostafa, M.M. (2007). Gender differences in Egyptian consumers' green purchase behavior: The effects of environmental knowledge, concern and attitude. *International Journal of Consumer Studies*, 31, 220-229.

Neena Sondhi and Vina Vani(2007). An Empirical Analysis of the Organic Retail Market in the NCR, Global Business Review, 8:2, 283–302

Netemeyer, R. G., Burton, S., and Lichtenstein, D. R. (1995). Trait Aspects of Vanity: Measurement and Relevance to Consumer Behavior, *Journal of Consumer Research* (21:4), pp. 612-626.

O'Donovan, P., & McCarthy, M. (2002). Irish consumer preference for organic meat. *British Food Journal*, *104*(3/4/5), 353-370.

Onyango, B. M., Hallman, W. K., & Bellows, A. C. (2007). Purchasing Organic food in US food systems. A study of attitudes and Practices. *British Food Journal,* 109, 399–411.

Padel, S. and Foster, C. (2005). Exploring the gap between attitudes and behaviour - Understanding why consumers buy or do not buy organic food", *British Food Journal*, Vol. 107 No. 8, pp. 606-625.

Parichard Sangkumchaliang[a] and Wen-Chi Huang (2012). Consumers' Perceptions and Attitudes of Organic Food Products in Northern Thailand, International *Food and Agribusiness Management Review* Volume 15, Issue 1

Paull, John(200). The Lost History of Organic Farming in Australia", *Journal of Organic Systems*, 3(2):2-17.

Pellegrini, G., & Farinello, F. (2009). Organic consumers and new lifestyles: An Italian country survey on consumption patterns. *British Food Journal*, *111*(9), 948-974.

Perreault, W. D. Jr. & Russ, F. A. (1976). Physical Distribution Service in Industrial Purchase Decisions , *Journal of Marketing*, 40(4), 3-10.

Perrini, F., S. Castaldo, N. Misani and A. Tencati. (2010). The impact of corporate social responsibility associations on trust in organic products marketed by mainstream retailers: a study of Italian consumers. *Business Strategy and the Environment* 19(8):512-526.

Pingali, P. (2007). Westernization of Asian diets and the transformation of food systems: implications for research and policy, *Food Policy*, Vol. 32 No. 3, pp. 281-98.

Pohlman, J. T., & Leitner, D. W. (2003). A comparison of ordinary least squares and logistic regression. *Ohio Journal of Science*: Volume 103, Issue 5 pp. 118-125

Quah, S. H. and K. G. Tan, A. (2009). Consumer Purchase Decisions of Organic Food Products: An Ethnic Analysis, Journal of International Consumer Marketing, 22:1, 47-58

Radman, M. (2005). Consumer consumption and perception of organic products in Croatia. *British Food Journal*, 107(4), 263-273.

Raffaele Zanoli, Danilo Gambelli, Daniela Vairo (2012). Scenarios of the organic food market in Europe, *Food Policy* 37 41–57

Ramu Govindasamy, Marc DeCongelio & Sanjib Bhuyan (2006). An Evaluation of Consumer Willingness to Pay for Organic Produce in the Northeastern U.S., *Journal of Food Products Marketing*, 11:4, 3-20

Rao, S.L. (2000). India's rapidly changing consumer markets, Economic and Political Weekly, Vol. 35 No. 40, pp. 3570-2

Rashid Nik Ramli Nik Abdul, (2009). Awareness of Eco-Label in Malaysia's Green Marketing Initiative, *International Journal of Business and Management*, 4(8): 132-141.

Rezai, G., Kit Teng, P., Mohamed, Z., & Shamsudin, M. N. (2013). Consumer willingness to pay for green food in Malaysia. *Journal of International Food & Agribusiness Marketing*, *25*(sup1), 1-18.

Robert. D Weaver, David. J Evans and A.E. Luloff (1992). Pesticide Use in Tomato Production: Consumer Concerns and Willingness to Pay. *Agribusiness*, 8(2) pp. 131-142

Roddy, G., Cowan, C.A. and Hutchinson, G. (1996). Consumer attitudes and behaviour to organic foods in Ireland , *Journal of International Consumer Marketing*, Vol. 9 No. 2, pp. 41-63

Roe, B., & Sheldon, I. (2007). Credence good labeling: The efficiency and distributional implications of several policy approaches. *American Journal of Agricultural Economics*, *89*(4), 1020-1033.

Roger D. Blackwell , Paul W. Miniard , James F. Engel (2006). South-Western College Pub; 010 edition

Roitner-Schobesberger, B., Darnhofer, I., Somsook, S., & Vogl, C. R. (2008). Consumer perceptions of organic foods in Bangkok, Thailand. *Food policy*,*33*(2), 112-121.

Rossetto. L (2002). Marketing Strategies for Organic Wine Growers in the Veneto Region, Prepared for the 8th Joint Conference on Food, Agriculture and the environment August 25-28, 2002 Red Cedar Lake, Wisconsin

Royne, M. B., Levy, M., & Martinez, J. (2011). The public health implications of consumers' environmental concern and their willingness to pay for an eco-friendly product. *Journal of Consumer Affairs*, *45*(2), 329-343.

Rudder, A., Ainsworth, P. and Holgate, D. (2001). New Food Product Development: Strategies for Success. *British Food Journal*, Vol. 103, No. 9, pp. 657–71.

Saba, A., Messina, F. (2003). Attitudes towards organic foods and risk/benefit perception associated with pesticides, *Food Quality and Preference*, 14, 637-45.

Salai, S., Sudarević, T., Đokić, N., & Pupovac, L. (2014). Marketing Research for Choosing The Promotional Message Content For Domestic Organic Products. *Economics of Agriculture*, *61*(2).

Sandalidou, E., Baourkis, G. and Siskos, Y. (2002). Customers' perspectives on the quality of organic olive oil in Greece: A satisfaction evaluation approach. *British Food Journal*. 104(3/4/5): 391-406.

Schifferstein, H. N. J. and Oude Ophuis, P. A. M. (1998). Health-related determinants of organic food consumption in the Netherlands, *Food Quality and Preference*, Vol. 9, pp. 119-133

Sedef Akgüngör , Bülent Miran & Canan Abay (2010). Consumer Willingness to Pay for Organic Food in Urban Turkey, *Journal of International Food & Agribusiness Marketing*, 22:3-4,

Shepherd, R., Magnusson, M. and Sjoden, P. O. (2005), Determinants of consumer behavior related to organic foods, *Ambio*, Vol. 34 No. 4-5, pp. 352-359

Shetty, P.S. (2002), Nutrition transition in India, *Public Health Nutrition*, Vol. 5, pp. 175-82.

Singla, M. (2010). Usage and understanding of food and nutritional labels among Indian consumers. *British Food Journal*, *112*(1), 83-92.

Smith-Spangler C, Brandeau ML, Hunter GE, Bavinger JC, Pearson M, Eschbach PJ, Sundaram V, Liu H, Schirmer P, Stave C, Olkin I, Bravata DM, (2012), Are organic foods safer or healthier than conventional alternatives?: a systematic review, Ann Intern Med. 2012 Sep 4;157(5):348-66

Smith-Spangler, C., Brandeau, M. L., Hunter, G. E., Bavinger, J. C., Pearson, M., Eschbach, P. J. & Bravata, D. M. (2012). Are organic foods safer or healthier than conventional alternatives: a systematic review. *Annals of Internal Medicine*, *157*(5), 348-366.

Somnath Chakrabarti (2010) Factors influencing organic food purchase in India – expert survey insights, British Food Journal Vol. 112 No. 8, pp. 902-915

Squires, L., Juric, B. and Cornwell, B.T. (2001). Level of market development and intensity of organic food consumption: cross-cultural study of Danish and New Zealand consumers, *Journal of Consumer Marketing*, Vol. 18 No. 5, pp. 392-409.

SS Rana Sr Scientist 2014 teaching manual Organic Farming, Department of Agronomy.

Stobbelaar, D.J., Casimir, G., Borghuis, J., Marks, I., Meijer, L. and Zebeda, S. (2007). Adolescents' attitudes towards organic food: a survey of 15- to 16-year old school children, *International Journal of Consumer Studies*, Vol. 31, pp. 349-56.

Storstad, O. and Bjorkhaug, H. (2003). Foundations of production and consumption of organic food in Norway: common attitudes among farmers and consumers, *Agriculture and Human Values*, Vol. 20, pp. 151-63.

Straub, M. O., & Thomassin, P. J. (2006). Product attributes and consumer willingness to pay for environmental management systems in agriculture: using the choice modeling technique. Selected Paper prepared for presentation at the American Agricultural Economics Association Annual Meeting, Long Beach, California.

Tanner. C and S. W. Kast (2003).Promoting Sustainable Consumption: Determinants of Green Purchases by Swiss Consumers, *Wiley Periodicals*, Psychology and Marketing, vol. 20, iss. 10, pp. 883-902.

Tarkiainen, A. and Sundqvist, S. (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food, British Food Journal, 107 (10-11), 808-22

Thogersen, J. (2009). The motivational roots of norms for environmentally responsible behavior. *Basic and Applied Social Psychology*, *31*(4), 348-362.

Thøgersen, J. (2009). Consumer decision-making with regard to organic food products. *Traditional Food Production and Rural Sustainable Development: A European Challenge*, 173-192.

Thompson, G. & Kidwell, J. (1998). Explaining the choice of organic produce: Cosmetic defects, prices, and consumer preferences. *American Journal of Agricultural Economics*, 80(2), (May), 277–278.

Tolušić, Z., Zmaić, K., & Deže, J. (2002). Marketing-mix in the function of the organic food of eastern croatia ". *Ekonomski pregled*, *53*(7-8), 782-794.

Torjusen, H., Lieblein, G., Wandel, M., & Francis, C. A. (2001). Food system orientation and quality perception among consumers and producers of organic food in Hedmark County, Norway. *Food quality and preference*, *12*(3), 207-216.

Tregear, A., Dent, J. B., & McGregor, M. J. (1994). The demand for organically grown produce. *British Food Journal*, *96*(4), 21-25.

Tsakiridou, E., Boutsouki, C., Zotos, Y. and Mattas, K. (2007). Attitudes and behaviour towards organic products: an exploratory study. *International Journal of Retail & Distribution Management* 36 (2): 158 - 175.

Van Doorn, J., & Verhoef, P. C. (2011). Willingness to pay for organic products: Differences between virtue and vice foods. *International Journal of Research in Marketing*, *28*(3), 167-180.

Velcovska, S. (2012). Food quality labels and their perception by consumers in the Czech Republic. *World Academy of Science, Engineering and Technology*,*66*, 154-160.

Vepa, S.S. (2004), Impact of globalization on the food consumption of urban India, in Globalization of Food Systems in Developing Countries: Impact on Food Security and Nutrition, FAO *Food and Nutrition Paper* 83, Food and Agriculture Organization of the United Nations, Rome.

Verdurme, A., Gellynck, X., & Viaene, J. (2002). Are organic food consumers opposed to GM food consumers?. *British Food Journal*, *104*(8), 610-623.

Verhoef P.C. (2005). Explaining purchase of organic meat by Dutch consumers. Eur Rev Agr Econ 32(2), 245-267.

Vijaykumar, S., Lwin, M. O., Chao, J., & Au, C. (2013). Determinants of food label use among supermarket shoppers: a Singaporean perspective. *Journal of nutrition education and behavior*, *45*(3), 204-212.

Wagner, K. (2013). The Package as an Actor in Organic Shops. *Journal of Cultural Economy, 6*(4), 434-452.

Walter J Crinnion ND(2010). Organic foods contain higher level of certain nutrients, lower level of pesticides, and may provide health benefits to the consumer, *Alternative medicine review*, Volume 15, No1.

Wandel, M. & Bugge, A. (1997). Environmental concern in consumer evaluation of food quality, *Food Quality and Preference*, Vol. 8 No. 1, pp. 19-26

Wier, M. and Calverly, C. (2002). Market potential for organic foods in Europe, British Food Journal, Vol. 104 No. 1, pp. 45-62.

Wier, M., Andersen, L.M. and Millock, K. (2003). Consumer demand for organic foods – attitudes, values and purchasing, paper presented at SOM Workshop, Environment, Information and Consumer, Frederiksdal, April.

Wilkins JL, Hillers VN. (1994). Influences of pesticide residue and environmental concerns on organic food preference among food cooperative members and non-members in Washington state. *Joumal of Nutrition Education* 26(1): 26-33.

Wonjae (2000). Regression Analysis (Spring, 2000)

Xia, W., & Zeng, Y. (2009). Consumers' attitudes and willingness to pay for green food in Beijing, *Social Science Research Network*, doi:10.2139/ssrn.2281861

Yiridoe, E. K., Bonti-Ankomah, S., & Martin, R. C. (2005). Comparison of consumer perceptions and preference toward organic versus conventionally produced foods: A review and update of the literature. *Renewable Agriculture and Food Systems* 20(4):193-205

.

Yiridoe, E. K., Bonti-Ankomah, S., & Martin, R. C. (2005). Comparison of consumer perceptions and preference toward organic versus conventionally produced foods: a review and update of the literature. *Renewable Agriculture and Food Systems*, *20*(04), 193-205.

Yue, C., Grebitus, C., Bruhn, M. and Jensen, H.H. (2008). "Potato marketing – factors affecting organic and conventional potato consumption patterns", paper presented at 12th Congress of the European Association of Agricultural Economists – EAAE, Ghent.

Żakowska-Biemans, S. (2009). Factors underlying consumption of organic food in the pinion of Polish consumers. *Agronomy Research, 7*(2), 768-782.

Zander, K., Hamm, U., Freyer, B., Goesssinger, K., Naspetti, S., Padel, S. & Zanoli, R. (2011). Consumer concerns regarding additional ethical attributes of organic food. *Organic is Life: Knowledge for tomorrow, 2*, 22-24.

Zanoli, R. and Naspetti, S. (2003). Values and ethics in organic food consumption, 83rd EAAE seminar. Chania, Greece.

Zanoli, R. and Naspetti, S. (2002). Consumer motivations in the purchase or organic food: A meansend approach. *British Food Journal*. 104(8): 643-653.

Zdravko Tolušić Krunoslav Zmaić Jadranka Deze (2002). Marketing-mix in the function of the organic food. *Ekonomski Pregled*, 53 (7-8) 782-794

BOOKS

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), Action control: From cognition to behavior. Berlin, Heidelber, New York: Springer-Verlag. (pp. 11-39).

Ajzen, I. (1991). The theory of planned behavior, Organizational Behavior and Human Decision Processes, Vol. 50 No. 2, pp. 179-211.

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall.

Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior, The handbook of attitudes, 173, 221.

Ajzen, Icek (1991). The theory of planned behavior, Organizational Behavior and Human Decision Processes 50 (2): 179–211.

Bollen, K. A. (1989). Structural Equations with Latent Variables. John Wiley & Sons. pp. 179-225.

Brace, N., Kemp, R. and Snelgar, R. (2006). SPSS for Psychologists (3rd edition). Basingstoke: Lawrence Erlbaum Associates.

Cameron, C. A. C. (2014). The SAGE Encyclopedia of Social Science Research Methods, 544–546.

Carmine. G and Zeller .R (1979). Reliability and validity assessment, Sage publications, pp:11

Chin, W. W. (2010) How to write up and report PLS analyses, in Handbook of Partial Least Squares: Concepts, Methods and Application. Esposito Vinzi, V.; Chin, W.W.; Henseler, J.; Wang, H. (Eds.), *Springer*, Germany, 645-689.

Cramer.H (1946). Mathematical Methods of Statistics. Princeton: Princeton University Press, p 282. ISBN 0-691-08004-6.

Engel, J.F., Blackwell, R. D. and Miniard, P.W. (1995). Consumer Behavior, 8th edition, The Dryden Press Harcourt Brace College Publishers, Forth Worth.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research.*Reading, MA: Addison-Wesley.

Hair Joseph F, William C. Black, Barry J.Babin, Rolph E. Anderson (2006). Multivariate data analysis, *A Global perspective,* Seventh edition, Perason Education pp 115.

Hawken, P. (1993). The ecology of commerce. New York: Harper Collins.

Hutcheson G. D, L. Moutinho and The SAGE Dictionary of Quantitative Management Research. pp 224-228.

Jim Blythe (2013), Consumer behavior, Second edition, Sage publications ltd.

Henseler.J, Theo K. Dijkstra et al, "Organizational Research methods" The Research Methods Division of The Academy of Management, Sage publications, DOI: 10.1177/1094428114526928.

Kasper, H, Helsdingen, P. and Vries, W. (1999). Services Marketing Management: An International Perspective', John Wiley & Sons Ltd.

Keller, K.L. (1998). Strategic Brand Management, Prentice-Hall: New Jersey.

Kothari C.R, (2004). Research Methodology Methods and Techniques (Second revised edition), New Age International Publishers.

Kotler, P. and Keller, K. (2011). Marketing Management(14th edition), London: Pearson Education.

Kotler, P., Armstrong, G., Brown, L., and Adam, S. (2006). Marketing, 7th Ed. Pearson Education Australia/Prentice Hall.

Kotler, P., Armstrong, G., Saunders, J., & Wong, V. (2002). "Principles of Marketing" (3rd European edition.), London: Prentice-Hall.

Kotler, Philip (2000). Marketing Management. The Millennium Edition, Upper Saddle River, Prentice Hall.

Krejcie, R. V, & Morgan, D. W. (1970). ACTIVITIES, 38, 607–610.

Krejcie, R.V. & Morgan, D.W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30, 607-610.

Leon. G Schiffman, Lesie lazar kanuk, Ramesh Kumar. S (2010). Consumer Behavior, Tenth edition, Pearson publications pp: 234.

Liebetrau, Albert M. (1983). Measures of association. Newbury Park, CA: Sage Publications. Quantitative Applications in the Social Sciences Series No. 32, pp 15-16.

Mintel (2003) "organic Foods". In UK, M. I. G. (Ed.). London.

Motarjemi Y, Moy G, Todd. E (2014). Encyclopedia of Food safety, Elsevier publications, pp: 419.

Needham, Dave (1996). Business for Higher Awards", Oxford, England: Heinemann.

Netemeyer, R.G., Bearden, W.O. & Sharma, S. (2003). Scaling procedures: issues and applications. Thousand Oaks: Sage Publications

Nunnally, J. C. (1978). Psychometric theory, New York: McGraw-Hill.

Pallant, J. (2007). *SPSS survival manual*. New York: McGraw-Hill Education.

Pamela Davies (2006). Exploratory Research, The SAGE Dictionary of Social Research Methods.

Philip Kotler (2000). Marketing Management, Millennium Edition", Tenth Edition, Prentice-Hall, Inc.

Philip Kotler (2002). Marketing Management, Millennium Edition Prentice-Hall, Inc. A Pearson Education Company.

Rosenthal, R. and Rosnow, R. L. (1991). Essentials of Behavioral Research: Methods and Data Analysis. Second Edition. McGraw-Hill Publishing Company, pp. 46-65.

Schiffman, L., Kanuk L., Ramesh kumar . S (2010). Consumer Behaviour 10th edition, Pearson Education

Sekaran, U. (2003) Research Methods for Business, 4th ed., U. S. A.: John Wiley & Sons, Incorporation.

Sethuraman, G, Srinivasa Naidu (2008). International Encyclopedia of Agricltural Science and Techonology, Mittal publications, pp:260.

Sikka B. K, Sapna A. Narula, M.S Jairath (2006), Enhancing Global competitiveness of Indian Organic produce: Oppurtunities, Challenges and Strategies, Management of Inovation, Technology. Transfer and Flexibility for Competitiveness in the Globalized world", ISBN: 81-903397-6-1

Solomon, M. (1995). Consumer Behavior: Buying, having and being, Prentice Hall, New Jersy.

REPORTS

A brief report on healthcare, telemedicine and medical tourism in India- Corporate catalyst India (pvt) ltd, February 2015.

APEDA Agri exchange, India Organic Food Market Forecast & Opportunities, 2017 June 21, 2013.

FIBL, IFOAM (2014), The world of organic agriculture, statistics and emerging trends 2014, Frick and Bonn.

Grand view Research, Organic Foods & Beverages Market Analysis And Segment Forecasts To 2020, Published: April 2014, ISBN Code: 978-1-68038-095-8.

Indian Healthcare Industry Analysis, India brand equity foundation, August 2015.

Kaushik, N. (2005), Retail: the next big thing?, The Hindu Business Line, 13 October.

Org- Marg. 2002. 'Organic & biodynamic farming' Field survey and the publication, Government of India, Planning Commission.

Raising capital in healthcare – creating value, growth and access, FICCI, August, 2015

Say Yes to Food and Agri business, Food & Agribusiness at YES BANK.

Transparency market research, Organic Food Market - Global Industry Size, Share, Trends, Analysis and Forecasts 2012 – 2018.

WEBSITES

Agricultural and processed food products export development authority
http://apeda.gov.in/apedawebsite/index.html

American public health association
https://www.apha.org/

Ecoworld, Organic farming in India
http://www.ecoworld.com/atmosphere/effects/organic-farming-in-india.html

Esther Lok, History of the Organic Movement, retrieved from
http://theorganicsinstitute.com/organic/history-of-the-organic-movement/

Guy Dauncey (2002), Ten Reasons Why Organic Food Is Better retrieved from
http://www.earthfuture.com/earth/cg-tenreasonsorganic.asp

Hermes.A (2015), "What Is the Difference Between Natural & Organic Food?" retrieved from http://www.livestrong.com/article/119591-difference-between-natural-organic/

Indian Organic Foods Market, Yes Bank retrieved from
http://www.efreshglobal.com/efreshtrade/(S(gyimyg4502f1svbuedm5xviy))/PDFs/Indian%20Organic%20Foods%20Market.pdf

Management study guide, The 7ps of services Marketing, retrieved from
http://www.managementstudyguide.com/seven-p-of-services-marketing.html

Marketing and the 7ps A brief summary of marketing and how it works (2009) - Chartered Institute of Marketing www.cim.co.uk/marketingresources

National bank for agriculture and rural development
https://www.nabard.org/english/home.aspx

Organic consumers association retrieved from
https://www.organicconsumers.org/taxonomy/term/469/0

Organic facts, "Health benefits of organic foods", retrieved from
https://www.organicfacts.net/organic-products/organic-food/health-benefits-of-organic-food.html

Organic Food and Its Effects on Health retrieved from
http://www.eostreorganics.co.uk/organic-food-and-Its-effects-on-health.html

Soil Association
http://www.soilassociation.org/

Spices board of India
http://www.indianspices.com/

Techsci Research, "India Organic Food Market Forecast and Opportunities 2017,
Valliant. M (2014), "Top 10 reasons why organic food is more expensive", retrieved from http://www.hellawella.com/top-10-reasons-organic-food-is-so-expensive/4727

The Economic Times (2013), Increase in consumption of organic food products: ASSOCHAM survey retrieved from http://articles.economictimes.indiatimes.com/2013-05-23/news/39475623_1_organic-food-organic-products-organic-sector

United National Conference on trade and Development
http://unctad.org/en/Pages/Home.aspx

Annexure I

Questionnaire for Organic food consumers

Personal Details	Gender: □ Male □ Female
	Age: □ below 20 yrs □ 21 to 30 yrs □ 31 to 40 yrs □ 41 to 50 yrs □ 51 to 60 yrs □ above 60 yrs
	Educational Qualification : □ Schooling □ Graduate □ Post graduate □ Others
	Occupation: □ Govt. employee □ Private employee □ Professional □ Business □ Others (specify)
	Marital status: □ Married □ Unmarried
	Monthly Income : □ less than Rs10,000 □ Rs10,000-20,000 □ Rs20,000-30,000 □ Rs30,000-40,000 □ Rs 40,000-50,000 □ 50,000 and above
	Eating habits: □ Vegetarian □ Non - vegetarian

1. Who is responsible for doing food shopping in your household?	Never	Seldom	Sometimes	Mostly	Always
I myself					
My partner					
My children					
My parents					
Cook/Maid					

2. I usually purchase them		3. The place I buy organic product is		4. I bought organic food	
Everyday		Supermarkets		Before 5 years	
Weekly once		Organic Food stores		3 to 5 years	
Weekly twice		Health stores		1 to 3 years	
Monthly once		Local Markets		Last 1 year	
		Farmers		Last 6 months	

5.Rate your knowledge on the following green terms

	Very High	High	Neutral	Less	Very less
Recyclable					
Biodegradable					
Environmental sustainability					
Organic products					
Global warming					

6. Following is the list of green logos. Kindly fill them

Logos	Tick mark the logos you have seen	Logos	Tick mark the logos you have seen

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
7. I buy products made with recycled materials					
7 a) I buy product which is eco friendly					

8. Please tick mark your sources of awareness on organic food

Media (TV, Radio)		Display at store	
Friend/Family		Internet	
Specialist (Doctor's etc)		Farmers	
Specialized shops		Ads on social network	
Promotional camp		Newspaper	
Magazines		Email forwarded	

9. Please rate your opinion about organic products

I buy organic because	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
It is healthier					
It is tastier					
It is cleaner					
It is natural					
More fresh					
Chemical free					
It has rich nutrients					
Ideal for children/elders					
Guaranteed due to their label					
Good for the soil					
Expensive					
Generally higher value					
No preservatives					
Comes with good packaging					
To support local farmers					
Fashion to consume					
Controls weight					
It's like I ate when I was child					

10. Please tick the reasons for not buying organic products

Reasons	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Non availability					
Too expensive					
I don't trust the product is chemical free					
Desire for variety					
I don't believe the health benefits					
Does not last long					
Can't store					
Don't trust the certificate					
Don't believe the information in the package					
Not able to distinguish from traditional pack					
Lack of information/knowledge					
Don't think it will make a difference					
Tend to forget					
Less variety/choice/brand					

11. How frequently you read the label during the purchase?	Never	Rarely	Sometimes	Often	Always

Strongly agree [SA]	Agree[A]	Neutral [N]	Disagree[D]	Strongly disagree[SD]

12. Which Information is clear to read/ clear to understand?

Please mark the appropriate option	Clear to read					Clear to understand				
	SA	A	N	D	SD	SA	A	N	D	SD
I read the label carefully										
Ingredient list is clear to read										
Expiry date										
Nutritional/health information										
Nutritional facts										
Information on allergies										
Quality guaranteed										
Manufacturing date/month facts										
Country of origin										
Logos/symbols										
Usage instruction										
Number of servings										
Brand name										
Price										
Net weight										

13. ***Please mark the appropriate option***	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I compare food price of brands					
I don't mind paying more					
I am willing to pay more					
High price means high quality					

14. ***The price of organic product is***	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
High					
No difference					
Not important					

15. Are you willing to pay more for organic products? □ Yes □ No

If yes how much?	
5 % more	
10% more	
15% more	
20% more	
25% more	
30% more	

16. Perception on food labeling on packages

I read the food label	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
When I buy first time					
To compare two brands					
To check nutritional claims					
On special diet for medical reasons					
I trust the information provided					

16 ***a) I don't read the food label because***	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Too confusing					
Time consuming					
Difficult to understand					
The way it is displayed					
Legibility					
I believe the claims on the package					

16 ***b) I pay most attention on***	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Manufacturers data					
Expiry date					
Nutritional label					
Health message and nutritional claims					
Net content of the product					
Price					
Country of origin					
Organic certification institute					
Cooking instructions					

17. ***Health consciousness***	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I try to protect myself against health hazards I hear about.					
I consider myself very health conscious					
I am concerned about health hazards and try to take action to prevent them.					
I try to prevent health problems before I feel any symptoms.					
I don't worry about health hazards until they become a problem for me					
I often worry about the health hazards I hear about, but don't do anything about them					
It is important to know well how to eat for healthy					
I don't ask myself the food I eat are good for me					
I trust those who sell certified products to indeed sell quality food					
I trust a quality label or logo					
I trust the institutions certifying organics food products					

18. I would like to buy more organic food products if

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
More cheap prices					
More income					
More accessibility in the market					
More assortment availability					
Better appearance and taste					
More time to look for organic food					
More recognizable label & products					
More trust to origin/production					
More seasonal products					
More products from my local region					
Longer shelf life					
Less packaging material					
More information in the media					
Better/ shorter cooking conditions					

ANNEXURE II

List of organic food brands in India

Sl.no	Brands	Sl.no	Brands
1	Aamrai	26	Sun Organofoods
2	Abali	27	Terragreens
3	ABC farms	28	Timbaktu
4	Arya organic	29	Tkn ecofarms
5	Asal	30	Vasantham
6	Aum fresh	31	Vision Fresh
7	Bonappetit	32	Ban Choon Marketing Pte Ltd
8	Conscious Food	33	Eden Park
9	Dear Earth Organic	34	Gokul
10	Down to Earth	35	Organic valley
11	Eco life	36	United Teas
12	Gokul	37	Wild Ideas
13	Green Sense	38	365 organic value
14	Grenera	39	Celnat
15	Khalas	40	Swastha
16	24 Mantra	41	Vedanthika
17	Nature green	42	Marson
18	Nature N Me	43	Health buddy
19	Organa	44	Organica
20	Organic Tattva	45	Deha organic
21	Pro organic	46	Natures treasure
22	Phalada Pure & Sure	47	Benefit
23	Sanjeevani	48	Azafran
24	Sattvic	49	Abali
25	Soul centric	50	Panchvati

ANNEXURE III

Price differences between organic and conventional products

Sl. No	Items	Category	Price			Premium (%)	Consumers willingness to pay	
			Organic (in Rs)	Conventional	Difference		Indians (%)	Foreigners (%)
1	Tur dal	Dal	159	110	49	25	7	4
2	Moong dal	Dal	185	135	50			
3	Channa dal	Dal	138	112	26			
4	Masoor dal	Dal	158	104	54			
5	Bengal gram chana dal	Dal	146	100	46			
6	black gram urad dal	Dal	146	84	62			
7	Urad dal	Dal	186	130	56			
8	Badam	Dry fruits	1700	1070	630	20	13	15
9	Pista	Dry fruits	2450	1900	550			
10	Cashew nut	Dry fruits	1900	900	1000			
11	Almonds	Dry fruits	1700	990	710			
12	Walnut	Dry fruits	2650	800	1850			
14	Golden raisins	Dry fruits	1650	700	950			
15	Apricot	Dry fruits	1650	317	1333			
16	Ragi flour	Flours	65	35	30	12.5	13	15
17	Whole wheat flour	Flours	58	35	23			
18	Besan flour	Flours	152	110	42			
19	Rava soji regular	Flours	88	25	63			

20	Whole grain brown rice flour	Flours	340	55	285			
22	Multigrain flour	Flours	90	112	22			
23	Rice flour	Flours	70	55	15			
24	Moong whole	Pulses	179	120	59	20	13	15
25	Chana brown	Pulses	158	74	84			
26	Chana white	Pulses	178	102	76			
27	Ground nut	Pulses	206	120	86			
28	Horse gram	Pulses	100	64	36			
29	Rajma chitra	Pulses	230	72	158			
30	Rajma red	Pulses	210	80	130			
31	Soya bean	Pulses	90	60	30			
32	Idly rice	Rice	90	56	34	30	5	10
33	Red rice	Rice	100	57	43			
34	Basmati rice	Rice	360	80	280			
35	Capsicum	Vegetables	200	40	160			
36	Cabbage	Vegetables	70	20	50			
37	Chinese cabbage	Vegetables	144	80	64	30	5	10
38	Banana stem	Vegetables	40	10	30			
39	Beet root	Vegetables	64	18	46			
40	Cauliflower	Vegetables	72	30	42			
41	Cucumber	Vegetables	72	16	56			
42	Tomato	Vegetables	90	20	70			
43	Chow chow	Vegetables	96	24	72			
44	American sweet corn	Vegetables	120	28	92			

45	Lemon	Vegetables	145	130	15			
46	Baby corn	Vegetables	108	30	78			
47	Baby corn (Pealed)	Vegetables	216	110	106			
48	Beans	Vegetables	144	35	109			
49	Carrot	Vegetables	136	54	82			
50	Ginger	Vegetables	100	60	40			
51	Green chilies	Vegetables	200	24	176			
52	Onion	Vegetables	60	35	25			
53	Brinjal	Vegetables	100	20	80			
54	Apple	Fruits	150	120	30	20	13	15
55	Orange	Fruits	100	60	40			
56	Banana	Fruits	60	40	20			
57	Grapes	Fruits	70	45	25			
58	Pomegranate	Fruits	200	90	110			

ANNEXURE IV

Organic food brands and their origin

Brands	Country	State
Araku	India	Andhra pradesh
Arihant Traders	India	Rajasthan
Arya Organic	India	Bangalore
Baba International	India	Mumbai
Ban Choon Marketing pte Ltd	Singapore	
Bhabootmal	India	Chennai
Bioville Farms	India	Pondicherry
Bon Appetit	India	Pondicherry
Castagno	Italy	
Celnat	France	
Chaitanya	India	Aurangabad
Chamong	India	Kolkata
Destination infinity	India	Chennai
Diamond	California	
Earth Loaf	India	Karnataka
Eco buddy exports	India	Tuticorin
Ecolife Organic	India	Haryana
Ecomytra	India	Maharashtra
Eden Park	Philippines	
Emile Noel	France	
Energy Home	India	Pondicherry
Gokul	Belgaum	
Jagdamba	India	Surat
JK Sweets	India	Maharashtra
Kapol	India	Mumbai
Kleton	India	Chennai
Last Forest	India	Tamil Nadu
Makino	India	Allahabad
Maruthuvam	India	Tamil Nadu
Morarka	India	Jaipur
Olivia	London	
Organa	India	Bangalore
Organic India	India	Lucknow
Oshin	India	Pune

Pankaj & Co	India	Maharashtra
Prano	India	Rajasthan
Pro Organic	India	Karnataka
Ramesh	India	Tamil nadu
Ridhi Sidhi	India	Indore
Rostaa	India	Maharshtra
Sanjeevani	India	Uttarkhand
Sattavic	India	New Delhi
Signature Estate	India	West Bengal
Societe Naturelle	India	Delhi
Sos Organics	India	Uttarkhand
Soul Centric	India	Rajasthan
Terra Greens	India	Hyderabad
The Nandanvan Estates	India	Kodaikanal
Timbaktu	India	Andhra Pradesh
UV Enterprises	India	Bangalore
Varanashi	India	Karnataka
Vardhan	India	Ahmedabad
Vasantham	India	Karur
Vigean	France	
Vitagermine	France	
Wild Ideas	Cape town	
Zero-G	India	New delhi
24 mantra	India	Hyderabad