



CONSUMER BELIEFS AND PERCEPTIONS OF ORGANIC
FRUIT AND VEGETABLES: UNDERSTANDING ASPECTS OF
INFLUENCE AND PURCHASING PRACTICE

GERALDINE FYNN-GREEN

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Approved for final submission

Supervisors: Dr. A Giampiccoli and Prof. RB. Mason
Submitted

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Where I have used the work of others, this has been correctly referenced in the study and again referenced in the bibliography. Any research of a similar nature that has been used in the development of my research project is also referenced.

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ACKNOWLEDGEMENTS

Though only my name appears on the cover of this dissertation, a great many people have contributed to its making. I owe eternal gratitude to all those who have made this dissertation possible. Foremost, I wish to express sincere appreciation to my supervisors- Dr. Giampiccoli and Professor Mason for their continuous motivation and immense knowledge. Thank you for never giving up on me. Sincere thanks my colleagues at the Department of Hospitality and Tourism who provided support and encouragement.

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“We are not permitted to choose the frame of our destiny. But what we put into it is ours. “

Dag Hammarskjold

ABSTRACT

Introduction: The study provides insight into consumer attitudes towards organic fruit and vegetables, attempting to understand aspects of influence on purchasing practices. While ‘organic’ may be a familiar term for some, very few understand the actual meaning. Several supermarkets and fresh food markets are now selling organically produced food items and consequently provide consumers with an alternative to conventionally grown food. To date limited research has been conducted locally regarding consumer awareness pertaining to organic fruit and vegetables and how consumer perceptions affect their purchasing practices.

Aim: This study aims to explore the perceived reasons influencing purchasing practices for organic fruit and vegetables.

Method: The Fishbein and Aizen Theory of Reasoned Action (TRA) is used in the study. The Theory of Reasoned Action defines the link between the beliefs, attitudes, norms, intentions and behaviours of individuals. According to the model, a person’s behaviour is determined by his/her behavioural intention to perform and this intention is determined by the person’s attitudes and subjective norms towards the behaviour. The study was conducted at three food and craft markets around the Durban area. The food focus at these markets is fresh fruit and vegetable products which are locally and sustainably produced, seasonal, farm-fresh and occasionally organic. The three markets that were used to conduct the surveys were the Shongweni Farmers and Craft Market, Pietermaritzburg Farmers market and the Litchi Orchard market. The markets are held outdoors on a weekly basis, usually running on Saturday mornings. The Shongweni Farmers and Craft Market is situated thirty-eight kilometres out of Durban in the upper Highway area and attracts crowds from as far away as Durban and Pietermaritzburg.

Results: The regularity of organic fruit and vegetable purchases is relatively high, with the respondents making purchases either monthly (35%) or weekly (33%). This figure could be dramatically increased if the availability of organic fruit and vegetable options improved, which is confirmed by a majority of respondents (83%) agreeing to purchase more organic fruit and vegetables if it was available at their regular stores. The high levels of agreement (77%) imply that respondents are knowledgeable about the concept of organic fruit and vegetables, as well as the total organic food concept. The decision to buy organic requires that consumers prefer organic over conventional food and that the price of organic food must

be within the consumer's reservation price; organic product familiarity is therefore crucial to help shape and form positive perspectives, to assist in purchase decisions.

Conclusion: The results of the study revealed that consumers do not have proper information pertaining to organic fruit and vegetables. The subjects in this study gained knowledge from various sources namely other organic customers, their own research and family members. The highest response indicated product labels as the go-to source. The importance of consumer information and ultimately how consumers relate knowledge regarding product traits and values in order to assess a product and make their preferences is explored. Higher levels of quantitative and personal knowledge regarding organic food are positively associated to a more certain attitude towards organic food; a better understanding of it; and a more regular use of information. The study highlighted the increased interest in organically produced fruit and vegetables in the South African market. It was discovered that the actual availability (or lack thereof) of organic produce in the local market was the main obstacle to purchasing organic fruit and vegetables.

Recommendations: There is great need for a structure to be put in place that would help and guide South African consumers when making any organic purchase. South Africa has no regulatory association and farmers producing organically grown or raised products for the local market and export are certified by international standards and accreditation systems. Major local retailers have developed specific certification schemes products under their brands and subject farms to thorough inspections and audits. However, because there are no governmental requirements for certification the selection is dependent on the policy of the retailer. The focus of a government-led policy would be to protect consumers against false, misleading and unfounded claims.

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ACRONYMS

WTP	Willingness to pay
GMO, GMOs	Genetically engineered / modified organism/s and product/s
BDOCA	Bio-Dynamic & Organic Certification Authority South Africa
USDA	United States Department of Agriculture
SAOSO	South African Organic Sector organisation
OSSIC-SAOSO	Organic Sector Strategy Implementation Committee- South African Organic Sector Organisation
IFOAM	International Federation of Organic Agriculture Movements

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Today, food is everywhere. It fills magazines, television screens and, coupled with the internet, people are now more than ever before, conscious of what they eat. Fuelled by an increasingly health-conscious and environmentally aware consumer base, organic produce, which is the largest organic sector, has experienced unprecedented growth in recent years (Dettmann 2008: 1). “Organic agriculture is produced with an objective to produce healthy and quality foods without using synthetic chemical products and thus, organic agriculture not only preserves the environment but it also improves public health, bringing significant benefits both to the economy as well as to the social cohesion of rural areas” (Gracia and de Magistris 2007: 439). The introduction of organically farmed produce has made it possible for consumers to have a choice when shopping. In the majority of studies on organic consumption Misra, Huang and Ott (1991: 53) denote that many consumers have a preference for and an interest in organically produced foods. The Hartman Group’s organic and natural 2012 report summary (2012:3) found that the path the adoption of organic products is usually through produce followed by milk and eggs, as organic category purchasing becomes more habitual, consumers add organic breads and grains, cereals and high quality proteins (for example natural and organic meats) to their menus.

1.2 Focus of the study

The choice of whether to purchase organic or conventionally produced fruit and vegetables, and what influences that choice is relevant to this study, as the factors that explain consumers’ decision-making processes for organically produced fruit and vegetables differ. Consumers have increasingly had to rely on credence attributes in responding to concerns regarding the safety and freshness of fresh foods. According to Wirth, Stanton and Wiley (2011: 49), credence attributes are quality features of a product that cannot be ascertained by direct experience, so consumers cannot know with certainty if a credence attribute is actually present within a product. Numerous studies have determined that credence attributes have a positive impact on consumers’ attitudes toward a product and, consequently, influence consumers’ buying intentions (Dentoni, Glynn, Calantone and Peterson, 2009: 384-396; Wirth, Love and Palma 2007: 48-62). Therefore, it is important that correct information about this type of produce is made available for consumers to purchase with confidence. “The

interest of consumers and public institutions in organically produced foods has increased, mainly in developed countries, in response to consumers' concerns about food safety, human health and the environment" (Gracia and de Magistris 2007: 439).

1.3 Problem statement

In the overall organic market, certain organic products are more dominant than others. Fruit and vegetables are the pioneering organic products in most countries (Willer and Lernoud 2014). Studies indicate (Makatouni, 2002: 345) that organic foods are perceived as healthier compared to conventional alternatives and, at the same time, these products are perceived as rather expensive. According to Radman (2005: 263), consumers have a "preference for and an interest in organically produced foods". However, the accessibility to organic fruit and vegetables in South Africa's supermarkets is irregular and limited. Barrow (2006: 24) states that "consumers report a lack of availability, rather high price as the main obstacle to purchasing organic products". Therefore, the research problem may be summarised as what factors are constraining the purchase of organic fruit and vegetables?

1.4 Research objectives

1.4.1 Research aim

The study aims to explore the perceived reasons influencing purchasing practices for organic fruit and vegetables.

1.4.2 Research objectives

- To analyse consumers' beliefs and attitudes towards organic food;
- To identify barriers to the purchasing of organic fruit and vegetables; and
- To study the main concerns that people who purchase organic food have namely status, health and environmental concerns.

1.5 Research Hypotheses

The main hypotheses being analysed is that apart from the socio-economic traits of consumers, perceived reasons that influence purchasing practices for organic fruit and vegetables and the product attributes are likely to influence consumers' willingness to pay (WTP).

1.6 Scope of the study

1.6.1 Delimitations

Questionnaires were distributed at only three food markets in and around the Durban area.

1.6.2 Limitations

When directly administering a survey, a researcher can be predisposed towards his or her own study. To reduce this likelihood, the fieldworkers were trained to conduct and administer the questionnaires in a professional manner.

1.7 Summary of research methodology

Research methodology describes how the actual study is designed. It centres on numerous issues of the research type namely: data collection; sampling and sample size; population; and validity and reliability. The Fishbein and Aizen Theory of Reasoned Action (TRA), (Fishbein and Ajzen, 1975) will be used as the research framework for this study. TRA defines the link between the beliefs, attitudes, norms, intentions and behaviours of individuals. According to the model, a person's behaviour is determined by his/her behavioural intention to perform and this intention is determined by the person's attitudes and subjective norms towards the behaviour. The study explores how subjective norms influence consumers' intentions to buy organic food.

1.7.1 Research type

The research structure adopted in this study consists of quantitative research methods and will employ the descriptive approach. Quantitative research highlights on formalising typical questions and predetermined response options in questionnaires or surveys administered to a large numbers of respondents.

1.7.2 Study of the population and sample

1.7.2.1 Population

The study was conducted at three food and craft markets around the Durban area. The food focus at these markets is fresh fruit and vegetable products which are locally and sustainably produced, seasonal, farm-fresh and occasionally organic. The three markets that were used to conduct the surveys were the Shongweni Farmers and Craft Market, Pietermaritzburg Farmers market and the Litchi Orchard market. The markets are held outdoors on a weekly basis, usually running on Saturday mornings. The Shongweni Farmers and Craft Market is situated thirty-eight kilometres out of Durban in the upper Highway area and attracts crowds from as far afield as Durban and Pietermaritzburg.

1.7.2.2 Sample

Convenience sampling was applied as it allows the researcher to investigate assess respondents who are free at a particular time. For this study the only condition for selecting respondents was their age namely respondents 21 years or older. Non-probability sampling was used as a sampling design for the research due to the nature of the administration of the questionnaires.

1.7.2.3 Sample size

“Sample size is the selection of a subset of elements from a large group of the population; with a population of over a million, a sample size of 400 is adequate”. As this study’s population is unspecified, the sample size for this study was 250 respondents (Churchill and Iacobucci 2007: 351).

1.7.2.4 Data collection

The primary data was collected through the self-administered questionnaire. Customers were intercepted while walking around the markets and after a brief introduction invited to complete a questionnaire.

1.7.3 Validity

Validity was determined by a pilot study, inspection by both supervisors and verifying with a statistician. This was done to guarantee the concept’s validity.

1.7.4 Reliability

“A Cronbach’s Alpha Coefficient statistical test was undertaken to test the internal consistency of each factor” (Kent 2007: 141).

1.8 Definitions and Key concepts

- I. Organic: The term organic is referred to as a process claim, not a product claim. Food must be produced without the use of sewer-sludge fertilizers, most synthetic fertilizers and pesticides, genetic engineering (biotechnology), growth hormones, irradiation and antibiotics (National Organic Standards Board of the U.S. Department of Agriculture, 2000).
- II. "Organic" means produced by the specific management practices indicated in these standards which are designed to —
 - (a) Enhance biological diversity within the whole system;

- (b) Increase soil biological activity;
- (c) Maintain long term soil fertility;
- (d) Recycle wastes of plant and animal origin in order to return nutrients to the land, minimising the use of non-renewable resources and thus relying on renewable resources in locally organised agricultural systems;
- (f) Promote the healthy use of soil, water and air, as well as minimise all forms of pollution thereto that may result from agricultural practices;
- (g) Handle agricultural products with emphasis on careful processing methods in order to maintain the organic integrity and vital qualities of the product at all stages; and
- (h) become established on any existing farm through a period of conversion, the appropriate length of which is determined by site specific factors such as the history of the land and type of crops and livestock to be produced.

- III. Conventional: any material, production or processing practice that is not certified 'organic' or 'organic in conversion'.
- IV. Certification: means the procedure by which the certifier provides written assurance that a product, process or service is in conformity with these standards.
- V. Organic monitor: Organic Monitor is a specialist research, consulting & training company that focuses on global sustainable product industries.
- VI. ECOCERT: an organic certification organization, founded in France in 1991. It is based in Europe but conducts inspections in over 80 countries, making it one of the largest organic certification organizations in the world.
- VII. Afrisco: organic certification is based on International Federation of Organic Agriculture Movement Principles of Organic Agriculture. The scheme was launched in 2001 to provide an ethical and well-regulated basis for establishing the integrity of organic production systems and food products in South Africa and neighbouring countries. It has been approved as equivalent to the EU regulations.
- VIII. ECOCERT-AFRISCO: Ecocert-Afrisco is an organic certifier which provides organic certification for food, cosmetics and textiles to South African, EU, US and Japanese standards.
- IX. BCS: an independent and private controlling agency, operating since 1992, which certifies organic products worldwide in accordance with international regulations and private standards. They are based in Germany with representing agencies in 4 continents; Africa, America, Asia and Europe. They are also a member of IFOAM

(International Federation of Organic Agricultural Movements), an umbrella group for all organic certifiers worldwide.

1.9 Summary of chapters

Chapter 1- Introduction:

Chapter one is an introduction of the study. The chapter focuses on the purpose and motivation of the study aim; problem statement; research objectives; and delimitation.

Chapter 2- Literature review:

Chapter two centres on the theoretic outlook of the research and recent studies that are important to the research question. It is a review of local and international literature focusing on consumers and all the complexities relating to the willingness to purchase organic fruit and vegetables.

Chapter 3- Research Methodology:

This chapter presents the philosophical assumptions underpinning this research and explains the research design employed in this study. The formulation, administration and content of the questionnaire; population sample; data analysis; and presentation, as well as any challenges encountered are also discussed.

Chapter 4- Data Presentation:

Chapter four constitutes a presentation of the results and discusses the findings obtained from the questionnaires in this study.

Chapter 5- Conclusions and Recommendations:

Chapter five poses the conclusions and recommendations of the study that are centred around the observed findings, recommendations for imminent research are also made.

1.10 Conclusion

This chapter focused on an explanation of key conceptions used in this study. In the next chapter, an in-depth review of existing literature will be conducted in order to provide a better understanding of the concepts being discussed.

CHAPTER TWO

A LITERATURE REVIEW OF THE ORGANIC FRUIT AND VEGETABLE MOVEMENT

2.1 Introduction

The purpose of this chapter is to provide greater insight into the organic fruit and vegetable movement in South Africa. The history of organic food and more specifically, organic fruit and vegetables is discussed in order to help facilitate a better understanding of the dynamics of this type of produce. Organic fruit and vegetable farming in South Africa and the rest of the world is included in this discussion because of the a) lack of national literature and b) comparisons are made to some degree in order to gain a greater appreciation of growth levels and to help recognise any barriers to purchasing. According to Niemeyer and Lombard (2003: 2), organic farming in South Africa, as in most African countries, is still a very young industry. However, during the last few years, more and more farmers have started the process of conversion to organic farming. This chapter provides insight into consumers' beliefs and attitudes towards organic fruit and vegetables, highlighting the main concerns people who purchase organic over conventional have, namely status, health and environmental factors. Consumer willingness to pay (WTP) and the perceived reasons influencing purchasing practices will also be explored. Research relating to consumer beliefs, attitude's and purchasing practices of organically produced food has been conducted throughout the world in the United States of America (Williams & Hammitt 2000; Jolly *et al* 1989; Huang 1996); The Netherlands (Hack 1993), Germany (Von Alvensleben 1998) and New Zealand (Saunders 1999) (as cited in du Toit and Crafford 2003: 1).

According to Vindigni, Janssen and Jager (2002: 624), "there is a growing demand for organic foods driven by consumers' perceptions of the quality and safety of these foods and by the positive environmental impact of organic agricultural practices". A variety of factors that can hypothetically impact organic fruit and vegetable consumption have been recognised in important literature. Literature on consumer studies show that a customers' socio-economic attributes i.e. gender, age, income and education level etc. and also the level of consumer perceptions and awareness of product taste; price; freshness and size can impact consumers' WTP for organic food products (Owusu and Anifori 2013: 70). "Organic products are obtained by processes friendly to the environment and by cultivation techniques

that consider both the attributes of the final product and the production methods” (Chinnici, D’Amico and Pecorino 2002: 187).

Worldwide, organically produced food has gained popularity and is rapidly becoming one of the fastest growing product categories in the food industry. There is talk about the organic market moving from a niche to a mainstream market (Hamzaoui-Essoussi and Zahaf 2012: 65) with some organic product categories becoming “must-have” products (Aschemann-Witzel and Aagaard 2014: 550-558). A growing trend towards consumer preference for local, organic produce in industrialised countries in the North has only recently emerged in the global South, (Bienabe, Vermeulen and Bramley 2011: 3). Consumers in developed countries have become more demanding, more critical and more fragmented in their food choices, leading to situations where the quality differentiation of food products has become necessary in order to satisfy consumers (Grunert 2005: 371). Previous literature (Misra, Chung and Loft 1991a; Wandel and Bugge, 1997; Wilkins and Hillers, 1994 cited in Tsakiridou, Boutsouki, Zotos and Mattas 2007: 159) concludes that the introduction of organically farmed produce on the market has made it possible for consumers to have a choice when shopping. In many studies, consumers indicate that they have a preference for and an interest in organically produced foods. Whether to purchase organic or conventionally produced fruit and vegetables and what influences those choices is what is relevant to this study as the factors that explain consumers’ decision-making processes for organically produced fruit and vegetables differ.

Table 2.1: Categories of organic consumers, and relationship with consumer behaviour

Source: adapted from Bonti-Ankomah and Yiridoe (2006), modified from Davies, Titterington and Cochrane (1995).

Organic consumer groups	Key characteristics
Environmentalists	Concerned about environmental quality
Food phobics	Concerned about chemical residues in food
Healthy eaters	Consumers who, for various (medical or other) reasons, follow particular diet sets
Humanists (and welfare enthusiasts)	Concerned with ‘factory farming’ methods
Hedonists	Believe that a price premium on a product signals a better product

2.2 The history of organic farming

According to the Agribusiness marketing report (2006: 1), the term “organic” as applied to farming that was first used in the U.S. by J. I. Rodale in the year 1940. He developed his ideas based on the works of Sir Albert Howard in England, Rudolph Steiner in Germany and Dr. William Albrecht of the University of Missouri. Organic farming techniques were pioneered in the early 20th century in England, led by Lord Northbourne and a small group of farmers concerned with the effects of mechanism, fertilisers and other forms of intensification on the biological health of the soil. The pioneers of the early organic movement were motivated by a desire to reverse the perennial problems of agriculture namely erosion; soil depletion; decline of crop varieties; low quality food and livestock feed, and rural poverty. They embraced a holistic notion that the health of a nation built on agriculture is dependent on the long-term vitality of its soil. The pioneers believed that the key to healthy plants, animals and ultimately people was the diversity of life forms found in the soil (Kuepper 2010: 2). The key to successful farming was to feed the soil, not the plant (Scofield cited in Lockie, Lyon, Lawrence and Halpin 2006: 1). These workers shared an emphasis on the importance of soil organic matter for maintaining fertility, a rejection of chemical fertilizers and pesticides; and a reliance on livestock production as an essential component of the workings of the farm (Lockie, Lyon, Lawrence and Halpin 2006: 2). Therefore, according to Northbourne (1940), the word “organic” was intended and used to describe process and function within a farming system – not the chemical nature of the fertilizer materials used and not adherence to a discredited notion of plant nutrition.

Organic food was predominantly sold at conventional markets due to the fact that there were very few organic retail stores. Organic produce was generated in “small quantities, mostly on family farms or in specialty organic farms, the products were also sold through small specialty produce stores or co-operatives or sometimes by the farms themselves. Consumers buying organic foods used to be well-integrated and had their own informal (or sometimes even formal) associations as they all had a common idea, namely a strong preference for organic foods. The consumer pool was consequently small, often considered a small minority and similarly, the supplier pool was also mostly localised” (Shahidul 2013: 537). Lockie, *et al* (2006: 2) maintain that it was the counterculture of the 1960s and 1970s that brought attention to the environmental and personal impacts of agricultural chemicals and fertilisers, as well as the food scares of the early 1990s, that set the stage for the demand of certified

organic produce. One of the earliest US activities related to organic agriculture was the 1980 USDA Bergland Report and Recommendations on Organic Farming, which it concluded that organic farming was viable and warranted increased institutional support with little changing for the next couple of decades (Thilmany 2006: 2).

2.3 Global organic agriculture

According to the latest Willer and Lernoud (2011: 26) survey on certified organic agriculture worldwide, there is approximately 37.2 million hectares of organic agricultural land. The regions with the largest areas of organic agricultural land are Oceania, 12.2 million hectares, (33%) of the world's organic agricultural land; Europe 10.6 million hectares (29%); Latin America 6.9 million hectares (18.4%) followed by Asia 3.7 million hectares (10%); North America 2.8 million hectares (7.5%) and Africa 1.1 million hectares (3%).

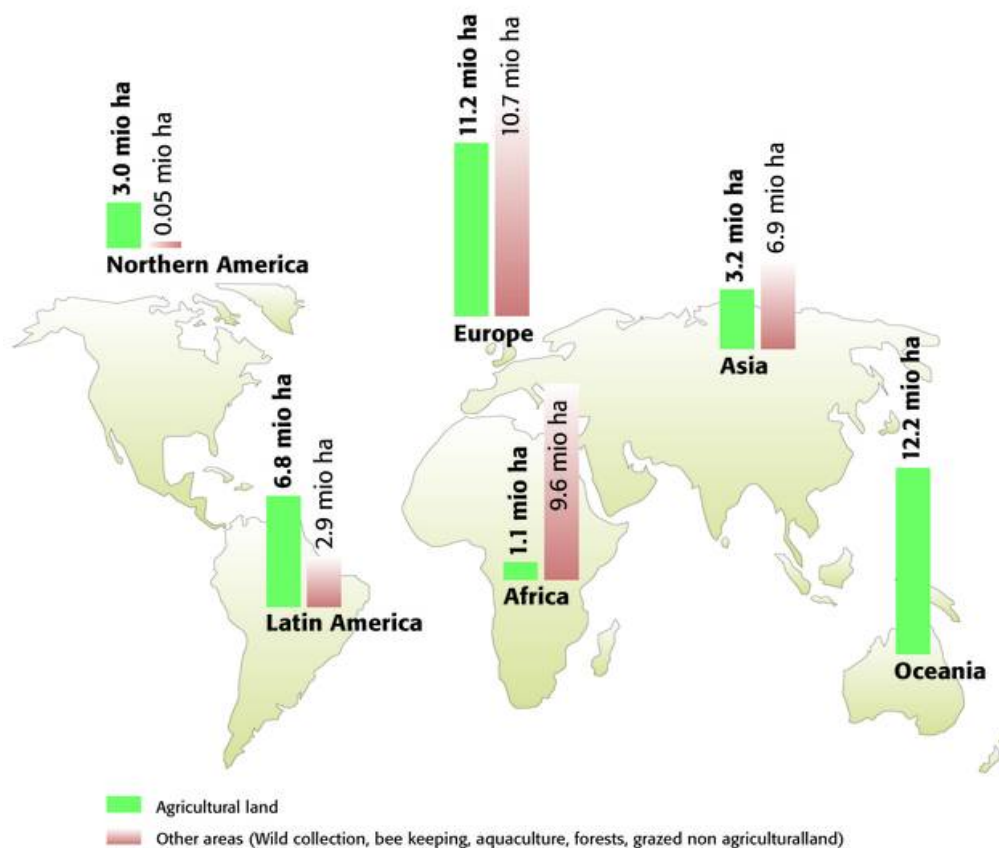


Figure 2.1 Organic agricultural lands by continent, 2012

(Source: adapted from Willer and Lernoud, 2013)

Currently, 0.9 percent of the agricultural lands of the countries covered by the survey are organic. By region, the highest shares of the total agricultural land are in Oceania (2.9%) and Europe (2.2 %). In the European Union, 5.4% of the farmland is organic. However, some countries reach far higher shares namely: Falkland Islands (35.9%); Liechtenstein (27.3 %) and Austria (19.7%). Thirty-four percent of the world's organic producers are in Asia, followed by Africa (30%) and Europe (16%). The countries with the most producers are India (547 591), Uganda (188 625) and Mexico (169 570). Permanent crops account for approximately 7% of the organic agricultural land, amounting to 2.6 million hectares. The most important permanent crops are coffee (0.6 million hectares), constituting almost one-fifth of the organic permanent cropland, followed by olives (0.5 million hectares), nuts and grapes (0.3 million hectares each); and cocoa (0.2 million hectares). In 2011 the countries with the largest organic markets were the United States, Germany and France. The most developed domestic market is in Brazil in which farmers' street markets and co-operatives have been organized for 30 years and where a balance has been kept between domestic and international organic markets (Frick and Bonn 2013: 26).

2.3.1 Regions with the largest agricultural land

2.3.1.1 Asia

The total organic agricultural area in Asia is approximately 3.7 million hectares. This is 10% of the world's organic agricultural land. In total there are 0.6 million producers, with over half a million from India. Top countries by region are China with (1.9 million hectares) and India with (1.1 million hectares). Timor-Leste has the highest proportion of organic agricultural land (almost 7%). "The market for organic products in Asia is growing at a steady rate due to the rising awareness of organic production methods this is fueling demand for organic food and beverages" (Frick and Bonn 2013: 26).

2.3.1.2 Europe

Year end 2011, 290 000 farms oversaw 10.6 million hectares of organic agricultural land in Europe. Twenty-nine percent of the world's organic land is in Europe with an increase of 0.6 million hectares from 2010. Countries with the greatest organic agricultural area are Spain (1.6 million hectares); Italy (1.1 million hectares); and Germany (1 million hectares). The largest market for organic products in 2011 was Germany with a turnover of 6.6 billion euros, followed by France (3.8 billion euros) and the UK (1.9 billion euros) (Frick and Bonn 2013: 26).

2.3.1.3 Latin America

In 2011, 315 000 producers managed 6.9 million hectares of agricultural land organically. This is 18% of the world's organic land and 1.1% of the region's agricultural land. Leading countries are Argentina; Uruguay and Brazil. Other countries within the region, including Colombia, Ecuador, Mexico and Peru, have begun developing other certification structures and marketing tactics with the intention of directly reaching conscientious consumers (Frick and Bonn 2013:26).

2.3.1.4 North America

Close to 2.8 million hectares of farmland are managed organically in North America, with nearly two million in the United States and 0.8 million in Canada representing 7 percent of the world's organic agricultural land. Organic food sales experienced a 9.4 % growth in 2011 and the organic food sector grew by 2.5 billion US dollars during 2011, with the fruit and vegetable category contributing close to 50% of the growth. The fastest growing sector was the meat, fish and poultry category, at 13% growth (Frick and Bonn 2013:26).

2.3.1.5 Oceania

Oceania includes Australia; New Zealand; the Pacific Island states including Fiji, Papua New Guinea, Tonga, Vanuatu and other smaller islands. Altogether, there were almost 14 000 producers, managing 12.2 million hectares. This constitutes 2.9% of the agricultural land in the region and 33% of the world's organic land. More than 98% of the organic land in the region is in Australia followed by New Zealand, and Samoa. The highest shares of all agricultural land are in Samoa (11.8 %), followed by Australia (2.9%) and the Solomon Islands (1.6%), (Frick and Boon 2013:30).

The ten countries with the largest areas of organic agricultural land 2012

Source: FiBL-IFOAM survey 2014

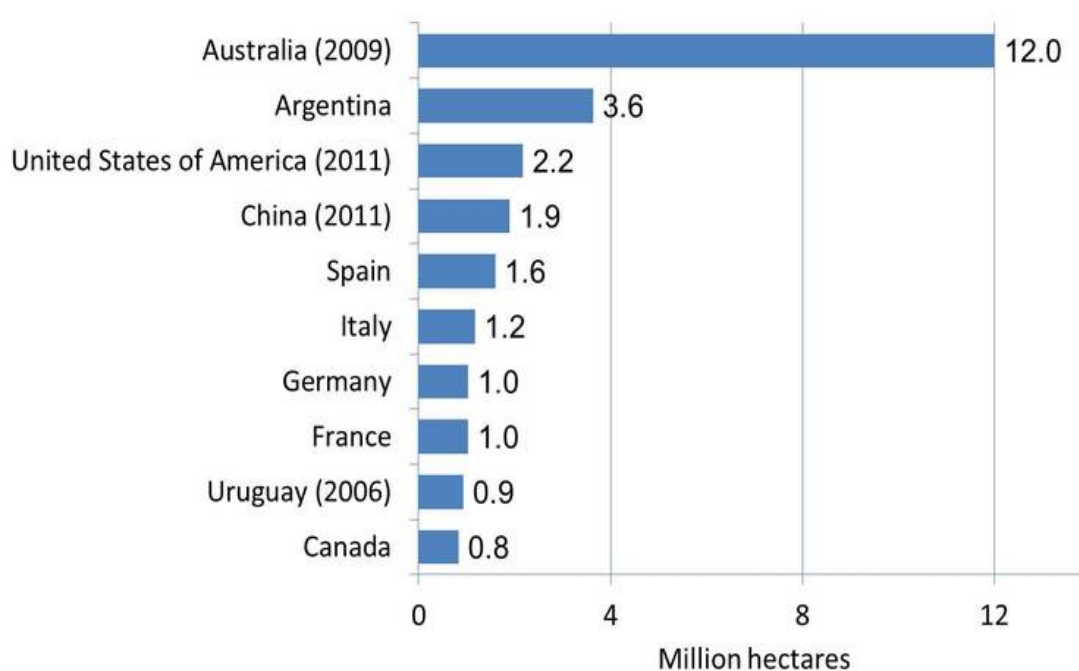


Figure 2.2 Ten countries with the largest areas of organic agricultural land, 2012

(Source: adapted from Willer and Lernoud, 2013)

2.3.2 Market growth throughout the world

The 2006 Eurobarometer data states that almost one out of ten European citizens think that consuming organic products is synonymous with a healthy diet. Cacao, quinoa, coffee, and banana are the leading organic exports for countries with tropical and mountain ecosystems. Due to the great demand overseas there has been rapid growth in the organic industry in Australia, New Zealand and the Pacific Islands with local domestic sales also growing (Frick and Boon 2013: 26).

The domestic market in Australia was valued at 1.15 billion Australian dollars in 2011-12 and in New Zealand at 360 million New Zealand dollars, according to the Organics Aotearoa New Zealand Organic 2010 -2012 market report. Most of the organically certified products from the Pacific Islands are produced for export. The important crops produced in Africa are coffee, olives, cocoa, oilseeds and cotton, with the majority of certified organic produce in Africa destined for export markets. The EU is Africa's chief market for agricultural produce (Frick and Boon 2013: 27).

The global organic food market reached a value of €45.8 billion in 2012, an increase of approximately 250% in 10 years, with 47% of the global market in Europe (2014 Organic market report 2014: 20). Latest research indicates that global sales of organic food and beverages have reached US \$64 billion in 2012 (Sahota 2012: 127).

2.4 Organic farming in Africa

In 2012, Africa had marginally more than one million hectares of certified organic agricultural land and this makes up about three percent of the world's organic agricultural land with five hundred and eighty thousand producers, which is a significant increase from 2000 when there was only fifty two thousand hectares reported (Willer and Lernoud 2014: 155). Of this grand total, South Africa had over forty three thousand hectares with two hundred and one producers in 2012 (FiBL-IFOAM 2014: 160). It must be noted that these figures are created on reports provided from the certifiers, private sector and governments and that due to the lack of any policies and procedures relating to organic production, figures are sometimes few and far between and do not reflect those producers not on certifiers lists (Willer and Lernoud 2013: 160).

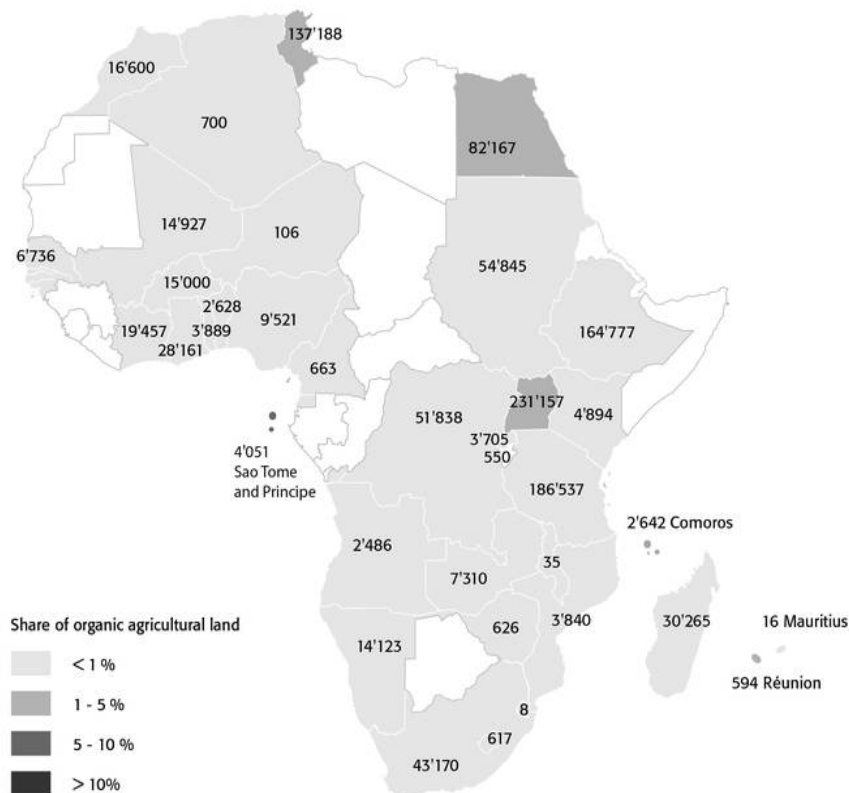


Figure 2.3 Organic agricultural lands by continent, 2012

(Source: adapted from Willer and Lernoud, 2013)

The majority of certified organic products in Africa is earmarked for export, with the majority exported to the EU, which is was previously stated as Africa’s largest market for agricultural produce and the world (Kalibwani 2004: 99). Excluding Egypt and South Africa, the African market for organic produce is very small; (Parrott, Sekyewa, Makunike and Ntambi 2006: 99). The range of certified organic products currently being produced in Africa is shown in Table 2.2 below.

Table 2.2- Certified organic products produced in Africa.

Source: adapted from Parrott, Sekyewa, Makunike and Ntambi, 2006: 99).

Product group	Countries
Fresh Vegetables	Egypt, Kenya, Madagascar, Malawi, Morocco, South Africa, Tunisia, Uganda, Zambia
Bananas	Cameroon, Ghana, Senegal, Uganda
Citrus Fruits, Grapes (including wine)	Egypt, Morocco, South Africa
Tropical fruits (fresh) Avocadoes, mangoes, pineapples, papaya etc.	Cameroon, Egypt, Ghana, Madagascar, Senegal, South Africa, Tanzania, Uganda
Dried Fruits	Algeria, Burkina Faso, Egypt, Madagascar, Morocco, Tanzania, Tunisia, Uganda
Coffee	Cameroon, Ethiopia, Kenya, Madagascar, Tanzania, Uganda
Tea	Tanzania, Uganda
Cocoa	Cameroon, Ghana, Madagascar, Tanzania, Uganda
Sugar	Madagascar, Mauritius,
Cotton	Benin, Egypt, Senegal, Tanzania, Uganda
Coconut Oil	Mozambique
Palm Oil	Ghana, Madagascar Tanzania
Olive Oil	Tunisia
Ground Nuts (peanuts)	Zambia
Tree Nuts (cashew, shea)	Kenya, Malawi, Morocco, Tanzania
Sesame	Burkina Faso, Uganda, Zambia, Zimbabwe
Herbs (culinary)	Egypt, Ethiopia, Ghana, Kenya, Madagascar, Malawi, Morocco, Mozambique, South Africa, Tunisia, Zambia, Zimbabwe
Spices (culinary)	Cameroon, Egypt, Ethiopia, Madagascar, Malawi, Mozambique, South Africa, Tanzania, Uganda, Zimbabwe
Medicinal / Therapeutic Herbs and Spices	Egypt, Morocco, Namibia, Tunisia, Zambia
Essential Oils	Madagascar, Tanzania
Honey	Algeria, Malawi, Tanzania, Tunisia, Zambia
Other Forest Products	Uganda, Zambia, Zimbabwe
Cereals	Egypt

An African study conducted by Owusa and Anifori (2013) analysed consumer's favourites for organic commodities on the market using different statistical methods. The study examined the willingness of Ghanaian consumers to pay a premium for organic food products with contingent valuation data from urban Kumasi of Ghana. The findings indicated that apart from socio-economic characteristics and consumer perceptions, product attributes tend to influence consumer preferences for organic water-melon and lettuce. Previous studies focused on the organic fruit and vegetable consumer (Michaelidou and Hassan 2010: 131); "consumers' store perception with regard to organic foods" (Naspetti and Zanolli 2004); marketing of organic food (Hill and Lynchehaun 2002); and studying the willingness to pay for organic foods (Aertsens, Mondelaers, Verbeke, Buysse and Van Huylenbroeck 2011).

2.5 Organic farming in South Africa

According to the 8th draft of the National policy (2010: 5) on organic production, very little is known regarding the history of the South African organic industry. However, the formalisation of the industry is considered to have begun with the establishment of the Organic Agriculture Association of South Africa (OAASA) in 1994. Bouagnimbeck and Gama (2014: 151) observe that the development of organic agriculture is entering a new phase, with policy makers recognising that organic agriculture has a significant role to play in addressing food insecurity, poverty and climate change in Africa. Organic production systems are similar to many traditional African production systems that have been practised for years. The Institute of Natural Resources (2008: 4) provides a figure of at least 279 certified farmers. Due to the lack of formal legislation governing organic agriculture in South Africa, the actual value and extent of organic agriculture has yet to be determined accurately.

Formal certified organic farming in South Africa is still relatively small. However, informal organic farming by smallholder and subsistence producers may feed as much as two-thirds of the population (National policy draft 2010: 4). The organic sector in South Africa is characterized by a high level of fragmentation and there is no single organization that represents the interests of the whole organic sector. The sector is now in the process of building a strong national organization with sound governance practices and a coherent vision (National policy draft 2010: 5). Several small organizations operate within the South African organic sector and participate in the process, driven by the OSSIC-SAOSO forum. In South Africa, land is divided into pastureland, rooibos production, fruit, vegetables, wine and essential oils. The main differences between organic and conventional farming that emerged

from these early developments were that no chemical fertilisers or chemical pesticides can be used on organic crops and animals raised organically have to be fed on organic or natural sources of feed (Blair 2012: 3). “In South Africa, organic food is a niche market aimed at consumers in higher wealth groups. Even though the organic food industry in South Africa is still far behind the rest of the world, the sector (local consumption and exports) has shown exceptional recent growth from R5 million in 2003 to R155 million in 2005, at least 80% of which was fresh produce” (Mead 2006: 4).

Certified organic products often fetch premium market prices and their production and marketing could alleviate food insecurity for smallholder farmers, there is a lack of adequate evidence that organic production is the best production option for smallholder farmers in developing countries (Thamaga-Chitja and Hendriks 2008: 318). Formal certified organic farming in South Africa is still relatively small. However, informal organic farming by smallholder and subsistence producers may feed as much as two-thirds of the population (National policy on organic production, 8th draft, 2006: 4). It may therefore be argued that the traditional agricultural methods used in South Africa and in other parts of the world have always been organic and have to a great extent inspired today’s modern organic agriculture. In general, farms “production levels are low due to a traditional land tenure system; a lack of physical infrastructure; a lack of credit facilities; low access to input markets; and a high level of emigration of the active population”. It is due to these imbalances that “certification procedures create high entry barriers, in particular due to asset specific investment requirements” Vermeulen and Bienabe (2007: 11). The results of a study conducted by Niemeyer and Lombard (2003) to identify the problems and potential of the conversion to organic farming in South Africa revealed that different motivating factors were responsible for farmers converting to organic farming. Protecting the environment and improving soil fertility were the two major driving forces in the decision making process with farming organically as a new challenge in life motivating more organic farmers in South Africa than in other countries like Germany, USA, and New Zealand. Problems that were identified included problem yield reductions; higher weed; pest and disease pressure; reduced livestock performance; few marketing opportunities; no premium prices; refusal of loans or insurance for organic production; and a lack of legislation, subsidies and certification bodies.

The South African consumer’s movement towards organic foods is apparent by the South Africa by the growth of the retail organic market over the past ten years, particularly with

regard to sales at Woolworths and Pick n Pay, two of South Africa's largest grocery retailers. (Bienabe and Vermeulen 2011: 10). In a study conducted locally by Barrow (2006: 14) on the South African organic market, it was found that supermarket chains have done much to promote the distribution and consumption of certified organic produce in South Africa. However, Vermeulen and Bienabe (2007: 8) determined that the organic food markets price fluctuations irregular supply and the substantial differences between producer and consumer prices are the characteristics of the organic food market.

2.6 Regulation of organic farming in South Africa

There is currently no organic food legislation, regulation or standard controlling organic agriculture production in South Africa. The South African National policy (draft) on organic production (2008: 15) states that while South Africa does not have an official inspection and certification programme for organic food products, the cosmetics, textile and other industries are using organic agricultural commodities in their production. "Consequently, products have to be certified organic by a third-party ISO 65-accredited certifier. South Africa's draft regulation on organic production within the Agricultural Products Standards Act of 1990 has been a work in progress since 2000" (Africa Research Bulletin 2006: 699).

The National Organic Standards Board (NOSB), U.S. Department of Agriculture (2000) established a national standard for the term "organic". Organic food, defined by how it cannot be made rather than how it can be made, must be produced without the use of sewer-sludge fertilizers; most synthetic fertilizers and pesticides; genetic engineering (biotechnology); growth hormones; irradiation; and antibiotics. Standards therefore define a minimum common ground but do not provide guidelines relating to what an ideal organic farming system should look like. With a few exceptions, notably Uganda, most African countries do not have data collection systems for organic farming and certified organic agriculture is relatively underdeveloped, even in comparison to other low-income continents (Kisaka-Lwalyo 2012: 8). The protection of the consumer and the control of labelling are effectively done by the retail sector in co-operation with suppliers and the various certifying bodies operating in the country. Should consumers purchasing from retailers need assurance that everything marketed or labelled as organic is organic they must follow that particular company's principles of organic production.

Current certification organizations are privately directed and forced on producers as a market entry requirement by local retailers and/or international importers (Vermeulen and Bienabe 2007: 11). They use international standards to certify, with the exception of Afrisco, a local certifier that has developed a set of IFOAM-accredited standards for local (and future international) certification. In the European Union, organic production is regulated through EC Regulations No. 2092/1991; No. 1804/1999; No. 1294/2005; and EC No. 834/2007, as well as through regulations from national associations and international institutions (Marian 2014: 13)

Many large retailers in South Africa have developed certification schemes which contribute to their image. Local retailers “Woolworths and Checkers have developed specific certification schemes for free range lamb that consist of a guarantee that the lamb labelled as “free range” or “certified natural” is naturally reared; raised according to environmentally sustainable practices; and, in the case of Checkers, originates from the Karoo or the Kalahari”; these standards supplement international safety standards (HACCP); and involve carcass traceability to farm level (Bienabe, Vermeulen and Bramley 2011: 40). This is another manner in which consumers are empowered with the knowledge to make informed decisions and not left unclear because of ambiguity. “All certified organic farmers are subjected to a comprehensive annual inspection and to frequent retailer audits. As there are no legislative requirements, any certification may be accepted and the choice depends on the policy of the retailer” (Barrow 2006: 20).

Due to the lack of organic policies in SA, there are draft regulations on organic production under the Agricultural Products Standards Act No. 119 of 1990 which are based on the EU regulations governing organic produce, as well as the International Federation of Organic Agriculture Movements (IFOAM) and Codex Alimentarius guidelines (Bienabe, Vermeulen and Bramley 2011: 40). The absence of national legislation and the consumer demand for reputable organic certification have led to the emergence of private certification schemes that impose organic standards on producers as a market entry requirement by local retailers and/or international importers (Kelly and Meterlekamp 2015). As a way forward, major steps have been undertaken by the department of Trade and Industry and SAOSO towards a policy to promulgate standards; the development of the sector as a driver of agricultural development for smallholders and participating guarantee schemes; and labelling laws were updated, making all words on labels justifiable (Callear 2012: 5). Participatory guarantee

schemes are for smallholder groups (not exporting) to monitor each other and help the farmers to avoid expensive certification procedures and bring in other farmers, who could not have otherwise sold organic (Callear 2012: 8).

2.7 Marketing organic fruit and vegetables

In the US, organic is the fastest growing food sector with organic produce considered highly important to the industry since it is consumers' primary introduction to the world of organic food (Dettmann and Dimitri 2012: 80). Consumers often enter the organic market by first purchasing organic produce and subsequently widening their purchases to include other organic products (Hartman Group, 2000, 2002). Consumer behaviour is a complex phenomenon and to succeed in a market, marketers need to know what consumers want; why they buy a particular product; where they shop; when they buy it; how often they purchase (Schiffman and Kanuk 2007: 102). Research indicates that amongst the barriers most commonly found, consumers' lack of information about the 'attributes' of organic food products is a constant (Zanoli and Naspetti 2002; Stolz, Bodini, Stolze, Hamm and Ritcher 2009: 153-182). The factors influencing organic food purchase can be split into egoistic and altruistic purchase motivators. Egoistic and altruistic considerations simultaneously predict consumers' attitudes and purchase intentions for organic products (Kareklas, Carlson and Muehling, 2014: 18-32).

Referring to Table 2.2 above, organic produce is not only made up of fruits, vegetables and meat products, but has also spread to pulses, nuts, seeds, flours, cereals, chocolate, ice cream, beers, wines, fruit juices, dairy produce and non-foods items such as cosmetics, hair care products and personal hygiene products. Hill and Lynchehaun (2002: 530) suggest that because of the high prices associated with organic food, consumers perceive organic food to be higher quality than conventionally grown food, which helps shape their perceptions of taste.

Another good way to cultivate the consumption of organic fruits and vegetables in South Africa is to market it at a certain level to consumers. From a marketing perspective, it is important to stimulate the consumption of organic food products by understanding:

- a. Why consume a certain level of organic food
- b. When and why they change their consumption pattern's; and

- c. How the consumption of organic food can be enhanced (Jager, Janssen and Vindigni 2002: 625).

The main challenge lies in broadening the appeal of organic food and establishing a broad consumer base without compromising its identity (Latacz-Lohmann, and Foster, 1997: 275-282). Barriers include consumers' reluctance to pay the higher costs, not only in money but also in time and effort, usually associated with organic products and their unwillingness to accept sacrifices in the subjectively perceived quality of the organic variant (Sadati, Sadati, Fami and Tolou 2010). Purchasers of organic foods believe that these products are superior to conventional foods in terms of quality and safety. Table 2.3 below offers a perspective of organic food price premiums, from retail store Woolworths. What is not clear from the published data on organic foods is the extent to which these consumer perceptions are correct, (Blair 2012: 7).

Table 2.3 Estimated price premiums for organic food sold at Woolworths (February 2007). Source: adapted from Bienabe, Vermeulen and Bramley, 2011: 43)

Food type:	Price premium:
Vegetables	18%*
Yoghurt	26%
Greek feta cheese	31%
Mixed processed vegetables	44%
Breakfast cereals / bars	47%
Bananas	72%
Salad dressing / mayonnaise	110%
Tea / coffee	112%

“The vegetables premium (*) has been calculated as an average of the price premiums of the whole range of vegetables available for purchase during February 2007 (onion, spring onion, beans, garlic, baby marrow, sweet corn, butternut, pumpkin)” (Bienabe *et al.* 2011: 43). According to Raynolds (2004: 4) South African price premiums for processed products are much higher compared to unprocessed food such as vegetables. “Consumers want assurance that products labelled ‘organic’ are indeed produced according to organic production methods, and producers want to know that other producers also claiming to produce organic products are competing fairly. The “organic authenticity” of a product cannot be established

by looking at the harvested product or by testing it. Rather, it is ascertained through documentation and inspection of the whole production process and the putting in place of a traceability program, so that any certification of labelling process is controllable and policed” (National Policy draft 2010: 18).

2.8 Organic fruit and vegetable consumers’ behaviour

Consumers’ behaviour involves the thoughts and feelings people experience, the actions they perform in consumption processes and includes all things from the environment that influence those thoughts, feelings and actions (Peter and Olson 2009: 5). Michaelidou and Hassan (2010: 131) examined the “factors which affect rural consumer purchases of organic and free-range produce in Scotland and found direct relationships between consumer attitudes towards organic food and factors such as food safety concerns, ethical lifestyle and price perceptions”.

In order to develop effective marketing strategies, marketers have to research, analyse and understand consumers. According to Chen (2007:1008) “an individual’s food-related personal traits are suspected of playing a moderating role in influencing personal food choice, with the increasing emphasis on understanding the consumer’s motives for the choice of food types”. South Africa is a diverse nation with an extensive range in wealth and cultural groupings in both urban and rural areas and because of the information era, South African consumers can relate to the global food environment. It is therefore critical to understand the trends shaping the world when taking a closer look at the South Africa consumer. Although the organic food industry in South Africa is still far behind the rest of the world, local consumption and exports have shown growth from R5 million in 2003 to R155 million in 2005, at least 80% of which was fresh produce (Vermeulen and Bienabe 2007:698)

Wealthier consumers are thought to be the leading target group for alternative quality foods because of the price premium related to organic products. However, less wealthy consumers tend to spend part of their income on selected luxury items (Vermeulen and Bienabe 2007: 695). The South Africa “middle class has the income, education and potential interest in alternative quality food products and could contribute to further growth in the these markets, especially for the organic food sector in South Africa” (Vermeulen and Bienabe 2007: 695).

2.8.1 Human behaviour

The study of food choice is a complex phenomenon that represents one of the most important parts of human behaviour, where several cognitive and behavioural factors can vary sharply between individuals (Babicz-Zielinska 2001: 154). “Cognition refers to the mental concepts and processes involved in thinking, understanding and interpreting a stimuli and event from the environment. From a cognitive perspective, consumer behaviour can be described as activities people engage in when selecting, purchasing and using products and services to satisfy needs and desires. These activities involve mental and emotional processes in conscious thinking processes, others are essentially automatic.” (Zanoli and Naspetti 2002: 644). Hence, consumer behaviour does not imply only reasoned action but is essentially a consequence of consumption-relevant cognitive structure- meaning that a product, old or new, forms a relationship between the consumer’s self-knowledge and his memory, and a link between him and the product is built (Grunert and Grunert 1995: 210).

On a daily basis organic products battle with conventional food options on market shelves, with the decision- making process a consumer embarks on affected by numerous fundamental qualities. “Intrinsic” characteristics are what differentiate organic products from their conventionally produced alternatives (Bonti-Ankomah and Yiridoe, 2006: 6). Reasons for buying could be grouped according to general and commodity-specific concerns. Examples of concerns include food safety, human health and environmental impact, whereas commodity attributes included taste, freshness and packaging (Yiridoe *et al.* 2005: 198). Consumers could perceive organic products as representing an environmentally friendly mode of production, as well as having certain intrinsic quality and safety characteristics (Grzelak 2011). Surveys have identified additional positive attributes that consumer associate with organic food products, which include improved taste (Davies 1995: 18), and they are better for environment (Lea and Worsley 2005: 864). “Purchasers of organic foods believe that these products are superior to conventional foods in terms of quality and safety” (Blair 2012: 1).

Certain attributes i.e. cleanliness, size, freshness and less insect damage of organic fruits and vegetables are product qualities theorised to have positive outcomes on WTP premiums (Owusua and Anifori 2013: 69). The behavioural objective based on the TPB, (Ajzen 1991: 183), which was originally grounded on the theory of reasoned action, is determined by three factors namely the attitude that the person holds toward engaging in the behaviour; the degree

of social pressure felt by the person with regard to the behaviour (the subjective norm); and the degree of control that the person feels he or she has over performing the behaviour (perceived behavioural control). The first two factors reflect the perceived desirability of performing the behaviour, while the third reflects perceptions of whether the behaviour is personally controllable or not. These three factors predict intention and the ensuing behaviour (Chen 2007: 1009). Organic “product knowledge is an important factor because it represents the only instrument that consumers have to differentiate the attributes of organic products from those of conventional ones, as well as to form positive attitudes and quality perceptions toward these products” (Gracia and de Magistris 2007: 442).

2.8.2 Group classification

Researchers Davis, Titterington and Cochrane (1995: 18) classify people who purchase organic food into four groups namely greens, people who are concerned with the environment; food phobic; those who are concerned about chemical residues in food; humanists, people who are preoccupied with factory farming methods; and hedonists, people who believe that premium products must be better and importantly taste better. Perceived healthiness, especially organic fruit and vegetables, is a limitation of quality for various consumers (Pearson, Henryks and Jones 2010: 3). In another study, Hill and Lynchehaun, (2002) found that consumers consider, for various reasons, organic food to be more nutritious. In a 2002 study conducted in Greece, it was revealed that health was not one of the main motives for purchasing organic but rather the organoleptic qualities of organic food that emerge as important driving forces in both Greece and Italy (Fotopoulos *et al.* 2003; Zanolli and Naspetti 2002). Hill and Lynchehaun (2002: 531) also allude to the fact that consumers perceive organic food to be fashionable due to the substantial media attention it has received. Research conducted in Belgium by Mondelaers, Verbeke and Van Huylenbroeck (2009: 1) maintains that health-related traits were more important than environmental traits in shaping consumer preference for organic vegetables. According to previous research, better taste and concern for animal welfare are some of the main purchasing motives for organic products, whereas the high price premium is one of the main barriers (Aertsens, Verbeke, Mondelaers, and Van Huylenbroeck 2009; Hughner *et al.* 2007).

According to previous research, better taste and concern for animal welfare are some of the main purchasing motives for organic products, whereas the high price premium is one of the

main barriers (Aertsens, Verbeke, Mondelaers, and Van Huylenbroeck, 2009; Hughner, *et al.* 2007).

Table 2.4- Summary of consumers’ main reasons for purchasing organic food alternatives in South Africa, Europe and North-America. Source: adapted form ACNielsen, 2005).

Purchase reason:	% of respondents in country / region:		
	South Africa:	Europe:	North-America:
Healthy for me	53%	41%	57%
Healthy for my children	16%	16%	19%
Better for the environment	17%	19%	11%
Kinder to animals	8%	12%	2%

The presence of an organic label was important in relation to buying intensity. Studies conducted in the USA, The Netherlands, Spain, Italy, Denmark and New Zealand suggest that habitual buyers of organically produced food are willing to pay higher premiums than consumers buying less frequently (Thompson 2000: 668). Therefore, an uninformed result is that the greater the price, the greater the expectations of quality. In the Total Food Quality Model by Brunsø, Fjord and Grunert (2002: 39), two aspects are particularly relevant for the processing of price information namely: the cue perception process, which is how consumers perceive prices (price cognition); and the price integration process, which is how consumers evaluate perceived prices.

2.8.3 Socio-demographic profiles

Govindasamy and Italia (2001: 52) proved that regardless of age and gender younger consumers paid higher prices for organic products. Liu, Zeng and Yu (2009: 1) discovered an inverted-U-shaped connection between consumer WTP and age, signifying that the WTP for additive-free foods multiplies with age but decreases as age increases beyond a threshold age. Wier, Anderson and Millock (2003: 16) state that organic food attitudes are mainly influenced by gender, age, income, level of education and the presence of children in the household. Numerous studies (Davis, Titterington Cochrane 1995: 20; Wandel and Bugge 1997: 19) indicate that women are more interested in organic than men and that they are more frequent buyers than men and overall women have a more positive attitude towards organic

food. Age can affect attitudes towards organic food- younger people may be more environmentally conscious but would be less willing to pay more due to smaller purchasing power, whereas older people might be more health conscious and therefore willing to pay an extra price for organic food (Fotopoulos and Krystallis 2002: 758). The diagram below (Figure 2.4) shows connections between subjective and objective knowledge.

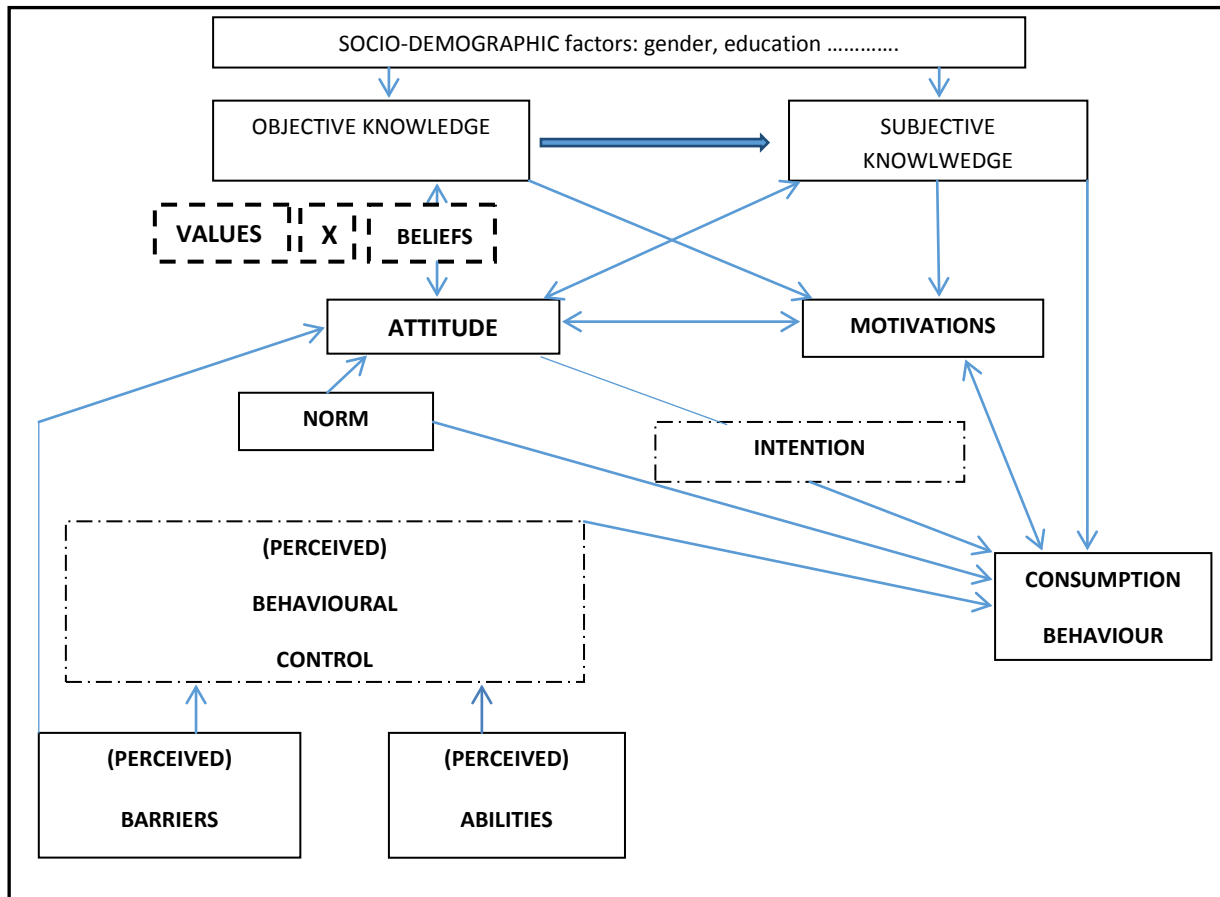


Figure 2.4- Relationship between objective and subjective knowledge concerning organic food, attitude and motivations towards organic food consumption and consumption itself. Source: adapted from Aertsens, Mondelaers, Verbeke, Buysse and Van Huylenbroeck, 2010: 1355)

2.8.4 Presence of children

In an EPOPA, study Barrow (2006: 15) found that parents of young children are becoming increasingly aware of the health risks associated with non-organic and processed / refined foods and consequently seek organically grown food, irrespective of the certification status thereof. Some qualitative studies suggest that “consumers sometimes relate feelings of good

conscience and feelings of responsibility for the well-being of one's family with organic food purchase decisions" (Makatouni 2002: 348). The presence of children affects the consumption and purchasing of organic food and is related to their age, meaning the older the children the less chance of purchasing organic food (Wier and Anderson 2003: 6).

According to Asafu-Adjaye (2000) "income variables- both higher and middle income are expected to be positively related to the WTP premiums for organic fruits and vegetables compared to conventional fruits and vegetables, in order to agree with economic theory". Voon, Ngui, and Agrawal (2011: 107) concluded that affordability would positively influence consumers' WTP for organic foods compared to conventional foods. Several studies highlight the presence of children in a household as a meaningful factor which constructively impacts consumers' organic food attitudes as well as purchasing behaviour (Fotopoulos and Krystallis 2002 and Davis *et al.* 1995). However, children's ages can be considered as a key factor, meaning that the higher the age of children in the household, the lower the propensity to buy organic food (Wier *et al.* 2003).

2.8.5 Educational background

Gracia and de Magistris's (2007: 447) study on organic food purchasing behaviour in southern Italy highlighted the fact that consumers with advanced education levels had a more knowledge on organic foods. Gracia and de Magistris (2007: 447) concluded that people with a higher education level were more likely to have positive attitudes to organic products. According to Wandel and Bugge (1997: 24) consumers that have knowledge of process methods and the production of organics and are willing to pay a considerably more for organic food. Attempts to categorise organic food consumers have been varied with studies by (Wilkins and Hillers 1994; Chinnici *et al.* 2002; O'Donovan and McCarthy 2002) finding both bad and encouraging connections between demographic variables and organic food preference. "Higher educated consumers are expected to pay higher price premiums for organic foods since they tend to appreciate issues of preventive health care through the consumption of chemically-free food products better than consumers with no education" (Piyasiri and Ariyawardana 2002: 117). Krystallis and Chryssohoidis (2005: 339) report that in their study on consumers' willingness to pay for organic food and the factors that affect it and variation per organic product type along with organoleptic characteristics and prices, consumers' socio-demographic profiles are not found to constitute powerful determinants of organic purchase.

2.8.6 Marketing organic fruit and vegetables

“From a marketing perspective, it is important to understand why consumers consume a certain level of organic food; when they change their consumption pattern; what their motives are, how the consumption of organic food consumption can be enhanced” (Vindiger *et al.* 2002: 625). Amongst the factors that seem to affect consumers’ willingness to pay are specific factors like quality, trust in the certification of the product and brand name (Krystallis *et al.* 2005: 339). As previously mentioned, there is no local certification authority in SA. According to Vindiger *et al.* (2002: 625), a general understanding of organic as well as globally recognised standards will provide a significant reassurance for consumers to get what they expect. Consequently, “consumer’s lack of knowledge concerning organic food is an important factor slowing down growth” (Aertsens *et al.* 2011: 1353).

Magnusson *et al.* (2001) found that another difficulty in the growth of organic food purchasing and consumption is that consumers are content with conventional produce. “However, there is a small but growing interest not only for organic food but also for free-range produce and food purchased at local markets” (Vermeulen and Bienabe 2007: 7). Common obstacles in marketing literature highlight consumers’ reluctance to pay and other barriers to organic food consumption, including consumers’ reluctance to pay the higher costs, not only in money but also in time and effort, usually associated with organic products and their unwillingness to accept sacrifices in the subjectively perceived quality of the organic variant (Vindigni *et al.* 2002; Lea and Worsley 2005).

2.9 Willingness to pay

Aertsens *et al.* (2010: 1354) found that the strongest perceived barriers were overly high prices and the lack of availability, with objective and subjective knowledge regarding organic food production showing a positive correlation. The same study also revealed that “higher levels of objective and subjective knowledge concerning organic food are positively related to a more positive attitude towards organic food; greater experience of it; and a more frequent use of information”. Most consumers have a positive attitude towards buying organic products but, they are often constrained by important barriers (Messina 2003: 644). “Consumers’ lack of knowledge concerning organic food is an important factor slowing down growth” (Aertsens *et al.* 2011: 1353). The hypothesis is that consumer’s link product attributes and results to evaluate a product and make choices. Factors that can influence

organic food consumption have been identified in relevant literature and it may be contended that the price issue and willingness to pay is an important factor with regard to organic purchases. Sustainable products are always seen as the more expensive option (Market and Opinion Research International Limited (MORI) 2003). It is suggested that the connection between environmental benefits and health should be intensified in order to increase awareness amongst consumers (Magnusson *et al.* 2001).

In a paper on food safety and consumers' willingness to pay for labelled beef Angulo, Gil and Tamburo (2003: 373) state that amongst the factors that affect willingness to pay for organic foods were consumers' use of food labels; experience with the product; and the prices that consumers pay. Krystallis and Chryssohoidis (2005: 322) found that consumers purchased organic products because they perceived these products as higher quality, safer foods that they could trust more than conventionally grown products. However, results from a study by Liu, Zeng and Yu (2009: 6-15) relating to WTP for food safety in Beijing revealed that income in relation to consumer WTP for food safety food appears to be mixed. While consumer WTP for food safety is adversely connected with the marginal value of money, consumer WTP is expected to increase as the income of the consumer increases. "Organic product knowledge is an important factor because it represents the only instrument that consumers have to differentiate the attributes of organic products from those of conventional ones, and to form positive attitudes and quality perceptions toward these products" (Gracia and de Magistris 2007: 442). In a study exploring the gap between attitudes and behaviour, Padel and Foster (2005: 623) reveal that price is not an absolute barrier but is only one factor in a complex decision-making process in which consumers consider price in the context of disposable income and "value for money" and need to justify a price premium.

2.9.1 Price premium

Numerous claims are made about the goodness of organic food in order to justify the premium price that consumers have to pay (Fillion and Arazi 2002: 153) and considerable price premium differences even between neighbouring countries reflects that organic market transparency is particularly poor (Hamm *et al.* 2002: 4). Many consumers may use the price of an organic product as a determining factor, for example if it costs more it will taste better, last longer or is of superior quality. Price, trust and quality in terms of taste are reported as the main impediments in the expansion of organics (Tsakiridou *et al.* 2008). Ureña, Bernabeu and Olmeda (2008: 20) found that organic customers are willing to pay an approximately 10% premium for organic food, with an average of 9.5% by women and 11.4% by men. Regular consumers would pay a slightly higher of premium around 15%; an average of 12% by women and 18% by men. Retailers should take the price that consumers are WTP and the specific food product/s that they would like to purchase into account when formulating marketing strategies (duToit and Crafford 2003: 4). According to the Total Food Quality Model, the intention to buy a certain product is co-determined by perceived costs and expected quality (Brunsnø *et al.* 2002). Because price remains one of the main barriers for consumers in purchasing organic food which is somewhat more expensive than most other food products, consumer willingness to pay would increase if organic food prices were somewhat adjusted with the existing gap between conventional and organic food prices being reduced to increase consumption (Gil *et al.* 2000: 222). The focus should therefore be on how to stimulate the consumption of organic food products.

2.9.2 Knowledge of products

The gap between food production and consumption, i.e. between food producers and consumers, has contributed to consumers' lack of trust in the various actors of the food sector and food production processes (Marian 2014: 2). Pouratashi (2012: 374) found that consumer attitude towards using organic products was at neutral and favourable levels. Consumers' concern with how food products are produced has increased their interest in "natural" production methods, which has stimulated the development and sale of GMO-free, animal welfare-conscious and organic products (Grunert, Bredahl, and Brunsnø 2004).

2.9.3 Barriers to effective purchasing

“South Africa’s growing middle class has the income, education and potential interest in alternative quality food products and could contribute to further growth in the these markets, thus constituting a significant target group for large retailers” (Vermeulen and Bienabe 2007: 7). In South Africa, organic food is a niche market aimed at consumers in higher wealth groups. However, there is a movement amongst less wealthy consumers to spend on selected luxury items within their budget constraints (Vermeulen *et al.* 2007:10). While the South African organic food industry trails behind the rest of the world, the local consumption and export sector has shown remarkable development from R5 million in 2003 to R155 million in 2005, of which at least 80% was fresh produce (Mead 2006). In their study on the theoretical framework of consumer decision-making regarding organic food consumption (Vindigni *et al.* 2002: 625) found that the most common barriers in marketing literature include consumer reluctance to pay higher costs both in terms of money and in time and effort, and their scepticism regarding the higher quality of these products. Roddy, Cowan and Hutchinson (1994) discuss a lack of unique value in the eyes of consumers whilst, Worner and Meier-Ploeger (1999) doubt the product guarantee, lack of promotion and unclear declarations of the organic status. However, the main consensus in terms of obstacles to buying organic food seem to be the existing price difference and the lack of availability of these products (Lea and Worsley 2005: 862).

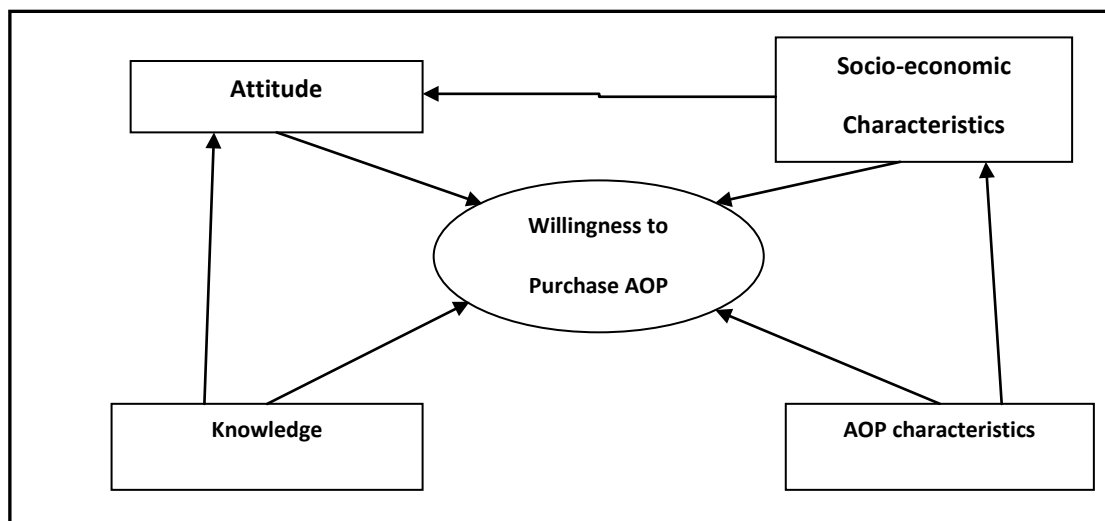


Figure 2.5- Factors affecting consumers’ willingness to purchase.

Source: adapted from Pouratashi, 2012: 373).

2.10 Conclusion

The literature discussed in this chapter highlights the fact that organic production is supported by various rules and regulations which directly and indirectly shape consumers' perceptions of organic fruit and vegetables. The literature provides insight into consumers' beliefs and attitudes towards organic fruit and vegetables highlighting the main concerns that people who purchase organic food have; namely status, health and environment. Consumer willingness to pay (WTP) and perceived reasons influencing purchasing practices were explored. Despite the fact that the literature on organic food is vast, there are still research gaps to be filled and studies to be carried out to pave the way for further developments in the organic food market in general and, in this case, the organic fruit and vegetable market in particular.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter reviewed local and international literature focusing on consumers and all the complexities relating to the willingness to purchase organic fruit and vegetables. The purpose of this chapter is to present the philosophical assumptions underpinning this research and to describe the research design employed in this study. The formulation, administration and content of the questionnaire; population sample; data analysis and presentation; and any challenges encountered are discussed. This chapter's aim is to describe how the study was conducted and the methods used to address the research objectives.

3.2 Research problem, aims and objectives:

3.2.1 Research Problem:

In many studies (Misra *et al.* 1991; Wandel and Bugge 1997; Wilkins and Hillers 1994 in Tsakiridou, Boutsouki, Zotos and Mattas 2008) “consumers indicate that they have a preference for and an interest in organically produced foods”. Waarts *et al.* (2009) emphasize the fact that in South Africa availability of organic produce in local supermarkets is intermittent and limited, and local consumers report that the main hurdle to purchasing organic products is a lack of availability, and not high price (ACNielsen, 2005). Thus the research problem can be summarised as “What are the factors that are constraining the purchase of organic produce?”

3.2.2 Research Aim:

This study explores the perceived reasons that influence purchasing practices for organic fruit and vegetables.

3.2.3 Research objectives:

To achieve the research aim, three objectives were set:

- To analyse consumers' beliefs and attitudes towards organic food;
- To identify the barriers to purchasing of organic fruit and vegetables; and
- To study the main concerns that people who purchase organic food have namely status, health and environment

Fishbein and Aizen's theory of reasoned action (TRA) (1975) was used as a base in the methodology of the study TRA defines the link between beliefs, attitudes, norms, intentions and behaviours of individuals and was vital to the study. According to the model, a person's behaviour is determined by his/her behavioural intention to perform and this intention is determined by the person's attitudes and subjective norms towards the behaviour.

3.3 Research design

Burns and Grove (2003: 195) define research design as "a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings". In this study, a quantitative research approach employing the survey research method for data collection was used. Aliaga and Gunderson (2002) describe quantitative research methods as "explaining a phenomenon by collecting quantitative (numerical) data that are analysed using mathematically-based methods such as statistics".

3.3.1 Quantitative research

Quantitative research is a formal, objective, systematic process in which numerical data is used to obtain information about the world. This research method is used:

- to describe variables;
- to examine relationships amongst variables; and
- to determine cause-and-effect interactions between variables (Burns and Grove 2005: 23).

The quantitative approach examines data to recognise and validate relationships amongst variables (Hair *et al.* 2007: 44). The advantage is that its inter-subjective meaning "the same result or same conclusion that comes from different individuals following the same procedure"(Zikmund *et al.* 2010: 135).

3.3.2 Descriptive research

Descriptive research is a type of research method in which the major emphasis is on determining the frequency with which something occurs, or the extent to which two variables vary and it may be conducted in many settings (Cooper and Schindler 2006). The data collected is often quantitative and statistical techniques are usually used to summarise the information (Collis and Hussey 2003: 58-62). A descriptive study is undertaken in order to discover and be able to describe the characteristics of the variables of interest in a situation

(Sekaran and Bougie 2010: 101); descriptive research is concerned with learning who, what, where, when or how (Cooper and Schindler 2006).

The main focus of the descriptive research method is:

- To describe the characteristics of certain groups;
- To determine the proportion of people who behave in a certain way;
- To make specific predictions; and
- To determine relationships between variables.

There are two types of descriptive research methods namely: cross-sectional and longitudinal. For the purpose of this study, cross-sectional descriptive research will be conducted as it involves drawing a sample of elements from the population of interest, and the characteristics of the elements are measured only once.

3.4 The Research Instrument

The research instrument comprised of 39 items, with a level of measurement at a nominal or an ordinal level. Questions and statements used in this research paper were in part derived from numerous journals whose topic was of a similar nature- Marian (2014); Du Toit and Crafford (2003); Bonti-Ankomah and Yiridoe (2006). The questionnaire was divided into 5 sections which measured various themes as illustrated below:

Section A: Biographical Data

Section B1: (General) Availability

Section B2: Consumer knowledge (of the term organic)

Section B3: Subjective norms

Section B4: Reasons for not purchasing organic food

Section B5: Sources of information on organic food

3.5 Population

Population refers to the entire group of people, events or things of interest that a researcher wishes to investigate (Sekaran and Bougie 2010: 240). The target population of this study is consumers who purchase fresh fruit and vegetable, regardless of gender; marital status; education level; level of income and number of children in a household. Customers at three food and craft markets around the Durban and upper highway area were asked to participate

in the study. The food focus at these markets is fresh fruit and vegetable products which are locally and sustainably produced, seasonal, farm-fresh and occasionally organic. The three markets that were used to conduct the surveys were the Shongweni Farmers and Craft Market, Pietermaritzburg Farmers market and the Litchi Orchard market. The markets are held outdoors on a weekly basis, usually running on Saturday mornings. The Shongweni Farmers and Craft Market is situated thirty-eight kilometres out of Durban in the upper Highway area and attracts crowds from as far afield as Durban and Pietermaritzburg. The Pietermaritzburg Farmers market is situated ninety kilometres from Durban and the Litchi Orchard market is forty-one kilometres up the north coast of Durban in the Salt Rock area. Visitors to these markets can reasonably be assumed to be people who are interested in and purchase fresh fruit and vegetables. Previous studies on the organic food market vary in the level of emphasis that they place on socio-economic variables versus product attributes- (Onyango, Hallman and Bellows 2007; Govindasamy and Italia 1991: 51).

3.6 Sample

According to Zikmund *et al.* (2010) “sampling refers to any procedure that draws conclusions based on the measurement of a portion of the population” with Sekaran (2003:286) concurring that “a reliable and valid sample should enable us to generalize the findings from the sample to the population under investigation”. Convenience sampling means “the sampling procedure of obtaining those people or units that is most conveniently available” (Zikmund *et al.* 2010: 369). Therefore, convenience sampling matched the purpose of the study perfectly. In this study the only condition for selecting respondents was their age. Respondents were 21 years or older. Non-probability sampling was used as a sampling design of the research due to the nature of the administration of the questionnaires. This method allows a larger amount of completed questionnaires to be obtained faster and efficiently (Zikmund *et al.* 2010). “A reliable and valid sample should enable us to generalize the findings from the sample to the population under investigation. In other words, the sample statistics should be reliable estimates and reflect the population parameters as closely as possible within a narrow margin of error” (Sekaran 2003:286). A total of 280 customers were issued with questionnaires handed out by the researcher and the field workers- this total number met the requirements as per Roscoe (1975) cited by Sekaran (2003:295) who states that: a.) Sample sizes larger than 30 and less than 500 are appropriate for most research, b.) Where samples are to be broken down into subsamples, a minimum sample size of 30 for each category is necessary.

3.7 Instrument design and administration

3.7.1 Questionnaire development

A self-administered questionnaire was used in this study and is defined as “a survey in which the respondent takes the responsibility for reading and answering the questions” (Zikmund *et al.* 2010: 219). The questionnaire for this study was developed based on the literature review as well as adaptations from Azjen and Fischbein’s (1980) theories on attitude towards behaviour, subjective norms and behavioural intention. The questions were formulated from other studies based on consumer perceptions and organic food. Respondents were asked questions which investigate their level of certainty about their knowledge about organics. These questions were adapted from (Grzelak 2011).

A five-point Likert scale with response categories ranging from “strongly disagree (1)” to “strongly agree (5)” accompanied by various statements was used. Likert-type or frequency scales use fixed choice response formats and are designed to measure attitudes or opinions and ultimately measure levels of agreement /disagreement (Bowling 1997; Burns and Grove 1997). The statements and questions were designed to avoid leading statements and words with double meaning. Throughout the entire questionnaire, no definition of organic or organic foods was given, due to the fact that the researcher wanted to explore consumers' responses to the term `organic`. A measure for organic food buying frequency was also included into the questionnaire in order to explore the organic food buying behaviour. The measure was adapted from a Finnish study (Tarkiainen and Sundqvist 2005: 808-822) on the subjective norms, attitudes and intentions of customers buying organic food.

The initial part of the questionnaire included an information and informed consent letter introducing the researcher, title of the research topic, an explanation of the study purpose and contact details of the researcher and research supervisor. The actual questionnaire contained the questions and consisted of statements regarding different variables. Questions 1- 5 were based on socio-economic characteristics (i.e. age, education level, income and lifestyle) and the remainder were statements regarding consumer perceptions and frequency of consumption of organic products, namely:

- frequency of consumption of organics,
- ease of access to organic fruit and vegetables,

- willingness to pay for organic products and
- socio-demographic characteristics importance of price
- consumer understanding of the term organic
- environmental behaviour
- perception of attitudes of others

According to Magnusson *et al.* (2001: 209), most research on consumer attitudes to organic food lacks an explicit theoretical basis. In their study of attitudes towards organic food amongst Swedish consumers, Magnusson *et al.* (2001) say according to Ajzen and Fishbein (1980) that the attitude towards a behaviour refers firstly to the extent to which a person has a favourable/unfavourable evaluation or appraisal of the consequences of the behaviour in question and secondly to the subjective norm and concerns over perceived social pressure to perform or not to perform the behaviour. The third determinant is the proportion of perceived behavioural control, which refers to the perceived ease/difficulty in performing the behaviour.

The questionnaire was tested for its validity and reliability. Cronbach's alpha coefficient was estimated for each question in the questionnaire in order to establish its reliability. Questionnaire pre-testing and pilot testing with a sample of 30 consumers with different socio-demographic characteristics showed the questionnaire to be clear and understandable.

3.7.2 Data collection

The primary data was collected through the self-administered questionnaire. Customers were approached while walking around the market and, after a brief introduction, invited to complete a questionnaire. Field workers were informed of the correct manner in which to conduct themselves during the completion of the questionnaire. A few difficulties arose during the data collection process due to the time of year that the questionnaires were administered. Field work started in October 2013, which was a very rainy season that year. Due to the fact that all markets took place only over the weekend, time was wasted waiting for the following week to continue trying to fill the sample. The Pietermaritzburg and Shongweni markets were held outdoors with no overhead covering. Due to this fact, on overcast or rainy days these markets, were either very empty or sometimes cancelled. If it was raining and customers were at the market very few were interested in completing a

questionnaire, opting to quickly purchase their goods and go home. This resulted in a relatively long and lengthy data collection process that took five months to complete.

3.7.3 Data analysis

The questionnaires were analysed using the SPSS (Statistical Package for the Social Sciences) software program version 21.0 in order to perform data entry, analysis and to create tables and graphs. These tables and figures appropriate figures were useful as they could be read quickly and were particularly helpful when presenting information.

The primary data will be analysed to investigate key issues such as:

1. Consumer perceptions relating to organic fruit and vegetables.
2. Base of consumer perceptions.
3. Perceptions and other socio-economic factors that can influence respondents purchase practices of organically produced fruit and vegetables (as opposed to conventionally produced produce).

3.8 Validity and Reliability

3.8.1 Validity

Validity is described as the degree to which a research study measures what it intends to measure and content validity refers to the extent to which an instrument represents the factors being studied (Cooper and Schindler 2006). The questions were based on information gathered from the literature review; and similar studies. Content validity was further ensured by consistency in the administration of the questionnaires. The surveys were completed in the presence of the researcher or field worker and simple and unambiguous words and phrases were used so customers could easily understand the questions and did not need to seek clarity from a field worker or the researcher, who may have used certain words that jeopardised the customers' answers. Pilot testing with a sample of 30 consumers was conducted to ensure that the questionnaire was clear and understandable.

3.8.2 Reliability

Collis and Hussey (2003) define reliability as being able to obtain the same results if the research was to be repeated by another researcher, meaning the degree to which an assessment tool produces stable and consistent results. Cooper and Schindler (2006 :) refer to

reliability as the accuracy and precision of a measurement procedure. Reliability was assessed via Cronbach's alpha coefficient to be 0.7 (with a reference for 0.7).

3.9 Conclusion

This chapter covered the research methodology in terms of the appropriate and relevant application of the various techniques in accordance with the fundamental principles and practices of research methodology. Chapter four will present the research findings and the interpretation of the results from the survey.

CHAPTER FOUR

DATA PRESENTATION

4.1 Introduction

This study provides insight into consumer attitudes towards organic fruit and vegetables by way of the questionnaires trying to understand aspects that influence purchasing practices. This chapter presents the results and discusses the findings obtained from the survey. Questionnaires were the primary data collection tool and distributed to customers in order to determine their perception of the purchasing of organic fruit and vegetables. The data collected from the responses was analysed with SPSS version 21.0 and the results are present the descriptive statistics in the form of graphs, cross tabulations and other figures for the qualitative data that was collected. The results of the data analysis will be presented in this chapter using, amongst others, graphs and cross tabulations. A summation of the research findings are provided within the chapter.

4.2 Biographical data

The study's sample comprised of people who visit food markets in and around Durban, Kwa Zulu Natal. The sample differs in terms of age, educational and financial backgrounds. However, the commonality involves general focus on food. By studying this sample, the researcher is able to derive conclusions that will apply to the entire population. This section summarises the biographical characteristics of the respondents. The importance of socio-demographic factors has been widely discussed in various studies summarized in the literature review. In this study, the relationship between consumer attitudes and behaviour towards organics is explored. Specific demographic characteristics such as gender, education level, age, income, and household size are examined in order to identify the extent to which organics attitudes and consumption of organics are related to demographics.

4.3 Reliability Statistics

The success of any study is dependent upon the research's reliability and validity. According to Welman *et al.* (2005: 182), an internal consistency method can be employed to determine the reliability of a measuring instrument. Reliability is computed by taking several measurements on the same subjects. A reliability coefficient of 0.70 or higher is considered

“acceptable” (Andrew, Pederson and McEvoy 2011: 202). Table 4.1 below reflects the Cronbach’s alpha score for all the items that constituted the questionnaire.

The overall reliability score of 0.684 is close to the acceptable recommended value of 0.70. The value for each section exceeds or is close to the recommended value of 0.70.

Table 4.1-Cronbach’s Alpha score

		Number of Items	Cronbach's Alpha
Section B1	(General) Availability	2 of 2	-
Section B2	Consumer knowledge (of the term organic)	15 of 15	.811
Section B3	Subjective norms	4 of 4	.675
Section B4	Reasons for not purchasing organic food	3 of 3	.785
Section B5	Sources of information on organic food	9 of 9	.887
Overall		31 of 33	.684

The high totals amongst the sections indicate a high (overall) internal degree of acceptable and consistent reliability for the research scale. All of the themes (sub-sections) have values that exceed or are very close to the acceptable standard, except for the first (B1). Amongst the reasons for this is that the construct is newly developed and section B1 had a minimum number of factors. Each matrix table is preceded by a table that reflects the results of the Kaiser-Meyer-Olkin Measure and Bartlett's Test. The requirement is that the Kaiser-Meyer-Olkin Measure of Sampling Adequacy should be greater than 0.50 and Bartlett's Test of Sphericity less than 0.05.

4.4 Exploratory Factor Analysis

“Factor analysis is a statistical technique whose main goal is data reduction. A typical use of factor analysis is in survey research where a researcher wishes to represent a number of questions with a small number of hypothetical factors.

- The principle component analysis was used as the extraction method and the rotation method was Varimax with Kaiser Normalization. This is an orthogonal rotation method that minimizes the number of variables that have high loadings on each factor. It simplifies the interpretation of the factors.
- Factor analysis/loading shows inter-correlations between variables.

Items of questions that loaded similarly imply measurement along a Similar factor. An examination of the content of items loading at or above 0.5 (and using the higher or highest loading in instances where items cross-loaded at greater than this value) effectively measured along the various components”. (Dorasamy and Balkaran 2013: 271-273)

In all instances, the conditions are satisfied, which allows for the factor analysis procedure. Certain components are divided into finer components. This is explained below in the rotated component matrix. It is noted that the variables that constituted two sub-sections of Section B loaded perfectly along one factor each (B3 and B4). This means that the statements (variables) that constituted this component perfectly measured the component. That is, the component measured what it was meant to measure. The remaining sub-themes split along five (B2) and two (B5) components respectively. This implies that respondents identified certain aspects of the sub-themes as belonging to other sub-sections.

Table 4.2: Consumer knowledge of the term organic (B2)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.791
Approx. Chi-Square	840.628
Bartlett's Test of Sphericity Df	105
Sig.	.000

Table 4.3 below features the measure of sampling adequacy for each section. The closer the total is to 1.0, the more useful the data. Note that only those figures above .500 are highlighted. Each colour represents a level on the Likert scale: 1- Strongly agree; 2- Agree; 3- Neither agree nor disagree; 4- Disagree; and 5- Strongly disagree. Each number represents the correlation between the item and the un-rotated factor (e.g. the correlation between ‘Adequate information regarding organic fruit and vegetable for me to make an informed purchase’ and component 5 is 0.821.) These correlations can help formulate an interpretation of the factors or components.

**Table 4.3: Consumer knowledge
Rotated Component Matrix (B2)**

	Component				
	1	2	3	4	5
There is adequate information regarding organic fruit & vegetables for me to make an informed purchase.	-.071	-.018	.050	.014	.821
I choose certain food items because I am concerned with chemical residues in my food.	.744	.140	.089	.062	-.212
I buy certain food items because I am concerned about the environment.	.810	.184	-.043	.181	-.038
I believe organic food options taste better.	.763	.057	.298	-.013	.164
I purchase food according to my budget.	.136	.054	-.071	.829	.153
Organic food is food that is not canned or frozen.	.503	.403	-.341	-.010	.421
Organic food is food grown without chemicals.	.167	.827	.182	.233	-.055
Organic food is food that has no foreign genes inserted into their genetic code.	.165	.823	.098	.085	-.118
The term 'organic food' applies broadly to foods that are minimally processed and free of preservatives.	.126	.600	.102	-.026	.383
Organic fruit and vegetables are healthier than conventional fruit & vegetables.	.677	.140	.197	.106	-.086
Organic fruit & vegetables are tastier than conventional fruit & vegetables.	.665	.091	.408	.104	.038
Organic fruit & vegetables do not contain any pesticides.	.172	.218	.293	.734	-.092
Growing organic fruit & vegetables is better for the environment.	.342	.147	.799	.071	-.001
Organic farming is environmentally friendly.	.261	.206	.810	.063	.153
Organic food is modern and trendy.	-.171	.000	.393	.310	.480

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

4.5 Frequency of purchase

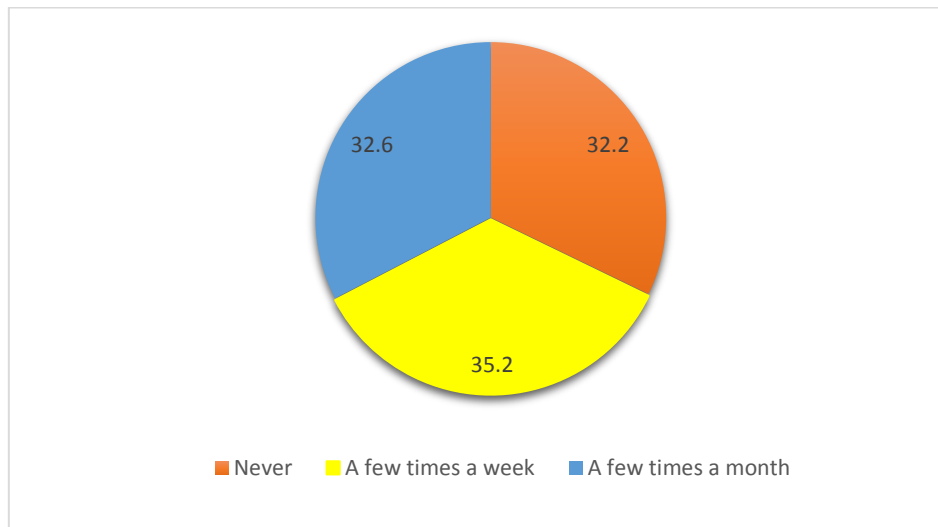


Figure 4.1 Frequency of organic fruit and vegetable purchases.

The regularity of organic fruit and vegetable purchases is relatively high with of the respondents making purchase either monthly or weekly. This figure could be dramatically increased if the availability of organic fruit and vegetable options improved which is confirmed by results in Figure 4.2 below. According to Islam (2013: 543), people’s preference for organic foods can be measured from their actual buying behaviour. “There is an increasing emphasis on understanding the consumer’s motives for the choice of food types as an individual’s food-related personal traits are suspected of playing a moderating role in influencing personal food choice” Chen (2007: 1008). Figures from Thom and Conradie’s (2012: 5) study indicates that between 2003 and 2005, Woolworths’ sales of organic foods went up by more than 50% each year; while in 2008, Pick n Pay’s organic sales grew by 62% in one year. It must be noted that while these figures include all organic products and are not specific to organic fruit and vegetables, which is the main focus of this particular study. Such increases are significant because they relate to the top retailers in South Africa (Thom and Conradie 2012: 5) This noticeably indicates that local consumers’ food buying behaviors are increasingly affected by products’ organic nature (Barrow 2006; Waarts *et al.* 2009).

4.6 Section A- Biographical data

This section summarises the biographical characteristics of respondents.

4.6.1 Demographics

4.6.1.1 Age

Table 4.4 - Age distribution by frequency of organic food purchase

		How often do you buy organic fruit & vegetables?			Total
		Never	A few times a week	A few times a month	
21-30	Count	25	22	11	58
	% within Age (years)	43.1%	37.9%	19.0%	100.0%
	% within How often do you buy organic fruit & vegetables?	33.3%	26.8%	14.7%	25.0%
	% of Total	10.8%	9.5%	4.7%	25.0%
31-40	Count	25	20	20	65
	% within Age (years)	38.5%	30.8%	30.8%	100.0%
	% within How often do you buy organic fruit & vegetables?	33.3%	24.4%	26.7%	28.0%
	% of Total	10.8%	8.6%	8.6%	28.0%
41-50	Count	13	16	27	56
	% within Age (years)	23.2%	28.6%	48.2%	100.0%
	% within How often do you buy organic fruit & vegetables?	17.3%	19.5%	36.0%	24.1%
	% of Total	5.6%	6.9%	11.6%	24.1%
51-60	Count	7	17	9	33
	% within Age (years)	21.2%	51.5%	27.3%	100.0%
	% within How often do you buy organic fruit & vegetables?	9.3%	20.7%	12.0%	14.2%
	% of Total	3.0%	7.3%	3.9%	14.2%
>60	Count	5	7	8	20
	% within Age (years)	25.0%	35.0%	40.0%	100.0%
	% within How often do you buy organic fruit & vegetables?	6.7%	8.5%	10.7%	8.6%
	% of Total	2.2%	3.0%	3.4%	8.6%
Total	Count	75	82	75	232
	% within Age (years)	32.3%	35.3%	32.3%	100.0%
	% within How often do you buy organic fruit & vegetables?	100.0%	100.0%	100.0%	100.0%
	% of Total	32.3%	35.3%	32.3%	100.0%

The ratio of respondents in terms of the frequency options is approximately one-third each. Within the age category of 21 to 30 years, 19.0% purchased organic fruit and vegetables a few times a month. Within the category of “How often do you buy organic fruit & vegetables?” (Only) 14.7% were between the ages of 21 to 30 years. This category of respondents who purchased organic fruit and vegetables a few times a month between the ages of 21 to 30 years formed 4.7% of the total sample. Fotopoulos and Krystallis (2002: 233-260) surmised that while younger people may be more environmentally conscious due to smaller purchasing power they would purchase less; whereas older people might be more health conscious and therefore willing to pay an extra price for organic food.

4.6.1.2 Qualifications

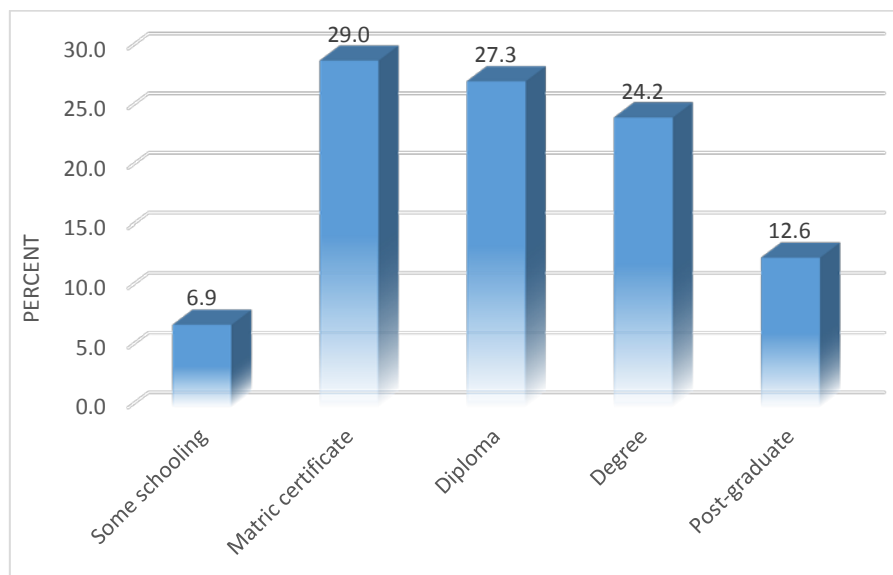


Figure 4.2: Highest qualifications of the respondents

Nearly two-thirds (64.1%) of the respondents had a post-school qualification. This indicates that the sample is a fairly educated group and that they would make informed decisions regarding their dietary patterns, with reference to purchasing organic food. This is consistent with findings from Davis, Titterington and Cochrane (1995: 19) and Wier, Andersen and Millock (2003). The consistency in the scoring patterns is also observed in the high reliability scores. Education has also been reported as a noteworthy factor affecting consumer attitudes; this finding is in line with literature. According to Piyasiri and Ariyawardana (2002: 117)

higher educated consumers are expected to pay higher prices for organic foods as they tend to appreciate issues of preventive health care through the consumption of chemically-free food products more than consumers with no education.

4.6.1.3 Income

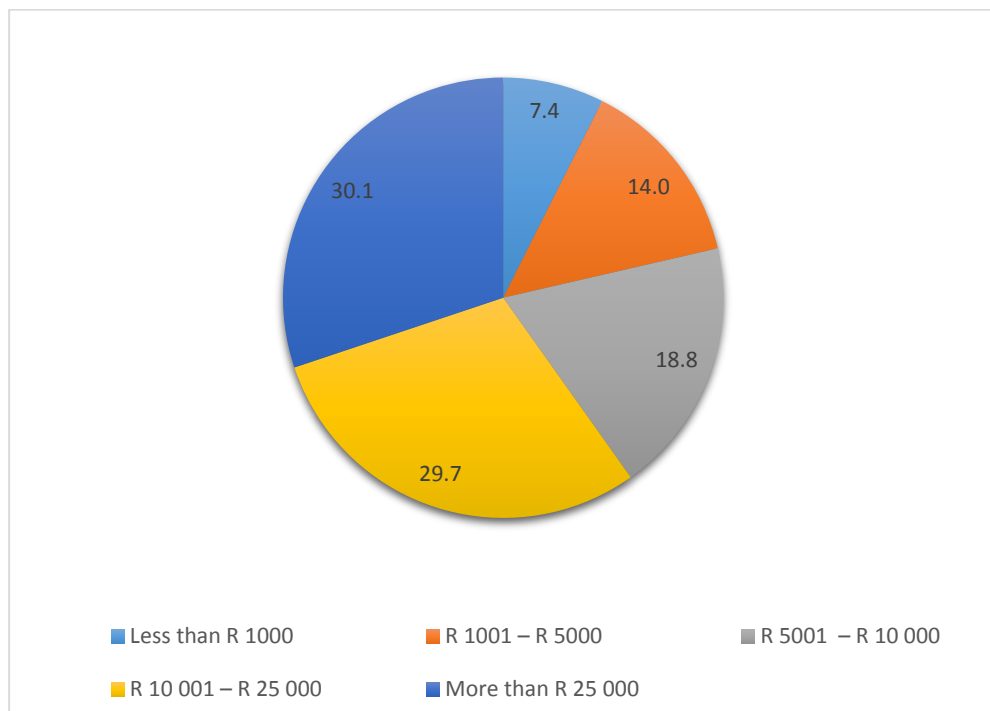


Figure 4.3: Income levels of the respondents.

A third of the respondents (30.1%) earn over R25 000 a month; the smallest proportion of respondents (7.4%) earned the least (less than R1000); and the majority of respondents earn a sizeable income. In chapter two; socio-economic indicators were identified as major factors in organic purchases. Various researchers, namely Vermeulen and Bienabe (2005); Wier *et al.* (2003); Asufu-Adjaye (2000); and Padel and Foster (2005), identified income levels as a contributing factor to the level of organic fruit and vegetable purchases.

4.6.1.4 Marital Status and total number of children in household

Table 4.5- Marital status and number of children in respondents' households

4.6.1.4 Marital status		Total			
		Married	Single	Other	
Number of children in household?	0				
	Count	42	64	1	107
	% within Number of children in household?	39.3%	59.8%	0.9%	100.0%
	% within Marital Status	30.9%	68.8%	100.0%	46.1%
	% of Total	18.1%	27.6%	0.4%	46.1%
	1-2				
	Count	73	21	2	96
	% within Number of children in household?	76.0%	21.9%	2.0%	100.0%
	% within Marital Status	53.7%	22.6%	100.0%	41.4%
	% of Total	31.5%	9.1%	0.8%	41.4%
	3 or more				
	Count	21	8	0	29
% within Number of children in household?	72.4%	27.6%	0.0%	100.0%	
% within Marital Status	15.4%	8.6%	0.0%	12.5%	
% of Total	9.1%	3.4%	0.0%	12.5%	
Total	Count	136	93	3	232
% within Number of children in household?	58.6%	40.1%	1.2%	100.0%	
% within Marital Status	100.0%	100.0%	100.0%	100.0%	
% of Total	58.6%	40.1%	1.2%	100.0%	

Nearly all of the respondents were either married or single (98.7%). Very little literature is available on the impact of marital status on organic fruit and vegetable purchases. Approximately 88% of the respondents had at most 2 children. Most respondents (46.1%) had no children. Owusu and Anifori (2013:70) “reveal that consumers’ socio-economic characteristics such as age; gender; level of education; income level and household size, as well as the level of consumers’ awareness and perceptions; product price; taste; size; freshness; and cleanliness tend to influence consumers’ willingness to pay (WTP) for organic food products. The presence of children in the household has a significant positive relationship with the proportion of organic vegetables consumed within this study. In Table 4.5 the percentage of consumers making organic purchases focusing on the benefits for their children are relatively low.

4.7 Section Analysis

The section that follows analyses the scoring patterns of the respondents per variable per section. Levels of disagreement (negative statements) were collapsed to show a single category of “Disagree”. A similar procedure was followed for the levels of agreement (positive statements). This is allowed due to the acceptable levels of reliability. The results are first presented using summarised percentages for the variables that constitute each section. Results are then further analysed according to the importance of the statements.

4.8 Section B1: Availability

4.8.1 Access to purchase

It is noted that a lack of availability of organic vendors impacted on the ease that respondents experienced when trying to find vendors and the fact that most respondents (83.24%) would be willing to purchase organic fruit and vegetables if it were available in regular stores. According to Smith (2008: 2), consumer trends show that consumers want to be brought closer to the producer, which goes hand-in-hand with fair-trade and ethical production. This aspect can be addressed through marketing and may be beneficial to small farmers as sales of products with that marketing edge is soaring. To determine whether the observed differences were significant, chi-square tests were conducted by variable (statement). The null hypothesis tested the claim that there were no differences in the scoring options per statement. The results are shown below.

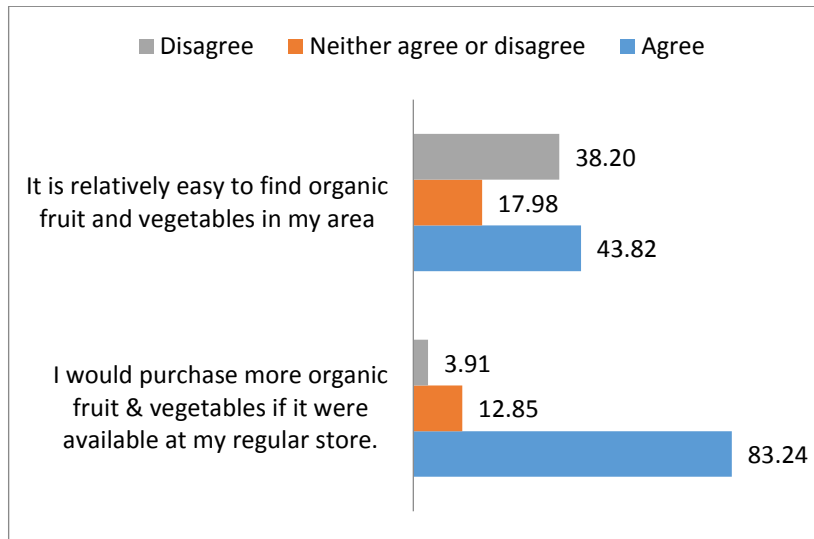


Figure 4.4: Access to purchase

4.9 Section B2: Consumer knowledge (of the term organic)

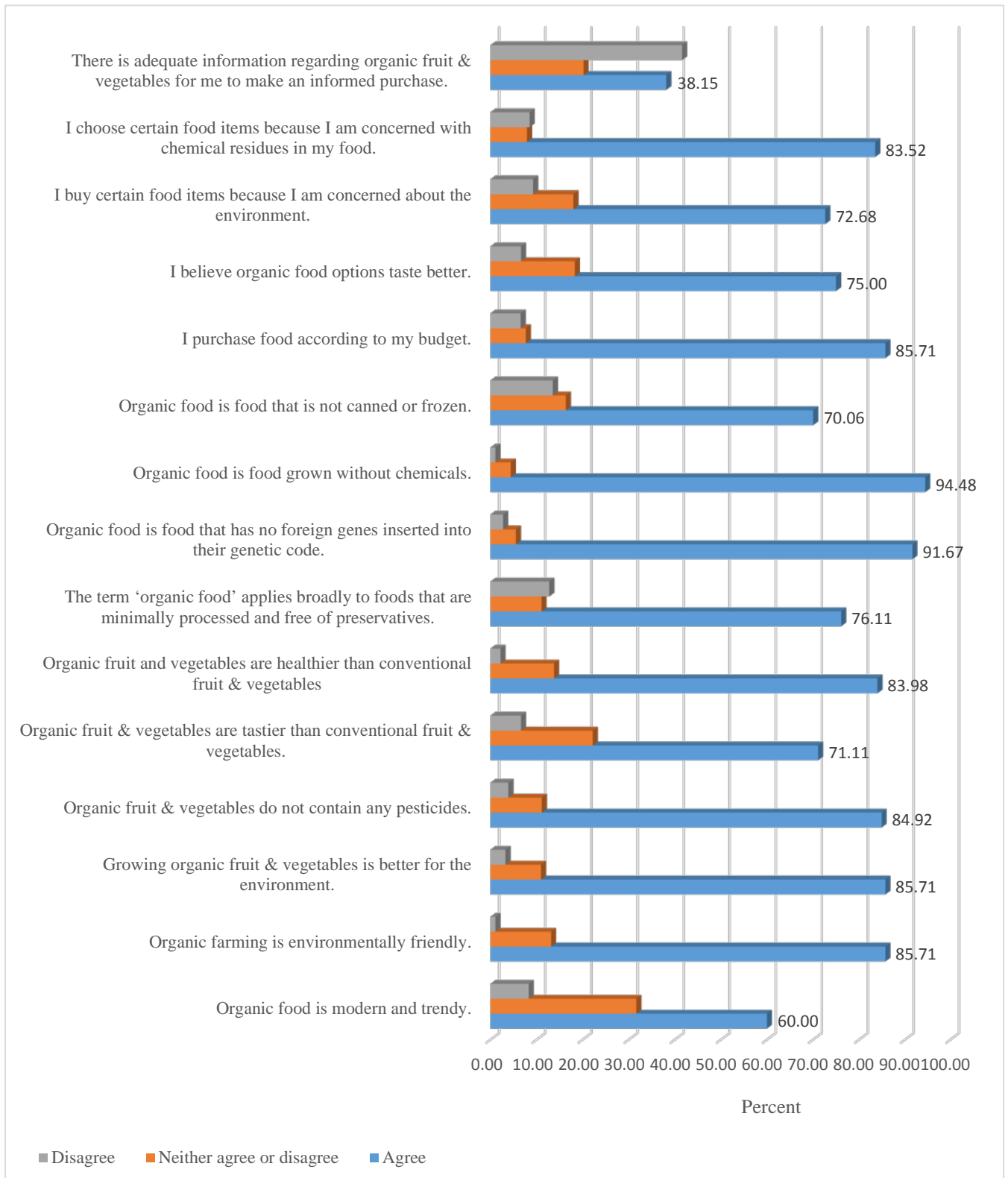


Figure 4.5: Consumer knowledge

The average level of agreement with the statements in this section is 77.25%. It is observed that all of the statements are close to this average except the first (38.15%) and the last (60.0%). The high levels of agreement imply that the respondents are fairly knowledgeable regarding the concept of organic fruit and vegetables and the total organic food concept. However, the first statement implies that there is still insufficient information available regarding organic foods. Consumer awareness of organic foods is the first step in developing demand for organic products, yet awareness does not necessarily equate with consumption (Briz and Ward 2009: 295). Notably, Blair (2012: 3) maintains that because organic food has a very strong brand image in the eyes of consumers, it commands a higher price in the marketplace compared to conventionally produced food.

Table 4.6 - Chi square test for individual statements

	Chi-Square	df	Asymp. Sig.
There is adequate information regarding organic fruit & vegetables for me to make an informed purchase.	69.225	4	.000
I choose certain food items because I am concerned with chemical residues in my food.	142.125	4	.000
I buy certain food items because I am concerned about the environment.	95.443	4	.000
I believe organic food options taste better.	106.944	4	.000
I purchase food according to my budget.	96.462	3	.000
Organic food is food that is not canned or frozen.	83.028	4	.000
Organic food is food grown without chemicals.	227.039	4	.000
Organic food is food that has no foreign genes inserted into their genetic code.	207.389	4	.000
The term 'organic food' applies broadly to foods that are minimally processed and free of preservatives.	103.944	4	.000
Organic fruit and vegetables are healthier than conventional fruit & vegetables	166.486	4	.000
Organic fruit & vegetables are tastier than conventional fruit & vegetables.	95.444	4	.000
Organic fruit & vegetables do not contain any pesticides.	159.464	4	.000
Growing organic fruit & vegetables is better for the environment.	165.198	4	.000
Organic farming is environmentally friendly.	99.758	3	.000
Organic food is modern and trendy.	77.889	4	.000

Since all of the sig. values (p-values) are less than 0.05 (the level of significance), the implication is that the distributions were not even. That is, the differences between the levels of agreement were significant. When a consumer chooses to buy organic fruit and vegetables over conventional food, the price of organic choice must be within the consumer's reservation price. "The value of preference for organic must be higher than the premium pricing the consumer has to pay, alternatively, if a consumer prefers organic but the intensity of preference is not strong enough to compensate for the higher price (s) he has to pay, the consumer will not buy. Under such circumstances, the decision not to buy organic is the result. The decision process is affected by several factors which may be a simple dichotomous or a combination of several factors" (Islam 2013: 540).

4.10 Section B3: Subjective norms

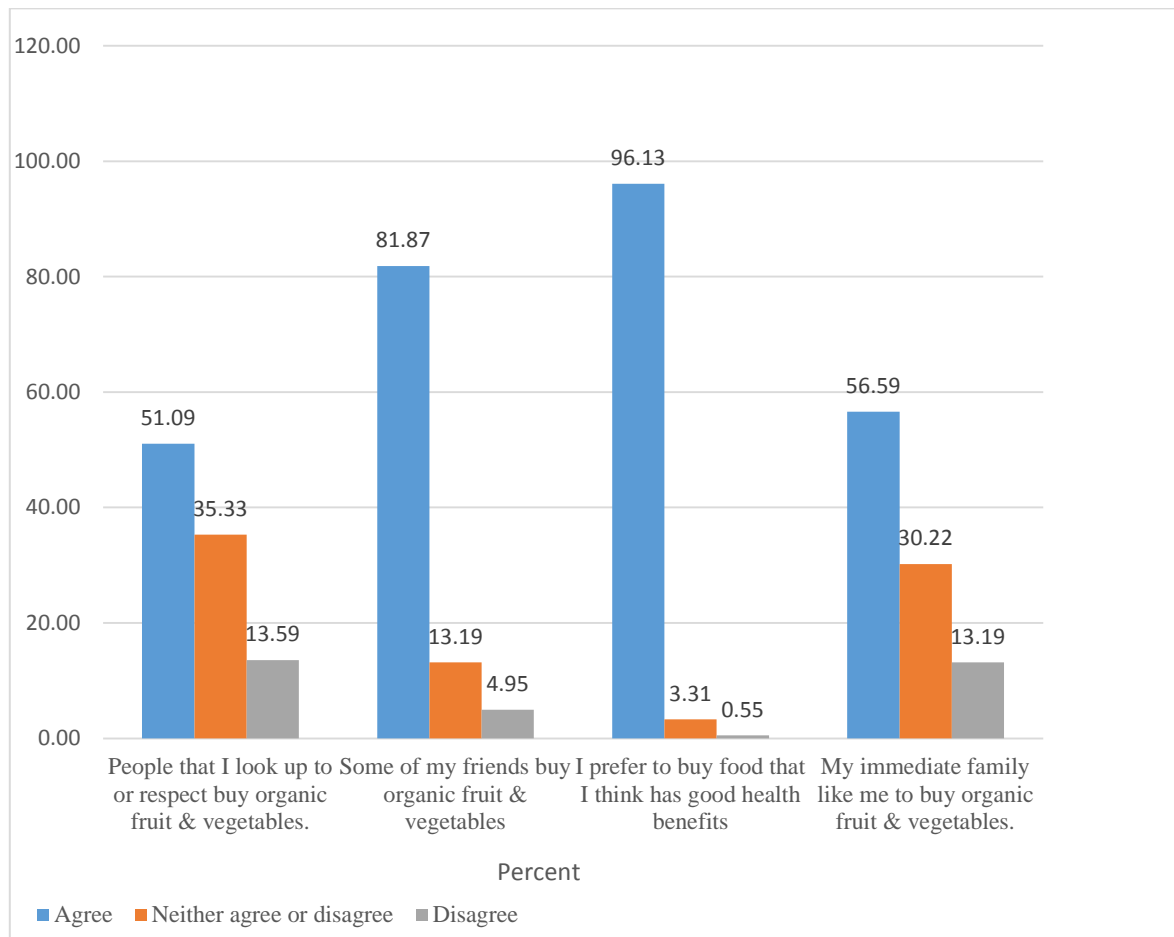


Figure 4.6 Subjective norms

The average level of agreement with the statements in this section is 71.2%. The value is greatly lowered by the first and third statements. The majority of respondents (96.13%) preferred to buy food that they deemed were healthy (and not necessarily organic). A fair number (81.87%) of the respondents did know someone who bought organic food. “Organic product knowledge is an important factor because it represents the only instrument that consumers have to differentiate the attributes of organic products from those of conventional ones, and to form positive attitudes and quality perceptions toward these products” (Gracia and de Magistris 2007: 442). The TPB was found to be a useful model for the prediction of determinants related to consumers’ intention to buy organic food. Based on the results of the multiple regression analysis, the variables attitudes towards buying and subjective norms are the most predictive factors of intention to buy organic food.

4.11 Section B4: Reasons for not purchasing organic food

Test Statistics

Table 4.7: Reasons for lack of organic purchases

	I do not buy organic fruit & vegetables because it is not readily available.	I do not buy organic fruit & vegetables because it is not within my budget.	I do not buy organic fruit & vegetables due to lack of information.
Chi-Square	74.064	42.826	64.000
df	4	4	4
Asymp. Sig.	.000	.000	.000

It is noted that the statements are all negatively directed. However, the level of disagreement (positive agreement) is not that different from the levels of negative agreement. The perceived product knowledge; price; and availability were not found to be objective sign of intention to buy organic food. The chi-square tests indicate that even though the differences look marginal, statistically they (differences) are shown to be significant.

4.12 Section B5: Sources of information on organic food

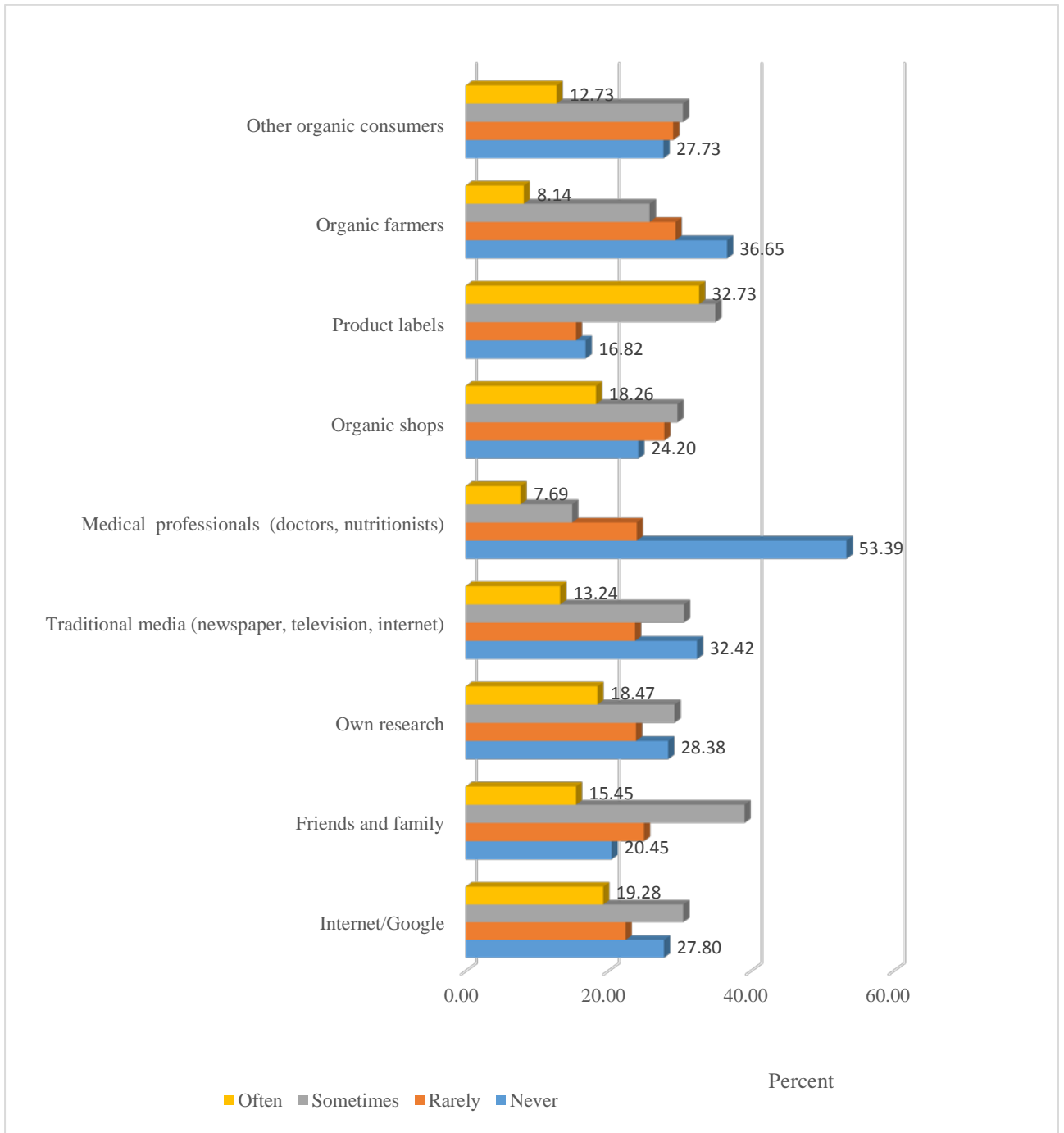


Figure 4.7 Consumer information

The statements above have similar levels of ratings per options. It is noted that “often” is the lowest scoring option and that ‘rarely’ and ‘never’ score more highly collectively. Consumers combine information about product attributes and consequences to evaluate a product and

make their choices. The above findings highlight the importance of national legislation for reputable organic certification that could lead to greater trust in organic fruit and vegetables.

4.13 Hypothesis Testing

A p-value is generated from a test statistic. A significant result is indicated with " $p < 0.05$ ". These values are highlighted with a *. An additional Chi-square test was implemented to decide whether there was a statistically meaningful connection between the variables (columns vs rows). See annexure C. The null hypothesis states that there is no association between the two. The alternate hypothesis indicates that there is an association. For example, the p-value between "How often do you buy organic fruit & vegetables?" and "I would purchase more organic fruit & vegetables if it were available at my regular store" is 0.001 (which is less than the significance value of 0.05). This means that there is a significant relationship between the variables. That is, the availability of organic food would influence the frequency of purchase. The direction of the scores can be obtained from the frequency tables in the appendix. All values without an * (or p-values more than 0.05) do not have a significant relationship.

4.14 Correlations

Bivariate correlation was performed on the (ordinal) data. The results indicate the following patterns: positive values indicate a directly proportional relationship between the variables and a negative value indicates an inverse relationship. All significant relationships are indicated by a * or **. For example, the correlation value for business factors between "I would purchase more organic fruit & vegetables if it were available at my regular store" and "Organic fruit and vegetables are healthier than conventional fruit & vegetables" is 0.432. This is a directly related proportionality. Respondents indicate that they would buy more organic food as it has more health benefits, and vice versa. Negative values imply an inverse relationship. That is, the variables have an opposite effect on each other.

4.15 Conclusion

Through this study, factors that are constraining the purchase of organic produce were discovered and evaluated. The main objectives were to analyse consumers' beliefs and attitudes towards organic food and identify the main concerns that people who purchase organic food have; namely status; health; and environment. The structured questionnaire was intended to validate information and determine consumer knowledge regarding organic fruit and vegetables amongst others. The results of the questionnaire were analysed in this chapter

and produced specific findings. Demographics, socio-economic status and marital status, played an important role in validating certain findings and, in some cases, closely corresponded with previous research. In the next chapter, a conclusion as well as recommendations from the study will be provided.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Chapter 4 discussed the findings of the research and ascertained relations to the conceptual framework and operations chapter of the study. Chapter 5 elaborates on the conclusions that were obtained from the study to correlate the findings of the current study with the published literature and conclude with recommendations established on the analysis of the study. The aim of the study was to explore the perceived reasons that influence purchasing practices for organic fruit and vegetables. The interpreted results of this study will assist in formulating practical recommendations for producers of organic fruit and vegetables, the South African organic industry and local retailers. Additionally, the findings seek to educate consumers concerning the facts around organic fruit and vegetables in a local setting. With this education, more interest and a greater demand for organic options may possibly emerge and, with newfound interest, simulate a more organized organic food industry.

5.2 Summary of the research

The study highlights the increased interest in organically produced fruit and vegetables in the South African market. It was discovered that the actual availability of organic produce in the local market was the main obstacle to purchasing organic fruit and vegetables. The background of this survey was provided by studying literature on the situation locally as well as internationally. Whilst in some cases a comparison was made between the two, it must be remembered that South Africa is still a “developing” organic country. The discussion below will be based on the achievement of each research objective. The information presented in this chapter highlights the need for further research to be conducted locally to better understand the South African organic consumer. It is clear that both the local and global production of organic food is expected to grow substantially due to the growing demand for organic fruit and vegetables, forced by consumers’ insights of various practices. A greater understanding of the organic marketing system and how organic consumers make purchasing decisions and consume organic products will positively reinforce the role of organic fruit and vegetables. This research will be beneficial to retailers, consumers, and producers to enhance the understanding what organic means to society and the influence of information. Consistent up-to-date studies can also keep policy makers and producers in touch with strategies useful

in educating the public on the one hand and also provide strategic advice on pricing strategies and packaging. All interested parties in the production and consumption of organic food will benefit from advice on policy which elucidates rather than obfuscates the organic question. While the literature on organic fruit and vegetables is substantial, there are still research gaps to be covered and studies to be carried out to pave the way for further developments in the organic food market locally. This thesis sets out to fill some of these gaps and to contribute a better understanding of consumers' behaviour towards organic fruit and vegetables and other products.

5.3 Limitations of the study

The study had the following limitations:

- The field work was only conducted at three of the local food and craft markets in the Durban and the surrounding area. While this may not be a complete sample of all the local food markets, they were chosen for their mass appeal and convenience.

5.4 Conclusion

The achievement of each research objective is discussed below by addressing the various proposed objectives.

5.4.1 Objective one: Consumer beliefs and attitudes towards organic food

The outcomes of the study reveal that subjects view organic fruit and vegetables favorably, with a high level of agreement ranging from 60-94%. In a statement concerning the adequacy of information available to make an informed purchase, the findings were low to average. While this outcome is consistent with previous research, it is a critical factor in changing the attitude and behaviour of consumers towards organic foods, which in turn is expected to drive the growth in organic food markets. The findings continue to highlight how the lack of organic options/producers impacts on the ease of access to making purchases, with close to forty- five percent of respondents agreeing that it was relatively easy to find organic fruit and vegetable in the areas they lived, while thirty- eight percent disagreed with the ease of access to organic produce. Subjects showed a high preference, (83%) for purchasing organic options if they were readily available in their regular stores. Figure 4.7 highlights the importance of consumer information and, ultimately, how consumers link product characteristics and values to assess a product and make their choices. Advanced levels of quantitative and personal information relating to organic food are clearly associated to a more certain attitude towards

organic food and a better experience of it. The outcome in Figure 4.7 draws attention to the fact that consumers do not have proper information pertaining to organic fruit and vegetables. The subject's knowledge in this study is gained from various sources i.e. other organic customers, their own research and family members, with the highest figure indicating product labels as the go-to source. While the information on product labels may be true in its form, the ambiguity on some labels could result in mistrust and, ultimately a loss of purchases.

5.4.2 Objective two: Barriers to purchasing of organic fruit and vegetables

The lack of availability impacted on the ease that respondents experienced when trying to find vendors. Most respondents (83.24%) commented that they would be willing to purchase organic fruit and vegetables if it were available in regular stores. As discussed in Chapter 2, the strongest perceived barriers to purchasing organic fruit and vegetables are excessively high prices, a lack of accessibility coupled with objective and subjective knowledge. The role of pricing is a crucial aspect between conventional and organic products as organic food products are usually more expensive than conventional ones, with organic being premium priced. However, many product categories branded conventional products are premium priced as well and organic food products can sometimes be less expensive or similarly priced to these conventional ones. Figure 4.1 emphasizes the regularity of the subject's organic fruit and vegetable purchases. The amount of organic purchasing is relatively high, which indicates actual preference. This corresponds with a study on South Africa's organic market which found that organic produce consumption across the country takes place primarily in metropolitan Cape Town, Tshwane and Durban. This study's results around consumers' purchasing motivations found a clear gap in South Africa's growing market for organic food. Consumers purchased organic, sometimes even when prices are higher, but are inadvertently forced to choose conventional products due to the lack of organic options. When consumers in this study were asked about their attitudes to buying organic, 48% of respondents said they buy organic when it is available but will resort to buying conventional products if they are more accessible. Although the organic market has expanded in recent years, it remains small. Some researchers argue that consumers' lack of knowledge concerning organic food is an important factor slowing down growth.

5.4.3 Objective three: Main concerns regarding organic food: status, health, and environment

Consumers locally and abroad are becoming increasingly knowledgeable regarding the environment and are basing their purchasing decisions on a product's environmental attributes. The consumption of organic products, on the whole, are met with concerns for

food safety, health and effects on the environment and whilst most consumers have a positive attitude towards buying organic products they are often constrained by obstacles, one being the uncertainty of organic food characteristics. In Figure 4.5, subjects were asked questions to examine their subjective knowledge surrounding organic purchases. The statement, 'I prefer to buy food I think has good health benefits', subjects responded positively with over 96% agreement. This could suggest that while consumers make purchases with the intention being healthy or making a decision they think is good for the environment, it is often an uneducated guess. Statements relating to concerns for the environment, chemical residue and the environmental friendliness of growing organic in Figure 4.5 also showed that respondents unanimously understood specific characteristics of organic production and processes. While this may seem like a favorable outcome, only 38% agreed that there was enough information to make an informed purchase. There could also be the perception that demand is not being met and beliefs that there is an inadequate and underdeveloped marketing structure which is hindering the growth of the market.

5.5 Recommendations

5.5.1 Recommendation one:

There is great need for a structure to be put in place that helps guide South African consumers when making any organic purchase. As stated in previous chapters, South Africa has no regulatory association and farmers producing organically grown or raised products for the local market and export are certified by international standards and accreditation systems. While this process is unbiased and ensures the validity of organic practices, not many customers rely on their assessments. A government-led approach must be developed to provide a framework for regulating the organic sector and maintain the standard and quality of all organic products. Government will be able to guarantee the implementation and successes of the policy, and at the same time, lower the usually high certification costs.

Locally, major retailers have developed specific certification schemes (i.e. free range or certified natural) for certain products under their brand and subject farms to thorough inspections and audits. However, because there are no governmental requirements, the choice depends on the policy of the retailer and any certification may be acknowledged. The main focus of a government-led policy would be to also protect consumers against false, misleading and unfounded claims. An increased number of people that are aware about

organic agriculture will lead to an increased prosecution of fraudulent claims. Information gained from the study highlighted the fact that while consumers understood the fundamentals of organic fruit and vegetables, this is not translating into enough noteworthy purchases. Previous research addresses the fact that an awareness of organics does not necessarily translate into actual consumption, but achieving awareness and understanding the linkage between awareness and purchasing organics is fundamental to impacting the demand for organically grown products. Various stakeholders, local government and non-governmental organizations could create policies that would advance and promote the intake of organic fruits and vegetables. Assuming that a greater amount of organic produce options were readily available, there would be significant increases in the regularity of purchasing. Ultimately, increasing yields and volumes result in an increased number of hectares under organic farming, leading to the production of high quality and safe organic products for both local and export markets. By understanding the associations between the awareness and purchasing decisions of the consumer, could succeed in increasing the demand for organically grown products.

5.5.2 Recommendation two:

The results give clear insight into how the lack of access to organic fruit and vegetables significantly inhibit purchases. As previously mentioned numerous local retailers stock alternatives to organic and conventional food but this is limited to certain products and certification is limited to in-house. Consumers have to therefore trust that standards are being constantly maintained. However, they may be different from professional regulatory bodies. The formation of a professional regulatory body will not only give peace of mind to consumers but also help assist established organic farmers, as well as those wanting to convert their farms to organic. Policies should be developed whose measures include creating awareness concerning the relevance of consuming organic fruit and vegetables through effective marketing strategies and the creation of a proudly South African organic logo. These strategies should focus on labelling in order to assist consumers to differentiate organic food products on the market from conventional foods. Due to the substantial cost of converting a conventional farm to an organic farm, assistance from government would be most beneficial and assist in reducing the current 90% failure rate of emerging farmers (National Policy on organic farming 2000) and help to protect farm workers, adjacent communities and consumers. The widespread distribution and availability of organic food through regular grocery stores is an indication of increased activity on both sides of the

conventional food market for organic items. Results reveal that most consumers are aware of organic products and this awareness has influenced their consumption of organic products in the past. The cost of organic fruit and vegetables must be seen as an important determinant in consumer buying behaviour. It could be of the highest importance that the prices of organic products should be competitive with those conventionally produced products that are available in supermarkets.

Campaigns should emphasise the socio-economic advantages to smallholder producers especially, and the ecological advantages for all of humanity from consuming organic fruit and vegetables. Numerous studies denote the fact that consumers who make organic food purchases belong to a certain socio-economic group because of the high costs related. If there were more local organic farms there would be more products available, making organic accessible and this would have a positive effect on reducing the mark-up of organic fruit and vegetables and ultimately drive the price down. Producing more organic foods will increase the chance of price deduction and affordability. If consumers saw more organic products on the shelf and the price point was competitive to that of conventional produce, it would create a viable demand. South Africa should be able to support the significance of food safety and health hazards associated with fruits and vegetables. Reliable information on organic produce production in relation to conventional production could see an increase in consumer (WTP) a premium for organic fruits and vegetables and their determinants.

5.5.3 Recommendation three:

Substantial evidence throughout the study suggests that organic fruit and vegetables are a parameter for perceived healthiness, with the organic option seeming more nutritious for consumers looking to decrease the amount of chemicals they ingest. Consuming organic is not only beneficial for humans. It has been shown to positively improve soil and highlights how different farming processes can be improved to the advantage of the environment on the whole. It is proposed that awareness programs as well as effective marketing strategies be developed in conjunction with government and various stakeholders. If policies are developed and implemented by government and subsequently have buy-in with the major retail stores, South African citizens will be able to trust the whole concept of organic. While well thought out advertising campaigns have been performed by various local retail stores highlighting not only organic options but also free-range, grass-fed, hormone-free products on offer, very little has been expressed by government.

5.6 Recommendations for future studies

- More research regarding the importance of local policies and procedures being implemented is crucial to the advancement of organic food production in SA.
- Further research on the role of introducing organic farming to the local eco-system and the results thereof.
- Identifying local retailers and their producers on the frontline of providing the local markets with organic produce that meets all standards.

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ANNEXURE A

P.O Box 1334
Hotel School
Ritson Campus
Durban
4000
June 2013

LETTER OF INFORMATION AND CONSENT

“Influence of consumer attitudes on purchasing practises for organic fruit and vegetables”

Dear participant,

I am currently undertaking a research project as part of my studies towards a Master’s degree in Technology: Hospitality and Tourism at Durban University of Technology. The study aims to identify perceived reasons that influence purchasing practices of organic fruit and vegetables.

Would you agree to complete a questionnaire for the study? The questionnaire will take approximately 5-8 minutes. Participation is voluntary and you are free to withdraw from the study at any time without giving reasons, and without prejudice or any adverse consequences. The information you give will only be used for research purposes and will be aggregated with other responses and only the overall or average information will be used. Your identity and individual answers will be kept totally confidential.

Should you wish to discuss this further please feel free to contact me or my supervisor (Dr Andrea Giampiccoli, telephone: 031 373 3022 or andrea.giampiccoli@gmail.com), or the IREC Administrator, Lavisha Deonarian: 031 373 2900 or LavishaD@dut.ac.za).

Your assistance will be much appreciated,

Yours faithfully,

Geraldine Fynn-Green

0760741929

geraldinef@dut.ac.za

Signature: Date:

I,, have adequately discussed the study with the researcher, understand that I may withdraw from it at any time without giving reasons, and voluntarily agree to participate by completing a questionnaire.

ANNEXURE B



The purpose of this survey is to better understand consumer perception of organic products. Please note that there is no right or wrong answers to the following questions. Please be assured that all answers will be kept anonymous and used only for the purpose of this research. ***Thank you for participating in this study.***

Q1 Age

21-30	
31-40	
41-50	
51-60	
>60	

Q2 Indicate highest level of education

Some schooling	
Matric certificate	
Diploma	
Degree	
Post-graduate	

Q3 Income level per month

Less than R 1000	
R 1001 – R 5000	
R 5001 – R 10 000	
R 10 001 – R 25 000	
More than R 25 000	

Q4 Marital Status

Married	
Single	

Q5 No. of children in household

0	
1-2	
3 or more	

Q6 How often do you buy organic fruit & veg?

Never	
A few times a week	
A few times a month	

If you answered Never to Q6, proceed to Q8

Q7 Indicate your level of agreement regarding the following statement:

Statement	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
7.1. I would purchase more organic fruit & veg if it were available at my regular store.					
7.2 It is relatively easy to find organic fruit and veg in my area					
7.3 There is adequate information regarding organic fruit & veg for me to make an informed purchase.					
7.4 I choose certain food items because I am concerned with chemical residues in my food.					

7.5 I buy certain food items because I am concerned about the environment.					
7.6 I believe organic food options taste better.					
7.7 I purchase food according to my budget.					
7.8 Organic food is food that is not canned or frozen.					
7.9 Organic food is food grown without chemicals.					
7.10 Organic food is food that has no foreign genes inserted into their genetic code.					
7.11 The term 'organic food' applies broadly to foods that are minimally processed and free of preservatives.					
7.12 Organic fruit and veg are healthier than conventional fruit & veg					
7.13 Organic fruit & veg are tastier than conventional fruit & veg.					
7.14 Organic fruit & veg do not contain any pesticides.					
7.15 Growing organic fruit & veg is better for the environment.					
7.16 Organic farming is environmentally friendly.					
7.17 Organic food is modern and trendy.					
7.18 My immediate family like me to buy organic fruit & veg.					
7.19 I prefer to buy food that I think has good health benefits					
7.20 Some of my friends buy organic fruit & veg					
7.21 People that I look up to or respect buy organic fruit & veg.					

Q8 Indicate your level of agreement regarding the following statement:

8.1 I do not buy organic fruit & veg because it is not readily available.					
8.2 I do not buy organic fruit & veg because it is not within my budget.					
8.3 I do not buy organic fruit & veg due to lack of information.					

Q9 How often do you use the following sources to obtain information about organic products?

	Never	Rarely	Sometimes	Often
Other organic consumers				
Organic farmers				
Product labels				
Organic shops				
Medical professionals (doctors, nutritionists)				
Traditional media (newspaper, television, internet)				
Own research				
Friends and family				
Internet/Google				

ANNEXURE C

Chi-square test for individual statements

	Chi-Square	df	Asymp. Sig.
There is adequate information regarding organic fruit & vegetables for me to make an informed purchase.	69.225	4	.000
I choose certain food items because I am concerned with chemical residues in my food.	142.125	4	.000
I buy certain food items because I am concerned about the environment.	95.443	4	.000
I believe organic food options taste better.	106.944	4	.000
I purchase food according to my budget.	96.462	3	.000
Organic food is food that is not canned or frozen.	83.028	4	.000
Organic food is food grown without chemicals.	227.039	4	.000
Organic food is food that has no foreign genes inserted into their genetic code.	207.389	4	.000
The term 'organic food' applies broadly to foods that are minimally processed and free of preservatives.	103.944	4	.000
Organic fruit and vegetables are healthier than conventional fruit & vegetables	166.486	4	.000
Organic fruit & vegetables are tastier than conventional fruit & vegetables.	95.444	4	.000
Organic fruit & vegetables do not contain any pesticides.	159.464	4	.000
Growing organic fruit & vegetables is better for the environment.	165.198	4	.000
Organic farming is environmentally friendly.	99.758	3	.000
Organic food is modern and trendy.	77.889	4	.000

ANNEXURE D

Cronbach's Alpha score

		Number of Items	Cronbach's Alpha
Section B1	(General) Availability	2 of 2	-
Section B2	Consumer knowledge (of the term organic)	15 of 15	.811
Section B3	Subjective norms	4 of 4	.675
Section B4	Reasons for not purchasing organic food	3 of 3	.785
Section B5	Sources of information on organic food	9 of 9	.887
Overall		31 of 33	.684