UNIVERSITY OF KWAZULU-NATAL

Factors affecting the organic products market in Durban, KwaZulu-Natal: A diffusion of innovation perspective

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2024

DECLARATION

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"Izipho zonke ezinhle neziphiwo zonke eziphelelelyo zivela phezulu, zehla kuYise wokukhanya okungekho kuye ukuguquka nasithunzi sokuphenduka". Jakobe 1:17.

ABSTRACT

Organic products, cultivated using agricultural practices that avoid synthetic fertilisers and pesticides, offer a sustainable alternative to conventional farming methods. However, in South Africa, adoption remains limited, hindered by consumer perceptions of organic food as unfamiliar and niche. This study explores the determinants of organic food adoption, integrating traditional consumer behaviour factors with innovation-oriented constructs from Diffusion of Innovation (DOI) theory and Consumer Innovativeness (CI). Employing a two-stage methodology, the study first conducted a systematic literature review to identify traditional and innovation-related drivers, followed by a quantitative analysis of survey data from 500 participants using Structural Equation Modelling (SEM). Results reveal that while traditional factors such as health consciousness and trust are significant, DOI constructs, including compatibility and relative advantage, also substantially influence adoption. These findings advance theoretical frameworks on consumer behaviour and offer actionable recommendations for marketers and policymakers to promote sustainable consumption practices in emerging markets.

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1. CHAPTER 1: INTRODUCTION

The increase in air pollution, climate change, lessening of natural resources, and increase in waste production are the key environmental complications affecting the world today (Liobikien & Bernatonien, 2017, p. 109; Simin & Jankovic, 2014, p. 518). Among the contributors to environmental degradation, conventional agricultural practices play a significant role in the deterioration of the ecosystem (Puech et al., 2014, p. 49). However, organic agriculture has been recognised as a sustainable alternative that enhances food security while promoting ecological preservation (Kisaka-Lwayo & Obi, 2014, p. 1).

The adoption of organic food consumption is particularly relevant within the framework of the United Nations (UN) Sustainable Development Goals (SDGs), specifically SDG 2, which aims to eradicate hunger and promote sustainable agriculture, and SDG 12, which focuses on responsible production and consumption (Yanakittkul & Aungvaravong, 2017, p. 1). Given the importance of these goals, understanding the factors that drive consumer adoption of organic products is essential for advancing global sustainability efforts. This study examines these factors through the lens of traditional factors, innovation, and consumer innovation theories to provide deeper insights into organic food adoption.

Organic food is cultivated following specific guidelines that prioritise natural growth processes while restricting the use of synthetic fertilisers (Naidoo & Ramatsetse, 2016, p. 81). Organic agriculture has been acknowledged as a conduit to heightened food security and ecological development (Kisaka-Lwayo & Obi, 2014, p. 1). It has emerged as a solution to the growing problems of traditional or conventional agriculture, namely in relation to caring for the environment (Simin & Jankovic, 2014, p. 518). Although it is farming, organic agriculture, in the context of diffusion of innovation is pointedly different from conventional production (Simin & Jankovic, 2014, p. 518). As a global trend, organic farming has encouraged better land use policies, thereby promoting better care for the environment (Yanakittkul & Aungvaravong, 2017, p. 2).

Globally, there is increasing awareness of health-conscious eating and environmentally sustainable production methods, leading to a heightened focus on organic food (Mhlophe, 2016, p. 1; Naidoo & Ramatsetse, 2016, p. 81; Yadav & Pathak, 2016, p. 123). Researchers have been investigating the factors influencing consumer behaviour to gain deeper insights into the growth and sustainability of the organic food market (Lee & Yun, 2015; Magistris &

Gracia, 2008; Muhammad et al., 2015; Parra-Lopez et al., 2007). Despite the growing interest in organic food, limited information is available regarding South African consumers' perspectives, concerns, knowledge, attitudes, and purchase intentions related to organic products (Mhlophe, 2016, p. 3). While there is consensus on the significance of organic food in society, researchers have yet to achieve unanimity on the key factors influencing its selection and adoption (Mhlophe, 2016, p. 3). Thus, this research aims to investigate factors affecting organic purchase behaviour.

South Africa has yet to achieve a substantial customer base for organic food, as the organic produce market remains relatively new and portrays characteristics of an infant or innovative market, still in its early phases of the product life cycle (Engel, 2008, p. 10; Mhlophe, 2016, p. 5; Naidoo & Ramatsetse, 2016, p. 81). Innovative ideas are no longer typically derived from technological progress, as was the case during the development of agriculture, but are also a result of managing processes and new methods of organising information within and between sectors (Falco et al., 2016, p. 1). Thus, organic products are considered innovative products and therefore the factors affecting DOI and CI in organic products may be relevant in understanding organic consumption. Studies such as that of Padel (2001) used Diffusion of Innovation (DOI) to understand organic farming adoption in the United Kingdom (UK) and Thiyagarajan (2018, p. 1663) used DOI to investigate organic food adoption in India. There is a limited body of research on organic food adoption in South Africa, as the country's organic food market exhibits characteristics of an emerging or nascent market (Engel, 2008, p. 5; Mhlophe, 2016, p. 3). Thus, there is a need to understand factors that lead to adoption of organic foods and the applicability of innovation models to the South African green consumer.

This chapter is organised as follows: it begins with a discussion of the background of the study, followed by the presentation of the research problem. Next, the research objectives are outlined and the conceptual framework is introduced. A review of the relevant literature is then provided. The chapter concludes by addressing the methodology, delimitations, the significance of the study, and the structure of the thesis.

1.1 Background of the Study

There are mainly two farming methods used by the farming sector, namely, conventional and organic. Organic farming is fashioned in line with policies and regulations where natural growth is stimulated, and unnatural fertilisers are forbidden (Naidoo & Ramatsetse, 2016, p.

81), whereas conventional farming utilises chemical substances such as insecticides, stimulants, growth hormones, and genetically adapted plants (Puech et al., 2014, p. 50). Arguments for conventional farming include fighting of pests and production of food in large quantities (Kisaka-Lwayo & Obi, 2014, p. 90). However, arguments against conventional farming state that it leads to degradation of the environment (Mhlophe, 2016, p. 8).

The societal alertness to environmental degradation leads some members of society to comprehend the dangerous effects of ecological erosion on their well-being (Mhlophe, 2016, p. 5). As a result of this consciousness, green products are gaining acceptance amongst consumers, as they are informed of their healthiness and their role in safeguarding the ecosystem (Naidoo & Ramatsetse, 2016, p. 82). However, there is a limited amount of literature on consumers' intentions to procure organically farmed food in South Africa (Engel, 2008, p. 5; Mhlophe, 2016, p. 2).

Past research has developed and utilised various models for understanding green behaviours. These include the Theory of Planned Behaviour (TPB) model which looks at the following factors: consumption intention, attitude, subjective norms and perceived behavioural control (Gakobo & Jere, 2016, p.1268). Yadav and Pathak (2016, p. 123) extended the TPB by adding environmental concern and health consciousness. In these models, numerous factors affect green adoption. These include, demographic, price, availability, social influences, environmental attitudes (Joshi & Rahman, 2015, p. 128; Xu et al., 2020, p. 1; Yang et al., 2021), and organic food adoption in particular, consumer values, attitude, subjective norm and perceived behavioural control (Naidoo & Ramatsetse, 2016, p. 81; Yadav & Pathak, 2016, p. 122) have been identified. The existing body of knowledge addressing factors in organic food adoption is, however, inconclusive and, as a result, not well understood and highly contradictory with respect to empirical research findings (Massey et al., 2018, p. 423).

In addition, the intensity of organic food adoption and the factors that drive the adoption, depend on the level of a country's economic development (Squires et al., 2001, p. 393). Paul et al. (2015, p. 124) state that to better understand consumers perceptions of factors leading to organic adoption, more research is needed in developing countries. Thus, this study aims to extend existing research on factors affecting organic food adoption in South Africa, a developing country.

Despite the growing global trend of organic food consumption, South Africa still faces challenges in achieving widespread adoption. Organic products are often viewed as new or unfamiliar by consumers in developing markets like South Africa (Fynn-Green et al., 2019, p. 62; Naidoo & Ramatsetse, 2016, p. 81). This perception, coupled with limited research on the factors influencing organic food adoption in the country, means that a large segment of the population remains hesitant to buy organic food. As a result, the organic food market has yet to reach its full potential, requiring focused efforts on consumer education and market strategies (Chauke & Duh, 2019, p. 18; Mkhize & Ellis, 2024, p. 2).

Diffusion of Innovation (DOI) theory offers insight into why consumers adopt or reject innovations, such as organic foods (Dan et al., 2019, p. 5). Alongside the DOI models, Consumer Innovativeness (CI), explores the role of individual traits in adopting new products (Zhang et al., 2020, p. 3). As organic foods are relatively new in South Africa, DOI and CI factors, in addition to traditional models on green behaviours, may offer insights into understanding their adoption. By examining organic adoption as the adoption of an innovative product, this study aims to provide marketers with tools to influence sustainability.

While studies have examined organic food adoption in other emerging countries, such as India and China (Thiyagarajan, 2018, p. 1663; Yap & Chen, 2017, p. 60), few studies have been conducted in South Africa (Naidoo & Ramatsetse, 2016, p. 81). This study, therefore, seeks to apply DOI and CI models in exploring the factors influencing organic food adoption in the South African context.

1.2 Research Problem

Due to the challenges associated with conventional agriculture, organic farming has emerged as a viable alternative that aims to preserve the ecosystem (Simin & Jankovic, 2014, p. 2; Wang et al., 2019, p. 1). As the message of environmental conservation spreads, it has led to an increase in consumer awareness and demand for sustainable foods such as organic products (Mhlophe, 2016, p. 2; Pandey et al., 2019, p. 357; Zayed et al., 2022, p. 2). However, despite this growing awareness, research on the factors influencing the adoption of organic food consumption has produced varying and sometimes contradictory results across different regions (Leyva-Hernández et al., 2022, p. 93; Massey et al., 2018, p. 419; Muhammad et al., 2015). This inconsistency highlights the need to consolidate and evaluate the key factors affecting organic food adoption to better understand their influence.

While organic foods are becoming more popular globally, consumption levels in South Africa remain relatively low, and little is known about the specific factors influencing this adoption (Naidoo & Ramatsetse, 2016, p. 81). In developing countries like South Africa, organic foods are often perceived as novel products, reflecting the early stages of market development for these products (Mhlophe, 2016, p. 2; Naidoo & Ramatsetse, 2016, p. 81). Organic food, therefore, displays many characteristics of a new product within the market's lifecycle (Li et al., 2021, p. 1467). Given the innovation-driven nature of these products, the Diffusion of Innovation (DOI) theory, which emphasises how new products are adopted by consumers, is a useful framework for understanding organic food adoption in this context (Parra-Lopez et al., 2007, p. 105).

Additionally, Consumer Innovativeness (CI) explores the role of individual innovativeness in the adoption of new products (Zhang et al., 2020, p. 1), making it an important factor in the study of organic food adoption. CI factors, together with DOI, could provide insights into the barriers and motivations affecting the consumption of organic foods in South Africa.

Although much attention has been given to the environmental benefits of organic foods, there is a gap in understanding how both traditional factors, such as consumer awareness, attitudes, and perceived barriers, and innovation-driven factors like DOI and CI, impact organic food consumption in South Africa. This study seeks to address this gap by examining how these factors influence consumer adoption of organic foods in a South African context. By doing so, the research aims to provide understanding of the factors affecting organic food adoption and contribute to the development of strategies that can increase organic food consumption in the region.

1.3 Research Questions

This study seeks to explore the relative influence of Diffusion of Innovation (DOI) factors and Consumer Innovativeness (CI) in explaining organic food consumption, compared to traditional consumer behaviour factors. Specifically, the research aims to determine how these factors contribute to consumer adoption and how this knowledge can assist green marketers in promoting sustainable consumption.

- Research Objectives

The following are objectives for this study:

1. To determine, from existing literature, the factors affecting organic food consumption and the extent to which innovation factors have been included in the models and studies on organic consumption
2. To determine the effects of the traditional factors on intention to purchase organic food
3. To determine the effects of Diffusion of Innovation factors on intention to purchase organic food
4. To ascertain the impact of Consumer Innovativeness on intention to purchase organic food
5. To investigate the relative role of traditional factors, Diffusion of Innovation, and Consumer Innovativeness in affecting intention and behaviour of organic food adoption.

1.4 The Conceptual Framework for The Study

Previous research has attempted to understand consumer perceptions of organic food adoption through established theoretical models of consumer behaviour and green behaviour and yet adoption is still low in South Africa. Limited research has acknowledged that organic products are perceived as innovative. To address this gap, this study proposes a conceptual framework that integrates the traditional factors with the Diffusion of Innovations (DOI) (Rogers, 2003) and Consumer Innovativeness (CI) factors. This framework aims to examine the relative impact of these various factors, on the adoption of organic food products in South Africa, an emerging market.

The proposed model, which integrates these variables, is depicted in the conceptual framework for the study.

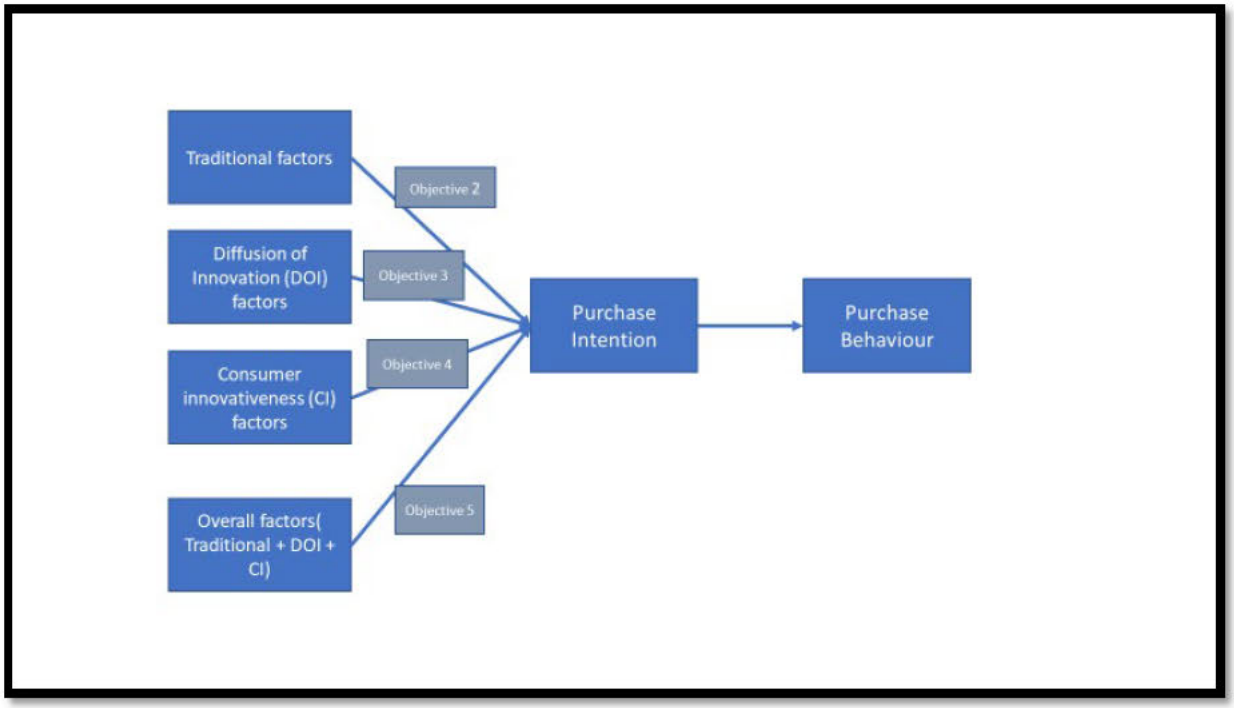

Figure 1. 1 Conceptual Framework for the study

The conceptual framework developed in this study integrates traditional factors, such as attitudes, subjective norms, trust, and health consciousness, with innovation-specific variables from the Diffusion of Innovation (DOI) theory (Rogers, 2003) and Consumer Innovativeness (CI) (Zhang et al., 2020, p. 1). The framework aims to provide a holistic understanding of the factors influencing organic food adoption by examining their relative contributions. Traditional factors reflect well-established drivers of consumer behaviour (Gakobo & Jere, 2016, p. 1268; Yadav & Pathak, 2016, p. 123), while DOI and CI offer insights into how perceptions of innovation and individual traits impact adoption (Thiyagarajan, 2018, p. 1663). This integration allows for exploration of consumer behaviour, particularly in the South African context, where organic products are still in the early stages of market development (Naidoo & Ramatsetse, 2016, p. 81). The framework is grounded in empirical evidence from the systematic literature review conducted in Stage 1 of the study and forms the basis for the quantitative analysis in Stage 2.

1.5 Justification for DOI and CI Models

Organic foods, as relatively new products in the South African market, exhibit characteristics of innovations within their product lifecycle. The Diffusion of Innovation (DOI) theory, which explains how innovations are adopted by individuals, provides a robust framework for

understanding the adoption of organic foods (Parra-Lopez et al., 2007, p. 105). This theory is particularly relevant as it highlights key factors like relative advantage, compatibility, and complexity, which align closely with consumer perceptions of organic products (Thiyagarajan, 2018, p. 1663). Similarly, Consumer Innovativeness (CI), which explores individual differences in adopting new products, has proven valuable in understanding behaviours in emerging markets (Zhang et al., 2020, p. 3). Applying DOI and CI in this study offers a unique perspective, allowing the exploration of innovation-specific factors alongside traditional determinants of consumer behaviour. This integration is critical to addressing the research gap in understanding organic food adoption in South Africa.

1.6 Articulation of Research Gap

Despite the global growth in organic food consumption, the South African market remains underdeveloped, with low levels of adoption and limited consumer engagement (Mhlophe, 2016, p. 3; Naidoo & Ramatsetse, 2016, p. 81). Existing studies have primarily focused on traditional factors such as attitudes, health consciousness, and environmental concerns. However, these studies have produced inconsistent and fragmented results, particularly in developing markets (Massey et al., 2018, p. 419). Additionally, few studies have incorporated innovation-driven factors like DOI and CI, which may play a pivotal role in influencing consumer decisions in markets where organic products are perceived as novel (Thiyagarajan, 2018, p. 1663; Zhang et al., 2020, p. 3). This research seeks to address these gaps by consolidating findings from existing literature and empirically testing the relative impact of traditional and innovation-driven factors on organic food adoption in South Africa.

1.7 Overview of Literature

The literature review provides a detailed summary and critical analysis of previous research relevant to the study of organic food consumption. This chapter serves as a foundation for the current research by exploring key concepts, theories and findings that have been established in the field. It assists in positioning the current study within the broader academic context, highlighting the gaps in knowledge that the research aims to address. Additionally, it lays the groundwork for making comparative recommendations based on the findings of the study. The chapter covers several key areas, each of which is briefly described below.

The literature review begins by examining the factors driving organic food consumption and adoption. This exploration includes an analysis of consumer attitudes, behaviours, and the perceived benefits of organic foods, particularly within developing countries where organic products are still considered relatively new. The review then continues to traditional factors to organic food adoption, consumer innovativeness and Diffusion of Innovation (DOI) frameworks, which are central to the study. The traditional factors are discussed in relation to their application in predicting consumer behaviour, particularly regarding organic food purchases, while the DOI theory provides insights into how innovation factors, such as relative advantage, compatibility, and complexity, might influence the adoption of organic products.

Next, the chapter explores the role of consumer innovativeness, examining how individual differences in innovation adoption might impact organic food consumption. This section also evaluates how these innovation factors are integrated into existing models of organic food consumption. Following this, the literature review critically assesses the strategies currently employed to promote organic food products, both globally and locally, identifying their effectiveness and areas for improvement. This evaluation provides a basis for developing green marketing strategies aimed at enhancing the adoption of organic foods.

Finally, the chapter offers an in-depth discussion of the TPB constructs, DOI factors, and consumer innovativeness, all of which contribute to the development of the conceptual framework and theoretical foundation for the entire study.

1.8 Overview of Research Methodology

The primary research question guiding this study was: What contribution do the factors related to the Diffusion of Innovation (DOI) theory and Consumer Innovativeness (CI) make in explaining the adoption of organic food products relative to traditional factors? To address this question, the research was designed in two distinct stages, each contributing to the overall understanding of the factors influencing organic food adoption.

- **Stage 1: Systematic Literature Review**

The first stage of the research involved a systematic literature review, which served two critical purposes. Initially, this stage aimed to comprehensively synthesise existing research on the factors affecting the adoption of organic food products. By doing so, it facilitated the identification and inclusion of the most relevant factors in the conceptual model. The

systematic review was methodical, following established protocols to ensure that the selection of literature was unbiased and exhaustive, covering a wide range of studies related to organic food consumption.

The systematic literature review played a crucial role in addressing the first research objective: To determine, from existing literature, the factors affecting organic food consumption and the extent to which innovation factors have been included in the models and studies on organic consumption. This involved a detailed examination of the degree to which factors related to DOI and CI were considered in prior studies and the impact these factors were found to have on organic food adoption. The insights gained from this analysis were used to justify and refine the conceptual model, ensuring that it was grounded in both theory and empirical evidence.

- **Stage 2: Quantitative Research**

The second stage of the research was the quantitative phase, which sought to empirically test the conceptual model developed in Stage One. This phase was designed to evaluate the relative impact of DOI factors (such as relative advantage, compatibility, complexity, observability, and trialability) and CI on the adoption of organic food products, particularly in comparison to traditional factors commonly investigated in organic food adoption studies, such as health consciousness, environmental concern, and perceived behavioural control.

To achieve this, a structured survey was administered to a representative sample of consumers, with the aim of collecting data on their attitudes, perceptions, and behaviours related to organic food consumption. The survey instrument included measures of DOI factors, CI, and traditional factors, and was designed to capture both direct and indirect influences on organic food adoption.

The data collected were then analysed using advanced statistical techniques, including factor analysis and structural equation modelling (SEM), to assess the strength and significance of the relationships between the variables. This stage directly addressed Research objectives Two to Four:

- Objective 2: To determine the effects of the traditional factors on intention to purchase organic food
- Objective 3: To determine the effects of Diffusion of Innovation factors on intention to purchase organic food

- Objective 4: To ascertain the impact of Consumer Innovativeness on intention to purchase organic food
- Objective 5: To investigate the relative role of traditional factors, Diffusion of Innovation, and Consumer Innovativeness in affecting intention and behaviour of organic food adoption.

By comparing the explanatory power of DOI and CI factors against traditional factors, the study aimed to provide a understanding of what drives consumers to adopt organic food products, ultimately contributing to the development of more effective marketing strategies and policy recommendations for promoting organic consumption.

Through this exploration, this research contributes significantly to the existing body of knowledge on organic food adoption, offering evidence-based insights into consumer behaviour patterns that are not only relevant to South Africa but may also be applicable to other developing markets. This research also guides strategies to overcome barriers to organic food consumption and support adoption rates, offering implications for both practitioners and policymakers.

1.9 Delimitations

This study focuses on consumers in the Durban Metropolitan area who actively shop for groceries, particularly those aware of organic products. The geographic scope was chosen due to time and budget constraints, limiting generalisability to other regions in South Africa (Naidoo & Ramatsetse, 2016, p. 81). However, this focus provides valuable insights into consumer behaviour in a developing market, offering a foundation for future studies to expand geographically.

Additionally, the study deliberately narrows its scope to consumer behaviour regarding organic food adoption, excluding broader dietary habits or shopping patterns unrelated to organic products. Supply-side factors, such as pricing or availability, are not investigated, as the focus remains on consumer-driven variables (Engel, 2008, p. 15). This focused approach ensures clarity and relevance in understanding the factors influencing organic food adoption while setting clear boundaries for the study's applicability.

1.10 Significance and Contribution of the Study

This study makes theoretical and practical contributions as explained hereunder.

1.10.1 Theoretical Contribution

The research into the factors influencing organic food adoption has often been fragmented and inconsistent, with different studies yielding varying results. There has been a clear need to consolidate and clarify these factors (Yiridoe et al., 2005, p. 194). This study contributes to the existing body of knowledge by empirically identifying, detailing, and prioritising the factors that affect organic food adoption in an emerging market context, specifically within South Africa. By doing so, it addresses a significant gap in the literature, offering a more cohesive understanding of the drivers of organic food consumption in a developing country.

Moreover, this study's conceptual framework advances the awareness and understanding of the role that innovation factors rooted in the Diffusion of Innovation (DOI) theory and Consumer Innovativeness (CI) play in the adoption of organic foods. By integrating these innovation-related factors with more traditional determinants of organic food consumption, the study enriches the theoretical discourse on how new products, such as organic foods, are adopted in markets where they are still relatively novel.

As marketers seek to comprehend consumer perceptions of innovative products to better predict behaviours and influence purchasing decisions, the findings from this study offer valuable insights. Specifically, this research outlines the factors that drive organic food adoption in developing countries, providing a theoretical basis for developing targeted marketing strategies for these novel products.

1.10.2 Practical Contribution

This research is particularly valuable for producers and retailers of organic food, as it provides comprehensive insights into the factors that influence consumer purchase decisions. By understanding these factors, marketers can strategically allocate resources to promotional and distribution efforts that are most likely to resonate with their target audience. The empirical data gathered in this study enables businesses to develop marketing strategies that are not only more effective but also more efficient, thereby improving the visibility and appeal of organic products.

For businesses operating in developing regions such as South Africa where organic foods are still considered new, this strategic focus is critical. By leveraging the findings of this study, producers and retailers can enhance market penetration and increase consumer adoption rates.

This, in turn, supports business growth while promoting sustainable consumption practices, a dual benefit that aligns with broader societal goals of environmental stewardship and public health.

Overall, this study offers practical guidance for businesses looking to expand their presence in the organic food market, particularly in emerging economies. By aligning marketing strategies with the factors most influential in consumer decision-making, businesses can not only achieve greater market success but also contribute to the wider adoption of sustainable, health-conscious food choices.

1.11 The Structure of the Thesis

The structure of this thesis is as follows:

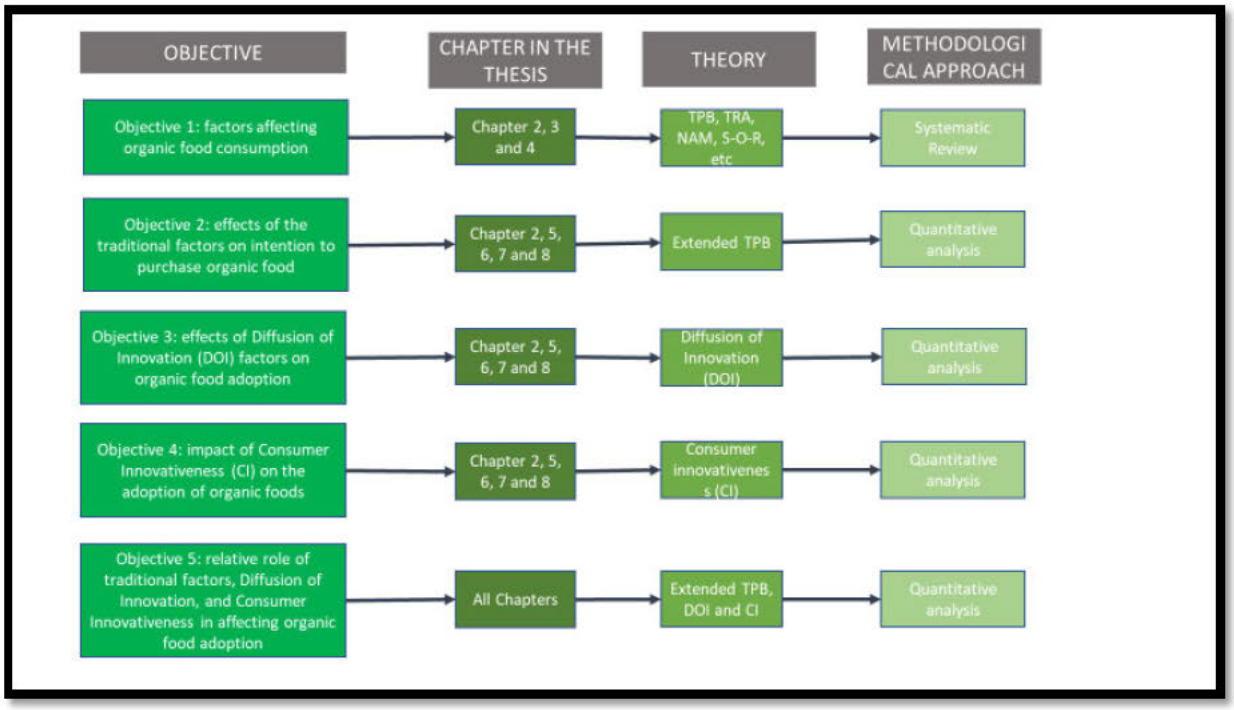

Figure 1. 2: Graphical abstract for the study

CHAPTER 2: ORGANIC FOOD DEMAND AND SUPPLY IN SOUTH AFRICA

This chapter explores the global and South African organic food markets, providing a detailed analysis of supply and demand trends. It identifies key challenges in the supply chain and demand-side barriers, along with strategies to mitigate these issues within the South African context. Additionally, the chapter profiles organic food consumers based on insights from existing literature, highlighting their characteristics and behaviours.

CHAPTER 3: SYSTEMATIC REVIEW METHODOLOGY – STAGE ONE

This chapter outlines the methodology employed in Stage One of the study, including the research philosophy, design, systematic review approach, sampling strategy, and data collection procedures. It also details the techniques used for data analysis and quality assurance to ensure the robustness of the systematic review. Furthermore, this chapter specifically addresses Objective 1, which aims to determine, from existing literature, the factors affecting organic food consumption and the extent to which innovation factors have been included in the models and studies on organic consumption. This objective guides the systematic review process to ensure a comprehensive and rigorous synthesis of relevant literature.

CHAPTER 4: FINDINGS –– STAGE ONE –– SYSTEMATIC REVIEW

This chapter presents the findings from the systematic review. It begins by describing the sample, followed by an exploration of the theories utilised and a discussion of the conceptual model outlining traditional factors influencing the adoption of organic food. Furthermore, this chapter directly addresses Objective 1, which aims to determine, from existing literature, the factors affecting organic food consumption and the extent to which innovation factors have been included in the models and studies on organic consumption. The findings provide insights into the key determinants of organic food adoption while evaluating the role of innovation-related factors in existing theoretical frameworks and empirical studies.

CHAPTER 5: STAGE 2: SURVEY METHODOLOGY FOR QUANTITATIVE ANALYSIS OF ORGANIC FOOD ADOPTION

This chapter presents the findings from the systematic review and discusses their implications. Based on these insights, a conceptual model is developed for empirical testing in Stage Two, addressing the key factors influencing organic food adoption.

CHAPTER 6. QUANTITATIVE FINDINGS, ANALYSIS AND DISCUSSION

This chapter details the methodology used to empirically test the conceptual model derived from Stage One. It discusses the target population, sampling process, data collection methods, and ethical considerations. Key statistical methods, including descriptive analysis, assessment of normality, and structural equation modelling (SEM), are also described.

CHAPTER 7: DISCUSSION & INTERPRETATION OF STUDY RESULTS, DRAWING RELEVANT CONCLUSIONS

This chapter presents and interprets the findings from the survey conducted in Stage Two. It provides a detailed discussion of the results, linking them to the conceptual model and research objectives, while offering insights into consumer behaviour regarding organic food adoption.

CHAPTER 8. RECOMMENDATIONS, CONTRIBUTIONS, LIMITATIONS, FUTURE RESEARCH DIRECTIONS AND OVERALL CONCLUSION

This final chapter synthesises the key findings of the study, drawing relevant conclusions to address the research objectives. It highlights the practical and theoretical contributions of the research, providing actionable recommendations for stakeholders in the organic food sector. The chapter also discusses the study's limitations and proposes directions for future research to enhance understanding and application in the field of organic food adoption.

1.12 Conclusion

This chapter has introduced the study by providing an overview of the research background, problem, objectives, and conceptual framework. The significance of understanding organic food adoption is emphasised in the context of addressing global environmental and food security challenges. Organic food consumption aligns closely with United Nations Sustainable Development Goal (SDG) 2, which seeks to end hunger, achieve food security, and promote sustainable agriculture, and SDG 12, which focuses on responsible consumption and production. By examining both traditional and innovation-driven factors, this study aims to identify the drivers and barriers that influence consumer adoption of organic foods in South Africa.

The study seeks to contribute to these SDGs by promoting the adoption of organic agriculture as a sustainable practice that can enhance food security while reducing environmental harm. Additionally, understanding the factors influencing organic food adoption supports efforts to shift consumer behaviour toward sustainable choices, fostering more responsible consumption patterns. By addressing research gaps and integrating these goals into the study, this research provides theoretical and practical contributions to advancing sustainability in the South African organic food market.

The next chapter delves deeper into the global and South African organic food markets, analysing supply and demand trends and profiling organic food consumers based on existing literature.

2 CHAPTER 2: ORGANIC FOOD DEMAND AND SUPPLY IN SOUTH AFRICA

This chapter presents a comprehensive review of theoretical frameworks and empirical studies relevant to organic food adoption. It integrates traditional consumer behaviour models such as the Theory of Planned Behaviour (TPB) and the Protection Motivation Theory (PMT) with innovation adoption frameworks, particularly the Diffusion of Innovation (DOI) theory and Consumer Innovativeness (CI). The goal is to critically analyse how these factors influence organic food adoption, particularly in the South African context.

This chapter is structured as follows: Section 2.2 provides an overview of the global and South African organic food markets. Section 2.3 discusses innovation theories applied to green behaviours, focusing on DOI. Section 2.4 examines Consumer Innovativeness as a moderating factor. Section 2.5 critically evaluates traditional behavioural theories, including TPB and its extensions. Section 2.6 reviews previous research on organic adoption. Section 2.7 presents studies integrating TPB, DOI, and CI. Finally, Section 2.8 introduces the conceptual framework for this study.

2.1 Organic farming globally

Growing environmental concerns, particularly climate change, have underscored the need for sustainable agricultural practices. Conventional farming, reliant on synthetic fertilisers and pesticides, depletes soil health, contaminates water sources, and reduces biodiversity (Kisaka-Lwayo & Obi, 2014, p. 3). In response, organic farming has emerged as a viable alternative, promoting eco-friendly practices that exclude synthetic chemicals and enhance biodiversity (Issock et al., 2023, p. 1). While organic agriculture offers significant environmental and health benefits, its adoption remains uneven, especially in developing countries where factors such as cost, accessibility, and perceived complexity hinder widespread acceptance (Chauke & Duh, 2019; Mhlophe, 2016; Mkhize & Ellis, 2024; Naidoo & Ramatsetse, 2016).

The global organic food industry has expanded significantly, reaching an estimated value of €124.8 billion in 2021. Organic farming is practiced in 191 countries, with the United States, Germany, and France leading in market size, while China, Argentina, and India dominate organic agricultural land (Willer et al., 2023, p. 34). Despite this growth, translating production into widespread consumer adoption remains a challenge, particularly in emerging markets where organic food is perceived as a luxury (Issock et al., 2023, p. 1). This study explores how

innovation-related factors, such as perceived novelty and complexity, influence consumer behaviour toward organic food adoption, offering insights for more effective market expansion strategies.

2.2 Global and South African Organic Food Market Overview

The organic food market has gained traction globally due to rising awareness of health and environmental concerns. However, its growth is constrained by high costs, accessibility challenges, and uneven adoption, particularly in developing economies. This section examines global and South African organic food market dynamics, assessing supply and demand trends, challenges, and opportunities for increased adoption.

2.2.1 Global Organic Food Market: Supply and Demand Perspectives

The global organic market has grown substantially, reaching €124.8 billion in 2021, with major markets in the United States, Germany, and France (Willer et al., 2023, p. 19). Organic farming spans 76.4 million hectares worldwide, though growth has been slowed by geopolitical tensions and rising food prices. Consumer demand, driven by concerns over pesticide use and environmental sustainability, is increasing, particularly among millennials (Ayyub et al., 2021, p. 3). However, organic products remain niche in many regions due to high costs and limited awareness, reinforcing their perception as luxury goods. This study examines how innovation attributes, such as perceived complexity, affect adoption in price-sensitive markets.

2.2.2 South African Organic Food Market: Demand Perspectives

South Africa has a long history of organic agriculture, dating back to the 1970's (Naidoo & Ramatsetse, 2016, p. 81). Despite early advances in organic farming, the sector has struggled to maintain momentum due to a lack of formal legislation and high certification costs (Mhlophe, 2016, p. 3; Naidoo & Ramatsetse, 2016). By the 1990s, around 50 organic farms were certified for export, focusing on products like mangoes, avocados, and rooibos tea (Kelly & Metelerkamp, 2015, p. 10). However, without strong policies supporting organic agriculture, South Africa's influence in the global organic sector has diminished (Africa, 2023, p. 11). Currently, only 0.1% of its agricultural land is under organic certification (Willer et al., 2023, p. 20; FiBL & IFOAM, 2023), highlighting the supply-side constraints that limit domestic growth.

South Africa's organic agriculture dates back to the 1970s but has struggled to expand due to high certification costs, limited government support, and regulatory gaps (Mhlophe, 2016, p. 3; Naidoo & Ramatsetse, 2016). Although certified organic land accounts for only 0.1% of the country's total farmland (Willer et al., 2023, p. 19), demand has grown among middle- and upper-income consumers, who perceive organic food as healthier and more sustainable (Chauke & Duh, 2019, p. 907). Major retailers like Woolworths and Pick n Pay have introduced organic product lines, yet affordability remains a key barrier for broader adoption, particularly among lower-income groups (Mhlophe, 2016, p. 3).

2.2.3 Market Trends for Organic Food: South African Perspective:

Despite increasing consumer interest, South Africa's organic food sector faces several challenges:

- ***Supply Constraints***: Limited infrastructure, high certification costs, and an absence of formal regulations hinder growth, with only an estimated 250 certified organic producers in the country (Kelly & Metelerkamp, 2015, p. 3). Much of the organic produce is exported, restricting local availability (Africa, 2023, p. 11).
- ***Limited Consumer Awareness***: Many South African consumers lack knowledge about the benefits of organic food, and perceptions of novelty and exclusivity contribute to hesitation in purchasing decisions (Mhlophe, 2016, p. 3; Naidoo & Ramatsetse, 2016).
- ***Affordability Issues***: Organic products are often priced significantly higher than conventional alternatives, making them inaccessible to price-sensitive consumers. Retail penetration remains limited, with organic products comprising less than 1% of the total food market (Africa, 2023, p. 11).

Traditional green consumer behaviour models, emphasising health consciousness and environmental concern, have not fully explained the slow uptake of organic food. This study suggests that innovation-related factors, such as perceived complexity, novelty, and accessibility, play a crucial role in shaping consumer behaviour. Understanding these factors can help develop targeted marketing strategies to increase organic food adoption and promote sustainable consumption.

2.2.4 Organic Products as New Products

Organic products are often perceived as novelty items, having yet to achieve widespread market prominence despite significant promotional efforts and market penetration strategies especially in developing countries (Banjara, 2016, p. 18; Persaud & Schillo, 2017, p. 131). One of the major challenges for consumers is the limited availability of organic products, which creates a significant barrier, even as awareness grows (Fynn-Green et al., 2019, p. 62; Kisaka-Lwayo & Obi, 2014, p. 3; Naidoo & Ramatsetse, 2016, p. 81). Additionally, the inherent uncertainty surrounding innovative products, including organic foods, can generate hesitation among consumers (Persaud & Schillo, 2017, p. 131). This hesitation stems from a lack of comprehensive information regarding green products and their benefits, resulting in consumer concerns over safety, authenticity, and potential negative experiences (Kisaka-Lwayo & Obi, 2014, p. 3; Naidoo & Ramatsetse, 2016, p. 81).

Despite growing awareness and promotional efforts, organic products are often perceived as novel, particularly in developing markets where they have yet to achieve widespread adoption (Banjara, 2016, p. 18; Persaud & Schillo, 2017, p. 131). Limited availability further restricts access, reinforcing consumer hesitation and scepticism (Fynn-Green et al., 2019, p. 62; Naidoo & Ramatsetse, 2016, p. 81). Additionally, uncertainty surrounding organic food, such as concerns about authenticity, safety, and efficacy, creates barriers to adoption (Persaud & Schillo, 2017, p. 131).

This challenge is not unique to South Africa; international studies highlight similar consumer resistance to novel food products. Research by Tuorila and Hartmann (2020, p. 2) indicates that unfamiliarity can trigger food neophobia, leading to hesitation in trying organic foods. Similarly, Le and Nguyen (2022, p. 3) in Vietnam found that green food innovations are often perceived as risky, particularly when benefits are not clearly communicated. Such scepticism underscores the importance of effective consumer education and marketing strategies in fostering trust and reducing perceived risks (Mangafić et al., 2017, p. 285; Yap & Chen, 2017, p. 51).

In South Africa, these challenges are amplified by market constraints, reinforcing the need for innovation-focused approaches. This study applies the Diffusion of Innovation (DOI) theory to explore how perceived novelty and complexity influence organic food adoption. Stage 1 will

systematically review both traditional (e.g., health consciousness, environmental concern) and innovation-related factors (e.g., perceived novelty, complexity), while Stage 2 will quantitatively assess their impact on consumer behaviour. Understanding these dynamics can inform strategies to enhance organic food adoption and accessibility in South Africa.

2.2.5 Food Innovation

Innovation, defined as the introduction of new ideas, practices, or products perceived as novel (Dedehayir et al., 2017, p. 2; Rogers, 2003, p. 10), plays a vital role in shaping consumer behaviour within the organic food sector. Beyond product characteristics, advancements in farming techniques, supply chains, and digital technologies, such as IoT and blockchain, enhance production efficiency and sustainability, potentially influencing consumer perceptions.

Despite these advancements, consumer scepticism regarding food safety and quality remains a key barrier, particularly in emerging markets like South Africa, where organic foods are often viewed as niche or luxury items (Naidoo & Ramatsetse, 2016, p. 81). Additionally, innovations in production can add perceived complexity, compounding existing barriers related to cost and accessibility (Kisaka-Lwayo & Obi, 2014, p. 3; Naidoo & Ramatsetse, 2016, p. 81). Understanding whether complexity and unfamiliarity hinder consumer adoption is critical.

Research indicates that acceptance of food innovations varies by demographic factors such as age and education (Sajdakowska et al., 2018, p. 253). While younger, more educated consumers tend to be more receptive, concerns about food technology risks still limit broader adoption. Furthermore, Guiné et al. (2021, p. 17) highlight the need for balance between innovation and tradition, as consumer acceptance often depends on cultural alignment.

This study applies the Diffusion of Innovation (DOI) theory to examine how perceived complexity, relative advantage, and compatibility influence organic food adoption in South Africa. Stage 1 will systematically review traditional and innovation-related factors, which will be tested in Stage 2 to assess their impact. By integrating health consciousness, environmental concern, and innovation-related perceptions, this research aims to provide a comprehensive understanding of consumer behaviour toward organic food.

The exploration of food innovation underscores the need to assess both technological advancements and consumer responses. Understanding how these innovations are introduced and accepted is essential for promoting organic food adoption. The next section explores DOI theory to contextualise its relevance in this study.

2.3 Innovation Theories on Green behaviours

The transition toward green behaviours, such as adopting environmentally sustainable practices or products, has been the focus of numerous innovation theories. These theories provide critical insights into how individuals and communities embrace sustainable innovations and how such behaviours can be fostered at scale. Among these, the Diffusion of Innovation (DOI) theory stands out as a valuable framework for understanding the dynamics of adoption in the context of green behaviours. By examining the factors influencing the acceptance of eco-friendly innovations, such as organic food, renewable energy solutions, or sustainable transportation methods, DOI theory sheds light on how green behaviours can gain momentum within societies.

The subsequent section delves into DOI theory and its application to green behaviours, highlighting its relevance in understanding the adoption of organic food as an example of sustainable consumer choices.

2.3.1 Foundational Principles of DOI Theory in the Context of Organic Food Adoption

The Diffusion of Innovation (DOI) Theory, proposed by Rogers (2003), identifies five categories of adopters namely; innovators, early adopters, early majority, late majority, and laggards each of which plays a distinct role in the adoption process of innovations (Rogers, 2003, p. 10). These categories provide a framework to understand how organic food adoption progresses within a social system and the role of DOI factors in influencing this process (Yap & Chen, 2017, p. 52). The following discussion outlines each of these adopter categories in detail.

- ***Innovators (2.5% of adopters):***

Innovators are risk-takers and the first to embrace new products or ideas (Cant et al., 2020, p. 90). In the South African context, innovators in organic food adoption are likely environmentally conscious individuals or health enthusiasts who actively seek novel solutions

that align with their values (Thiyagarajan, 2018, p. 1663). They often act as trendsetters within their social networks.

- ***Early Adopters (13.5% of adopters):***

Early adopters are opinion leaders who evaluate innovations and influence others (Cant et al., 2020, p. 90). These individuals may view organic food as a means to align with ethical and environmental values while also enhancing their societal status (Yap and Chen, 2017, p. 52). In South Africa, early adopters are likely to exhibit innovative consumer traits such as being from urban area, professionals or high-income consumers who prioritise sustainable consumption (Byun et al., 2017, p. 226).

- ***Early Majority (34% of adopters):***

The early majority adopts once they see tangible benefits and receive positive feedback from early adopters (Cant et al., 2020, p. 90). For organic food, this group would likely require clear labelling, proof of health benefits, or evidence of affordability (Mangafić et al., 2017, p. 100). In South Africa, they may represent middle-class consumers who are cautious but willing to invest in organic products if the perceived advantages outweigh the costs (Byun et al., 2017, p. 226).

- ***Late Majority (34% of adopters):***

The late majority is more sceptical and adopts only after an innovation becomes mainstream or necessary (Cant et al., 2020, p. 90). Price sensitivity and cultural relevance are likely significant drivers for this group in South Africa, given the socio-economic challenges faced by many households (Thiyagarajan, 2018, p. 1663).

- ***Laggards (16% of adopters):***

Laggards resist change and typically adopt only when compelled by external forces (Cant et al., 2020, p. 90). For organic food, this group may require significant incentives, regulatory shifts, or cultural pressure to embrace adoption (Rogers, 2003, p. 25). In South Africa, laggards may include individuals in lower-income or rural areas with limited access to organic options.

The adoption of innovations, such as organic food, does not occur uniformly across all adopter categories. Instead, the process is influenced by the interaction of various factors, including the characteristics of each category, the nature of the innovation, and the broader social and economic environment. The Diffusion of Innovation (DOI) Theory provides a comprehensive

framework for understanding these dynamics, offering insights into how innovations spread within a social system and the factors that drive or hinder their adoption.

While DOI theory provides a strong classification system, its traditional application does not fully account for economic and cultural constraints, particularly in emerging markets like South Africa (Thiyagarajan, 2018, p. 1663). The theory assumes that innovations spread predictably through social networks, yet factors such as affordability, supply chain challenges, and scepticism towards organic certification influence adoption rates. Therefore, a contextualised approach that integrates DOI theory with behavioural models such as Protection Motivation Theory (PMT) and the Theory of Planned Behaviour (TPB) may offer a more accurate framework for analysing organic food adoption. The following section explores the core principles of DOI theory and its relevance to organic food adoption.

2.3.2 Diffusion of Innovation (DOI) Theory

The Diffusion of Innovation (DOI) theory, introduced by Rogers (2003), provides a framework for understanding how innovations are adopted over time within a social system (Rogers, 2003, p. 25). This theory is particularly relevant for analysing the adoption of organic food, as it highlights the factors that influence consumers' decisions to embrace innovative products, which are perceived as novel (Padel, 2001, p. 40; Thiyagarajan, 2018, p. 1663). According to DOI theory, an innovation is any new idea, practice, or product perceived as novel by consumers (Rogers, 2003, p. 25). The theory explains how multiple factors determine the rate at which an innovation spreads through a community, influencing its overall adoption.

2.3.2.1 Relative Advantage

Relative advantage refers to the extent to which an innovation is perceived as superior to existing products or solutions, influencing its adoption rate (Ali et al., 2019, p. 621; Kim & Dearing, 2016, p. 20; Thiyagarajan, 2018, p. 15). In the context of organic food, this superiority may be perceived through factors such as health benefits, nutritional value, environmental sustainability, and societal status (Mhlophe, 2016, p. 5; Naidoo & Ramatsetse, 2016, p. 82). If consumers recognise significant advantages of organic foods compared to conventional alternatives, they are more likely to adopt them (Yap & Chen, 2017, p. 52).

While previous research (Yap & Chen, 2017, p. 52) confirms that relative advantage positively influences adoption, findings remain inconsistent across cultural contexts. For instance, Thiyagarajan (2018, p. 1663) found that in India, relative advantage did not significantly

impact organic food adoption due to high costs and consumer scepticism. These mixed results highlight the need for localised studies that assess whether relative advantage holds predictive power over other determinants in South Africa.

2.3.2.2 Complexity

Complexity refers to the degree to which an innovation is perceived as difficult to understand and use (Ali et al., 2019, p. 621; Kim & Dearing, 2016, p. 20; Thiyagarajan, 2018, p. 1663). In the context of organic food, this can manifest through challenges such as difficulty in identifying organic products, understanding their benefits, or navigating the variety of available options (Yap & Chen, 2017, p. 52). High perceived complexity can act as a barrier to adoption, as consumers may struggle with decision-making and feel uncertain about the tangible benefits (Thiyagarajan, 2018, p. 1663).

Empirical evidence highlights the negative impact of complexity on adoption. For instance, Yap and Chen (2017, p. 52) found that high complexity deterred young Chinese consumers from adopting wine products, while Thiyagarajan (2018, p. 1663) observed similar effects in India, where insufficient information led to challenges in the adoption of organic foods. These findings underscore the need to reduce perceived complexity to promote consumer acceptance. This study aims to evaluate the predictive power of complexity as a factor within the Diffusion of Innovation (DOI) framework compared to traditional factors.

2.3.2.3 Compatibility

Compatibility refers to the degree to which an innovation aligns with the existing habits, values, beliefs, and needs of potential adopters (Kim & Dearing, 2016, p. 100; Rogers, 2003, p. 25). In the context of organic food, compatibility plays a crucial role in adoption, as consumers are more likely to embrace products that resonate with their ethical values, dietary preferences, and cultural practices (Thiyagarajan, 2018, p. 1663). When organic foods align well with these existing dimensions, consumers are more inclined to integrate them into their regular consumption patterns.

Studies have shown that perceived compatibility can significantly influence adoption behaviour. For example, in Bosnia a study by Mangafić et al. (2017, p. 100) found that consumers' alignment with the ethical and environmental values of organic foods had a strong impact on their purchase intentions. Similarly, a study by Thiyagarajan (2018, p. 1663) reported that in India, the perceived compatibility of organic foods with local cultural and ethical values

positively affected adoption, suggesting that compatibility with consumers' beliefs and practices plays a key role in driving organic food adoption. This study aims to determine the relative and additional predictive power of compatibility, as one of the key DOI factors, in comparison to traditional factors.

2.3.2.4 Trialability

Trialability refers to the extent to which an innovation can be tested or sampled on a limited basis before a full commitment is made (Ali et al., 2019, p. 621; Rogers, 2003, p. 25). For organic food adoption, trialability plays a key role in reducing consumer hesitation by allowing them to experience the product first-hand (Thiyagarajan, 2018, p. 1663). When consumers can try organic foods through product sampling or smaller packaging, it helps alleviate concerns about taste, quality, or value, making them more likely to adopt these products.

Empirical studies highlight the importance of trialability in product adoption. A study by Mangafić et al. (2017, p. 100) found that consumers who had the opportunity to sample organic products formed more positive attitudes, which led to higher adoption rates. Similarly, Thiyagarajan (2018, p. 1663) reported that trialability positively influenced the adoption of organic foods in India, emphasising that when consumers are allowed to try organic products, they are more inclined to purchase them.

However, the impact of trialability may vary depending on the context. For instance, Yap and Chen (2017, p. 52) observed that in the case of wine products in China, trialability was less influential due to insufficient promotional efforts, which limited opportunities for sampling. This underscores the importance of targeted marketing strategies that offer consumers multiple ways to test organic products, thus reducing uncertainties related to their purchase. This study seeks to determine the relative and additional predictive power of trialability as a DOI factor, comparing it with traditional factors that typically influence organic food adoption, such as health consciousness and environmental concern.

2.3.2.5 Observability

Observability refers to the degree to which the benefits or results of an innovation are visible to others (Rogers, 2003, p. 25; Yap & Chen, 2017, p. 52). For organic foods, observability presents a challenge due to their credence nature, meaning consumers cannot easily verify by sight whether a product is genuinely organic (Massey et al., 2018, p. 419). Instead, consumers rely on external indicators, such as labels, certifications, and recommendations from trusted sources, to make purchase decisions.

Despite this challenge, research suggests that observability can still play a role in influencing adoption. (Thiyagarajan, 2018, p. 25) found that the social visibility of organic food consumption and perceived health benefits positively influenced its adoption in India. When consumers believe that organic products provide tangible, recognizable benefits such as improved health or social status this can encourage others within their social networks to adopt similar behaviours.

However, the impact of observability may differ across cultural contexts. For example, (Yap & Chen, 2017, p. 52) found that observability had a weaker influence on the adoption of organic foods in China, where visible benefits like health advantages or social recognition were less significant drivers of behaviour. This highlights the need to tailor marketing strategies to emphasise the observable benefits of organic foods in ways that resonate with local consumer expectations.

This study aims to determine the relative and additional predictive power of observability as a DOI factor, comparing it to traditional factors like health consciousness and environmental concern. By exploring how visible benefits such as social recognition and perceived health improvements influence organic food adoption in South Africa, this research will help identify strategies to make these benefits more apparent and impactful in driving consumer behaviour.

2.3.2.6 Interplay Between DOI Factors and Adopter Categories

The adoption of organic food is shaped by the interaction between DOI factors; relative advantage, complexity, compatibility, trialability, and observability and the characteristics of adopter categories. Each category interacts differently with these factors, influencing their likelihood and pace of adoption (Rogers, 2003, p. 25).

For instance, innovators and early adopters, who are more open to change and risk, are particularly motivated by the relative advantage of organic food, such as its perceived health benefits and environmental sustainability (Mhlophe, 2016, p. 5; Yap & Chen, 2017, p. 52). These groups are less deterred by complexity, as they are typically more informed and better equipped to navigate the novelty of organic products (Thiyagarajan, 2018, p. 15).

Conversely, the early majority and late majority are more cautious and reliant on evidence of compatibility with their values and lifestyles. Research shows that aligning organic food with existing dietary habits and cultural practices increases adoption in these groups (Mangafić et al., 2017, p. 100; Thiyagarajan, 2018, p. 25). Trialability also plays a significant role for these

categories, as opportunities to sample organic products reduce perceived risks and build trust (Mangafić et al., 2017, p. 288).

For laggards, who are typically resistant to change, complexity and affordability are substantial barriers (Cant et al., 2020, p. 90). Studies indicate that regulatory incentives and societal pressure, such as subsidies or government campaigns, can be effective in encouraging adoption among this group (Byun et al., 2017, p. 226; Rogers, 2003, p. 25). Moreover, observability, while a critical factor across all categories, is particularly influential for the late majority and laggards, as visible benefits, such as improved health or social status, can foster trust and drive adoption (Thiyagarajan, 2018, p. 25; Yap & Chen, 2017, p. 51).

In the South African context, socio-economic diversity amplifies these dynamics. Urban innovators and early adopters may prioritise ethical and environmental concerns, while affordability and accessibility are significant drivers for the late majority and laggards (Naidoo & Ramatsetse, 2016, p. 82). Cultural norms also play a pivotal role, as compatibility with traditional dietary preferences can significantly impact adoption (Thiyagarajan, 2018, p. 25).

This interplay underscores the need for tailored strategies that address the unique motivations and barriers of each adopter group. For example, simplifying product labelling and enhancing consumer education can reduce complexity for the majority categories, while targeted marketing and subsidy programs can help overcome barriers for laggards. By leveraging these insights, marketers and policymakers can accelerate the diffusion of organic food in South Africa.

The DOI framework is thus ideal for this study, as it allows for analysis of both innovation-related and traditional factors, providing insights into how these factors interact to shape consumer adoption decisions. This analysis aims to uncover ways to foster greater organic food adoption in South Africa by leveraging the unique benefits of innovation-related factors.

2.3.3 Applying Diffusion of Innovation (DOI) Theory to Organic Food Adoption

One of the main challenges in organic food adoption is that consumers cannot directly observe the inherent benefits of organic products. This lack of observability can hinder adoption, making certifications, labelling, and endorsements crucial in building trust and consumer confidence (Yap & Chen, 2017, p. 52). Research supports the notion that enhancing

observability and clearly communicating the relative benefits of organic products through effective marketing strategies can significantly boost consumer adoption (Mangafić et al., 2017).

The DOI theory has been widely applied to study the adoption of innovations across various industries. (Yap & Chen, 2017, p. 52) applied DOI theory to the wine industry in China, highlighting how the perceived characteristics of innovations strongly influenced consumer behaviour. (Mangafić et al., 2017, p. 285) similarly emphasised the importance of consumer attitudes and the role DOI factors play in shaping purchase intentions toward organic products. In the South African context, where organic products are seen as novel, the DOI framework can clarify how relative advantage, complexity, and compatibility impact consumer perceptions and behaviour, providing insights into overcoming barriers to adoption (Naidoo & Ramatsetse, 2016, p. 81).

By enhancing consumers' understanding of the relative advantages of organic foods such as improved health benefits and environmental sustainability and reducing the complexity surrounding these products, marketers can accelerate the adoption process. Moreover, trialability, the extent to which organic products can be tested or sampled before purchase, plays a significant role in reducing consumer hesitation, especially in developing markets like South Africa (Thiyagarajan, 2018, p. 1663). Research across different geographical contexts, such as Hungary and Malaysia, also indicates that cultural factors influence the impact of trialability and observability on consumer behaviour (Yap & Chen, 2017, p. 52).

Previous studies have focused primarily on the supply side of organic adoption, investigating factors influencing the adoption of organic practices by food processors (Shanahan et al., 2008; Simin & Jankovic, 2014). For example, Shanahan et al. (2008, p. 369) examined the constraints limiting food processors' adoption of organic methods, such as regulatory complexity and cost. This study, however, focuses on the demand side, exploring how consumers adopt organic foods, particularly in South Africa. Although Thiyagarajan (2018, p. 1663) found significant relationships between DOI factors and organic food adoption in India, limited research exists that applies DOI theory specifically to the South African market, leaving a gap in understanding how these factors influence consumer behaviour in this emerging market.

This study, therefore, seeks to fill this gap by assessing the relative, comparative, and additional predictive power of DOI factors on organic food adoption in South Africa. Unlike previous

research, which often explored traditional factors such as health consciousness and environmental concern, this study will provide insights into the role of DOI factors in shaping consumer behaviour, offering valuable strategies for marketing organic foods in the region. The next section discusses consumer innovativeness in detail and links it to the purpose of this study.

2.4 Consumer Innovativeness (CI)

Consumer Innovativeness (CI) refers to an individual's tendency to seek and adopt new products earlier than others, reflecting their openness to change and novel experiences (Michalak & Bartkowiak, 2020, p. 14617; Persaud & Schillo, 2017, p. 130; Rogers, 2003, p. 10). In the context of organic food adoption, CI influences how consumers perceive and respond to DOI factors, such as relative advantage and trialability, shaping their purchase decisions (Mangafić et al., 2017, p. 285). Highly innovative consumers often view organic products more positively, engaging in value co-creation and shaping market trends through early adoption and feedback (Michalak & Bartkowiak, 2020, p. 14617).

In the organic food sector, CI is crucial in moderating the relationship between consumer attitudes and purchase intentions. A study by Mangafić et al. (2017, p. 285) in Bosnia and Herzegovina found that highly innovative consumers are more inclined to adopt organic foods early, with CI strengthening the link between attitudes and purchase intentions. Expanding on the role of CI, a study by Michalak and Bartkowiak (2020, p. 14617) further explored the role of CI, revealing that innovative consumers often engage in value co-creation with companies, actively contributing feedback and suggestions that shape product development and improvement. Their findings suggest that pro-innovative consumers not only adopt new products early but also influence how these products evolve in the market.

This study aims to examine the relative influence of both traditional factors (e.g., health consciousness and environmental concern) and innovation-related factors (e.g., compatibility and trialability) on organic food adoption. Research by Yap and Chen (2017, p. 52) highlight CI's significant impact on new food product adoption, suggesting that targeting innovative consumers could accelerate organic food diffusion in an emerging market like South Africa. Moreover, a study by Michalak and Bartkowiak (2020, p. 14617) found that CI contributes to value co-creation, meaning innovative consumers not only adopt products early but also help shape their acceptance by others.

CI comprises two dimensions: innate innovativeness (general openness to new ideas) and actualised innovativeness (speed of adoption) (Zhang et al., 2020, p. 3). Both dimensions are important predictors of organic food adoption, as innovative consumers often seek to reinforce their individuality and social standing through early product adoption, further facilitating market diffusion (Mangafić et al., 2017, p. 285). These dynamics align with the broader objectives of this study, which seeks to understand how CI and DOI factors interact to shape organic food adoption in South Africa.

While CI is a key predictor of early adoption, it is not without limitations. Its focus on early adopters' risks neglecting the motivations and barriers faced by the majority of consumers, such as the late majority and laggards. Moreover, cultural and socio-economic factors significantly influence CI's impact, suggesting the need for localised strategies in emerging markets like South Africa. By integrating CI with DOI factors and traditional green behaviour models, this study aims to develop a comprehensive framework for understanding organic food adoption and designing effective marketing strategies for sustainable consumption.

2.5 Traditional Theories on Green behaviours

Traditional theories on green behaviours provide a foundation for understanding the motivations and processes that influence environmentally conscious decisions. These frameworks emphasise the psychological, social, and contextual factors that drive sustainable consumption, including organic food adoption. The next section provides discussion on the traditional theories such as Stimulus-Organism-Response (S-O-R), Protection Motivation Theory, Theory of Reasoned Action, Theory of Planned Behaviour, Norm Activation Theory, and other related models and theories.

2.5.1Stimulus-Organism-Response (S-O-R Theory)

The Stimulus-Organism-Response (S-O-R) theory, first proposed by Mehrabian and Russell in 1974, provides a comprehensive framework for understanding how external stimuli influence internal psychological states, which, in turn, drive behavioural responses (Thanki et al., 2022, p. 3). This theory has been widely applied in various fields, including psychology, marketing, and consumer behaviour, to explain how environmental and situational factors affect decision-making processes (Amaya Rivas et al., 2022, p. 3). This framework is particularly relevant to this study's aim of exploring the factors influencing organic food adoption in South Africa, where organic products are often perceived as new or unfamiliar.

Components of the S-O-R Framework:

- **Stimulus (S):** Stimuli are external cues that trigger internal reactions in individuals (Amaya Rivas et al., 2022, p. 3). In In the context of organic food adoption, these stimuli can include marketing communications, product labelling, and certifications that emphasise health benefits and environmental sustainability. Such stimuli are essential for shaping consumer attitudes, particularly in markets like South Africa, where awareness and availability of organic foods are limited (Naidoo & Ramatsetse, 2016, p. 81). Marketing strategies that enhance consumer awareness and perceived value of organic foods play a key role in driving adoption (Sultan et al., 2021, p. 2).
- **Organism (O):** This refers to the individual's internal cognitive and emotional processes that occur after receiving external stimuli (Sultan et al., 2021, p. 2). These processes include perceptual and physiological responses, where the individual analyses the cues and forms cognitive evaluations and emotional reactions (Amaya Rivas et al., 2022, p. 3; Sultan et al., 2021, p. 2). In the context of organic food, this could involve assessing perceived benefits of the organic product, as well as experiencing positive emotions like pride or satisfaction from making environmentally responsible choices.
- **Response (R):** The refers to the behavioural outcome that results from the interaction of stimuli and the individual's internal processes (Sultan et al., 2021, p. 2). In the context of this study, the key response is the decision to adopt organic food. This outcome reflects whether consumers, after evaluating the stimuli (such as marketing cues and product attributes) and processing them internally (through cognitive and emotional reactions), ultimately choose to purchase organic products.

The S-O-R model underscores the importance of effective consumer engagement through targeted stimuli. In South Africa, where organic food adoption faces barriers related to limited awareness, high prices, and trust issues, strategic marketing efforts must focus on reducing perceived risks and enhancing product credibility through clear labelling, third-party certifications, and informative campaigns.

While the S-O-R framework provides a strong foundation, it does not fully account for economic and accessibility barriers, which are particularly relevant in South Africa's diverse market. Therefore, this study integrates traditional behavioural factors with innovation-related variables to develop a more comprehensive understanding of organic food adoption. The next

chapter's systematic review will identify key factors to be incorporated into the study's conceptual model, which will be tested quantitatively in Stage 2 to provide empirical insights into consumer decision-making.

2.5.2 Protection Motivation Theory

Protection Motivation Theory (PMT), developed by Rogers in 1975 and revised in 1983, explains how individuals are motivated to adopt protective behaviours in response to perceived threats (Marikyan & Papagiannidis, 2023, p. 80). Initially applied in health psychology, PMT has since expanded to domains like environmental behaviour, marketing, and technology adoption (Pang et al., 2021, p. 3). The theory focuses on two cognitive appraisals: threat appraisal (evaluating the severity and personal susceptibility to a threat) and coping appraisal (assessing the efficacy of protective actions and one's ability to implement them) (Marikyan & Papagiannidis, 2023, p. 80). Rooted in the Health Belief Model (HBM), PMT addresses how individuals weigh costs and benefits when deciding on behavioural change, particularly in pro-environmental contexts (Rogers, 2003, p. 102). Although originally developed for health-related decisions, PMT is broad enough to be applied to situations involving protective behaviours in various fields (Marikyan & Papagiannidis, 2023, p. 80).

1. **Threat Appraisal**: This involves evaluating the severity and vulnerability of the threat. Individuals assess the seriousness of the threat (e.g., health risks from non-organic food or environmental degradation due to conventional farming) and their personal susceptibility to the threat (Pang et al., 2021, p. 5).
2. **Coping Appraisal**: This assesses the efficacy of the recommended protective behaviour (e.g., switching to organic food) and individuals' confidence in their ability to carry out that behaviour (self-efficacy) (Marikyan & Papagiannidis, 2023, p. 82). PMT asserts that when individuals believe the recommended behaviour will be effective in reducing the threat and they feel capable of adopting it, they are more likely to engage in protective actions (Pang et al., 2021, p. 5).

In relation to organic food consumption, PMT has proven useful in understanding the motivation behind consumer behaviour (Marikyan & Papagiannidis, 2023, p. 78; Pang et al., 2021, p. 5). For instance, consumers may perceive significant health threats from consuming conventionally farmed foods due to pesticide residues, and environmental risks stemming from unsustainable agricultural practices. If they also believe that switching to organic products

effectively mitigates these risks and that they can afford and access organic products, they are more likely to make the switch.

PMT provides critical insights into consumer decision-making by highlighting the role of risk perception and self-efficacy in driving behaviour. In the South African context, where organic food is often perceived as expensive or inaccessible, PMT suggests that adoption depends on whether consumers see organic options as both effective in mitigating risks and feasible within their economic constraints.

While PMT offers a strong foundation for understanding organic food adoption, it does not fully account for innovation-related factors (e.g., perceived novelty and complexity), which also influence consumer decisions. To develop a more comprehensive framework, this study integrates PMT with Diffusion of Innovation (DOI) theory and other behavioural models. The systematic review in Stage 1 will identify the most relevant traditional and innovation-related factors, which will then be tested in Stage 2 to provide empirical insights into consumer behaviour in South Africa.

2.5.3 Theory of Reasoned Action

The Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen in 1975, provides a foundational framework for understanding human behaviour based on the premise that individuals are driven by their intention to perform a certain behaviour (Macovei, 2014, p. 15). TRA posits that behaviour is determined by behavioural intentions, which are shaped by two main factors: attitudes and subjective norms. Attitudes refer to an individual's overall evaluation, whether positive or negative of performing a particular behaviour (Sok et al., 2021, p. 389). In contrast, subjective norms represent the perceived social pressures or expectations from others to either engage in or refrain from the behaviour (Macovei, 2014, p. 15). Importantly, TRA assumes that individuals will act on their intentions when they have full volitional control, meaning that as long as they are capable, they will follow through on their intentions to act (Sok et al., 2021, p. 389). Thus, according to TRA, behavioural intentions serve as the most significant predictor of actual behaviour.

The research aims to determine whether traditional factors such as TRA constructs (attitude, intention, social norms and behaviour) play a significant role in shaping consumer behaviour toward organic food adoption. During Stage 1, the study will review the existing literature to establish if TRA factors are among the most prominent and emerging influences on consumer

behaviour. The results from this systematic review will guide which factors are to be included in the survey for Stage 2**.** Thus, while TRA emphasises the importance of intention as a predictor of behaviour, this study seeks to verify whether these traditional factors are crucial for organic food adoption in the South African context.

2.5.4 Norm Activation Model

Norm Activation Theory (NAT), introduced by Schwartz in 1977, provides a framework for explaining pro-social and altruistic behaviours, particularly when individuals feel morally obligated to act in ways that benefit society or the environment (Le & Nguyen, 2022, p. 3; Shanka & Gebremariam Kotecho, 2023, p. 305). NAT has been widely applied to various pro-environmental behaviours, including recycling, energy conservation, and sustainable consumption practices such as the adoption of organic foods (Le & Nguyen, 2022, p. 3; Shanka & Gebremariam Kotecho, 2023, p. 305). The theory posits that moral norms influence individuals' beliefs and actions (Shanka & Gebremariam Kotecho, 2023, p. 305).

The key constructs of NAT are:

- **Awareness of Consequences (AC):** This refers to the recognition that one's actions, such as purchasing non-organic products, have negative environmental or health impacts. In the context of organic food adoption, heightened awareness can drive consumers to switch to organic alternatives (Shanka & Gebremariam Kotecho, 2023, p. 305).
- **Ascription of Responsibility (AR):** AR involves the belief that individuals are personally responsible for the consequences of their behaviours. When consumers feel accountable for the environmental damage caused by conventional farming, they are more likely to engage in sustainable behaviours like buying organic products (Le & Nguyen, 2022, p. 3; Shanka & Gebremariam Kotecho, 2023, p. 305).
- **Personal Norms (PN):** Personal norms are moral obligations that individuals internalize, guiding their behaviour. When consumers develop strong personal norms related to protecting (Le & Nguyen, 2022, p. 3; Shanka & Gebremariam Kotecho, 2023, p. 305).

Research applying NAT to organic food consumption has demonstrated that when consumers are aware of the negative consequences of conventional farming and feel personally responsible, it strengthens their personal norms, which are crucial in predicting their intention

to purchase organic food (Le & Nguyen, 2022, p. 3). In collectivist cultures, social approval can further amplify personal norms and lead to greater adoption of organic products (Shanka & Gebremariam Kotecho, 2023, p. 305).

- ***Analytical Perspective on NAT and Organic Food Adoption***

Empirical studies confirm that heightened awareness and personal responsibility reinforce ethical consumption choices. In collectivist cultures, social approval further strengthens personal norms, amplifying organic food adoption (Shanka & Gebremariam Kotecho, 2023, p. 305). However, in markets like South Africa, economic constraints may limit the translation of moral intentions into purchasing behaviour, making it necessary to assess NAT's predictive power alongside economic and innovation-related factors.

This study systematically reviews NAT's relevance in Stage 1, identifying whether its constructs significantly influence organic food adoption in South Africa. The findings will determine whether NAT factors should be integrated into the quantitative analysis in Stage 2. While NAT effectively explains the role of moral obligations in consumer behaviour, this study seeks to assess its comparative influence against other behavioural and innovation-driven adoption factors.

2.5.5 Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB) was introduced by Icek Ajzen in 1985 as an extension of the Theory of Reasoned Action (TRA), addressing key criticisms of the latter (Macovei, 2014, p. 16). One of the primary critiques of TRA was its assumption of complete volitional control over behaviour, which limited its applicability in situations where individuals might face external constraints (Ajzen, 1991, p. 182). TPB builds on TRA by adding a new variable, "perceived behavioural control" (PBC), which accounts for an individual's perception of the ease or difficulty of performing a behaviour in the face of potential barriers (Macovei, 2014, p. 16). This modification enables TPB to better explain human behaviour in contexts where external factors may influence the individual's ability to act (Macovei, 2014, p. 16). TPB posits that an individual's intention to engage in a particular behaviour is shaped by three key factors: their attitude toward the behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991, p. 182). Given its wider applicability, TPB has been extensively used across various domains, including health, environmental sustainability, and consumer behaviour,

making it a valuable tool for understanding intentions to adopt eco-innovations, such as organic foods (Le & Nguyen, 2022; Macovei, 2014, p. 15; Yadav & Pathak, 2016, p. 122).

The TPB framework is particularly effective in examining how these three determinants, attitude, subjective norms, and PBC, interact to influence consumer intentions and behaviour.

- **Attitude:**

Attitude refers to an individual's overall evaluation of performing a behaviour, which can be either positive or negative (Macovei, 2014, p. 16). It represents the degree to which a person forms a favourable or unfavourable judgment of engaging in a specific action (Lupindo et al., 2024, p. 2). In the context of organic food, attitudes are shaped by perceptions of its benefits, including health advantages, environmental sustainability, and product quality (Yadav & Pathak, 2016, p. 122). Studies consistently demonstrate that consumers with positive attitudes toward organic products are more likely to develop strong purchase intentions (Macovei, 2014, p. 15; Paul & Rana, 2012, p. 412). These attitudes often stem from cognitive and emotional evaluations, such as the belief that organic foods are safer, free from harmful chemicals, and aligned with personal health and environmental values (Yadav & Pathak, 2016, p. 122).

Positive attitudes play a pivotal role in driving organic food adoption, as they are directly linked to a higher likelihood of purchase. For example, Lupindo et al. (2024, p. 6) found that attitudes significantly influence purchase intentions for organic personal care products, highlighting the broader applicability of attitudes in sustainable consumer behaviour. This underscores the importance of shaping consumer attitudes through targeted marketing campaigns that emphasise the health and environmental benefits of organic foods. By fostering positive perceptions, marketers can enhance consumer intent and encourage greater adoption of organic products.

However, the role of attitude in predicting organic food adoption within the South African context is still uncertain. While previous studies have highlighted the importance of attitudes in shaping consumer behaviour, this study aims to determine whether attitude, as a construct, will emerge as a key traditional factor for organic food adoption. Stage 1 of this research will involve a systematic review of existing literature to identify the most prominent factors influencing organic food consumption. The results of this review will guide which constructs, including attitude, will be incorporated into the final model for Stage 2 of the study, where these factors will be quantitatively tested

- **Subjective Norm:**

Subjective norms refer to the social pressures or expectations from significant individuals, such as family members, friends, or society, that influence an individual's intention to engage in a particular behaviour (Zayed et al., 2022, p. 3). In the context of organic food consumption, subjective norms capture the perceived social approval or disapproval of purchasing organic products (Yadav & Pathak, 2016, p. 122). Research indicates that social influence plays a crucial role in shaping consumer behaviour, as higher social pressures from important referents can increase an individual's intention to adopt organic products (Budhathoki et al., 2022, p. 2; Zayed et al., 2022, p. 3). When consumers perceive that their decision to buy organic food aligns with the expectations of their social group, they are more likely to follow through with the purchase.

However, the extent to which subjective norms influence organic food adoption in South Africa remains uncertain. This study will investigate whether subjective norms emerge as a significant traditional factor influencing organic food adoption during Stage 1, which involves a systematic review of existing literature. The review will guide which factors, including subjective norms, are most prominent in shaping consumer behaviour. Based on the findings of this review, the study will incorporate the most relevant constructs into the final model for Stage 2, where they will be quantitatively tested. As a result, while subjective norms have been shown to be influential in other contexts, this study aims to verify their role in the South African organic food market.

- **Perceived Behavioural Control (PBC):**

Perceived Behavioural Control (PBC) refers to the extent to which an individual feels they have the ability to perform a particular behaviour, influenced by both internal factors (such as self-efficacy) and external factors (such as economic or resource availability) (Ajzen, 1991, p. 182). It reflects the perceived ease or difficulty of adopting a behaviour, shaped by past experiences and anticipated obstacles (Macovei, 2014, p. 18). In the context of organic food, PBC encompasses factors such as financial resources, accessibility, and personal confidence in making informed purchasing decisions.

Research indicates that when consumers perceive greater control over purchasing organic products, they are more likely to intend to adopt them (Lupindo et al., 2024, p. 2). High levels of PBC have been consistently linked with stronger intentions to engage in pro-environmental behaviours, including organic food consumption (Paul et al., 2015, p. 123).

This study will explore whether PBC is one of the most significant traditional factors influencing the intention to adopt organic food in South Africa. As outlined in Objective 1, Stage 1 will conduct a systematic review of the literature to determine whether PBC is one of the key constructs to be included in the survey for Stage 2. Although prior research suggests a strong connection between PBC and intention, the final model used in the quantitative phase will depend on the outcomes of the systematic review.

- **Intention:**

Intention refers to the strength of an individual's resolve to engage in a particular behaviour, serving as the best predictor of future behaviour (Nedra et al., 2015, p. 68). In the context of organic food adoption, intention forms through a motivational process in which consumers first recognize a need or desire, make a decision, and then take action by purchasing the product (Gakobo & Jere, 2016, p. 1270). As the direct antecedent of behaviour, intention is often considered a key determinant of whether a person will actually follow through with their planned actions. Numerous studies have shown that strong intentions are highly predictive of actual purchasing behaviour, particularly for eco-friendly and sustainable products such as organic food (Gakobo & Jere, 2016, p. 1268; Nedra et al., 2015, p. 67).

This study seeks to determine whether intention plays a significant role in the adoption of organic foods within the South African market. As part of Objective 1, the systematic review conducted in Stage 1 will examine whether intention, alongside other traditional factors, emerges as a key predictor of consumer behaviour. The results of the systematic review will guide the inclusion of intention in the survey for Stage 2, ensuring the study captures the most relevant factors influencing organic food adoption.

- **Purchase behaviour**

In the context of green behaviours, such as organic food consumption, purchase behaviour is the result of a series of cognitive and motivational processes. This behaviour starts with a recognition of a need or desire, followed by decision-making, and eventually leads to the act

of purchasing (Gakobo & Jere, 2016, p. 1270). Intention is seen as the direct antecedent to actual behaviour (Nedra et al., 2015, p. 68). However, the intention-behaviour gap often highlights that various external and psychological factors can influence whether this intention is translated into actual purchasing behaviour.

For instance, even with a strong intention to buy organic products, consumers might be influenced by situational factors such as price, availability, and convenience (Yadav & Pathak, 2016, p. 122). Other factors like trust in organic certifications and the perceived authenticity of the product also play a crucial role in driving actual purchasing behaviour. These external influences highlight the complexities of green consumer behaviour, which cannot be solely predicted by intention.

This section investigates purchase behaviour as one of the key models influencing green behaviour. The systematic review (Stage 1) of this study will further determine whether purchase behaviour and other related constructs emerge as significant factors in explaining green behaviour adoption in South Africa's organic food market

2.5.6 Theory of Planned Behaviour (TPB)extensions

The Theory of Planned Behaviour (TPB) has been extensively applied to understand consumer behaviour, particularly in the context of organic food consumption. However, to more accurately capture the complexities of consumer decision-making, various extensions to the TPB have been proposed. These extensions incorporate additional factors such as trust, health consciousness, and environmental concern, which are particularly relevant in the context of sustainable consumption.

- ***Trust:***

Trust has been defined in various ways in the literature, with Hobbs and Goddard (2015, p. 71) definition offering valuable insight: trust is "a heuristic used in situations where lack of knowledge, experience, or familiarity with firms, products, or processes hampers decision-making" (Canova et al., 2020, p. 3). Trust plays a crucial role in shaping consumer attitudes and purchase intentions toward organic foods, particularly as demand for sustainability continues to grow (Canova et al., 2020, p. 3).

Consumers rely on trust to assess the authenticity and credibility of organic products, especially given their credence attributes, where quality cannot be directly verified (Rashid & Lone, 2023,

p. 914). However, the rise of greenwashing, where companies make vague or misleading claims about their sustainability practices, has significantly eroded consumer trust (Chen & Chang, 2013, p. 489). This erosion of trust presents a significant barrier to the adoption of organic products, as consumers increasingly question the legitimacy and credibility of sustainability messaging (Roh et al., 2022, p. 8).

Trust plays a critical role in shaping consumers' positive evaluations of organic foods. Studies such as Canova et al. (2020, p. 3) emphasise that consumer trust in organic certifications, labelling, and company transparency is pivotal for fostering favourable attitudes and driving purchase intentions. Without trust, even the most well-crafted sustainability claims may fail to resonate with consumers, limiting the adoption of organic products. This highlights the need for credible certification systems, transparent labelling, and clear communication to restore consumer confidence and mitigate scepticism.

This research recognises trust as a significant potential extension to the Theory of Planned Behaviour (TPB) for explaining organic food adoption. During Stage 1, a systematic review identifies key traditional and innovation-related factors influencing organic food consumption. The review outcomes will guide the decision on whether trust, among other constructs, should be included in the final model for quantitative testing in Stage 2. Incorporating trust emphasises its vital role in mitigating concerns about greenwashing and consumer scepticism, thereby offering a more holistic framework for understanding the adoption of organic food.

- ***Health Consciousness***

Health consciousness reflects the degree to which individuals consider health-related factors in their everyday decisions, shaping their lifestyle and purchasing behaviours (Yadav & Pathak, 2016, p. 123). Research indicates that health-conscious consumers are more likely to develop positive attitudes toward buying organic products, often viewed as healthier options compared to conventionally produced foods (Yazdanpanah & Forouzani, 2015, p. 342). Despite this, some studies, such as Bryła (2016, p. 737), have noted a lack of conclusive evidence that organic food offers significant nutritional or health advantages over non-organic food.

The measurement of health consciousness has been widely explored and adapted in recent studies. For instance, Zayed et al. (2022, p. 7) utilised a comprehensive health consciousness measure that captures consumers' focus on health in their decision-making processes. This measure evaluates how individuals incorporate health considerations into their daily lives,

including their food choices. Lupindo et al. (2024, p. 3) also applied this measure in a study focusing on organic personal care products, confirming its relevance across various organic product categories. Zayed et al. (2022, p. 7) demonstrated that consumers with higher levels of health consciousness exhibit stronger preferences for products perceived as health-enhancing, further validating the construct's applicability in understanding organic food adoption.

Research findings consistently demonstrate a positive correlation between individuals' health consciousness and their intention to buy organic foods. Yadav and Pathak (2016, p. 123) found that health-conscious consumers in India were more likely to purchase organic products, a trend consistent with findings from developed countries. Similarly, Yazdanpanah and Forouzani (2015, p. 342) reported that health-conscious individuals associate organic products with reduced chemical exposure and better nutritional value, reinforcing their favourable attitudes and purchase intentions. In South Africa, Mhlophe (2016, p. 2) highlighted the significant influence of health consciousness on consumers' decisions to purchase organic food, indicating its relevance in emerging markets. However, some studies, such as Bryła (2016, p. 737), have questioned the extent of the nutritional advantages offered by organic foods over conventional alternatives, which could temper consumer trust and affect adoption rates.

This study integrates health consciousness as a potential predictor of organic food adoption in South Africa, recognising its significance in shaping consumer behaviour. The systematic review conducted in Stage 1 will critically assess health consciousness alongside other traditional and innovation-related factors, determining its inclusion in the final model for Stage 2 quantitative testing. Drawing on insights from (Zayed et al., 2022, p. 7) and Lupindo et al. (2024, p. 4), the study employs robust health consciousness measures to ensure the construct's relevance and reliability in capturing its influence on consumer intentions. These findings are expected to contribute to a deeper understanding of how health consciousness drives organic food adoption in both developed and emerging market contexts.

- ***Environmental Concern***

Environmental concern is defined as the level of awareness individuals have regarding environmental challenges and their commitment to taking personal actions that support environmental sustainability (Yadav & Pathak, 2016, p. 123). This factor has been widely explored in research to understand its influence on organic food purchasing behaviour.

In their study, Yadav and Pathak (2016, p. 123) observed that environmental concern did not significantly impact the purchase intentions of Indian consumers, suggesting a lower level of altruism in their behaviour compared to those in more developed nations. In contrast, research by Mhlophe (2016, p. 2) in Johannesburg, South Africa, found a positive relationship between environmental concern and the intention to purchase organic food. This demonstrates that in certain contexts where environmental awareness is higher environmental concern can serve as a strong motivator for organic food adoption.

This study seeks to determine whether environmental concern is a prominent traditional factor influencing organic food adoption in South Africa, as outlined in Objective 1. The systematic review conducted in Stage 1 will guide whether environmental concern, along with other factors, should be included in the final model for Stage 2, where these factors will be tested. While environmental concern may influence purchasing behaviour in certain markets, this study will assess its significance in the South African context based on the outcomes of the systematic review.

2.5.7 Comparison of Protection Motivation Theory (PMT) with TRA and TPB in Explaining Consumer Behaviour

Protection Motivation Theory (PMT), the Theory of Reasoned Action (TRA), and the Theory of Planned Behaviour (TPB) each provide valuable insights into understanding consumer decision-making. While they share a focus on explaining behaviour through cognitive processes, their constructs and areas of applicability differ significantly, especially in the context of organic food adoption. This section highlights these differences and evaluates their relative explanatory power. Table 2.1 summarises the key differences between PMT, TRA, and TPB, highlighting their core constructs, motivations, and areas of application.

Table 2. 1: Comparison of PMT, TRA and TPB

Aspect	PMT	TRA	TPB
Core Focus	Risk evaluation and protection motivation (Rogers, 1975, 1983; Marikyan & Papagiannidis, 2023).	Attitudes and social norms (Fishbein & Ajzen, 1975; Macovei, 2014, p. 15).	Intentions influenced by attitudes, social norms, and perceived control (Ajzen, 1991).
Primary Motivation	Fear, risk reduction, and coping appraisal (Pang et al., 2021, p. 5).	Rational decision-making based on intention (Macovei, 2014, p. 15).	Rational decision-making influenced by external constraints (Yadav & Pathak, 2016, p. 122).
Emotional Component	Strong (fear and protection motivation; Rogers, 1983; Marikyan & Papagiannidis, 2023).	Weak (primarily cognitive; Fishbein & Ajzen, 1975).	Moderate (addresses cognitive and situational factors; Ajzen, 1991).
Barriers/Constraints	Accounts for self-efficacy, response efficacy, and coping costs (Rogers, 1983; Pang et al., 2021, p. 5).	Assumes full volitional control (Fishbein & Ajzen, 1975; Macovei, 2014, p. 15).	Incorporates perceived behavioural control for external and internal barriers (Ajzen, 1991).

Aspect	PMT	TRA	TPB
Best Use Case	Behaviours driven by risk and protective motivation, such as health and environmental risks (Pang et al., 2021, p. 5).	Socially influenced behaviours, such as peer-pressured decisions (Macovei, 2014, p. 15).	Contexts with external barriers like affordability or accessibility (Yadav & Pathak, 2016, p. 122).

PMT's focus on threat and coping appraisals makes it uniquely effective for explaining organic food adoption in contexts where health and environmental risks are key motivators. While TRA and TPB provide valuable insights into intentional behaviour, they lack PMT's emphasis on fear and protection. By integrating emotional and cognitive processes, PMT offers understanding of consumer decisions, especially in emerging markets like South Africa, where affordability and trust are critical barriers (Naidoo & Ramatsetse, 2016, p. 81). While TRA and TPB provide valuable frameworks for understanding intention, they may inadequately address behaviours driven by fear or protective motivation, which are central to organic food consumption decisions (Yadav & Pathak, 2016, p. 123). This limitation becomes particularly relevant for organic food consumption, where perceived risks and protective actions are central to consumer decisions. The next section explores additional theories and models that contribute to a more comprehensive understanding of organic food adoption.

2.5.8 Other theories and models contributing to organic adoption.

Understanding consumer behaviour toward organic food adoption is complex, as it is influenced by an interplay of multiple psychological, social, and economic factors. While dominant models such as the Theory of Planned Behaviour (TPB) and the Diffusion of Innovation (DOI) theory are often applied to explain consumer decisions, many other theories have been explored to provide a more holistic understanding of organic food consumption. These additional theories offer diverse perspectives that capture the motivations, attitudes, and external influences driving consumer behaviour. Below, several alternative theories and factors are discussed to highlight the breadth of approaches used to study organic food adoption:

- **Self-Construal Theory**: Explains how individual self-perception in relation to others influences consumption choices (Gumber & Rana, 2021, p. 3). Independently oriented consumers adopt organic food based on personal values (e.g., health, sustainability), while interdependent individuals are more influenced by societal norms and social expectations (Markus & Kitayama, 2010, p. 420).
- **Self-Determination Theory**: Differentiates between intrinsic and extrinsic motivations in consumer behaviour. When consumers feel autonomous in their decisions, competent in assessing organic food benefits, and socially connected to like-minded individuals,

they are more likely to adopt organic products long-term (Ryan & Deci, 2000, p. 68). In a study by Sahelices-Pinto et al. (2021, p. 449) findings showed that Millennials motivated intrinsically, rather than by external pressures, demonstrate stronger, long-term commitment to organic food. This highlights how intrinsic motivation fosters more enduring consumption behaviours in the context of organic food.

- **Theory of Cognitive Dissonance**: Suggests that individuals adjust behaviours or beliefs to reduce the discomfort of misalignment between values (e.g., environmental concern) and actions (e.g., purchasing conventional food). Organic adoption may serve as a resolution to this psychological tension (Miller et al., 2015, p. 2). In the context of consumer behaviour, such as organic food consumption, individuals who value health or environmental sustainability may feel dissonance if their purchasing habits do not align with these values. To reduce this discomfort, they may shift to purchasing organic products, thereby aligning their actions with their values (Miller et al., 2015, p. 2). Cognitive dissonance offers a framework for understanding shifts in consumer behaviour, particularly when consumers seek to resolve conflicts between their ethical beliefs and consumption patterns (Miller et al., 2015, p. 2).
- **Hierarchy of Effects Model**: This model outlines a sequential progression of six stages: awareness, knowledge, liking, preference, conviction, and purchase (Barry, 1987, p. 251). The model suggests that advertising and marketing efforts guide consumers through these stages, gradually building awareness and shaping attitudes before motivating action. In the context of organic food consumption, the Hierarchy of Effects Model helps explain how consumers become aware of organic products, develop favourable attitudes toward their benefits (such as health and environmental impact), and ultimately decide to purchase (Barry, 1987, p. 251).
- **Goal Framing Theory**: This theory posits that different frames such as gain frames (emphasising benefits) or loss frames (highlighting potential risks or losses) can significantly impact decision-making processes (Steg & Vlek, 2009, p. 309). In the context of organic food consumption, goal framing can be particularly effective in encouraging consumers to make sustainable choices (Khan et al., 2022, p. 2). For instance, framing organic products as beneficial for health (gain frame) or as a way to avoid harmful chemicals (loss frame) can increase the likelihood of purchase (Khan et al., 2022, p. 2). Moreover, highlighting environmental goals (e.g., reducing carbon footprints) or personal health goals (e.g., improving well-being) can further motivate

consumers to opt for organic products by aligning with their intrinsic motivations and values (Khan et al., 2022, p. 2).

- **Attitude-Behaviour gap**: The decision-making process around organic food consumption is complex, especially due to the persistent attitude-behaviour gap. Consumers often express strong environmental and health concerns but fail to translate these attitudes into consistent purchasing actions (Liang & Lim, 2021; Pino et al., 2012). Studies highlight that factors such as social influences, consumer trust, and scepticism about organic claims play critical roles in widening this gap (Anisimova & Weiss, 2022, p. 1476; Sadiq et al., 2023). This gap persists across cultural contexts, where perceived effectiveness and trust in labelling vary, underscoring the need for more marketing strategies to bridge attitudes and actual organic food purchases.

The diversity of theoretical perspectives underscores the complexity of organic food adoption, necessitating a systematic approach to identifying the most empirically validated factors. This study will conduct a Stage 1 systematic review to determine which traditional and innovation-related factors are most predictive of consumer behaviour, ensuring a scientifically robust and contextually relevant framework for the South African market. The findings will then inform Stage 2, where these key drivers will be tested quantitatively, offering actionable insights for marketing strategies and policy interventions aimed at increasing organic food adoption.

The following section reviews existing research on organic food adoption, further contextualising the study's theoretical foundations.

2.6 Previous Research on Organic Adoption

The increasing demand for organic food is driven by health consciousness, environmental sustainability, and ethical consumption (Massey et al., 2018, p. 419; Rana & Paul, 2020, p. 162). A significant body of research has explored the complexity of consumer behaviour, categorizing influencing factors into consumer-related, product-specific, and external drivers (Massey et al., 2018, p. 419). Several systematic reviews and meta-analyses have synthesized existing literature, providing valuable insights but also revealing gaps, particularly regarding the role of innovation-related factors in organic food adoption.

Key Findings from Systematic Reviews and Meta-Analyses

- *Health and Environmental Motivations*: Eyinade et al. (2021, p. 78) identified health consciousness, food safety, and environmental concern as primary drivers of organic

food consumption. However, their study focused on intrinsic values, neglecting innovation-related factors such as trialability and relative advantage in influencing consumer behaviour.

- *Demographic and Cultural Influences*: Rana and Paul (2020, p. 162) confirmed that health perceptions and food safety significantly drive organic purchases. They found that younger, well-educated, and health-conscious consumers are more likely to buy organic food. Cultural variations were also noted, with health motivations prevailing in Western countries, while social and environmental concerns played a more significant role in developing regions. The study emphasised the need for research on how health motivations interact with other adoption drivers.
- *Regulatory and Market Challenges*: Leyva-Hernández et al. (2022) examined organic food adoption in Colombia, highlighting limited consumer knowledge about organic certifications, high prices, and inconsistent supply as barriers. They emphasised the need for stronger regulatory frameworks to enhance consumer trust and market accessibility.
- *Role of Trust and Labelling*: Massey et al. (2018, p. 413) reaffirmed health, environmental, and ethical considerations as key motivators of organic food adoption. Their study highlighted consumer trust in organic labels, suggesting that certification innovations could enhance confidence. However, the study did not explore DOI factors such as trialability and observability, which are crucial in understanding how consumers evaluate organic food as an innovation.

➢ *Addressing the Research Gaps*

Existing literature consistently reinforces traditional factors (e.g., health, environmental awareness, and ethical responsibility) as key drivers of organic food adoption. However, innovation-related factors remain underexplored, limiting insights into how consumers evaluate organic food as a novel product. This study seeks to fill this gap by integrating DOI theory to examine how trialability, relative advantage, and observability influence consumer adoption of organic food. Given the unique challenges of emerging markets like South Africa, this research aims to provide a more holistic and context-specific understanding of organic food adoption by bridging traditional and innovation-driven perspectives.

The next section examines studies that integrate TPB, DOI, and consumer innovativeness in organic food adoption research.

2.7 Studies Using TPB traditional Green behaviour models, DOI and CI

The Theory of Planned Behaviour (TPB) and the Diffusion of Innovation (DOI) theory are widely used frameworks for understanding consumer adoption of innovations, including organic food. TPB focuses on psychological determinants of behaviour, such as attitudes, subjective norms, and perceived behavioural control, while DOI explains how innovations spread through factors like relative advantage, compatibility, and observability. Recent studies have successfully integrated these theories to provide a comprehensive perspective on adoption behaviour.

- ***Integration of TPB and DOI in Previous Studies***

Adoption of Organic Farming: Yanakittkul and Aungvaravong (2017, p. 2) combined TPB and DOI to examine how smallholder farmers transition from conventional to organic farming. Their study found that attitudes, subjective norms, and perceived behavioural control (TPB factors) significantly influenced adoption. Additionally, DOI factors, such as relative advantage and observability, played a crucial role in shaping perceptions of organic farming as a viable innovation. This integration demonstrated that both behavioural and innovation-specific factors drive adoption.

Adoption of Electric Vehicles (EVs): Moon (2021, p. 1) applied TPB and DOI to investigate consumer intentions to adopt electric vehicles (EVs). Findings revealed that TPB factors (attitudes, subjective norms, and perceived behavioural control) significantly influenced adoption intentions. Furthermore, DOI factors, such as relative advantage, compatibility, and observability, positively shaped consumer attitudes. The study also highlighted consumer innovativeness as a moderating factor, strengthening the relationship between perceived innovation characteristics (PICs) and consumer attitudes, further influencing the adoption process.

- ***Implications for Organic Food Adoption Research***

The integration of TPB and DOI provides a comprehensive framework for studying organic food adoption, allowing for an understanding of both psychological drivers and innovation

attributes. Combining TPB's behavioural constructs (e.g., attitudes, norms) with DOI's innovation characteristics (e.g., relative advantage, trialability) offers a robust approach to predicting adoption behaviour. Furthermore, consumer innovativeness, as a moderating factor, enhances the analysis by exploring how individual traits influence the evaluation of organic food as an innovation.

Future research should expand on this dual-framework approach by considering context-specific factors, such as affordability, trust, and cultural influences, to develop a more holistic understanding of organic food adoption. The next section introduces the conceptual framework for this study, integrating insights from TPB, DOI, and consumer innovativeness to examine organic food adoption in South Africa.

2.8 The Conceptual Framework for The Study

Research on organic food adoption has examined various psychological, social, and economic factors influencing consumer behaviour. However, no systematic review has comprehensively assessed the relative impact of these factors, particularly in integrating traditional consumer behaviour theories with innovation adoption perspectives. This study aims to address this gap by developing a conceptual framework that synthesizes insights from traditional factors, Diffusion of Innovation (DOI) theory, and Consumer Innovativeness (CI) to examine their combined impact on purchase intention and behaviour.

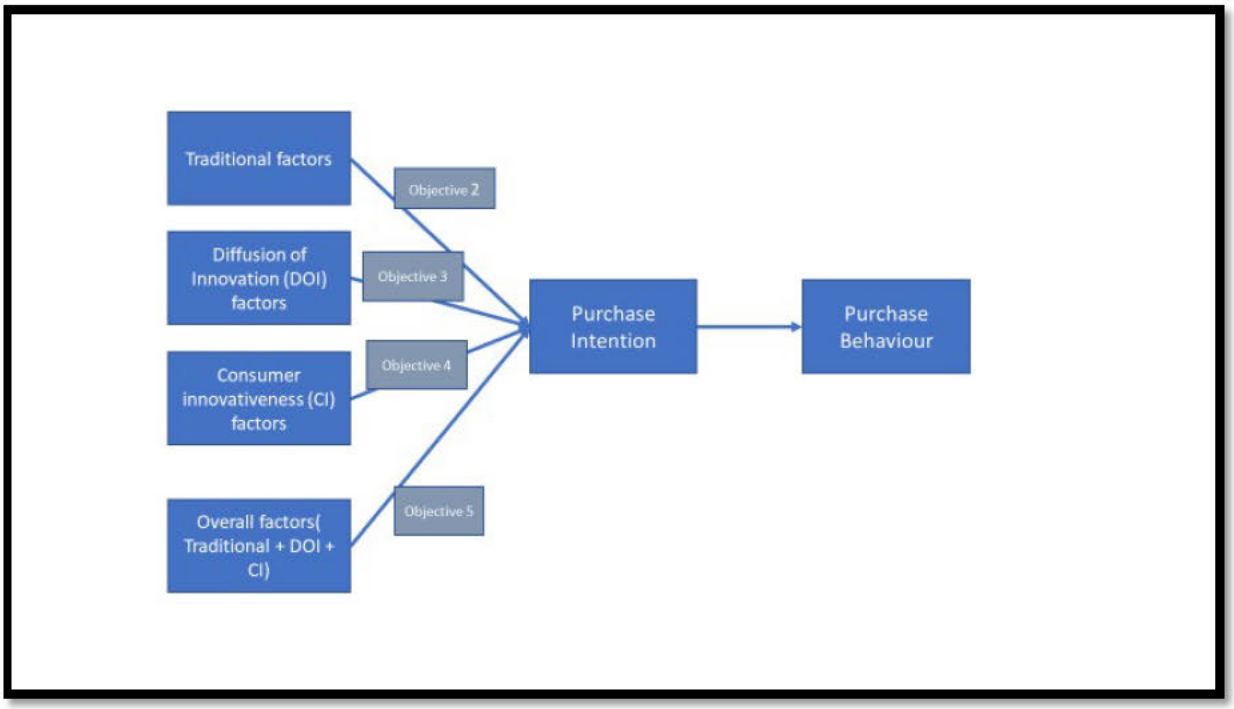

Figure 2. 1: Conceptual Framework for the study

The conceptual framework presented in Figure 2.1 outlines how different categories of factors influence purchase intention and subsequent purchase behaviour:

- Traditional Factors (e.g., health consciousness, environmental concern) – Objective 2
- Diffusion of Innovation (DOI) Factors (e.g., relative advantage, trialability, observability) – Objective 3
- Consumer Innovativeness (CI) Factors (e.g., openness to new products, novelty-seeking behaviour) – Objective 4
- Overall Integration of Traditional, DOI, and CI Factors – Objective 5

This framework will be tested in two stages:

Stage 1 – Systematic Review: Identifies the most significant traditional factors influencing organic food adoption based on existing literature.

Stage 2 – Quantitative Analysis: Evaluates the relative impact of DOI and CI factors in addition to traditional variables, determining how these dimensions collectively influence purchase intention and behaviour.

Theoretical Implications

By integrating TPB and DOI theory, this study provides a holistic view of organic food adoption, combining psychological determinants (attitudes, norms, perceived control) with innovation attributes (relative advantage, complexity, observability). Moreover, the inclusion of Consumer Innovativeness (CI) enhances the framework, capturing individual differences in openness to organic food as an innovation.

This study extends prior research by exploring the interplay between behavioural and innovation-related factors and examining context-specific barriers (e.g., affordability, trust, accessibility). The findings will contribute to both academic literature and practical applications, informing marketing strategies and policy interventions to enhance organic food adoption in emerging markets like South Africa.

2.9 Conclusion

This chapter has reviewed the existing literature on the factors influencing organic food adoption, drawing on both traditional and innovation-driven models. The Theory of Planned Behaviour (TPB) provided valuable insights into how consumer attitudes, subjective norms, and perceived behavioural control shape green behaviours, including organic food consumption. These traditional models emphasise intrinsic motivations such as health consciousness, environmental concern, and ethical considerations, which have consistently emerged as strong drivers of organic food adoption.

In addition to traditional models, the Diffusion of Innovation (DOI) theory has been explored to understand how innovation characteristics such as relative advantage, compatibility, and observability affect consumer perceptions and adoption of organic products. This is especially relevant given the perception of organic foods as innovative products in many developing markets. The chapter also highlighted the role of Consumer Innovativeness (CI) as a moderating factor that could enhance or inhibit the relationship between DOI factors and consumer behaviour.

Moving forward, Chapter 3 will outline the research methodology employed to test the conceptual framework developed in this review.

3 CHAPTER 3: SYSTEMATIC REVIEW METHODOLOGY – STAGE ONE

The overall question for this research is: what contribution do the factors related to the DOI and CI make to explaining organic food adoption relative to traditional factors? This research involved two stages. Stage 1 began with a systematic literature review to fully develop and justify the conceptual model with the theory explicitly driving the design. This stage played two important roles. First, it synthesised the research on the factors affecting organic adoption so that the main factors could be determined and included in the conceptual model. Second, it determined the extent to which innovativeness factors had been included in these studies and the effects they had been found to have, thus addressing Research objective One;

- Objective 1: To determine, from existing literature, the factors affecting organic food consumption and the extent to which innovation factors have been included in the models and studies on organic consumption.

Stage 2 followed as the quantitative phase, where the role of the factors in the DOI theory and CI were studied to determine their relative impact on organic product adoption compared to traditional factors often investigated in organic product adoption studies. Stage 2 addressed Research objectives 2 to 5 in Chapter 6 and Chapter 7.

The following are objectives for this study:

- Objective 2: To determine the effects of the traditional factors on intention to purchase organic food
- Objective 3: To determine the effects of Diffusion of Innovation factors on intention to purchase organic food
- Objective 4: To ascertain the impact of Consumer Innovativeness on intention to purchase organic food
- Objective 5: To investigate the relative role of traditional factors, Diffusion of Innovation, and Consumer Innovativeness in affecting intention and behaviour of organic food adoption.

This chapter explains the process undertaken to identify, evaluate, and synthesise the literature on organic food adoption. The systematic review methodology employed in this stage is designed to ensure a thorough and unbiased analysis of the existing body of knowledge. Key

sections of this chapter include the criteria for selecting studies, the databases used, and the techniques for analysing and synthesising the literature. Additionally, the chapter discusses how the findings from Stage One informed the development of the conceptual framework for Stage Two.

3.1 Research Problem

Due to the challenges associated with conventional agriculture, organic farming has emerged as a viable alternative that aims to preserve the ecosystem (Simin & Jankovic, 2014, p. 2; Wang et al., 2019, p. 1). As the message of environmental conservation spreads, it has led to an increase in consumer awareness and demand for sustainable foods such as organic products (Mhlophe, 2016, p. 2; Pandey et al., 2019, p. 357; Zayed et al., 2022, p. 2). However, despite this growing awareness, research on the factors influencing the adoption of organic food consumption has produced varying and sometimes contradictory results across different regions (Leyva-Hernández et al., 2022, p. 93; Massey et al., 2018, p. 419; Muhammad et al., 2015). This inconsistency highlights the need to consolidate and evaluate the key factors affecting organic food adoption to better understand their influence.

While organic foods are becoming more popular globally, consumption levels in South Africa remain relatively low, and little is known about the specific factors influencing this adoption (Naidoo & Ramatsetse, 2016, p. 81). In developing countries like South Africa, organic foods are often perceived as novel products, reflecting the early stages of market development for these products (Mhlophe, 2016, p. 2; Naidoo & Ramatsetse, 2016, p. 81). Organic food, therefore, displays many characteristics of a new product within the market's lifecycle (Li et al., 2021, p. 1467). Given the innovation-driven nature of these products, the Diffusion of Innovation (DOI) theory, which emphasises how new products are adopted by consumers, is a useful framework for understanding organic food adoption in this context (Parra-Lopez et al., 2007, p. 105).

Additionally, Consumer Innovativeness (CI) explores the role of individual innovativeness in the adoption of new products (Zhang et al., 2020, p. 1), making it an important factor in the study of organic food adoption. CI factors, together with DOI, could provide insights into the barriers and motivations affecting the consumption of organic foods in South Africa.

Although much attention has been given to the environmental benefits of organic foods, there is a gap in understanding how both traditional factors, such as consumer awareness, attitudes, and perceived barriers, and innovation-driven factors like DOI and CI, impact organic food consumption in South Africa. This study seeks to address this gap by examining how these factors influence consumer adoption of organic foods in a South African context. By doing so, the research aims to provide understanding of the factors affecting organic food adoption and contribute to the development of strategies that can increase organic food consumption in the region.

While this chapter focuses on Stage 1, which involves conducting a systematic review (SR) to consolidate existing literature and identify key factors influencing organic food adoption, it is important to situate this stage within the broader context of the overall research process. The following table provides an overview of the objectives, stages, scale, type of data, and methods of analysis across both stages of the study:

Table 3. 1: Operationalisation table

Objective	Stage	Scale	Type of data (Qual / quant)	Method of analysis
1. To determine, from existing literature, the factors affecting organic food consumption and the extent to which innovation factors have been included in the models and studies on organic consumption	Systematic review	Systematic literature review	Qualitative	Qualitative synthesis (deductive and inductive content analysis)
2. To determine the effects of the traditional factors on intention to purchase organic food	Quantitative	Traditional factors scale	Quantitative	SEM
3. To determine the effects of Diffusion of Innovation factors on intention to purchase organic food	Quantitative	DOI Scales	Quantitative	SEM
4. To ascertain the impact of Consumer Innovativeness on intention to purchase organic food.	Quantitative	Consumer innovativeness	Quantitative	SEM
5. To investigate the relative role of traditional factors, Diffusion of Innovation, and Consumer Innovativeness in affecting intention and behaviour of organic food adoption.	Quantitative	Traditional factors, DOI and Consumer Innovativeness	Quantitative	SEM

Stage One, which is the focus of this chapter, involves a qualitative systematic review of the existing literature. It aims to identify the traditional and innovative factors that have been explored in prior studies on organic food consumption. The findings from this stage will lay

the groundwork for the quantitative survey and Structural Equation Modelling (SEM) analysis in Stage Two.

3.2 Research Philosophy

Research philosophy encompasses the beliefs and assumptions guiding how knowledge is developed and understood in the research process (Saunders et al., 2019, p. 144). This foundation shapes the research strategies and methods, influencing data collection, analysis, and interpretation (Bhattacherjee, 2012, p. 15). This study adopts a pragmatism philosophy, which aligns well with its objective of exploring both traditional and innovation-driven factors impacting organic food adoption in South Africa.

- **Positivism**: is described by Saunders et al. (2019, p. 144) is a philosophical approach rooted in natural science. It emphasises the observation and analysis of measurable phenomena to establish law-like generalisations, particularly within the framework of social realism (Saunders et al., 2019, p. 144). Positivism adopts an objective epistemological stance, maintaining a clear separation between the researcher and the research process, thereby minimising researcher bias (McGiven, 2013, p. 146). While positivism is suited to controlled studies, its rigid focus on objectivity makes it less adaptable to dynamic, real-world contexts like consumer behaviour research (McGiven, 2013, p. 146).
- **Critical Realism**: Critical realism explores the connection between observable events and the underlying structures that shape them, helping to examine causality within specific contexts (Saunders et al., 2019, p. 144). Unlike positivism, it acknowledges reality's complexity and avoids asserting absolute truths, focusing instead on deeper insights into how various factors interact (McGiven, 2013, p. 146).
- **Interpretivism**: Interpretivism, in contrast to positivism, emphasises the creation of meaning by human beings (Saunders et al., 2019, p. 148). It assumes that individuals interpret their experiences and that these interpretations form the basis of understanding social phenomena (Saunders et al., 2019, p. 148). Researchers adopting an interpretivist approach seek to explore these subjective meanings, often employing qualitative methods or mixed methods to capture the richness of human experiences (Creswell & Creswell, 2017). However, while interpretivism provides depth, it may lack the focus on actionable outcomes needed for practical applications (Creswell & Creswell, 2017).
- **Postmodernism**: Postmodernism challenges established ways of thinking,

emphasising the role of language, power relations, and the inclusion of marginalised perspectives (Saunders et al., 2019, p. 150). It seeks to question dominant narratives and provide a platform for alternative voices, offering a critical lens through which to view social and cultural phenomena (Saunders et al., 2019, p. 150).

- **Pragmatism**: Pragmatism bridges the gap between objectivism and subjectivism by focusing on the practical application of concepts (Saunders et al., 2019, p. 150). Pragmatism emphasises practical application, focusing on real-world problem-solving rather than adhering to a single theoretical perspective (Saunders et al., 2019, p. 130). This approach is especially suited to studies like this one, which employ both qualitative and quantitative methods to generate actionable insights (Saunders et al., 2019, p. 130). Pragmatism's flexibility allows the study to utilise a systematic review in Stage 1 to consolidate existing evidence, followed by quantitative analysis in Stage 2 to test specific hypotheses. This blending of methods enables a comprehensive understanding of the complex factors influencing consumer behaviour. Pragmatism, however, prioritises real-world outcomes and is better aligned with this study's goal to produce insights that can inform organic food adoption strategies in South Africa. It forms the foundation upon which research strategies and methods are built, influencing how data is collected, analysed, and interpreted (Bhattacherjee, 2012, p. 15).

There are five major research philosophies; positivism, critical realism, interpretivism, postmodernism, and pragmatism, each offering a distinct perspective on how knowledge is generated and understood (Saunders et al., 2019, p. 144). This study adopted pragmatism as the guiding research philosophy to address the complex and multifaceted nature of consumer behaviour. This approach allowed the integration of both qualitative and quantitative methods, ensuring a comprehensive understanding of organic food adoption. Stage 1 utilised a systematic review to synthesise existing evidence, while Stage 2 employed quantitative analysis to test specific hypotheses. By focusing on practical outcomes and real-world applications, pragmatism aligns with the study's goal of generating actionable insights for promoting organic food adoption in South Africa.

3.3 Stage 1: Systematic Review

Studies investigating the factors affecting organic food purchases have yielded fragmented and contradictory results across various countries (Kushwah et al., 2019, p. 2; Massey et al., 2018, p. 419; Mhlophe, 2016, p. 2; Naidoo & Ramatsetse, 2016, p. 81). This highlights the need for

a comprehensive evaluation of the factors influencing organic food adoption, particularly in the South African context, where organic food consumption is relatively low.

The primary objective of this research is to systematically consolidate and test the factors influencing organic food adoption, with a specific focus on traditional and innovation-driven factors such as Consumer Innovativeness (CI) and Diffusion of Innovation (DOI). The study is structured into two stages:

Stage 1: Systematic Review (SR): ***Objective 1***: To determine, from existing literature, the factors affecting organic food consumption and the extent to which innovation factors, such as Consumer Innovativeness and DOI, have been included in the models and studies on organic consumption.
This systematic review serves two main purposes:

- First, it synthesises the research on the factors affecting organic adoption, allowing for the identification of the key factors to be included in the conceptual model.
- Second, it evaluates the extent to which innovation factors, particularly CI and DOI, have been integrated into previous studies and assesses their impact on organic food adoption. This lays the groundwork for Stage 2 of the study.

3.3.1 Research Design

Research design serves as the framework guiding the process of data collection and analysis, ensuring alignment with the research objectives (Saunders et al., 2019, p. 144). Typically, research designs fall into three categories: descriptive, exploratory, and causal.

- Descriptive Research systematically describes and documents characteristics, behaviours, or phenomena without manipulating variables or establishing cause-and-effect relationships (McGiven, 2013, p. 47; Saunders et al., 2019, p. 144). It provides a snapshot of current conditions or relationships between variables and is often used in surveys and case studies.
- Exploratory Research is used to gain insights into problems or areas that are not well understood (McGiven, 2013, p. 47; Saunders et al., 2019, p. 144). It is flexible and qualitative, often involving interviews, focus groups, or literature reviews to identify hypotheses or future research directions (Saunders et al., 2019, p. 144).
- Causal Research seeks to establish cause-and-effect relationships by manipulating

independent variables and controlling extraneous factors, typically through experiments or clinical trials (McGiven, 2013, p. 47; Saunders et al., 2019, p. 144).

For this study, a descriptive research design was employed in Stage 1 to conduct a systematic review of the literature. This approach was critical for identifying and synthesising prevailing trends in organic food adoption, particularly the integration of innovation factors such as Consumer Innovativeness (CI) and Diffusion of Innovation (DOI) in existing models (McGiven, 2013, p. 47; Saunders et al., 2019, p. 144).

3.3.2 Systematic Reviews as a Research Method

The systematic literature review method offers several advantages over conventional review methods, particularly in its ability to integrate existing literature in a methodical and reproducible manner (Kushwah et al., 2019, p. 2). This approach is beneficial for reducing bias and enhancing the credibility of data analysis, as it provides a structured framework for synthesising research findings (Kushwah et al., 2019, p. 2). The existence of contradictory findings across various studies on organic food adoption further underscores the need to systematically integrate and summarise the existing empirical evidence in this field (Jaafar et al., 2020)

Systematic reviews can be tailored to the specific needs of the research, employing qualitative, quantitative, or mixed-methods approaches depending on the objectives and phase of the review (Kushwah et al., 2019, p. 4). Each type of systematic review serves a different purpose:

- Quantitative Systematic Review: This type of review focuses on research that uses numerical data to provide statistical analyses (Radez et al., 2021, p. 183; Snyder, 2019, p. 334). It is particularly useful for aggregating and synthesising findings from multiple studies to draw generalisable conclusions about a specific phenomenon (Kushwah et al., 2019, p. 4).
- Qualitative Systematic Review: A qualitative systematic review collects and synthesises data from non-numerical sources, such as interviews, observations, and textual analysis (Lekan et al., 2021, p. 2). This approach emphasises understanding the meanings, interpretations, and experiences of participants, providing in-depth insights into complex social phenomena (Seers, 2015, p. 36).
- Mixed-Methods Systematic Review: This approach combines both qualitative and quantitative data, integrating the strengths of both methods into a single, comprehensive synthesis (Kushwah et al., 2019, p. 4; Pearson et al., 2015, p. 124). By doing so, mixed-

methods systematic reviews offer a more holistic understanding of the research topic, capturing both the breadth and depth of the evidence (Kushwah et al., 2019, p. 4).

In this study, a quantitative systematic review was chosen to evaluate and integrate existing research on organic food adoption, focusing solely on studies that utilised quantitative data. The rationale for selecting a quantitative approach is grounded in the need to aggregate and synthesise numerical findings from multiple empirical studies, allowing for the identification of statistically significant trends and patterns in consumer behaviour (Kushwah et al., 2019, p. 4). By employing this method, the study can draw generalisable conclusions regarding the key factors influencing organic food adoption, based on measurable outcomes. This approach is particularly useful for resolving inconsistencies across studies by providing a robust, data-driven analysis that enhances the reliability of findings (Radez et al., 2021, p. 183). Additionally, a quantitative systematic review allows for a more objective synthesis, minimising researcher bias and enabling a clearer comparison of variables related to organic food adoption (Radez et al., 2021, p. 183). This method lays the foundation for empirical testing in subsequent stages of the research, facilitating the examination of relationships between traditional and innovation-driven factors in a statistically rigorous manner.

3.3.2.1 Sample Design

Sample design in a systematic review is a critical component of the research process, as it involves the structured and rigorous selection of studies to ensure the inclusion of relevant research (Rahi, 2017, p. 3). This process enhances the transparency, reliability, and validity of the systematic review by ensuring that the studies included are methodologically sound and contribute meaningfully to the synthesis of evidence (Paul et al., 2021, p. 6).

In this systematic review, a rigorous sample design was employed to identify studies focused on quantitative data related to organic food adoption, ensuring that only studies meeting predefined quality and relevance standards were included. This approach provided a clear framework for synthesising the available empirical evidence and enhanced the overall credibility of the findings.

3.3.2.2 Data Collection

The systematic review process for this study adhered to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework and SPAR-4-SLR (Scientific Procedures and Rationales for Systematic Literature Reviews) protocol. These frameworks

ensured a structured, transparent, and rigorous approach to identifying and synthesising relevant studies (Paul et al., 2021, p. 6; Traoré et al., 2023, p. 3). Below, the data collection process is detailed, with definitions and references provided for each stage, aligned with the diagram.

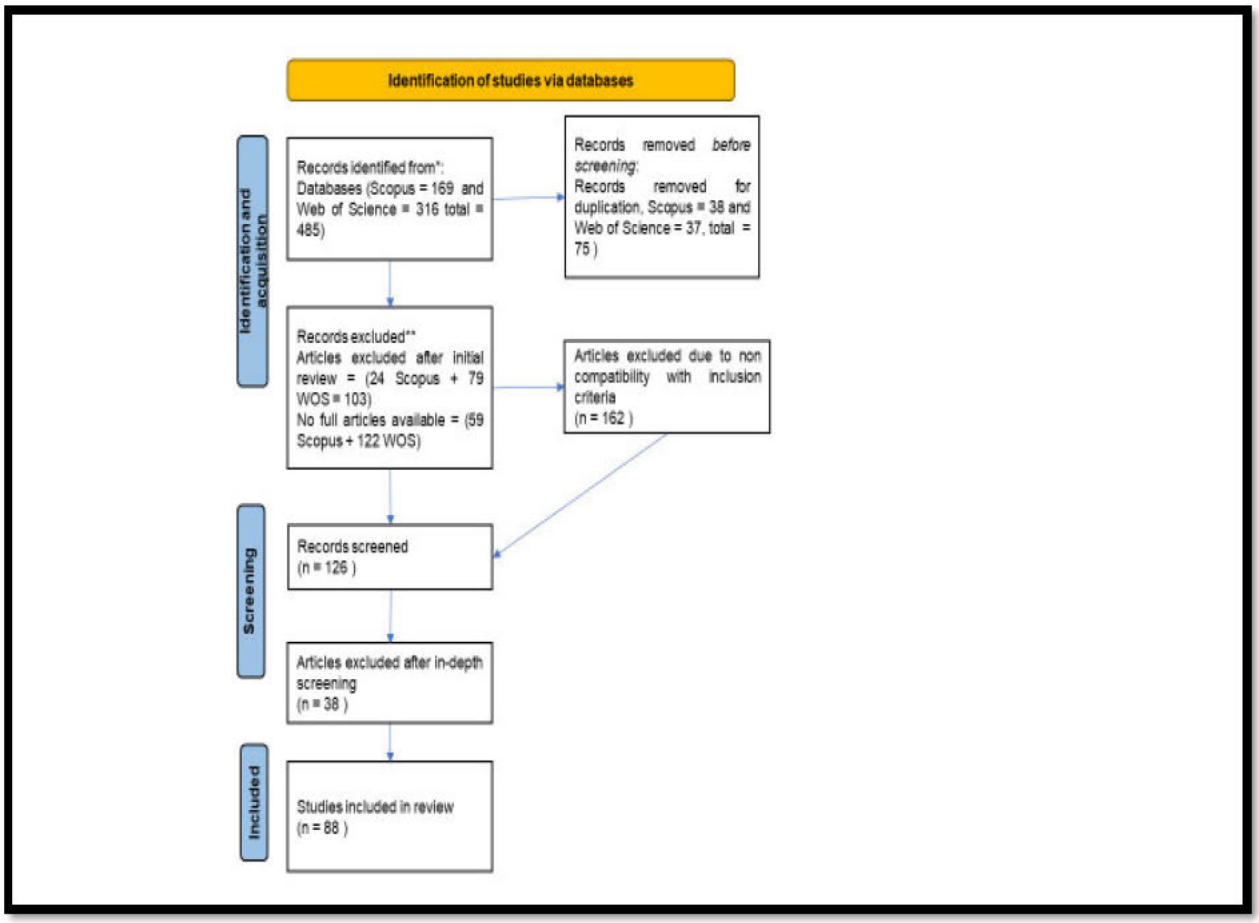

Figure 3. 1: *PRISMA protocol (adapted from (Paul et al., 2021, p. 6))*

➢ Stage 1: Identification and Acquisition

Identification is the initial step where relevant literature is systematically searched and collected using predefined search strategies. This process ensures comprehensive coverage of studies related to the research questions (Paul et al., 2021, p. 5). In this study, two academic databases, Scopus (316 records) and Web of Science (169 records), were searched using Boolean operators and keywords such as "organic adoption," "organic consumption," "organic purchase intention," and "organic buying." These terms were aligned with the study objectives to locate empirical studies on organic food adoption. The search was restricted to peer-

reviewed articles published between 2012 and 2022 to ensure relevance and currency (Paul & Criado, 2020, p. 2).

- ***Stage 2: Screening (Selection of Studies)***

Screening is the process of systematically evaluating identified studies based on predefined inclusion and exclusion criteria (Paul et al., 2021, p. 6). This stage involved two levels of review:

In-Depth Screening: The remaining 162 articles underwent a full-text review to ensure alignment with the study objectives and methodological quality (Lasserson et al., 2019, p. 5). Articles were excluded for not meeting inclusion criteria, such as focusing on unrelated topics or lacking empirical evidence. After this phase, 126 articles were selected for further evaluation.

The "Arranging" phase in SPAR-4-SLR emphasises the systematic organisation and refinement of identified studies. This screening stage is crucial in a systematic review, as it aims to ensure that only relevant studies meeting predefined inclusion criteria are selected for final synthesis. Identifying appropriate articles can be challenging and requires the application of clear inclusion and exclusion criteria, grounded in the authors' knowledge, judgment, and set criteria (Paul & Criado, 2020, p. 3). The initial screening involved a thorough examination of abstracts to determine each article's relevance. The following inclusion and exclusion criteria were applied:

Screening was conducted in two stages:

- **Initial Screening:** The abstracts of the 410 articles were reviewed to apply inclusion and exclusion criteria based on the relevance, quality, and type of study. This stage required the use of predefined criteria to ensure consistency:
- **Exclusion Criteria:** Studies were excluded if they did not directly address organic food adoption, were not empirical in nature, or were categorised as opinion pieces, review articles, conference papers, or dissertations. To ensure focus on recent findings, only studies published from 2012 to 2022 and available in English were considered. Duplicate records were removed to avoid redundancy.
- **Inclusion Criteria:** Only empirical studies published from 2012 onward that specifically investigated factors related to organic food adoption, purchase intention, or

consumption were included. Articles needed to have accessible full-text versions and abstracts clearly aligned with the objectives of this review.

Detailed Screening and Final Selection: The screening process began with an initial review of abstracts, resulting in the exclusion of 162 articles that did not meet the inclusion criteria. This left a total of 248 articles for further consideration. A comprehensive full-text screening was then conducted to assess the methodological rigor and relevance of these studies. Following this detailed evaluation, an additional 162 articles were excluded due to quality concerns or lack of alignment with the study objectives. Subsequently, 38 more articles were excluded for their lack of relevance to the research focus. In the end, 88 studies were included in the final dataset, forming a robust and reliable foundation for synthesising insights on organic food adoption. After applying all inclusion and exclusion criteria, 88 studies were included in the final systematic review. The list of these articles can be found in Appendix E of this study. These studies form the foundation for synthesising insights into the factors influencing organic food adoption, particularly focusing on Diffusion of Innovation (DOI) and Consumer Innovativeness (CI) frameworks.

This systematic and transparent process ensured the selection of high-quality studies, aligning with the PRISMA protocol for rigorous evidence synthesis.

3.3.2.3 Data Analysis

The systematic review process for this study adhered to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework and SPAR-4-SLR (Scientific Procedures and Rationales for Systematic Literature Reviews) protocol. These frameworks ensured a structured, transparent, and rigorous approach to data analysis (Paul et al., 2021, p. 2; Traoré et al., 2023, p. 3). Below, the data collection process is detailed, with definitions and references provided for each stage, aligned with the diagram.

- **Data Extraction**

A structured data extraction MS Excel form was developed to systematically gather relevant information, as recommended by Lasserson et al. (2019, p. 5). This form captured key details such as study design, sample characteristics, and variables related to traditional, Diffusion of Innovation (DOI) and Consumer Innovativeness (CI). Following a deductive content analysis protocol, predefined categories were used to group factors (e.g., attitudinal, demographic, DOI

factors). New themes were incorporated inductively as they emerged during the review, ensuring flexibility in capturing unique findings (Paul et al., 2021, p. 5).

For example, attitudinal factors like trust and perceived benefits were categorised under general factors, while attributes like observability and complexity were assigned to DOI themes. This systematic approach provided a robust foundation for cross-study comparisons and reliable synthesis.

- **Coding and Standardisation**

The coding process followed a deductive-inductive approach, integrating predefined themes from the literature while remaining open to new patterns (Lasserson et al., 2019, p. 5). Each factor was recorded in an MS Excel spreadsheet, with columns indicating its presence ("Exists") and supporting evidence ("Evidence"). For instance, studies that discussed trialability provided insights into how sampling opportunities influence adoption, and supporting quotes were documented for consistency.

This method allowed for standardisation across diverse datasets while ensuring alignment with the study's objectives. Similar codes were grouped to form comprehensive themes, and definitions were refined iteratively to capture relationships.

- **Inductive Content Analysis**

Inductive content analysis was employed to identify patterns and themes directly from the data, consistent with Thomas and Harden's (2008) recommendations. The process involved:

- **Data Familiarisation:** Articles were reviewed thoroughly, focusing on factors influencing organic food consumption, such as attitudinal drivers, DOI attributes, and CI. Familiarisation facilitated a deep understanding of each study's context (Massey et al., 2018, p. 419).
- **Generating Initial Codes:** Codes were initially identified from the first study and recorded in the spreadsheet. For example, studies highlighting observability were coded under DOI themes, with evidence linked to specific findings (e.g., "organic food consumption is noticeable to peers").
- **Identifying Themes:** Similar codes were grouped into themes like general factors, DOI attributes, and CI, ensuring coherence across studies. For instance, factors like

complexity and trialability were consistently observed as barriers or enablers of adoption, reinforcing their significance.

- **Refinement and Review:** Codes and themes were refined iteratively to ensure clarity and alignment with the research objectives. For example, overlapping themes like "attitudes" and "trust" were clearly delineated to avoid redundancy.

The analysis results are presented systematically in the following chapter, detailing the frequency and significance of each theme. Supporting evidence, such as direct quotes, ensures transparency and credibility in reporting. This structured synthesis highlights the critical roles of DOI, CI, and traditional factors in organic food adoption, providing actionable insights for future research and practice.

By employing a methodical approach grounded in SPAR-4-SLR and PRISMA, this analysis ensures rigorous, transparent, and reproducible findings. These results lay a robust foundation for understanding consumer behaviour, bridging Phase One's systematic review with Phase Two's quantitative analysis.

3.4 Quality Control

Quality control in this systematic review was meticulously maintained by following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, which emphasise transparency and completeness in reporting (Traoré et al., 2023, p. 10). To ensure reliability and validity throughout the review process, several rigorous measures were implemented.

A pilot data extraction form was developed using MS Excel to standardise the approach and ensure systematic capture of all relevant information. Early-stage analysis, as well as subsequent stages of the review, was cross-checked by the researcher's supervisor to maintain consistency in the process and accuracy in interpreting themes. The researcher conducted multiple rounds of article reviews to ensure that all relevant themes and factors were correctly identified and aligned with the study objectives.

Additionally, regular cross-checks were performed to identify and mitigate potential biases, enhancing the rigor of the process (Lasserson et al., 2019, p. 5). Where necessary, sensitivity analyses were conducted to validate the robustness of the extracted findings, further ensuring the reliability of the results. These measures collectively upheld a high standard of quality

control, ensuring that the systematic review was both comprehensive and methodologically sound.

3.5 Limitations of Systematic Reviews

Despite rigorous quality control measures, the systematic review faced certain limitations. The reliance on peer-reviewed quantitative studies may have excluded valuable insights from qualitative research, particularly regarding subjective consumer experiences and cultural nuances. Additionally, while the 10-year publication window ensured the relevance of findings, it may have overlooked older foundational studies that continue to inform current research. These limitations were mitigated through sensitivity analyses and iterative coding processes, ensuring that key themes were robustly identified.

3.6 Ethical Issues

The study adhered to the ethical research procedures outlined by the University of KwaZulu-Natal (UKZN). Prior to the collection of any systematic review data, the researcher obtained Ethical Clearance (HSSREC/00003958/2022) from the Research Office of UKZN, ensuring compliance with institutional and ethical guidelines (UKZN, 2014). The official Ethical Clearance letter, included in *Appendix C*, confirms adherence to these standards and served as a framework for guiding the research practices. Although the data used in the systematic review was publicly available, an ethical clearance application was still submitted to demonstrate accountability and transparency in the research process. Given the phased approach of this study, two rounds of ethical clearance were obtained to address the specific requirements of each phase. These measures ensured that all ethical considerations were thoroughly addressed throughout the research process.

3.7 Conclusion

This chapter detailed the systematic methodology employed in Stage 1 of the study to identify key factors influencing organic food adoption through a comprehensive systematic review. Guided by PRISMA and SPAR-4-SLR protocols, the review synthesised knowledge on both traditional and innovation-driven factors, particularly those linked to Diffusion of Innovation (DOI) and Consumer Innovativeness (CI) theories, ensuring transparency and credibility.

The review highlighted gaps in the literature, particularly in the integration of innovation factors alongside traditional drivers, and provided a robust dataset for the conceptual framework. These findings set the stage for the quantitative analysis in Stage 2, where the relative influence of these factors will be tested in the South African context.

By employing a structured research design, rigorous quality control, and systematic sample selection, this chapter underscores the study's commitment to methodological rigor. The integration of traditional and innovation factors not only addresses critical research gaps but also offers valuable insights for stakeholders aiming to promote organic food consumption.

4 CHAPTER 4: FINDINGS – STAGE 1 – SYSTEMATIC REVIEW

This chapter presents the findings from Stage 1 of the study, which involved a systematic review of literature on organic food adoption. The research seeks to address the question: What contribution do factors related to Diffusion of Innovation (DOI) and Consumer Innovativeness (CI) make to explaining organic food consumption relative to traditional factors?

Stage 1 served two key purposes: first, it synthesised existing research to identify the primary factors influencing organic food adoption, which were subsequently incorporated into the conceptual model for Stage 2; second, it evaluated the inclusion and impact of innovation-related factors such as DOI and CI, addressing Research Objective 1. The findings from this systematic review provide a strong foundation for Stage 2, where the conceptual framework will be empirically tested within the South African context, ensuring a seamless progression from theoretical development to quantitative analysis.

The chapter is structured to first describe the sample and theories used, followed by the presentation of the conceptual model of traditional factors influencing organic food adoption.

4.1 Sample Description

The final sample consisted of 88 articles as presented in Appendix C. Table 4.1 presents the years of publication of the 88 articles.

Table 4. 1: Sample description by year of publication

Year of Publication	Number of Articles
2012	1
2014	5
2015	5
2016	4
2017	4
2018	5
2019	10
2020	14
2021	20
2022	20

The 88 emerging papers analysed in this review were published between 2012 and 2022, with the primary focus on factors influencing the adoption of organic food. Notably, the majority of

these studies (71 articles, or 78.88%) were published in the last five years, indicating a significant surge in research interest during this period. Among the journals, the *Journal of Retailing and Consumer Services* led with the highest number of publications (8 articles). This was closely followed by the British Food Journal with 7 articles, and Sustainability with 6 articles. Other key journals in the sample include the Journal of Cleaner Production (4 articles), Foods (3 articles), the Journal of Food Products Marketing (3 articles), Cogent Business & Management (4 articles), and the International Journal of Consumer Studies (4 articles).

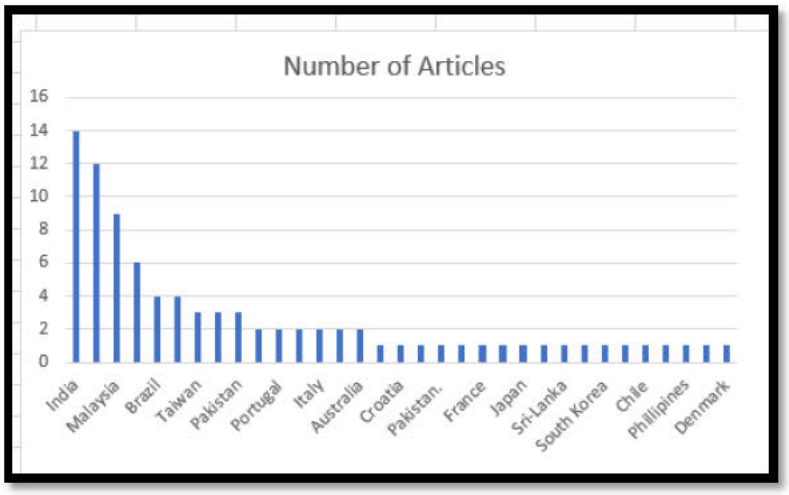

Figure 4. 1:Distribution of articles by country

The geographic scope as outlined in Figure 4.2 of the sample studies indicates a strong bias towards India, South East Asia and China. This represents an interesting developing world dominance but also an alarming lack of studies from the Global South thus representing a research opportunity. The theories used are discussed next.

4.2 Theories Used

A summary of the key theories applied in analysing the factors influencing the adoption of organic foods is presented in Table 4.2.

Table 4. 2: Theories used in Systematic Review articles

Theory	Number of articles	Theory	Number of articles
Theory of Planned Behaviour	86	Self-Construal Theory	1
Theory of Reasoned Action	5	Alphabet Theory	1
Green Perceived Value (GPV)	2	Diffusion of Innovation (DOI) Theory	1
Attitude–Behaviour Gap Theory	2	Health Belief Model	1
Stimulus-Organism-Response (S-O-R Theory)	2	Self-Determination Theory (SDT)	1

Protection Motivation Theory	2	Hierarchy of Effects Model	1
Consumer Decision-Making Process (CDP)	2	Cognitive Dissonance Theory	1
Norm Activation Model	2	Food Lifestyle Approaches	1
Value-Attitude-Systems/Behaviour Model	1	Theory of Multi-Attributes	1
Goal Framing Theory	1	Theory of Cognitive Dissonance	1

The Theory of Planned Behaviour (TPB) stands out as the predominant theoretical framework, being the most frequently utilised across the studies. Specifically, TPB is employed in 86 (98%) of the research papers in the sample, highlighting its central role in this field of study. Other notable theories include the Theory of Reasoned Action, which is used in 5 studies, followed by the Attitude–Behaviour Gap Theory, Protection Motivation Theory, Consumer Decision-Making Process (CDP), and Norm Activation Model, each referenced in 2 studies. Additionally, several other theories, such as the Self-Construal Theory and the Diffusion of Innovation (DOI) Theory, are also represented in the analysis, as detailed in Table 4.3.

4.2.1 Dependent variables

The analysis of empirical studies revealed that the intention to consume, purchase, or repurchase organic foods was the most commonly investigated dependent variable, appearing in 60 studies (68%). A smaller proportion of studies focused on purchase behaviour, which accounted for 25 studies (28%). Other dependent variables were examined far less frequently, with attitude toward the behaviour and conative loyalty to organic products each appearing in 1 study (1%). Similarly, purchase frequency was analysed in just 1 study (1%).

Table 4. 3: Dependent variables

Dependent Variable	**Count**
Purchase intention	60
Purchase behaviour	25
conative loyalty to organic	1
attitude of consumers towards organic food	1
Purchase frequency	1
Total	88

This distribution underscores the dominant focus on purchase intention in the literature, followed by purchase behaviour, while other dependent variables remain significantly underexplored.

The following section examines the independent variables investigated in the reviewed studies

4.2.2 Independent Variables

The dataset revealed over 200 occurrences of independent variables, highlighting the diversity of factors examined in the literature and the variation in traditional drivers of organic food purchases. The Theory of Planned Behaviour (TPB) emerged as the most commonly used framework, alongside theories such as Protection Motivation, Self-Determination, Personality, Diffusion of Innovation, and the Theory of Reasoned Action.

Among the most studied variables, Attitude appeared 57 times (35.2%), followed by Subjective Norms (37 times, 22.8%), Trust (22 times, 13.6%), Health Consciousness (17 times, 10.5%), Perceived Behavioural Control (PBC) (16 times, 9.9%), and Environmental Concern (13 times, 8.0%).

Less frequently studied factors, such as Personal and Moral Norms, Perceived Severity, and Advertising Impacts, contribute additional depth, while niche variables like Egoistic Values and Lifestyle highlight the exploratory nature of this field. These findings underline the interplay of intrinsic and extrinsic factors in shaping consumer behaviour toward organic food adoption, with significant roles for attitudes, social norms, and contextual influences.

The top 6 factors are discussed in more detail below.

4.2.2.1 Attitude (ATT)

The examination of attitude as an independent variable spanned multiple dependent variables, including purchase intention, purchase behaviour, purchase frequency, and conative loyalty. Among the studies in the sample, the relationship between attitude and purchase intention was the most frequently analysed, appearing in 40 studies. The link between attitude and purchase behaviour was investigated in 16 studies, while intention to repurchase was analysed in one study.

Attitude was examined as an independent variable across three dependent variables, including purchase intention, purchase behaviour and intention to repurchase. Among the studies reviewed, the relationship between attitude and purchase intention was the most frequently explored, appearing in 40 studies. The connection between attitude and purchase behaviour was investigated in 16 studies, while intention to repurchase was analysed in one study.

Table 4. 4: Attitude analysis

Attitude	
Purchase intention	40
Purchase behaviour	16
Intention to Repurchase	1
Total	***57***

Overall, attitude was measured in 57 instances across the studies. The following discussion explores the influence of attitude on these dependent variables in greater detail.

- ***Attitude and purchase intention***

Attitude consistently emerged as a key predictor of purchase intention across the majority of studies reviewed. As a psychological construct, attitude reflects an individual's overall evaluation of a product, which can be positive or negative (Yadav & Pathak, 2016, p. 123). This construct plays a crucial role in shaping consumer behaviour, particularly in influencing their intention to purchase (Anisimova & Weiss, 2022, p. 1476). In consumer behaviour research, purchase intention refers to the likelihood of a consumer buying a product and is often considered a direct precursor to actual purchasing actions (Ajzen, 1991, p. 5). Understanding the link between attitude and purchase intention is essential because it demonstrates how consumers' evaluations influence their decision-making processes (Anisimova & Weiss, 2022, p. 1476). A positive attitude towards a product generally increases the likelihood of purchase intention, highlighting the value of marketing strategies that foster favourable attitudes to drive engagement and sales (Ajzen, 1991, p. 5; Lupindo et al., 2024, p. 5).

Several studies provide strong evidence for this relationship. For example, Najib et al. (2022, p. 322) conducted a study in Indonesia that demonstrated a positive relationship between attitude and purchase intention towards organic food products. The study found a "path coefficient of 0.358, with a p-value of <0.01 and a t-value of 4.813" (Najib et al., 2021, p. 322), confirming the significant positive effect of attitude on purchase intention. Similarly, Zayed et al. (2022, p. 10) in Egypt explored factors influencing consumers' intention to purchase organic food and found a strong relationship between attitude and purchase intention, with a "β-value of 0.362, a t-value of 5.487, and a p-value of 0.000". This significant positive relationship was also found by Bhutto et al. (2022, p. 156), in their study investigated the factors influencing Chinese consumers' intention to purchase organic meat in Wuhan. Likewise, Saleki et al. (2020, p. 168) in Malaysia confirmed a significant relationship between attitude and purchase

intention towards organic food. The study Saleki et al. (2020, p. 8) reporting a "β-value of 0.311; p-value of <0.05" confirming the positive impact of attitude on purchase intention.

However, not all studies reached the same conclusion. For instance, Cavite, Mankeb, Kerdsriserm, et al. (2022, p. 243), in their research on consumers' purchase intentions for traceable organic rice in Thailand, found that "attitude was the only factor that was not significant in predicting purchase intention, with a negative coefficient ($\beta = -0.10$, $p > 0.05$)".

Overall, the majority of studies underscore the strong influence of attitude on purchase intention across diverse contexts and regions. This relationship emphasises the importance of fostering positive attitudes towards organic foods to enhance consumer interest and drive purchasing decisions. However, exceptions such as the findings by Cavite, Mankeb, Kerdsriserm, et al. (2022, p. 243), suggest that this relationship can be moderated by contextual factors, such as socio-demographic variables or product types, highlighting the complexity of consumer decision-making processes.

- ***Attitude and consumer purchase behaviour***

The relationship between attitude and purchase behaviour is crucial in understanding how positive evaluations of organic foods influence actual purchasing actions (Nedra et al., 2015, p. 67). Many studies confirm that a favourable attitude toward organic products correlates with an increase in purchase behaviour (Nedra et al., 2015, p. 67; Tandon et al., 2020, p. 3). However, there is often a gap between expressed attitudes and executed behaviours, pointing to the complexity of consumer decision-making (Anisimova & Weiss, 2022, p. 1476; Henryks & Pearson, 2013, p. 2). Factors such as product affordability, accessibility, and social norms often play critical roles in shaping consumer behaviour, influencing the extent to which positive attitudes translate into actual purchases (Ajzen, 1991, p. 5)

For instance, Nedra et al. (2015, p. 67) conducted a study in Tunisia and found that "although there was a positive relationship between attitude and purchase behaviour, the result was not statistically significant ($\beta = 0.177$, $t = 1.242$, $p = 0.214$)". This indicates that while consumers may express favourable attitudes toward organic products, these attitudes do not always result in actual purchasing actions. Similarly, Tandon et al. (2020, p. 5) examined the relationship between attitude and purchase behaviour and found it to be "insignificant ($\beta = -0.18$, p-value Not significant)"). Tandon et al. (2020, p. 5) states that "the insignificant association suggests that, for organic food, actual purchase may be additionally influenced by supplementary

factors, including motivation and reasons, rather than a positive attitude". These findings highlight that while consumers may express favourable attitudes towards organic products, these attitudes do not always translate into purchases due to external barriers or influencing factors.

Conversely, Arora et al. (2022) found that attitude, along with factors like price and trust, significantly influenced purchase decisions. This study underscores the role of attitude as part of a broader set of influences on consumer behaviour, with trust and price consciousness playing pivotal roles in the decision-making process.

Conversely, other studies demonstrate a significant connection between attitude and purchase behaviour. For instance, Arora et al. (2022, p. 1085) identified that attitude, alongside factors such as price and trust, significantly influenced purchase decisions. This suggests that attitude interacts with other variables, such as trust and price consciousness, to shape consumer behaviour.

Among the studies reviewed, the relationship between attitude and purchase intention was the most frequently explored, appearing in 40 studies. The connection between attitude and purchase behaviour was investigated in 16 studies, while intention to repurchase was analysed in one study.

In analysing the 57 studies that explored the impact of attitude on purchase intention and behaviour. There were 40 articles that measured intention while 16 articles measure behaviour. These findings reveal that while attitude is often a predictor of purchase behaviour, its influence can be moderated by other external factors such as pricing, accessibility, and socio-demographic variables.

4.2.2.2 Subjective Norm (SN)

Subjective norm was examined in 37 out of the 88 studies reviewed. The concept of subjective norm encompassed various related terms discussed across the articles, including descriptive norms, personal norms, moral norms, injunctive norms, and peer pressure. These keywords were collectively categorised under the broader umbrella of subjective norms. The examination of subjective norms as an independent variable extended across various dependent variables, including intention to purchase and behaviour. Specifically, the relationship between subjective norm and intention was explored in 25 of 88 studies, and subjective norm and purchase behaviour in 11 studies as shown in Table 4.5.

Table 4. 5: Subjective norms analysis

Subjective Norms	
Purchase intention	25
Purchase behaviour	11
Total	***37***

Overall, subjective norms were measured in 37 instances across the studies. The following discussion explores the influence of attitude on these dependent variables in greater detail.

- ***Subjective Norms and Purchase Intention***

The premise of subjective norms is that individuals are influenced by the expectations of those they deem significant, particularly when the behaviour aligns with socially accepted norms or when there is a desire for social approval (Ajzen, 1991, p.5). In consumer behaviour, subjective norms can significantly impact purchase intentions, as individuals may feel compelled to purchase certain products to align with societal expectations or to gain approval from their social circles (Armitate & Conner, 2001, p.471).

The majority of studies found a positive and significant relationship between subjective norms and purchase intention. For example, Saleki et al. (2020, P 168), in Malaysia, found subjective norms to be a significant predictor, with a "path coefficient (β) of 0.192 ($p < 0.05$), alongside other factors such as attitude and perceived behavioural control".

Similarly, Cavite, Mankeb, Kerdsriserm, et al. (2022, p. 243), studied the factors determining consumers' purchase intentions for traceable organic rice products and reported a "significant relationship ($\beta = 0.24$, $p < 0.010$) between subjective norms and purchase intention". However, a study conducted by Zayed et al. (2022) in Egypt investigated factors influencing consumers' intention to purchase organic food and found no significant relationship between subjective norms and purchase intention, "(β) of 0.104, a $t = 1.960$, $p = 0.51$. Similarly, Yazdanphanah and Forouzani (2015), in their study in Iran, also reported no significant relationship between subjective norms and purchase intention ($\beta = 0.015$, $p = 0.749$).

Bhutto et al. (2022, p.156), in a study conducted in China, investigated the purchase intention of organic meat. They found that subjective norms did not significantly impact purchase intention, with a path coefficient (β) of 0.013 and a p-value of 0.804, suggesting that in this market, social pressures might not drive consumer behaviour toward organic meat.

The findings suggest that while subjective norms are frequently a significant predictor of purchase intention, there are contextual factors that may influence the strength or even the direction of this relationship. Cultural, demographic, and product-specific contexts likely play a role in shaping how subjective norms impact consumer behaviour, emphasising the need for further research to better understand these dynamics.

- ***Subjective Norms and consumer purchase behaviour***

Among the 11 studies that explored the impact of subjective norms on purchase behaviour, 9(81%) studies identified a significant positive relationship between these variables, while 2(18%) studies reported non-significant relationships.

In the study conducted by Testa et al. (2019, p. 327) in Italy, the research highlighted the discrepancy between consumers' declared intentions to purchase organic food and their actual purchasing behaviour. Interestingly, the study found that subjective norms had a negative influence on actual purchasing behaviour towards organic food. The Testa et al. (2019, p. 327) findings "showing that subjective norms negatively affect consumer actual purchasing behaviour towards organic food, with path coefficients of -0.3962 ($z = -3.61$; $p < 0.001$)".

This negative relationship suggests that in some contexts, social pressure or expectations may act as deterrents rather than motivators for purchasing organic products. This could be due to consumers feeling pressured by societal expectations, which may lead to resistance or avoidance in their actual buying behaviours. The Testa et al. (2019, p. 327) study confirmed that there is a "peculiar role subjective norms play in predicting organic food purchasing, the fact that people who experience higher subjective norms tend to buy less than people with lower subjective norms is an implicit confirmation that social desirability is a relevant topic for research on organic food."

However, not all studies found such a negative association. Several studies across different regions reported positive relationships between subjective norms and purchase behaviour. For example, in the study by Singh and Verma (2017, p. 473) conducted in India on organic food adoption, subjective norms had a positive influence on purchase behaviour, with a path coefficient of 0.23 and a p-value < 0.01. This highlights that in certain cultural contexts, subjective norms can encourage consumers to align their purchasing decisions with socially accepted behaviour, especially when organic food consumption is seen as environmentally responsible or socially desirable.

Despite some variations in findings, most studies highlight the critical role of subjective norms in influencing both purchase intentions and actual purchasing behaviour. The differences observed across studies suggest that the impact of subjective norms may depend on factors such as cultural context and the intensity of social influences. This variability underscores the importance of examining how subjective norms interact with other determinants to better understand their role in consumer decision-making.

Recognising these interactions is essential for crafting strategies that effectively motivate consumers to translate their intentions into actions when purchasing organic products. While subjective norms consistently emerge as a significant factor in shaping consumer choices, the inconsistencies observed point to the need for further exploration of contextual and moderating influences.

4.2.2.3 Trust

Trust was examined in a total of 22 studies, with its influence assessed across various dependent variables, such as purchase intention, purchase behaviour, and conative loyalty. Among these, purchase intention was the most commonly investigated variable, appearing in 15 studies. Trust was linked to purchase behaviour in four studies, conative loyalty in one study, consumer attitudes in one study, and repurchase intention in one study.

Table 4. 6: Trust variable analysis

Trust	
Purchase intention	15
Purchase behaviour	4
Conative loyalty to organic	1
Attitude of consumers	1
Intention to repurchase	1
Total	***22***

Table 4.6 provides a summary of the analysis of trust and its associations with various dependent variables:

- **Trust and Purchase Intention**

Trust is defined as the confidence consumers place in the reliability and integrity of a product, brand, or seller (Chaudhuri & Holbrook, 2001, p. 81). In the context of organic and sustainable products, trust is often associated with consumers' belief that these products meet established standards, such as being authentically organic, environmentally friendly, or safe for

consumption (Nguyen et al., 2019). Trust plays a pivotal role in influencing consumer perceptions and purchase decisions, particularly for products that rely on credence attributes, such as organic food, where quality is not immediately verifiable (Singh & Verma, 2017, p. 473).

In the studies reviewed, trust consistently emerged as a significant predictor of purchase intention, particularly for organic food or certified products. For example, Roh et al. (2022, p. 8) in their study conducted of organic food adoption in China, reported that "trust significantly influenced purchase intention for green products: $\beta = 0.242$ ($p < 0.01$)". Similarly, Teng and Wang (2015, p. 1066) in a study from Taiwan, found that "trust in the authenticity of organic certifications strongly influenced consumer purchase decision: $\beta = 0.426$ ($p < 0.001$)".

In another study conducted in Australia, Anisimova (2016, p. 809) stated that "trust in organic food producers and the perceived trustworthiness of the product were strong predictors of purchase intention; $\beta = 0.60$ ($p < 0.001$)". This suggests that trust in the production process and the brand plays a crucial role in determining whether consumers are willing to engage with organic products.

Despite the strong evidence supporting trust as a predictor of purchase intention in other studies, research found no significant relationship between trust and purchase intention. For example, Cavite, Mankeb, Kerdsriserm, et al. (2022, p. 243), in their study on traceable organic rice in Thailand, found that "trust was not a significant factor in shaping purchase intention ($\beta = -0.10$, $p > 0.05$)". Similarly, Najib et al. (2022, p. 320) in Indonesia on organic food adoption, did not find trust to have a significant effect on purchase intention "($\beta = 0.055$, $p > 0.05$)". Although trust was important for building positive attitudes towards organic food, it did not directly influence the intention to purchase in this study.

These mixed findings suggest that while trust generally plays a significant role in influencing purchase intention, especially in markets where consumers are sceptical about the authenticity or safety of organic or eco-friendly products—its impact may vary across contexts. As Massey et al. (2018, p. 419) noted, "consumers tend to rely heavily on trust when making purchasing decisions about organic food, given their inability to independently verify claims such as being pesticide-free or environmentally sustainable." However, in certain cases, other factors like price, attitudes, or social influences may outweigh trust as the primary determinant of purchase intention.

These mixed findings suggest that while trust generally plays a significant role in influencing purchase intention especially in markets where consumers are sceptical about the authenticity or safety of organic or eco-friendly products its impact may vary across contexts. As Massey et al. (2018, p. 418). noted, "consumers tend to rely heavily on trust when making purchasing decisions about organic food, given their inability to independently verify claims such as being pesticide-free or environmentally sustainable." However, other factors like price, attitudes, or social influences may outweigh trust as the primary determinant of purchase intention

- **Trust and Purchase Behaviour**

Among the four studies examining the relationship between trust and purchase behaviour, three identified a significant positive association, while one reported a non-significant relationship. These findings underscore the crucial role of trust in shaping consumer behaviour, particularly in the context of organic food purchases.

A study by Doan (2021, p. 333) in a study on the adoption of organic vegetables, reported that a "standard deviation of 0.07, a t-value of 1.022, and a p-value of 0.0183", further supporting the notion that consumer trust in organic food products positively influences their actual purchasing behaviour. Another study by Canova et al. (2020, p. 1069) on the purchase of food and non-food fair trade products in Italy reported with a "$\beta = 0.34$ and a p-value > 0.001", highlighting the central role that trust plays in shaping the purchasing decisions of consumers who buy organic products.

Conversely, in a study conducted by Tandon et al. (2020, p. 2), the relationship between trust and purchase behaviour was found to be non-significant, suggesting that while trust generally plays a significant role, it may not always be the sole determinant of purchase decisions, particularly in markets where other factors like price sensitivity or availability come into play.

Overall, the majority of studies affirm that trust is a significant predictor of purchase behaviour, particularly in the context of organic food products. As a result, enhancing consumer trust through transparent communication and quality assurance can be a powerful strategy for boosting organic product sales.

4.2.2.4 Health Consciousness (HC)

Health Consciousness (HC) was analysed in a total of 17 studies, with its role examined across various dependent variables, including purchase intention, purchase behaviour, and other

decision-making outcomes. Among these, purchase intention was the most frequently studied dependent variable, being examined in 10 studies (including variations like "intention"). HC was also linked to purchase behaviour in six studies. Additionally, HC was studied in relation to "intention to repurchase" in one study.

Table 4. 7: Health Consciousness analysis

Health Consciousness	
Purchase intention	10
Purchase behaviour	6
Intention to repurchase	1
Total	***17***

This analysis highlights the significant influence of Health Consciousness on purchase intention and behaviour, with less frequent exploration of its impact on other decision-making variables.

- **Health Consciousness (HC) and Purchase Intention**

Health consciousness refers to the degree to which individuals are aware of and concerned about their health, and how this concern influences their lifestyle choices, including their purchasing decisions (Yadav & Pathak, 2016, p. 123). In the context of consumer behaviour, health consciousness plays a significant role in shaping the intention to purchase products, particularly those that are perceived as healthier or more beneficial for well-being, such as organic or green products (Bhutto et al., 2022, p. 156). Health-conscious consumers are more likely to engage in behaviours that they believe will enhance or protect their health (Yadav & Pathak, 2016, p. 123).

For example, Bhutto et al. (2022, p. 156), in their study on organic meat purchasing in China, reported that health consciousness had a “significant positive impact on purchase intention, with a β-value of 0.203 ($p < 0.01$)”. This finding underscores the idea that consumers with higher health awareness are more likely to prioritise purchasing organic meat due to its perceived health benefits. Similarly, Llanos-Herrera et al. (2022), in a study conducted in Chile on organic fruit consumption, confirmed that “health consciousness was significantly related to purchase intention, with consumers who were more health-conscious being more inclined to purchase organic food products”. This aligns with the broader trend of health-conscious consumers choosing organic products as a means of maintaining or improving their well-being.

In Teixeira et al. (2022, p. 2), a study in Portugal on antecedents to organic food purchase found that the "path from health concerns to attitudes had a $\beta = 0.14$, ($p = 0.01$)", showing a clear link between health consciousness and consumer decision-making.

Despite the strong evidence supporting health consciousness as a significant factor in many studies, some research found no significant relationship between health consciousness and purchase intention. For instance, Zayed et al. (2022, p. 2), in a study on organic food purchasing in Egypt, found that while other variables such as attitude and environmental concern were significant, "health consciousness did not have a notable impact on purchase intention ($\beta = 0.088$, $t = 1.684$, $p = 0.093$)". Similarly, Cavite, Mankeb and Suwanmaneepong (2022, p. 1124) in Thailand found that while health consciousness was an important predictor of consumer behaviour, it did not directly influence the purchase intention for traceable organic rice ($\beta = 0.16$, $p < 0.01$). This suggests that, in some contexts, health consciousness may influence attitudes but not necessarily translate into a stronger purchase intention

The findings from these studies indicate that health consciousness is generally a strong predictor of purchase intention for organic and health-related products. Health-conscious consumers are more likely to seek out products that align with their health values, making health consciousness a critical variable for marketers targeting these consumers. However, in some contexts, other factors like attitudes, subjective norms, or environmental concerns may override health consciousness in driving purchase intention.

- **Health Consciousness and purchase behaviour**

Among the six studies exploring the impact of Health Consciousness (HC) on purchase behaviour, some identified a significant relationship between these variables, while other studies reported non-significant relationships. The findings emphasise the importance of health-related awareness in driving consumer behaviour, especially in the context of purchasing organic products, where health consciousness is often a critical motivator.

In a study by Zheng et al. (2021, p. 9) conducted in Bangladesh, the research "indicate the existence of statistically significant positive relationships between health consciousness ($\beta = 0.249$, $p < 0.01$), and purchase intention". This finding supports the notion that individuals who are more conscious of health issues are more likely to translate this awareness into purchasing actions, particularly for organic products that are often perceived as healthier alternatives. Similarly, a study by Nedra et al. (2015, p. 67) found that "health consciousness significantly

explains consumer behaviour towards organic products, with a $\beta = 0.378$, a $t = 2.491$, and a $p = 0.013$. This positive relationship underscores the role of health awareness in motivating consumers to adopt sustainable purchasing behaviours, such as choosing organic food products.

In contrast, Tandon et al. (2020, p. 2) conducted a study in India on why people buy organic foods that found that "health does not moderate the associations between different users' motivations and organic food buying behaviour". This suggests that while consumers may express health concerns, these concerns do not always translate into concrete purchasing actions, possibly due to other influencing factors such as price or product availability.

The mixed findings highlight that while health consciousness often plays a significant role in driving purchase behaviour. The majority of studies, however, confirm that when consumers are more aware of health benefits, they are more likely to act on these concerns by purchasing organic products.

4.2.2.5 Perceived Behavioural Control (PBC)

The examination of PBC as an independent variable extended across various dependent variables, including intention to purchase, behaviour.

Table 4. 8: Perceived Behavioural Control analysis

Perceived Behavioural Control	
Purchase intention	13
Purchase behaviour	3
Total	***16***

Specifically, the relationship between PBC and purchase intention was examined in 13 out of 88 studies, while its association with purchase behaviour was investigated in 3 studies. The following sections discuss these relationships in detail.

- **Perceived Behavioural Control (PBC) and Purchase Intention**

Perceived Behavioural Control (PBC) refers to an individual's perception of their ability to perform a particular behaviour, considering external factors such as resources, time, or access (Yadav & Pathak, 2016, p. 123). Within consumer behaviour, PBC reflects the level of control consumers believe they have over purchasing decisions, such as whether they can afford a product or easily access it. The Theory of Planned Behaviour (TPB) positions PBC as a critical

factor in shaping intentions, alongside attitudes and subjective norms (Yadav & Pathak, 2016, p. 123).

In the reviewed studies, PBC was found to be a significant predictor of purchase intention in most cases, though a few studies reported non-significant findings. Of the 16 studies that examined the relationship between PBC and purchase intention, 16 (80%) studies found a significant positive relationship, while 4 (20) studies did not find PBC to be a significant factor.

For example, Saleki et al. (2020) in Malaysia found a significant positive relationship between PBC and purchase intention, with a path coefficient (β) of 0.285 ($p < 0.05$). Similar results were found in the study by Teixeira et al. (2022) in Portugal (β) of 0.469 ($t = 10.482$, $p < 0.001$). This suggests that consumers who felt they had greater control over their purchasing decisions, such as affordability and product accessibility, were more likely to intend to buy organic food. Arora et al. (2022) in a study conducted in India, also highlighted the significant role of PBC in driving purchase intention, confirming that greater perceived ease of purchasing organic products was positively associated with higher purchase intentions.

Despite the strong evidence supporting PBC as a significant factor in most studies, some research found no significant relationship between PBC and purchase intention. For example, Bhutto et al. (2022), in their study on organic meat purchase intention in China, reported that PBC did not significantly influence consumers' intentions ($\beta = 0.035$, $p = 0.518$). Other factors, such as attitude and health consciousness, were found to be more influential. Similarly, Yazdanpanah and Forouzani (2015), in a study examining students' behavioural intentions regarding organic food purchases in Iran also reported no significant impact of PBC on purchase intention ($\beta = 0.008$, $p = 0.884$), indicating that control over resources or access was not a deciding factor for organic food purchases in this context.

In Zayed et al. (2022)'s study on organic food in Egypt, PBC was also found to be non-significant ($\beta = 0.090$, $t = 1.680$, $p = 0.094$). This implies that even though other factors like attitude and environmental concern were significant, the perceived ease or difficulty of purchasing organic food did not have a notable effect on purchase intentions.

Lastly, Cavite, Mankeb, Kerdsriserm, et al. (2022, p. 243) in Thailand found no significant relationship between PBC and purchase intention for traceable organic rice products ($\beta = -0.10$, $p > 0.05$), suggesting that factors other than control, such as subjective norms, played a

more dominant role. As is evident, the strength and significance of these relationships may vary across different consumer segments and product categories.

- **Perceived Behavioural Control (PBC) and Purchase Behaviour**

Among the 16 studies investigating Perceived Behavioural Control (PBC), three focused specifically on its relationship with purchase behaviour.

In a study by Ashraf et al. (2019), the relationship between PBC and consumer purchase behaviour in Bangladesh was examined and the results "indicated a significant positive relationship, with a standardised estimate of 0.95, a standard error (SE) of 0.076, and a critical ratio (CR) of 5.563". This suggests that consumers who perceive they have the resources and opportunities to buy organic foods are much more likely to do so.

Similarly, in the study by Singh and Verma (2017, p. 473) conducted in India, PBC was found to positively influence purchase behaviour, with a path coefficient of 0.14 and a p-value < 0.05. The study highlights how PBC can act as a determinant in consumer behaviour, particularly in cases where consumers feel confident in overcoming barriers such as price or availability of organic products.

Conversely, a study by Testa et al. (2019) in Italy found a non-significant relationship between PBC and actual purchase behaviour. The study reported that while PBC significantly influenced purchase intention, it did not directly impact purchase behaviour. This suggests that although consumers might perceive they have control over purchasing organic products, other external factors, such as social norms or situational barriers, might prevent them from translating this perception into actual behaviour.

Despite these mixed findings, the majority of the research underscores the importance of PBC in shaping consumer behaviour. These findings highlight that while PBC generally plays an essential role in shaping purchase intentions, its significance may vary depending on the context, product type, and consumer segment.

4.2.2.6 Environmental Concern

Environmental Concern (EC) was explored in 12 studies, primarily focusing on its influence on consumer decision-making regarding organic and sustainable products. The analysis revealed that EC was most frequently associated with purchase intention, as this relationship

was examined in 8 of the studies, highlighting the importance of consumers' environmental awareness in shaping their intent to buy eco-friendly products. Additionally, EC was linked to purchase behaviour in one study, emphasising its potential impact on actual consumer actions, albeit less extensively studied.

Table 4. 9: Environmental concern analysis

Environmental Concern	
Purchase intention	8
Purchase behaviour	4
Total	***12***

These findings underscore the critical role that environmental awareness plays in driving consumer engagement with sustainable consumption. These are discussed in detail below.

- **Environmental concern (EC) and Purchase Intention**

Environmental concern refers to the degree to which individuals are aware of environmental issues and are motivated to engage in pro-environmental behaviours, such as purchasing eco-friendly products (Yadav & Pathak, 2016, p. 123). Consumers with high environmental concern tend to prioritise products that are sustainable, organic, or environmentally friendly (Mhlophe, 2016, p. 2). In the context of purchase intention, environmental concern is often a significant factor driving the decision to buy products perceived as being less harmful to the environment (Mhlophe, 2016, p. 2; Yadav & Pathak, 2016, p. 123).

A study by Zayed et al. (2022, p. 2), in Egypt, found that "environmental concern had a significant direct effect on purchase intention, with a path coefficient $\beta = 0.285$, $p < 0.001$". While a study by Bhutto et al. (2022, p. 156), a study conducted in China explored the impact of environmental concern on the intention to purchase organic meat. The findings indicated that environmental concern was a significant factor, with a β-value of 0.155 ($p < 0.01$), showing that consumers' concern for the environment strongly predicted their willingness to purchase organic meat (Bhutto et al., 2022, p. 156).

Although environmental concern is widely recognised as a significant predictor of purchase intention, some studies have reported non-significant relationships. For example, Cavite et al. (2022) in Thailand found no significant effect of environmental concern on the purchase intention of traceable organic rice ($\beta = -0.10$, $p > 0.05$), suggesting that factors like subjective norms or product-specific attributes may play a stronger role. Similarly, Yazdanpanah and Forouzani (2015, p. 343) in Iran reported no significant relationship between environmental

concern and purchase intention for organic food ($\beta = 0.033$, $t = 0.694$, $p > 0.05$), indicating that concerns about the environment may not always directly translate into purchasing intentions, possibly due to barriers like price or accessibility.

These results emphasise the importance of marketers aligning their strategies with environmental values to attract environmentally concerned consumers. Emphasising the sustainability, eco-friendliness, or green certifications of products in marketing campaigns can effectively appeal to consumers who prioritise environmental protection in their purchasing decisions.

- **Environmental concern (EC) and Purchase Behaviour**

Among the 12 studies exploring the impact of Environmental Concern (EC) on purchase behaviour, four studies identified a significant relationship with purchase behaviour.

In a study by Nedra et al. (2015), it was found that environmental concern significantly explains consumer behaviour towards organic products. The confirmatory analysis revealed a β-value of 1.524, a t-value of 5.627, and a p-value of 0.000, indicating a strong and statistically significant relationship. This supports the notion that consumers who are concerned about environmental issues are more likely to exhibit sustainable purchasing behaviours, such as buying organic products, which they perceive as more environmentally friendly.

Similarly, a study conducted by Zheng et al. (2021) in Bangladesh found a significant relationship between environmental concern and purchase behaviour, with a β-value of 0.150 and a p-value of 0.01. This further emphasises that consumers with higher environmental awareness are more inclined to purchase organic food, reinforcing the importance of addressing environmental concerns in marketing strategies.

In contrast, Tandon et al. (2020) conducted a study in India that found a non-significant relationship between environmental concern and purchase behaviour, with a p-value of 0.924. This suggests that, in certain contexts, environmental concerns alone may not be sufficient to drive purchasing behaviour, possibly due to other influencing factors such as price sensitivity or perceived product efficacy.

The majority of studies affirm that environmental concern plays a significant role in shaping purchase behaviour, especially for organic products. However, the inconsistencies across some studies highlight the need to further explore how factors such as product affordability and consumer education may mediate or strengthen this relationship.

The majority of studies affirm that environmental concern plays a significant role in shaping purchase behaviour, especially for organic products. However, the inconsistencies across some studies highlight the need to further explore how factors such as product affordability and consumer education may mediate or strengthen this relationship.

4.3 Conceptual Model of Traditional Factors Influencing Organic Food Adoption

Organic food adoption is influenced by a dynamic interplay of traditional factors, encompassing psychological constructs, social influences, and contextual motivators. These factors collectively shape consumers' purchase intentions and behaviours, providing a foundational understanding of how and why individuals engage with organic products.

Objective One of this analysis was to identify, from existing literature, the key factors driving organic food consumption and to assess the extent to which innovation-related factors have been integrated into models and studies on organic consumption. By exploring these traditional drivers and their interactions, the conceptual model offers a comprehensive framework for understanding the pathways through which organic food adoption occurs. This model as shown in Figure 4.1 not only highlights the critical roles of attitudes, social norms, and perceived behavioural control but also integrates specific motivators such as environmental concern, trust, and health consciousness, emphasising their impact on consumer decision-making.

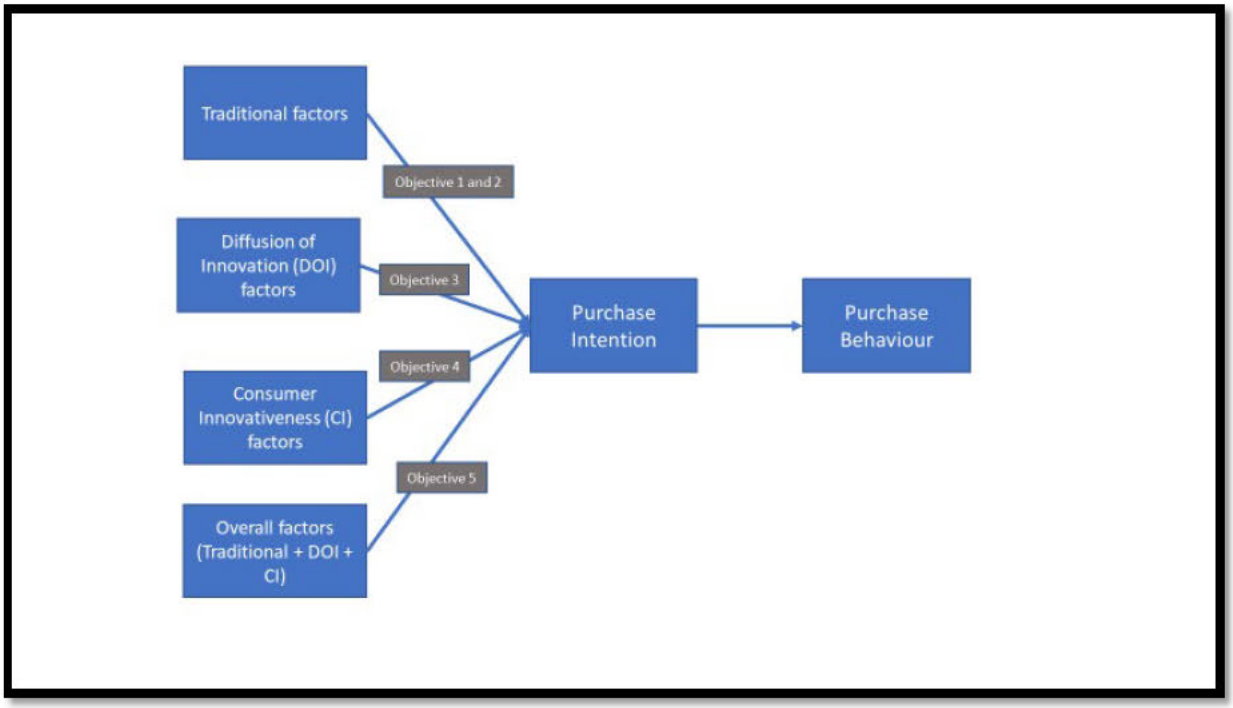

Figure 4. 2: Revised Conceptual model for the study

The conceptual model presented here synthesises insights from the literature, offering a structured framework to understand how key variables interact to influence organic food consumption. The elements of the conceptual model include traditional factors (Objective 2), DOI factors (Objective 3), CI factors (Objective 4) and overall factors (Objective 5)

4.3.1 Elements of the Conceptual Model

The conceptual model for traditional factors influencing organic food adoption consists of the following core constructs, each supported by empirical research:

The conceptual model is structured around four key components:

- **Traditional Factors (Objective 1 and 2)** – Phase One of this study identifies traditional factors grounded in well-established consumer behaviour theories, particularly the Theory of Planned Behaviour (TPB). These factors include key variables such as attitude, subjective norms, perceived behavioural control, health consciousness, environmental concern, and trust. As extensively studied determinants, these constructs play a fundamental role in shaping consumer decisions regarding organic food adoption.
- **Diffusion of Innovation (DOI) Factors (Objective 3)** – This category examines how consumers perceive organic food as an innovation, integrating factors from Rogers'

Diffusion of Innovation (DOI) Theory, including relative advantage, compatibility, complexity, trialability, and observability. These attributes help explain the extent to which consumers view organic products as novel and beneficial.

- **Consumer Innovativeness (CI) Factors (Objective 4)** – Recognizing that some consumers are more open to new products than others, this section incorporates Consumer Innovativeness (CI) as a key moderator. CI measures how early adopters, risk-tolerant consumers, and information-seekers influence the adoption of organic products.
- **Overall Factors (Traditional + DOI + CI) (Objective 5)** – This final component assesses the combined influence of traditional and innovation-related factors in shaping purchase intention and actual behaviour. It provides a comprehensive evaluation of consumer decision-making, integrating behavioural, social, and innovation-related constructs into a single framework.

This model underscores the interconnected roles of psychological, social, and contextual factors in influencing organic food adoption, offering understanding of consumer behaviour in this domain. The integration of well-established constructs such as attitude, subjective norm, and perceived behavioural control provides a comprehensive framework for analysing traditional factors in organic food consumption.

4.3.2 Significance and Application of the Conceptual Model

The conceptual model presented in this chapter serves as a critical framework for understanding the multifaceted drivers of organic food adoption. By synthesising key insights from the systematic review, the model bridges the gap between traditional factors, such as attitudes, subjective norms, and health consciousness, and the innovation-driven constructs of Diffusion of Innovation (DOI) theory and Consumer Innovativeness (CI). This integrative approach provides a comprehensive foundation for addressing the study's overarching research question and objectives.

4.3.2.1 Significance of the Conceptual Model

The conceptual model presented in this study plays a pivotal role in advancing the understanding of organic food adoption by bridging the gap between traditional consumer behaviour frameworks and innovation-driven factors. This section elaborates on the model's significance, particularly its contribution to holistic consumer behaviour research and its relevance in under-researched regions like South Africa.

***Integration of Traditional and Innovation-Driven Factors*:** The model uniquely combines well-established psychological and social constructs with innovation-oriented drivers. While traditional factors, such as attitudes and trust, explain consumer intentions based on intrinsic motivations, DOI and CI factors capture external and innovation-specific influences, such as trialability, observability, and relative advantage (Thiyagarajan, 2018, p. 1663; Yadav & Pathak, 2016, p. 123).

This integration is especially significant for markets like South Africa, where organic foods are perceived as novel products (Banjara, 2016, p. 18; Naidoo & Ramatsetse, 2016, p. 82; Persaud & Schillo, p. 131). By addressing both sets of factors, the model provides a holistic view of consumer behaviour that accounts for both established and emerging determinants.

***Addressing Gaps in the Literature*:** Previous studies have largely focused on traditional factors, often overlooking the role of innovation-related attributes in organic food adoption (Thiyagarajan, 2018, p. 1663; Yadav & Pathak, 2016, p. 123). This model addresses this gap by emphasising how DOI characteristics and CI can complement traditional predictors, such as health consciousness and environmental concern.

The inclusion of these innovation-driven constructs allows the study to explore new influences, such as how consumers evaluate organic products as innovations and how individual differences in innovativeness affect adoption decisions.

***Adaptability to Diverse Contexts*:** The model is designed to be applicable across varied cultural and market contexts, with specific attention to developing economies like South Africa. It highlights the interplay between affordability, accessibility, and innovation perceptions, making it particularly relevant for understanding consumer behaviour in under-researched regions.

4.3.2.2 Application of the Conceptual Model

The practical utility of the conceptual model lies in its ability to guide research design, explain consumer behaviour pathways, and inform actionable strategies for increasing organic food adoption. This section discusses how the model's insights can be leveraged to deepen our understanding of organic food adoption, close the intention-behaviour gap, and provide strategic guidance for policymakers and marketers seeking to promote sustainable consumption practices.

Guiding Stage 2 Research Design: The conceptual model underpins the hypotheses tested in Stage 2 by providing a clear framework for identifying relationships between traditional and innovation-driven factors. For instance: Hypotheses related to the impact of DOI attributes (e.g., trialability and compatibility) on purchase intention are derived directly from the model. The role of CI in enhancing the influence of innovation characteristics is another critical area informed by the model.

Explaining Consumer Behaviour Pathways: By integrating constructs such as perceived behavioural control, trust, and DOI attributes, the model offers insights into the pathways through which intentions translate into actual purchase behaviour. This is particularly important for addressing the persistent intention-behaviour gap highlighted in the literature (Lupindo et al., 2024, p. 2).

Informing Practical Strategies: The conceptual model provides actionable insights for marketers and policymakers by identifying key levers for promoting organic food adoption. For example: Trust-building initiatives, such as transparent certification processes, can enhance traditional factors like health consciousness and environmental concern. Highlighting innovation attributes, such as the relative advantage and observability of organic products, can appeal to early adopters and innovative consumers.

The conceptual model is more than a synthesis of existing knowledge; it is a bridge that connects traditional motivations with innovation-related dynamics to offer understanding of organic food adoption. By integrating these dimensions, the model not only addresses gaps in the literature but also guides the empirical testing phase in Stage 2, ensuring that the study provides a comprehensive and contextually relevant explanation of consumer behaviour. This dual-focus approach lays the groundwork for an investigation into the factors influencing organic food adoption in South Africa and beyond.

4.4 Conclusion

This chapter presented the findings from the systematic review conducted in Stage 1 of the study, which synthesised existing research on organic food adoption to identify key traditional factors influencing consumer behaviour. The analysis revealed that attitudes, subjective norms, perceived behavioural control, health consciousness, trust, and environmental concern are the most frequently studied drivers, with a dominant focus on purchase intention as the dependent variable. The findings underscore the critical role of attitudes and health consciousness in

shaping consumer intentions, supported by substantial evidence across diverse contexts. Subjective norms and perceived behavioural control also emerged as significant, though their impact varied depending on cultural and product-specific factors. Trust and environmental concern were highlighted as pivotal motivators, particularly in markets where scepticism about organic claims is prevalent.

However, the review revealed notable gaps in the literature, such as the underrepresentation of innovation-related factors like Diffusion of Innovation (DOI) and Consumer Innovativeness (CI). These gaps emphasise the need for a more integrated approach that combines traditional and innovation-driven variables to comprehensively explain organic food adoption. Additionally, the findings highlight the limited focus on actual purchase behaviour compared to purchase intention, suggesting a need for further research to explore the intention-behaviour gap.

The conceptual model developed in this chapter synthesises these insights, providing a structured framework for understanding the interplay of traditional factors in organic food adoption. This model forms the foundation for Stage 2, where the influence of DOI and CI factors will be empirically tested in the South African context.

In the next chapter, the research methodology for Stage 2 will be outlined, detailing the quantitative approach employed to test the conceptual model and address the identified gaps. By building on the findings from Stage 1, Stage 2 aims to offer a more comprehensive understanding of the factors driving organic food consumption, with implications for theory and practice.

5. STAGE 2: SURVEY METHODOLOGY FOR QUANTITATIVE ANALYSIS OF ORGANIC FOOD ADOPTION

This chapter outlines the research methodology adopted for the second stage of the study, focusing on the research philosophy, design, and statistical procedures employed to address the study's objectives. Guided by a pragmatic philosophy, this stage uses a quantitative approach to test hypotheses developed from the literature review in Stage 1. Specifically, it seeks to investigate how traditional factors, Diffusion of Innovation (DOI), and Consumer Innovativeness (CI) influence consumer intention to adopt organic foods in South Africa. By utilising a causal research design and structured survey methods, this chapter details the sampling, data collection, and analysis techniques that support the study's goal of providing actionable insights for promoting organic food adoption.

5.1 Research Objectives and Hypotheses

This study adopts a phased approach to explore the multifaceted factors influencing organic food adoption. Phase One, utilising a systematic literature review, examined the traditional and innovative factors affecting organic food consumption and assessed the extent to which innovation factors have been integrated into existing models and studies. Building on this foundation, Phase Two employs quantitative analysis to investigate key drivers of organic food adoption.

5.1.1Research Objectives

- To determine, from existing literature, the factors affecting organic food consumption and the extent to which innovation factors have been included in models and studies on organic consumption. *(Addressed in Phase One through a systematic literature review – Chapter 3 and Chapter 4 of this study).*
- To determine the effects of the traditional factors on intention to purchase organic food. *(Explored in Phase Two using quantitative analysis).*
- To determine the effects of Diffusion of Innovation (DOI) factors on organic food adoption. *(Explored in Phase Two using quantitative analysis).*
- To ascertain the impact of Consumer Innovativeness (CI) on the adoption of organic foods. *(Investigated in Phase Two through empirical testing).*
- To investigate the relative role of traditional factors, Diffusion of Innovation, and

Consumer Innovativeness in affecting organic food adoption. *(Analysed in Phase Two to identify their combined and relative contributions to intention and behaviour).*

The phased approach ensures a systematic transition from theoretical understanding to empirical validation, providing a comprehensive framework for exploring organic food adoption.

Phase Two Research Objectives

Building on insights from Phase One, Phase Two focuses on the following:

- To determine the effects of the traditional factors on intention to purchase organic food.
- Determining the effects of DOI factors on intention to adopt organic foods.
- Assessing the impact of Consumer Innovativeness on intention to adopt organic foods.
- Investigating the relative influence of traditional factors, DOI factors, and Consumer Innovativeness on intention to adopt organic foods.

5.1.2 *Research Hypotheses*

- To determine the effects of the traditional factors on intention to purchase organic food.

H2a: Attitude (ATT) has a significant positive effect on Intention to purchase organic food.

H2b: Perceived behavioural control (PBC) has a significant positive effect on Intention to purchase organic food.

H2c: Trust (TRST) has a significant positive effect on Intention to purchase organic food.

H2d: Subjective Norms (SUBJ) have a significant positive effect on Intention to purchase organic food.

H2e: Health Consciousness (HLTH) has a significant positive effect on Intention to purchase organic food.

H2f: Environmental Concern (ENVRN) has a significant positive effect on Intention to purchase organic food.

H2g: Intention to purchase organic food has a significant positive effect on Purchase Behaviour (PURCH).

- To determine the effects of Diffusion of Innovation factors on intention to adopt organic foods:

H3a: Complexity (COMP) negatively affects Intention (INT) to purchase organic foods.

H3b: Compatibility (COMPAT) positively affects Intention (INT) to purchase organic foods.
H3c: Observability (OBS) positively influences Intention (INT) to purchase organic foods.
H3d: Trialability (TRA) positively affects Intention (INT) to purchase organic foods.
H3e: Relative Advantage (REL) positively influences Intention (INT) to purchase organic foods.
H3f: There is a positive relationship between Purchase Intention and Purchase Behaviour.

- To ascertain the impact of Consumer Innovativeness on intention to adopt organic foods:

H4a: Consumer Innovativeness (CI) influences Intention (INT) to purchase organic foods.
H4b: There is a positive relationship between Purchase Intention and Purchase Behaviour

- To investigate the relative role of traditional factors, Diffusion of Innovation, and Consumer Innovativeness in affecting intention to adopt organic foods:

H5a: Traditional factors positively affect Intention (INT) to purchase organic foods.
H5b: Diffusion of Innovation (DOI) factors affect Intention (INT) to purchase organic foods.
H5c: Consumer Innovativeness (CI) affects Intention (INT) to purchase organic foods.
H5d: There is a positive relationship between Purchase Intention and Purchase Behaviour.

This section highlights the systematic and theory-driven approach adopted in this research. Phase One established the groundwork by identifying key traditional and innovative factors influencing organic food consumption through a systematic literature review. Phase Two builds on these insights, quantitatively testing the proposed hypotheses to determine the direct and indirect effects of DOI factors, Consumer Innovativeness, and traditional psychological constructs on purchase intention and behaviour.

By addressing these objectives and hypotheses, this study contributes to academic literature by bridging gaps in existing knowledge on organic food adoption. It offers practical implications for marketers and policymakers, providing evidence-based recommendations to promote sustainable consumption and enhance consumer engagement with organic products.

5.2 Research Approach

Creswell and Creswell (2017, p. 203), describe research approaches as comprehensive plans and strategies that extend from foundational assumptions to specific methods for collecting,

analysing, and interpreting data. The choice of a research strategy is influenced by several factors, including the research questions, objectives, existing knowledge, available time and resources, and the researcher's philosophical stance (Saunders et al., 2019, p. 176). Although there are other differences in research types, qualitative and quantitative classifications are the most common methods (McGiven, 2013, p. 140). Below is a discussion on these elements.

Table 5. 1: The distinction between qualitative and quantitative studies.

QUANTITATIVE RESEARCH	QUALITATIVE RESEARCH
Hypotheses are formulated at the outset and tested systematically (McGivern, 2009, p. 51).	Insights and meanings emerge as researchers become immersed in the data (McGivern, 2009, p. 53).
Concepts are defined as distinct variables (McGivern, 2009, p. 51; Saunders et al., 2019, p. 569).	Concepts are presented as themes, motifs, generalisations, or taxonomies (McGivern, 2009, p. 53).
Measures are predefined, systematically developed, and standardised before data collection (McGivern, 2009, p. 51; Saunders et al., 2019, p. 569).	Measures are typically created on an ad-hoc basis, tailored to the specific setting or context (McGivern, 2009, p. 53).
Data are numerical, derived from precise measurements (McGivern, 2009, p. 51; Saunders et al., 2019, p. 569).	Data consist of words, images, or observations gathered from various sources (McGivern, 2009, p. 53).
Research is often deductive, focusing on causal relationships (McGivern, 2009, p. 51; Saunders et al., 2019, p. 569).	Research may be inductive and explore both causal and non-causal relationships (McGivern, 2009, p. 53).
Procedures are standardised, allowing for frequent replication (McGivern, 2009, p. 51).	Procedures are context-specific, making replication rare (McGivern, 2009, p. 53).
Analysis involves statistical methods, often presented in tables or charts, with discussions linking findings to hypotheses (McGivern, 2009, p. 51).	Analysis focuses on themes and generalisations derived from evidence, aiming to organize data into a coherent narrative (McGivern, 2009, p. 53).

Stage 2 of this study utilised a quantitative research approach, chosen for its ability to improve the accuracy of findings through statistical analysis while minimising the subjectivity typically associated with qualitative methods (Creswell & Creswell, 2017, p. 100). This method is valued for its objectivity, as it allows the researcher to remain independent and ensures the research process is structured, unbiased, and free from value influences. Additionally, quantitative research emphasises precision and reliability, achieved through rigorous validity and reliability testing, making it suitable for deriving actionable insights (Saunders et al., 2019, p. 100).

5.3 Research Design

Stage Two of this study employs a causal research design to explore the relationships between traditional factors, Diffusion of Innovation (DOI), and Consumer Innovativeness (CI) as they relate to the adoption of organic foods. This design aims to establish causality, enabling the

study to determine not only whether these factors are associated with organic food adoption but also how they influence each other in a cause-and-effect manner.

The decision to use a causal design is grounded in the objectives of this stage, which seek to go beyond mere correlation and explore the directional impacts of variables, particularly in understanding how DOI and CI contribute additional predictive power beyond traditional factors. This approach was appropriate because it allowed for testing specific hypotheses about the pathways through which variables such as attitudes, perceived behavioural control, and relative advantage affect consumer behaviour. The following are justification for causal research design:

- **Establishing Causal Relationships**: Utilising a causal design allows for the identification of cause-and-effect relationships (Saunders et al., 2019, p. 711). This approach is essential for understanding the mechanisms through which traditional factors, DOI, and CI influence the adoption of organic foods. By moving beyond descriptive or correlational analysis, the causal design enables the study to offer more comprehensive explanations of how and why certain factors drive higher adoption rates.
- **Fit with Theoretical Frameworks**: Since the study incorporates theoretical models such as DOI and CI, which posit directional relationships between innovation factors and consumer behaviour, a causal design is necessary to test these theories. The design aligns with the study's emphasis on comparing and contrasting traditional factors with DOI and CI to assess their relative contributions.
- **Hypothesis Testing**: This design supports the quantitative testing of hypotheses derived from the literature review in Stage 1, providing empirical evidence on the influence of various predictors on organic food adoption. The causal framework was essential for examining these hypotheses, particularly in determining whether DOI and CI factors enhance our understanding of organic food adoption beyond traditional predictors.

This causal design was therefore a strategic choice, as it allowed for a structured and in-depth examination of the relationships between key variables namely; traditional factors, DOI, and CI.

5.4 Research Method

Descriptive research designs typically employ either surveys or observation methods for data collection (Saunders et al., 2019, p. 569). Surveys involve gathering data from a large sample of respondents using structured questionnaires, which can be administered in various formats, such as verbally, in writing, via computers, or through mobile devices (Karunarathna et al., 2024, p. 10).

Both observation and survey methods have distinct advantages. In academic social research, surveys are particularly valuable as they provide a standardised framework for collecting data from large groups (Mellinger & Hanson, 2020, p. 175). Surveys offer several benefits, including:

a) Delivering uniform and standardised questions to all participants (Fowler Jr, 2013, p. 10);
b) Simplifying administration due to the consistency of questionnaires (Mellinger & Hanson, 2020, p. 175);
c) Allowing researchers to explore deeper motivations and circumstances influencing consumer behaviour (Fowler Jr, 2013, p. 10);
d) Enabling computerised data analysis tools to efficiently process collected data; and
e) Identifying differences among subgroups through the use of large sample sizes (Babbie, 2020, p. 275).

Online surveys, in particular, provide additional advantages such as speed, broad accessibility, ease of administration, cost-effectiveness, flexibility, and automation (Mellinger & Hanson, 2020, p. 172). They facilitate the rapid distribution and completion of questionnaires via platforms like social media and email, often enhanced by the use of incentives (Mellinger & Hanson, 2020, p. 172). Furthermore, the automated features of online surveys significantly lower costs associated with face-to-face interviews and manual data entry (De Man et al., 2021, p.2). This automation reduces errors during data entry and minimises the need for extensive data coding and cleaning, streamlining the entire research process (De Man et al., 2021, p.2).

There are various drawbacks of online surveys which include:

- **Response Bias**: Online surveys can suffer from response bias due to non-random sampling, as those with internet access and interest in the topic are more likely to respond (De Man et al., 2021, p.2; Mellinger & Hanson, 2020, p.174). This can affect the representativeness

of the sample.

- **Questionnaire Design**: The quality of the data collected through surveys heavily depends on the design of the questionnaire (De Man et al., 2021, p. 2). Poorly worded or leading questions can result in biased or inaccurate responses (Mellinger & Hanson, 2020, p. 174).
- **Engagement and Completion Rates**: Online surveys often face low engagement and completion rates. Participants may abandon the survey midway, leading to incomplete data which can affect the overall analysis (De Man et al., 2021, p. 2; Goodrich et al., 2023, p. 762).
- **Lack of Depth**: While surveys can inquire about motives and circumstances, they often lack the depth of understanding that qualitative methods, such as interviews or focus groups, can provide (De Man et al., 2021, p. 2). Surveys may not fully capture the complexity of respondents' thoughts and feelings.
- **Technical Issues**: Online surveys rely on technology, and technical issues can affect the accessibility and usability of the survey, potentially leading to lower response rates or incomplete data (Goodrich et al., 2023, p. 762).
- **Privacy and Confidentiality**: Ensuring the privacy and confidentiality of respondents is crucial (Goodrich et al., 2023, p. 762). Participants may be hesitant to provide honest responses if they are unsure about the security of their data.

In conclusion, while online surveys offer significant advantages in terms of speed, cost, and ease of data collection, it is important to consider and mitigate their potential drawbacks.

5.5 Sample Design

Sampling design is a schematic used to decide who should participate in a test (Saunders et al., 2019, p. 144). Sampling involves defining the study's target population, finding the sample frame, selecting a suitable sampling technique and determining sample size (Saunders et al., 2019, p. 144).

5.5.1 Sampling Technique

This study employed a non-probability sampling design, specifically using a purposive sampling approach. Unlike probability sampling, which relies on random selection, purposive sampling involves the intentional selection of participants based on specific criteria (Saunders et al., 2019, p. 277). This method was chosen to ensure the relevance and applicability of the data to the research objectives, particularly in exploring consumer behaviour regarding organic

food adoption in KwaZulu-Natal. To enhance the depth and heterogeneity of the dataset, maximum variation sampling was employed, strategically capturing diverse sociodemographic profiles, including gender, age, education level, income, and household composition (Ramos-Morcillo et al., 2020, p. 2). While purposive sampling inherently limits the generalisability of findings, it provides a robust framework for obtaining rich, context-specific insights from participants with direct knowledge and experience of organic food consumption. This section elaborates on the target population, sample size, and sampling methods adopted in the study.

5.5.2 Target Population

The term 'target population' pertains to the complete set of individuals from which the sample will be selected and to which the findings drawn from the sample can be applied in a broader sense (Saunders et al., 2019, p. 177). Informed by the objectives of this study, the target population was restricted to consumers who were aware of organic food and its benefits in KwaZulu-Natal, South Africa. The sampling criterion was limited to a minimum age of 18 years, both male and female from all racial groups.

The rationale behind selecting KwaZulu-Natal as the primary geographic focus of this study is rooted in several key factors. As the second most populous province in South Africa, both in terms of overall population and population density, KwaZulu-Natal holds significant demographic weight (Census, 2022). At the heart of the province lies Durban, its largest city and a prominent center of economic and cultural activity (Census, 2022). Moreover, KwaZulu-Natal's distinction lies in its remarkable cultural and demographic diversity, spanning across both urban and rural landscapes (Census, 2022). This intricate interplay of diversity provides a fertile ground for capturing a wide spectrum of perspectives on the matter of organic food consumption. By embracing this diverse population, the study's findings stand to achieve an enriched level of comprehensiveness and representation, enhancing the overall validity of its conclusions.

5.5.3 Sample Size

The determining of an appropriate sample size is a critical aspect of research design, particularly when ensuring the representativeness of the sample concerning key demographic variables (Saunders et al., 2019, p. 277). However, practical constraints such as time limitations and budgetary considerations must also be factored into this decision-making process (Creswell & Creswell, 2017, p. 220). Additionally, the selection of the sample size for this study was guided by the utilisation of Structural Equation Modelling (SEM) for the analysis.

Significantly, Hair Jr et al. (2017, p. 108) advocate for a minimum sample size of 500 or greater when dealing with intricate models comprising more than seven constructs. Considering that the conceptual model involves thirteen constructs, a minimum of 500 respondents will be sought in accordance with this guidance. In addition, in light of the principle that, under equal situational circumstances, a more heterogeneous population necessitates a larger sample size to attain acceptable accuracy (Wang & Rhemtulla, 2021, p. 15), this study aimed to achieve a significant path coefficient falling within the range of 0.05 to 0.1 within a structural equation model (SEM). This pursuit was undertaken at a significance level (alpha) of 10%. Consequently, the calculations, as corroborated by Wang and Rhemtulla (2021, p. 18), indicated that a minimum sample size of approximately 451 observations was requisite to accomplish this goal while maintaining a statistical power of 80%. Consequently, the selected sample size for this study was set at 500 respondents.

The sample size of 500 respondents, adjusted to 352 after data cleaning, meets the requirements for SEM analysis. Hair Jr et al. (2017, p. 108) recommend a minimum of 500 for models with seven or more constructs. This study's adherence to these guidelines ensures adequate statistical power and reliability in testing hypotheses.

5.5.4 Sampling Technique

The chosen sampling technique for this study was non-probability, purposive sampling, specifically employing a heterogeneous purposive or maximum variation sampling approach (Saunders et al., 2019, p. 144). This sampling technique is justified based on its appropriateness for the research objectives and the characteristics of the study population. Here's how respondents were recruited using heterogeneous purposive sampling:

- ***Selection of the Study Area***: The study was conducted in KwaZulu-Natal, South Africa. This geographical area was chosen as the research context, as it represents the target population for the study's objectives.
- ***Identification of Online Data Collection Sites:*** Within the online realm, the researcher identified specific sites for data collection. These sites were chosen strategically to target a diverse group of adult consumers responsible for household food purchases. The primary data collection platform utilised was WhatsApp, where the researcher leveraged his existing contacts and referrals to access a broad spectrum of potential participants. This approach allowed for the inclusion of individuals from various backgrounds and perspectives, mirroring the diversity sought in the study.

- ***Sampling Continuation***: Snowball sampling techniques is an ongoing process. Data collection continued until the desired sample size of 500 was achieved.

5.6 Questionnaire Design

The questionnaire was designed to align with the study's objectives and was divided into three distinct sections to comprehensively capture the required data. The questionnaire used in this study can be found in *Appendix B*.

- Section One of the questionnaire aimed to assess respondents' perceptions of organic food products concerning Diffusion of Innovation (DOI) and Consumer Innovativeness (CI). These factors included complexity, compatibility, relative advantage, observability, trialability and consumer innovativeness. This section included questions designed to evaluate the factors influencing the adoption of organic foods, providing insights into how these perceptions impact consumer behaviour.
- Section Two requested respondents to rate statements pertaining to key traditional factors identified through systematic analysis in Stage 1. These factors included attitude, subjective norms, perceived behavioural control, health consciousness, environmental concern, trust, purchase intention, and purchase behaviour. The inclusion of these variables ensured a comprehensive assessment of the determinants influencing organic food adoption.
- Section Three aimed to gather demographic information from respondents, including gender, age, education level, ethnicity, income, language, age of children, and relationship status. This demographic data was crucial for contextualizing the responses and understanding the characteristics of the participants.

To measure the relationships demonstrated in the conceptual model, a structured questionnaire was developed. Different scales validated in previous research studies were utilised to measure the items assigned to each variable. Each item was measured on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The Likert scale is widely recognised for its reliability and validity in survey design (Hutchinson & Chyung, 2023). The measurement scales used in this study were adapted from existing literature to ensure their relevance and appropriateness for the research context.

The final version of the questionnaire was distributed to a purposively selected sample of consumers responsible for purchasing groceries for their households. This targeted sampling approach ensured that the respondents had direct involvement and decision-making authority regarding the adoption of organic food products, thereby enhancing the relevance and accuracy of the data collected for this study. The questionnaire is attached as Appendix A.

5.6.1 Section 1: Diffusion of Innovation

This section of the questionnaire was designed to assess respondents' perceptions of organic food adoption through the lens of the Diffusion of Innovation (DOI) model. DOI theory, developed by Rogers (2003), posits that innovation adoption is influenced by several factors, including complexity, compatibility, relative advantage, observability, and trialability. By examining these constructs, the study aims to understand how each DOI factor influences consumer intention to adopt organic foods, identifying barriers and motivators within this context.

Each DOI dimension was measured through a series of targeted questions, allowing for a comprehensive analysis of participants' attitudes toward organic food adoption. The subsections that follow detail the constructs measured and the specific items used to capture each dimension, beginning with complexity.

5.6.1.1 Complexity

To measure the complexity variable, a four-item complexity scale was used. The four items were adapted from Yap and Chen (2017, p. 52) who used these items to measure complexity towards consumers' perceptions of the diffused wine information in China. The application of this complexity measure is also present in other recent studies (e.g. Abbas et al. (2017, p. 4). In the study conducted by (Yap & Chen, 2017, p. 52) the Cronbach's alpha for the complexity measure was found to be 0.865 which is above the minimum acceptable level of 0.6, exceeding the minimum acceptable level of 0.6 indicating an internally consistent measure (Hair et al., 2009, p. 353). The complexity scale used by Yap and Chen (2017, p. 52) was developed based on existing literature and expert insights, ensuring that it covered the full range of the construct. Content validity is supported by the fact that the scale has been applied in multiple studies (e.g. Abbas et al. (2017, p. 4) and is designed to reflect the perceived difficulty or ease of understanding information related to complex products, such as organic foods or wine. The items were slightly adjusted to match the current study context.

- The concept behind organic foods is difficult for me to understand

- It is difficult to understand organic food information in general
- Organic foods are too complicated to be understood
- It is difficult to find organic foods in supermarkets

These measurement items were chosen to capture the essence of complexity in the context of organic food consumption.

5.6.1.2 Compatibility

To measure the compatibility variable, a six-item compatibility scale was used. The six items were adapted from Yap and Chen (2017, p. 52) who examined young Chinese wine consumers' perceptions of wine-related information in China and explored the factors influencing these perceptions. The scale demonstrated a Cronbach's alpha of 0.865, exceeding the minimum acceptable level of 0.6(Hair et al., 2009, p. 353). The scale was also found to be valid and reliable (Abbas et al., 2017, p. 4; Moon, 2021, p. 95). All the items were slightly adjusted to match the current study context.

- Organic food consumption is common in my society
- Organic food consumption is part of my culture
- Organic food is nutritional
- Organic food is compatible to my taste
- Organic food is good for my health
- Organic food consumption means social prestige

These measurement items were carefully chosen to capture the essence of compatibility in the context of organic food consumption and are expected to provide valuable insights for this study.

5.6.1.3 Relative Advantage

To measure the relative advantage variable, a four-item measure developed by Jansson (2011, p. 200) and used by Moon (2021, p. 2) to examine how complexity is related to attitudes toward the adoption of electric vehicles (EVs). This relative advantage measure has also been applied in other recent studies (Abbas et al., 2017, p. 4). In Moon (2021, p. 5) study, the Cronbach's alpha for the relative advantage measure was 0.742, which is above the minimum acceptable level of 0.6(Hair et al., 2009, p. 45). Similarly, Abbas et al. (2017, p. 4) found the Cronbach's alpha to be 0.822 and AVE to be 0.765. The items were slightly adjusted to match the current study context. The measurement items for relative advantage included:

The following were measurement items for relative advantage:

- Buying organic foods would decrease environmental damage.
- Buying organic foods would be financially advantageous for me.
- Organic foods are better than other competitive alternatives.
- Organic food purchasing serves as a substitute for less desirable alternatives

These questions were chosen to capture the perceived benefits of organic food consumption and are anticipated to provide valuable insights into consumer attitudes in this context.

5.6.1.4 Observability

In this study, a five-item measure was used to assess the concept of observability as it pertains to organic food consumption. The first three items were originally developed by Jansson (2011, p. 199) and used by Moon (2021, p. 95) to measure how complexity is related to attitude toward adoption of electronic vehicles (EV's). The last two were adapted from (Yap & Chen, 2017, p. 51). These five items have also been applied in other recent research studies (e.g. Abbas et al. (2017, p. 4). In a study conducted by Moon (2021, p. 95), the Cronbach's alpha for the observability measure was found to be 0.766 which is above the minimum acceptable level of 0.6 (Hair et al., 2009, p. 353). The scale was also found to be valid in both studies (Abbas et al., 2017, p. 4; Moon, 2021, p. 95). For the purposes of our current study, slight adjustments were made to the original items to ensure alignment with the specific context. The following were the measurement items for the construct of observability:

- By buying organic foods, I show that I care about the environment.
- If I buy organic foods, it would be noticed by people close to me.
- Organic foods are easily identifiable.
- I have observed organic food talks or seminars
- I have observed organic food advertisements

These measurement items were carefully chosen to capture the essence of observability in the context of organic food consumption and are expected to provide valuable insights for this study.

5.6.1.5 Trialability

To measure the trialability variable, a four-item scale was used. The first two items were developed by Jansson (2011, p. 199) and used by Moon (2021, p. 95) while the last two were

developed by the researcher. Moon (2021, p. 95) used these items to measure how trialability is related to attitude toward adoption of electronic vehicles. The application of this trialability measure is also present in other recent studies (e.g. Abbas et al. (2017, p. 4); (Yap & Chen, 2017, p. 51)). In the study conducted by Moon (2021, p. 95), the Cronbach's alpha for the trialability measure was found to be 0.822 which is above the minimum acceptable level of 0.6(Hair et al., 2009, p. 353). Abbas et al. (2017, p. 4) also found the Cronbach's alpha to be 0.794. The scale was found to be valid in both studies (Abbas et al., 2017, p. 4; Moon, 2021, p. 95). All the items were slightly adjusted to match the current study context. The following were measurement items for complexity:

- Organic food tasting is common in supermarkets
- it is easy to taste organic foods prior to purchasing
- It is possible to buy organic foods in small quantities to try it out
- Many restaurants have organic foods on their menus, which make it easier to try them before purchasing

These items were selected to reflect the concept of trialability within organic food consumption and are expected to yield meaningful insights for this study.

5.6.2 Consumer Innovativeness

To measure the consumer innovativeness variable, a six-item consumer innovativeness measure was used. The first four items were used by Zhang et al. (2020, p. 2) while the last two were developed by the researcher. The application of this consumer innovativeness measure is also present in other recent studies (e.g. Li et al. (2021, p. 1465). In a study conducted by Zhang et al. (2020, p. 2), the scale demonstrated a Cronbach's alpha of 0.867, exceeding the minimum acceptable level of 0.6, and an AVE of 0.736, surpassing the recommended threshold of 0.5 for convergent validity (Hair et al., 2009, p. 353). All the items were slightly adjusted to match the current study context. The following were measurement items for consumer innovativeness:

- I know about new food products before most other people in my circle do
- Compared to my friends, I seek out a lot of information about the new food products
- If I heard about a new food product, I would look for ways to experiment with it
- In general, I would look for ways to experiment new products

- I like to go to places where I will be exposed to information about new products
- I frequently look for new products.

These items were selected to reflect consumer innovativeness in the context of organic food consumption and are anticipated to yield meaningful insights for this study.

5.6.3 Traditional Factors

This section of the questionnaire was designed to assess respondents' perceptions of organic food adoption through the lens of traditional factors such as attitude, subjective norms, perceived behavioural control, trust, health consciousness, environmental concern, purchase behaviour, and purchase intention. These factors provide a comprehensive framework for understanding consumer decision-making processes related to organic food.

By examining these constructs, the study aims to identify key drivers influencing consumer adoption of organic foods, shedding light on the interplay between individual perceptions, social influences, and broader environmental or health considerations. Each factor was measured through a series of targeted questions, enabling an in-depth analysis of participants' perspectives.

The subsections that follow detail the constructs measured and the specific items used to capture each dimension, beginning with attitude.

5.6.3.1 Attitude

To measure the attitude variable, a four-item attitudinal measure adapted from (Yadav & Pathak, 2016) was used. The application of this attitudinal measure is also present in other recent studies (e.g. Abbas et al. (2017, p. 11); Chu (2018, p. 8); Paul et al. (2015, p. 123). In the study conducted by (Yadav & Pathak, 2016, p. 123) the Cronbach's alpha for the attitudinal measure was found to be 0.902 which is above the minimum acceptable level of 0.6 and AVE was found to be 0.866 surpassing the recommended threshold of 0.5 for convergent validity (Hair et al., 2009, p. 353). All the items were slightly adjusted to match the current study context. The following were the attitude measurement items:

- Buying organic food is a good idea.
- Buying organic food is a wise choice.
- I like the idea of buying organic food.
- Buying organic food would be pleasant.

These items were selected to capture the aspects of attitude within the context of organic food consumption, offering insights that will contribute meaningfully to this study's findings.

5.6.3.2 Subjective norm

To measure subjective norm, a three-item subjective norm measure adapted from Ham et al. (2018) was used. The application of this attitudinal measure is also present in other recent studies e.g. Abbas et al. (2017, p. 11); Chu (2018, p. 8); Paul et al. (2015, p. 123). In the study conducted by Ham et al. (2018), the Cronbach's alpha for the subjective norm measure was found to be 0.904 which is above the minimum acceptable level of 0.6 and AVE was found to be 0.747 surpassing the recommended threshold of 0.5 for convergent validity (Hair et al., 2009, p. 353). All the items were slightly adjusted to match the current study context. The following were measurement items for subjective norm

- My friends think I should buy organic food
- My relatives think I should buy organic food
- My family thinks I should buy organic food

These measurement items were carefully chosen to capture the essence of subjective norm in the context of organic food consumption and are expected to provide valuable insights for this study.

5.6.3.3 Perceived behavioural control

To measure perceived behavioural control, a three-item perceived behavioural control measure adapted from Ham et al. (2018) was used. The application of this perceived behavioural control measure is also present in other recent studies e.g. Abbas et al. (2017, p. 11); Chu (2018, p. 8); Paul et al. (2015, p. 123). In the study conducted by Ham et al. (2018), the Cronbach's alpha for the perceived behavioural control measure was found to be 0.763 which is above the minimum acceptable level of 0.6 and AVE was found to be 0.551 surpassing the recommended threshold of 0.5 for convergent validity (Hair et al., 2009, p. 353). All the items were slightly adjusted to match the current study context. The following were measurement items for perceived behavioural control.

- I have enough money to buy organic food
- I have the ability to buy organic food
- I have the knowledge necessary to buy organic food

These items were thoughtfully selected to reflect the concept of perceived behavioural control in the context of organic food consumption, with the goal of yielding meaningful insights for this study.

5.6.3.4 Health Consciousness

Three items were used to measure health consciousness which were adapted from Zayed et al. (2022, p. 7). The application of this health consciousness measure is also present in other recent studies e.g. (Lupindo et al., 2024, p. 3). In the study conducted by (Zayed et al., 2022), the Cronbach's alpha for the health consciousness measure was found to be 0.755 which is above the minimum acceptable level of 0.6 and AVE was found to be 0.745 surpassing the recommended threshold of 0.5 for convergent validity (Hair et al., 2009, p. 353). All the items were slightly adjusted to match the current study context. The following were measurement items for perceived behavioural control

The following were items for measuring health consciousness:

- I chose food carefully to ensure the good health.
- I consider myself as health-conscious consumer.
- I think often about health-related issues.

These measurement items were carefully chosen to capture the essence of health consciousness in the context of organic food consumption and are expected to provide valuable insights for this study.

5.6.3.5 Environmental Concern

Four items were used to assess environmental concern, adapted from Yadav and Pathak (2016, p. 125) and reworded to fit the study context. This measure of environmental concern has been applied in other recent studies as well (e.g. (Chu, 2018, p. 8; Paul et al., 2015, p. 125). In a study conducted by Yadav and Pathak (2016), the Cronbach's alpha for the environmental concern measure was 0.87, which exceeds the minimum acceptable level of 0.6 and AVE was found to be 0.745 surpassing the recommended threshold of 0.5 for convergent validity (Hair et al., 2009, p. 353). Therefore, environmental concern items were adapted with confidence in their predictive power. The following were items for measuring environmental concern:

- The balance of nature is very delicate and can be easily upset.
- Human beings are severely abusing the environment.

- Humans must maintain the balance with nature in order to survive.
- Human interferences with nature often produce disastrous consequences.

These items were carefully selected to capture the essence of environmental concern in the context of organic food consumption, providing valuable insights for this study.

5.6.3.6 Trust

Four items were used to measure trust, adapted from Roh et al. (2022, p. 8). Several studies have indicated that trust is one of the reasons for organic food purchase behaviour e.g. (Ladwein & Romero, 2021, p. 9). In a study conducted by Roh et al. (2022, p. 8), the Cronbach's alpha for the environmental concern measure was 0.6, which exceeds the minimum acceptable level of 0.830and AVE was found to be 0.745 surpassing the recommended threshold of 0.5 for convergent validity (Hair et al., 2009, p. 353). The following were items for measuring trust:

- I think that corporations in the field of organic foods are aware of their responsibilities.
- I trust that those who sell certified organic foods indeed sell quality organic foods.
- I trust a quality organic food label or logo.
- I trust the institutions certifying organic food products.

These measurement items were carefully chosen to capture the essence of trust in the context of organic food consumption and are expected to provide valuable insights for this study.

5.6.3.7 Purchase intention

Purchase intention was measured using a three-item scale adapted from Yadav and Pathak (2016, p. 123) and used to measure organic food purchase intention. These items were found to be reliable in measuring purchase intention in a study aimed at understanding consumer intention towards buying green products in India (Yadav & Pathak, 2016, p. 123). In the Yadav and Pathak (2016) study, the Cronbach's alpha for the purchase intention measure was 0.88, which is well above the minimum acceptable level of 0.6(Hair et al., 2009, p. 353). All the items were slightly adjusted to match the current study context. The following were measurement items for purchase intention:

- I will purchase green products for personal use.
- I am willing to purchase green products for personal use.

- I will make an effort to purchase green products.

These items were carefully selected to capture the essence of purchase intention in the context of organic food consumption, providing valuable insights for this study.

5.6.3.8 Purchase Behaviour

Purchase behaviour was measured using a three-item scale adapted from Yadav and Pathak (2016, p. 123) used to measure organic food purchase behaviour. These items were found to be reliable in a study that aimed to understand consumer behaviour towards buying green products in the context of a developing nation, India (Yadav & Pathak, 2016, p. 123). The Cronbach's alpha for the purchase behaviour measure in their study was 0.93, well above the minimum acceptable level of 0.6(Hair et al., 2009, p. 353). All the items were slightly adjusted to match the current study context. The following were measurement items for purchase behaviour:

- I have been purchasing organic foods on regular basis.
- I purchase organic foods for my daily needs' products.
- I have been purchasing organic foods for more than the past six months.

These items were selected to capture the essence of purchase behaviour in the context of organic food consumption, providing valuable insights for this study.

In summary, the questionnaire used in this study was designed to comprehensively assess various factors influencing organic food adoption through established constructs drawn from the Diffusion of Innovation (DOI) model, as well as from other relevant theoretical frameworks. Each construct, including complexity, compatibility, relative advantage, observability, trialability, consumer innovativeness, attitude, subjective norm, perceived behavioural control, health consciousness, environmental concern, trust, purchase intention, and purchase behaviour, was measured with carefully selected items adapted from existing validated scales. These items were slightly modified to align with the context of organic food consumption, enhancing their relevance and applicability to the current study.

The next section discusses pre-testing of the questionnaire employed in this study.

5.6.4 Pre-Testing the Questionnaire

Following the design of the questionnaire, it is essential to identify and resolve any potential errors before conducting the main survey. Pre-testing is a valuable method for detecting and

eliminating errors in advance (Taherdoost, 2022, p. 9). In this study, a pre-test of the questionnaire was conducted to identify any issues and to ensure it met the researcher's expectations regarding the quality and relevance of the information gathered. Twenty respondents, including professionals, participated in the pre-test to evaluate the clarity and appropriateness of the items. They were asked to complete the questionnaire and note any areas of ambiguity or difficulty they encountered.

Pre-testing is especially valuable for self-administered questionnaires, as it allows for refining questions and enhancing response quality (Bryman, 2012). Based on feedback from the pre-test, certain items were revised or removed to improve clarity and relevance. Subsequently, the final version of the questionnaire (Appendix A) was prepared and administered to respondents.

Pre-testing identified potential ambiguities, leading to refinements that ensured clarity and relevance. Participant feedback helped eliminate poorly understood items, improving response quality for the final survey.

5.6.5 Implementing the Final Survey

This section outlines the key steps undertaken to implement the final survey, focusing on the processes and methods used to ensure a robust and representative dataset. It provides a detailed account of the fieldwork conducted to collect responses, the procedures followed to aggregate and clean the data, and the screening criteria applied to refine the final sample for analysis. The section is divided into three sub-sections:

5.6.5.1 The Fieldwork and Response rate

Data for this study were collected through a combination of online surveys and mall intercepts conducted across various centres in KwaZulu-Natal. This fragmented collection approach allowed responses to be gathered in batches, helping to achieve a more representative sample of the target population. Initial data collection started slowly, with preliminary quality checks performed in December 2023, focusing on response variability within the Likert-scale items. Lower-than-expected participation prompted enhanced recruitment efforts, and by incorporating mall intercepts alongside online surveys in January 2024, response rates improved. The data collection concluded in March 2024, with 560 respondents participating, surpassing the target sample size of 500 as discussed in Section 5.6. This achieved an acceptable response rate that aligns with social science standards, as Fincham (2008, p. 2) recommends response rates above 50% for survey-based studies.

5.6.5.2 Data Aggregation and Cleaning

The final dataset, compiled in March 2024, consisted of responses from seven Excel files. Preliminary cleaning was applied to each file to remove non-analytical variables, such as participant identifiers, consent responses, and timestamps. To facilitate efficient merging, variable names were standardized across files. The files were then consolidated into a single dataset of 560 cases.

5.6.5.3 Sample Refinement and Screening

An initial review of the dataset identified that 98% of participants were South African, with minimal representation from other nationalities. Given the study's focus on Durban, KwaZulu-Natal consumers, non-South African participants (11 cases) were removed, resulting in a sample of 549 cases. Further, participants who reported no prior awareness of organic food were excluded, eliminating an additional 16 cases and reducing the sample to 533.

- **Handling Missing Data in Demographic Variables**

Certain demographic variables (e.g., age, gender, ethnicity, education level, household income, occupation, and province of residence) exhibited some missing values, likely due to their non-required status at the end of the survey. As these missing values were isolated to demographic data and did not affect the main constructs, they were disregarded, retaining 533 complete cases for analysis.

- **Variability Check in Likert-Scale Responses**

To ensure data quality, response variability across Likert-scale items was examined. Constructs such as complexity, compatibility, relative advantage, observability, trialability, consumer innovativeness, attitude, subjective norms, perceived behavioural control, health consciousness, environmental concern, trust, intention, and purchase behaviour were evaluated by calculating row-wise standard deviations. Cases with a standard deviation below 0.3, indicating low response variability, were excluded as they lacked meaningful differentiation in responses, potentially affecting the accuracy of SEM analysis (Maharana et al., 2022, p. 92). This step eliminated 181 cases, yielding a final sample of 352 cases.

- **Final Sample for Analysis**

After completing all data cleaning and quality control steps, a final dataset of 352 cases was prepared for Structural Equation Modelling (SEM) analysis. While this sample size is lower than the initial responses, it meets the study's requirements and SEM standards, ensuring that the dataset is robust, representative, and free from significant bias (Hu & Bentler, 1999, p. 3).

After combining both online (self-administered) and mall-intercept (researcher-administered) responses and accounting for missing values, the dataset was ready for analysis. Data were first imported into SPSS 29 for descriptive analysis, followed by transfer to AMOS 29 for inferential analysis.

5.7 Data Analysis

The data analysis involved systematic preparation, management, and application of both descriptive and inferential techniques using SPSS 29 and AMOS 29. After comprehensive data cleaning to ensure quality and consistency, descriptive statistics provided initial insights into the sample characteristics, while Structural Equation Modelling (SEM) validated and explored relationships among the traditional factors, Diffusion of Innovation (DOI) constructs, and consumer innovativeness, in line with the study's objectives.

5.7.1 Descriptive Statistics

Descriptive statistics summarise the sample's demographic characteristics and provide foundational insights into the constructs measured (Hair Jr et al., 2017, p. 107). This analysis used SPSS software to generate frequency tables, showcasing frequencies and percentages for various demographic characteristics of organic food consumers (Saunders et al., 2019, p. 277). Key measures of central tendency, including means and standard deviations, were calculated to reveal average values and the dispersion of continuous variables, offering foundational insights into data distribution (Saunders et al., 2019, p. 277). The analysis utilised SPSS software to calculate means, standard deviations, and frequency distributions.

5.7.2 Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) is a statistical method used to uncover the underlying structure within a large set of observed variables, especially when the number or nature of latent factors is not predefined (Goretzko et al., 2021, p. 3411; Hair Jr et al., 2017, p. 107). In this study, EFA was employed to identify the core factors influencing organic food adoption,

helping to clarify relationships among items and providing a foundational structure for subsequent Confirmatory Factor Analysis (CFA).

- **Purpose and Process of EFA**

The EFA process aimed to reduce data dimensionality by grouping related items into factors, thereby simplifying the data structure for further analysis (Hair Jr et al., 2017, p. 107). Key steps in the EFA process included:

- **Factor Extraction Method:** Principal Component Analysis (PCA) was used as the extraction method. PCA identifies principal components that account for maximum variance within the dataset, allowing for efficient data reduction while retaining critical information (Eze et al., 2021, p. 133; Hair Jr et al., 2017, p. 107).
- **Rotation Method:** The Varimax rotation with Kaiser Normalisation was applied to maximise interpretability, minimising correlations among factors for clarity (Shrestha, 2021, p. 5). This orthogonal rotation method adjusts factor loadings to minimise correlations among factors, which enhances the clarity and interpretability of each factor's contributions to the observed variables (Shrestha, 2021, p. 5).
- **Factor Loading Threshold:** Items with factor loadings below 0.50 were removed, as lower loadings suggest a weak association with the factor acceptable (Anderson & Gerbing, 1988, p. 411; Chinomona & Maziriri, 2017, p. 149). This threshold ensures that only items with strong and meaningful contributions to the factor structure are retained, thereby enhancing construct validity (Anderson & Gerbing, 1988, p. 411).

Key Considerations in EFA

The study carefully addressed several methodological considerations in conducting EFA:

- **Sample Size and Suitability**: The analysis was based on a robust sample size, exceeding the commonly recommended 250 cases for reliable factor analysis, which helped ensure stable and interpretable results (Hair Jr et al., 2017, p. 107).
- **Determining Factor Retention**: The number of factors was determined using eigenvalues greater than 1 and scree plot analysis, standard criteria for identifying relevant factors. In addition, Kaiser's criterion (eigenvalues > 1) and visual inspection of the scree plot were used to verify the factors that best represented the data structure (Hair Jr et al., 2017, p. 107).

The EFA using PCA and Varimax rotation successfully revealed a clear factor structure aligned with the theoretical constructs related to organic food adoption. This process validated the distinctiveness of each factor and supported the measurement model, confirming that the retained items were both reliable and theoretically meaningful. By ensuring a well-defined factor structure, EFA facilitated the development of a robust CFA model, ultimately contributing to a deeper understanding of the factors influencing organic food adoption among consumers.

5.7.2.1 Reliability and internal consistency

Reliability of the measurement scales was assessed using Cronbach's alpha, a widely recognised indicator of internal consistency (Tavakol & Dennick, 2011, p. 53). Reliability here refers to the extent to which the measurement tool produces consistent results under similar conditions (Tavakol & Dennick, 2011, p. 53). This study set an alpha threshold of 0.5 as acceptable, following recommendations from prior research (Hair Jr et al., 2017, p. 107; Tavakol & Dennick, 2011, p. 53). The following guidelines were applied to interpret reliability coefficients

$\alpha > 0.9$ = Excellent
$0.7 \leq \alpha < 0.9$ = Acceptable
$0.6 \leq \alpha < 0.7$ = Marginally Acceptable
$0.5 \leq \alpha < 0.6$ = Poor
$\alpha < 0.5$ = Unacceptable

The Tavakol and Dennick (2011, p. 53) guidelines supported reliable measurement scales in this study.

5.7.2.2 Validity

While reliability assesses the consistency of the measure, validity ensures the accuracy of the measure specifically, whether it effectively measures the intended construct (Tavakol & Dennick, 2011, p. 53). Although preliminary validity assessments were conducted in EFA, further validation through CFA confirmed the robustness of each construct.

5.7.3 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) represents the first step in the Structural Equation Modelling (SEM) process, aimed at validating the measurement model by examining the relationships between latent constructs and their observed indicators (Boichat, Eccleston & Keogh, 2018; Teo & Khine, 2009). This initial phase of SEM is critical as it assesses model fit, evaluates reliability through Composite Reliability (CR), and establishes validity using

Average Variance Extracted (AVE) for each construct. By ensuring that each construct accurately measures its intended variable, CFA sets a robust foundation for the subsequent structural model analysis in Step 2 of SEM, enabling reliable insights into the theoretical framework underlying consumer behaviour in organic food adoption.

- **Reliability and Validity in CFA**

To ensure model reliability and validity, CR and AVE values were calculated. The following thresholds guided model assessment:

Table 5. 2: Criterions and their Thresholds

Criterion	**Threshold**
Composite Reliability (CR)	CR is a reliability measure and must be at least 0.7
Average Variance Extracted (AVE)	AVE is a validity measure and must be higher than 0.50

Convergent validity was assessed through AVE, as recommended by Fornell and Larcker (1981). An AVE of 0.50 or higher confirmed that the latent variable explained a majority of the variance in its observed indicators, meeting the criteria for convergent validity.

With CFA, a solid and reliable measurement model was established, reinforcing the structural relationships identified in EFA. Both EFA and CFA together provided a rigorous validation process for the constructs, confirming their reliability and theoretical alignment with the study's objectives. These stages ultimately strengthened the foundation for Structural Equation Modelling (SEM), ensuring accurate and meaningful interpretations of the factors influencing organic food adoption.

5.8 Structural Equation Modelling

Structural Equation Modelling (SEM) is an advanced statistical technique that allows for the evaluation of complex relationships among observed and latent variables (Hair Jr et al., 2017, p. 109). This technique is valuable for verifying theoretical constructs through simultaneous assessments of measurement and structural models (Prakash et al., 2023, p. 376). By integrating methodologies such as path analysis, confirmatory factor analysis, and regression analysis, SEM facilitates a comprehensive analysis of intricate data structures across various fields (Becker et al., 2022, p. 10; Hair Jr et al., 2017, p. 109). Prior to SEM, Exploratory Factor Analysis (EFA) may be conducted as a preliminary step to identify underlying factor structures when constructs are not well-established. SEM then combines Confirmatory Factor Analysis (CFA) and structural path analysis, providing a robust framework for evaluating both the

measurement accuracy and the causal relationships within a theoretical model (Hair Jr et al., 2017, p. 109).

In SEM, latent constructs also referred to as unobservable variables can be modelled using either reflective or formative indicators (Sarstedt et al., 2016, p. 4001). This distinction is essential for understanding how measurement models are structured and has direct implications for data analysis and interpretation.

5.8.1 Reflective and Formative Constructs

Latent variables (LV) can be modelled using either reflective or formative indicators, a distinction that influences model specification and analysis (Sarstedt et al., 2016, p. 4001). Reflective constructs represent an underlying construct that manifests itself in parallel measures that co-vary and collectively measure the same underlying concept (Hair Jr et al., 2017, p. 110). In contrast, formative constructs represent a combination of indicators that collectively define the latent variable, with each indicator uniquely contributing to the construct's meaning (Hair Jr et al., 2017, p. 110). The following section discusses these constructs in detail

- **Reflective Constructs**

In a reflective measurement model, the latent construct is seen as the causal factor influencing the indicators, meaning that changes in the construct lead to changes in the indicators (Hair Jr et al., 2017, p. 110). Reflective constructs assume that all indicators are equally valid reflections of the underlying construct, allowing for internal consistency measures such as Cronbach's alpha and Composite Reliability (CR) to assess reliability indicators (Hair Jr et al., 2017, p. 110).

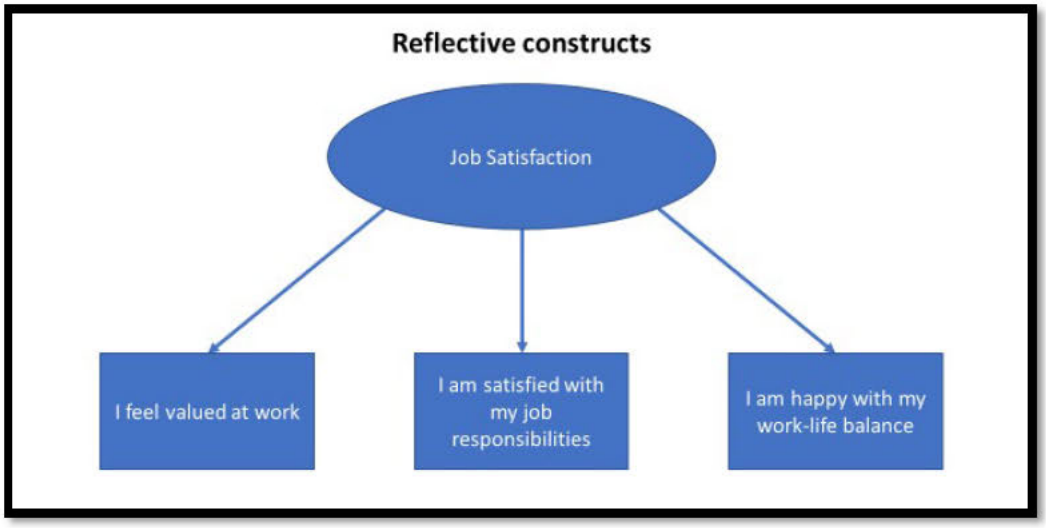

Figure 5. 1: Reflecting constructs

Figure 5.1 visually represents how reflective constructs operate. The latent variable (or construct) is depicted as the central causal element that manifests through its indicators, each of which reflects different aspects of the construct

Reflective constructs are a central part of SEM due to their causal nature and ease of evaluation through reliability metrics (Fornell & Larcker, 1981, p. 39; Hair Jr et al., 2017, p. 107). As shown in Figure 5.1, the construct influences its indicators, which are expected to be correlated and interchangeable (Kline, 2015). Reliability measures, such as Cronbach's alpha and CR, ensure that indicators consistently reflect the construct (Hair Jr et al., 2017, p. 110). This framework, underpinned by high internal consistency and interchangeable indicators, makes reflective constructs ideal for capturing latent variables where the construct itself dictates the variance in observed indicators

- **Formative Constructs**

In formative measurement models, the indicators are considered to cause the construct rather than reflect it. Here, the indicators combine to form or create the construct, meaning the construct is not an underlying factor influencing the indicators; rather, the indicators themselves define and give meaning to the construct (Hair Jr et al., 2017, p. 110). In formative models, indicators are represented by arrows pointing from the indicator to the latent construct, visually depicting their causal influence (Sarstedt et al., 2016, p. 4001).

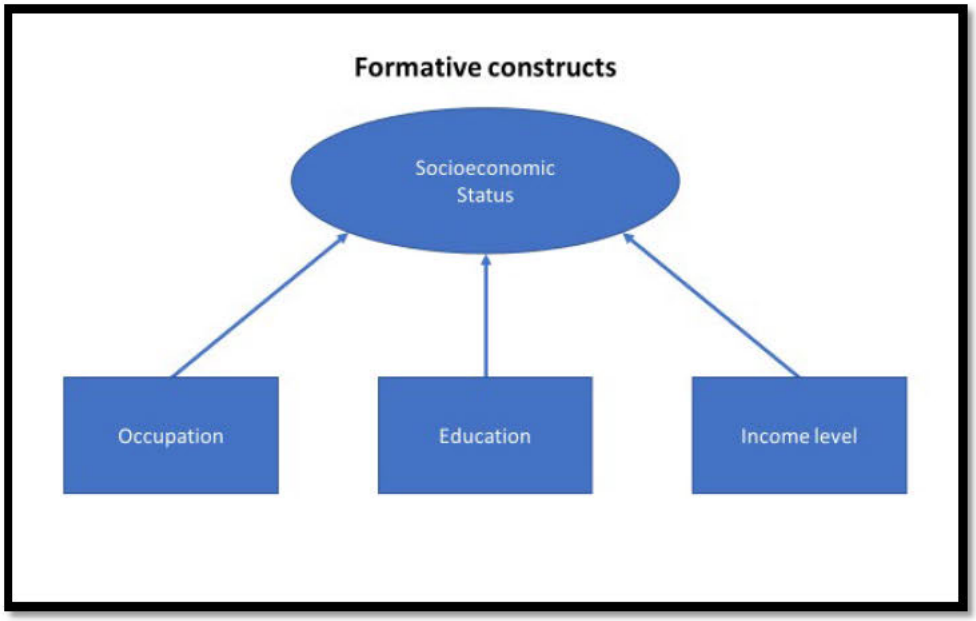

Figure 5. 2: Formative constructs

Figure 5.2 illustrates the formative model where each indicator contributes uniquely to the construct. The directional arrows from each indicator to the latent variable emphasise that these indicators collectively create the construct.

Formative constructs are essential when the construct is defined by a diverse set of indicators that collectively establish its meaning (Sarstedt et al., 2016, p. 4001). As shown in Figure 5.2, each indicator plays a distinct role in forming the construct, and changes in any indicator affect the construct itself (Hair Jr et al., 2017, p. 110). This approach is ideal for constructs that encompass multiple dimensions or aspects that do not necessarily correlate (Hair Jr et al., 2017, p. 110). Unlike reflective models, formative constructs rely on each indicator's unique contribution, without requiring internal consistency reliability measures, underscoring their distinct role in defining complex latent variables (Sarstedt et al., 2016, p. 4001).

5.8.2 The Distinction between formative and reflective constructs in SEM

The distinction between reflective and formative constructs is critical in SEM, as it directly impacts model specification and the interpretation of relationships within the model (Hair Jr et al., 2017, p. 110). Treating a formative construct as reflective, or vice versa, can lead to incorrect conclusions, affecting the validity of the model (Bagozzi & Yi, 2012, p. 8; Sarstedt et al., 2016, p. 4001). Properly distinguishing between these construct types ensures that each is modelled and analysed according to its nature.

- **Model Specification**: Misidentifying a formative construct as reflective, or the reverse, can result in inaccurate relationships in the SEM model (Bagozzi & Yi, 2012, p. 8). Reflective constructs assume that indicators are outcomes of the construct, whereas formative constructs imply that indicators collectively form the construct (Hair Jr et al., 2017, p. 110). This misalignment can distort the model's structural pathways and influence findings.
- **Appropriate Analysis**: Reflective constructs require internal consistency checks, such as Cronbach's alpha and Composite Reliability (CR), to ensure that indicators consistently reflect the construct (Bagozzi & Yi, 2012, p. 8). Formative constructs, on the other hand, necessitate multicollinearity checks among indicators, as they should represent distinct aspects of the construct without overlapping excessively (Sarstedt et al., 2016, p. 4001).

Understanding whether a construct is reflective or formative is essential for accurately modelling the relationships between latent variables and their indicators. This study, which aims to test established theories such as Diffusion of Innovation (DOI), Consumer Innovativeness, and the traditional factors (mostly presented by Theory of Planned Behaviour (TPB). utilises reflective constructs to capture and measure these theoretical dimensions effectively. By applying reflective constructs, this study ensures that indicators serve as reliable reflections of the underlying constructs, enabling a robust analysis of the proposed theoretical models.

5.8.3 Differences Between CB-SEM and PLS-SEM

Structural Equation Modelling (SEM) offers two primary methodologies: Covariance-Based SEM (CB-SEM) and Partial Least Squares SEM (PLS-SEM) (Hair Jr et al., 2017, p. 109). Each has distinct strengths that guide its use based on the study's objectives, data characteristics, and theoretical framework (Becker et al., 2022, p. 322). The following discussion details each of these in detail.

- Objective Orientation: CB-SEM is optimal for testing and confirming theories, aiming to closely fit the observed data with the theoretical model, making it ideal for hypothesis-driven research (Hair Jr et al., 2017, p. 109). PLS-SEM, however, focuses on maximizing explained variance, suitable for prediction and theory development, especially in exploratory studies (Becker et al., 2022, p. 322).

- Data Requirements and Assumptions: CB-SEM requires large sample sizes and assumes multivariate normality, leveraging covariance matrices. In contrast, PLS-SEM is effective with smaller samples and does not rely on normality, making it flexible for preliminary research (Hair Jr et al., 2017, p. 109).
- Model Assessment: CB-SEM provides detailed goodness-of-fit indices for thorough model fit evaluation, while PLS-SEM emphasises predictive accuracy, often using bootstrapping for precision in parameter estimation (Becker et al., 2022, p. 322).

In this study on organic food adoption, the choice between Covariance-Based Structural Equation Modelling (CB-SEM) and Partial Least Squares Structural Equation Modelling (PLS-SEM) was driven by the research objectives, data characteristics, and the theoretical framework (Becker et al., 2022, p. 322).

In this study on organic food adoption, the decision to use Covariance-Based Structural Equation Modelling (CB-SEM) over Partial Least Squares SEM (PLS-SEM) was guided by the study's research objectives, data characteristics, and theoretical foundations (Becker et al., 2022, p. 322). CB-SEM was chosen for its robustness in theory testing, particularly for analysing established constructs, including traditional factors primarily represented by Theory of Planned Behaviour (TPB) variables, along with Diffusion of Innovation (DOI) and Consumer Innovativeness. CB-SEM's suitability for reflective models ensures a precise alignment between indicators and latent variables. This methodological choice enhances the empirical rigor and reliability of the study, enabling thorough testing of theoretical frameworks in the context of organic food adoption.

5.8.4 Critiques on SEM

Most critiques that have been raised against the use of SEM revolve around two issues.

- ***Statistical Assumptions***: SEM heavily depends on specific statistical assumptions, such as multivariate normality and adequate sample size, which can be difficult to fulfil in practice, especially in social sciences (Hair Jr et al., 2017, p. 109). Meeting these assumptions is essential to obtain accurate parameter estimates and valid model fit indices. For instance, Hair Jr et al. (2017, p. 109) and Becker et al. (2022, p. 322) highlight that larger sample sizes are often required, limiting SEM's use in studies with smaller or non-normal samples.

- ***Causal Interpretation***: Another critique involves the potential misinterpretation of SEM as a causal analysis tool (Bagozzi & Yi, 2012, p. 8). SEM models are often interpreted as causal frameworks; however, a strong model fit alone does not confirm causation, as SEM cannot convert correlation into causality (Hair Jr et al., 2017, p. 107). Misunderstandings can arise when SEM results are mistakenly viewed as causal, despite the technique's foundational reliance on correlational data.

Despite these critiques, SEM remains an indispensable statistical tool. SEM excels in handling measurement errors, assessing overall model fit, and integrating multiple constructs, making it ideal for validating complex theoretical frameworks (Hair Jr et al., 2017, p. 107). As noted by Hair Jr et al. (2017, p. 107) and Sarstedt et al. (2016, p. 3998), SEM's strengths in simultaneously analysing both measurement and structural components enable researchers to obtain in-depth insights into theoretical models. For studies where constructs and hypotheses are clearly defined, SEM provides valuable, interpretations, making it especially suitable in research areas requiring detailed analysis of interconnected factors, such as the current study on organic food adoption (Hair Jr et al., 2017, p. 107).

5.8.5 Path Modelling

Path modelling represents the second stage in the Structural Equation Modelling (SEM) process, concentrating on assessing the relationships between latent and observed variables within the structural model (Tabachnick & Fidell, 2021, p. 100). This stage is critical for evaluating the hypothesised pathways, determining the strength, direction, and significance of relationships, and offering insights into the model's overall predictive power while enabling hypothesis testing (Hair Jr et al., 2017, p. 107; Shrestha, 2021, p. 5). Path analysis in SEM integrates both observed (endogenous) and latent (exogenous) variables to confirm the conceptualised causal structure, providing a robust framework for testing theoretical models in empirical research (Anderson & Gerbing, 1988; Tabachnick & Fidell, 2021, p. 102).

5.8.5.1 Model Fit Assessment

In this study, model fit was assessed through a set of fit indices to evaluate the structural model's ability to accurately represent the observed data. The model fitness indices, along with their respective thresholds and observed values, are presented below:

Table 5. 3: Model Fitness Indices table

Fit Indices	Criteria
χ^2 / df (p-value)	<5
Goodness of Fit Index (GFI)	>.9
Incremental Fit Index (IFI)	>.9
Tucker-Lewis Index (TLI)	>.9
Comparative Fit Index (CFI)	>.9
Root Mean Square Error of Approximation (RMSEA)	<0.08

Source: Adapted from (Hair Jr et al., 2017, p. 107; Smith & McMillan, 2001, p. 10).

These indices presented in Table 5.2 are discussed in detail below:

- The **chi-squared test (χ^2/df)** is a widely used measure of overall model fit, with a ratio below 5 generally indicating an acceptable fit (Smith & McMillan, 2001, p. 10). In this study, the test assessed the discrepancy between the sample and fitted covariance matrices, as recommended for covariance structure analysis (La Du & Tanaka, 1995, p. 289). While lower values relative to degrees of freedom suggest better fit, the chi-squared statistic is sensitive to large sample sizes, often producing significant results even for well-fitting models. Therefore, it is interpreted alongside other fit indices to provide a more comprehensive evaluation of model adequacy (Hair Jr et al., 2017, p. 107).
- The **Goodness of Fit Index (GFI)** assesses how well a model reproduces the variance-covariance matrix compared to a null model that assumes no relationships among variables (Smith & McMillan, 2001, p. 10). This index ranges from 0, indicating no fit, to 1, representing a perfect fit, with values of 0.9 or higher typically considered indicative of an acceptable model fit (Hu & Bentler, 1999, p. 5). As an absolute fit measure, the GFI evaluates the overall fit of the model without comparing it to alternative models (Tabachnick & Fidell, 2021, p. 100). This makes it a critical tool for determining the adequacy of the hypothesised model in capturing the observed data structure.
- The **Incremental Fit Index (IFI)** evaluates relative model fit by comparing the hypothesised model to a null model with no assumed relationships among variables (Hu & Bentler, 1999, p. 5). IFI values range from 0 to 1, with values of 0.9 or higher indicating a good fit. Unlike other indices, the IFI adjusts for model complexity, helping to prevent overfitting, and remains robust even in large samples where chi-squared statistics may be overly sensitive (Tabachnick & Fidell, 2021, p. 100). This makes it especially useful for comparing models of varying complexity. The IFI is robust in

larger samples, maintaining accuracy even when the chi-squared statistic may be overly sensitive (Tabachnick & Fidell, 2021, p. 100).

- The **Tucker-Lewis Index (TLI),** also known as the Non-Normed Fit Index (NNFI), evaluates the quality of model fit while incorporating a penalty for model complexity. By adjusting for the number of estimated parameters, the TLI ensures that models with unnecessary complexity are not overly favoured, promoting parsimony (Hair Jr et al., 2017, p. 107). This index ranges from 0 to 1, with values of 0.9 or higher widely accepted as indicative of an adequately fitting model (Smith & McMillan, 2001, p. 10). Unlike other indices, such as the Comparative Fit Index (CFI), the TLI considers the degrees of freedom used in the model, providing an assessment of model adequacy (Tabachnick & Fidell, 2021, p. 100). The TLI is particularly useful in structural equation modelling for evaluating whether the hypothesised model effectively balances explanatory power and parsimony, making it a critical tool for assessing model validity in large samples and complex theoretical frameworks (Hu & Bentler, 1999, p. 5).
- The **Comparative Fit Index (CFI)** evaluates the improvement in fit of the hypothesised model compared to a null model that assumes no relationships among variables. It is a widely used incremental fit index, with values of 0.9 or higher generally indicating a strong model fit and alignment with the data (Hu & Bentler, 1999, p. 5). Unlike other indices, the CFI adjusts for sample size, reducing sensitivity to large samples, which often inflate other fit metrics, such as the chi-square statistic (Tabachnick & Fidell, 2021, p. 100). This makes the CFI a robust measure for complex structural equation models. By balancing simplicity and explanatory power, the CFI is particularly effective in determining whether the proposed model adequately captures the observed data while accounting for the degrees of freedom used (Hair Jr et al., 2017, p. 107).
- The **Root Mean Square Error of Approximation (RMSEA**) is a widely used absolute fit index in structural equation modelling, providing a measure of how well a model approximates the population covariance structure per degree of freedom (Smith & McMillan, 2001, p. 10). It accounts for model complexity by penalizing overfitting, making it particularly effective for evaluating models with numerous constructs and pathways (Tabachnick & Fidell, 2021, p. 100). RMSEA values below 0.08 are generally considered indicative of an acceptable fit, while values closer to 0.05 or lower reflect a good fit (Hu & Bentler, 1999, p. 5). One of the strengths of RMSEA is its ability to provide a confidence interval, offering insights into the precision of the fit

estimate (Smith & McMillan, 2001, p. 10). This feature enables researchers to account for uncertainty in model evaluation, which is crucial for assessing the robustness of complex models (Tabachnick & Fidell, 2021, p. 100). Moreover, RMSEA is relatively unaffected by sample size, making it a reliable index in studies with large datasets, where other measures, such as the chi-square test, may become overly sensitive (Hair Jr et al., 2017, p. 107).

5.8.5.2 Modification Indices

To improve model fit, modification indices were employed to identify adjustments that could be theoretically justified and enhance model accuracy (Hair Jr et al., 2017, p. 107). With AMOS software, non-significant paths were evaluated for potential removal, while theoretically supported paths were considered for inclusion. This iterative refinement, guided by modification indices, ensured that the model configuration was well-aligned with observed data patterns while maintaining theoretical consistency (Hair Jr et al., 2017, p. 107).

Following these refinements, path modelling was finalised, completing the two-step SEM process and confirming the hypothesised relationships among variables. This careful model evaluation and enhancement established the SEM model's robustness and reliability, offering a strong foundation for interpreting results related to organic food adoption behaviours and contributing valuable insights to consumer behaviour theories.

5.9 Data quality

Ensuring data quality is fundamental to the reliability and validity of research findings. This study undertook comprehensive data quality checks to minimise potential biases, enhance the accuracy of measurement, and validate the robustness of the dataset used for analysis (Hair Jr et al., 2017, p. 107).

5.9.1 Missing Data

Missing data can introduce biases that impact the validity of results. In this study, demographic data showed minimal missing values, which were deemed non-systematic and isolated primarily to non-essential variables. As these did not affect the primary constructs, they were disregarded in subsequent analyses. No imputation methods were applied, as the small

proportion of missing data did not materially impact the sample size or the quality of the data for SEM (Little & Rubin, 2019, p. 34).

5.9.2 Response Variability and Straight-Lining

To assess response variability, row-wise standard deviations were calculated for Likert-scale items to identify cases with low variability, which could indicate low engagement or "straight-lining" (repeatedly selecting the same response option). A threshold of a row-wise standard deviation below 0.3 was set to identify these cases (Maharana et al., 2022, p. 92). Participants who met this criterion were removed from the analysis, ensuring only informative responses contributed to the final dataset.

5.9.3 Outlier Detection

Outliers were identified using z-scores and visual inspection to assess extreme values in continuous variables. In SEM, extreme outliers can distort parameter estimates and impact model fit (Tavakol & Dennick, 2011, p. 53). The identified outliers were carefully evaluated to ensure they were representative responses and not data entry errors. Only non-representative outliers were excluded, enhancing the model's predictive accuracy and reliability.

5.9.4 Reliability and Internal Consistency

Reliability was assessed using Cronbach's alpha and Composite Reliability (CR) measures to evaluate the internal consistency of the constructs. All constructs achieved acceptable Cronbach's alpha values of 0.7 or higher, ensuring that the items within each construct consistently measured the intended latent variable. Additionally, CR values exceeded the 0.7 threshold, confirming construct reliability and supporting the measurement model's stability.

5.9.5 Validity

Both convergent and discriminant validity were assessed to ensure data quality within the SEM framework. Average Variance Extracted (AVE) was used to evaluate convergent validity, with all constructs meeting the threshold of 0.5 or higher, indicating that the latent variables explained more than half of the variance of their indicators. Discriminant validity was evaluated through the Fornell-Larcker criterion, verifying that constructs were distinct from one another and did not overlap excessively (Fornell & Larcker, 1981, p. 39).

5.9.6 Normality and Multicollinearity

For SEM, normality and multicollinearity assumptions were assessed to ensure data quality and model accuracy. Skewness and kurtosis values were examined to check for deviations from

normality, while variance inflation factors (VIF) were calculated to detect multicollinearity among predictors (Hair Jr et al., 2017, p. 107). Both measures indicated that data assumptions were met, with no significant multicollinearity detected, ensuring reliable model estimation.

By implementing these data quality measures, this study safeguarded the accuracy, reliability, and validity of the dataset used for SEM analysis. These steps not only enhanced the integrity of the findings but also ensured that the results provide a meaningful contribution to understanding consumer behaviours in organic food adoption.

5.10 Ethical Issues

The study adhered to the ethical research procedures outlined by the University of KwaZulu-Natal (UKZN). Prior to the collection of any systematic review data, the researcher obtained Ethical Clearance (HSSREC/00003958/2022) from the Research Office of UKZN, ensuring compliance with institutional and ethical guidelines (UKZN, 2014). The official Ethical Clearance letter, included in *Appendix D,* confirms adherence to these standards and served as a framework for guiding the research practices. The University of KwaZulu-Natal (UKZN) research procedures were followed, which ensured that before any data is collected, the researcher obtains Ethical Clearance (EC) for the study from the Research Office of the UKZN (UKZN, 2014). Given the phased approach to the research, two rounds of ethical clearance were obtained. The original ethical clearance letter and the subsequent amendments for each phase can be found in *Appendix C and D*. As an ethical research requirement, the researcher acquired consent from participants prior to taking any opinions. The consent form used in this study is attached in Appendix A. Respondents that were willing to participate in the study had to fill in an informed consent form. The informed consent form made the potential respondents aware of the purpose of the research study and their rights such as to withdraw at any stage. *Refer to Appendix A*

5.11 Conclusions

This chapter outlined the analytical methods used in the study, detailing the two primary phases of analysis: descriptive and inferential. Descriptive statistics were generated using SPSS 27, covering measures such as means, standard deviations, Cronbach's alpha coefficients, and correlation matrices to provide an overview of the dataset. The chapter then explained the

approaches taken to assess reliability and validity, critical for ensuring the robustness of the measurement instruments.

The inferential analysis was conducted through Structural Equation Modelling (SEM) using AMOS 27, following a two-step approach. The first step involved Confirmatory Factor Analysis (CFA) to evaluate the measurement model's reliability and validity, including the calculation of Composite Reliability (CR), Average Variance Extracted (AVE), and model fit indices. The second step, Path Modelling, focused on assessing the structural model, including fit indices and hypothesis testing, to explore relationships among the study constructs. By dividing SEM into these distinct stages, the chapter provided a clear framework for validating the theoretical model and supporting the study's examination of factors influencing organic food adoption.

Descriptive statistics were analysed using SPSS 27 to calculate metrics such as means, standard deviations, Cronbach's alpha coefficients, and the correlation matrix. This chapter also outlined the procedures for assessing reliability and validity, alongside the methodologies applied to evaluate the theoretical model that illustrated the relationships between the study constructs. Structural Equation Modelling (SEM) was conducted using Amos 27, employing the Maximum Likelihood Estimation technique. The SEM process was divided into two key phases: Confirmatory Factor Analysis (CFA), which involved assessing Composite Reliability, Average Variance Extracted (AVE), and model fit; and Path Modelling, which focused on evaluating model fit and testing the proposed hypotheses.

6. CHAPTER 6: QUANTITATIVE FINDINGS, ANALYSIS AND DISCUSSION

The previous chapter outlined the methodology and tools used to gather and analyse data, setting up the current chapter, which presents findings from the quantitative analysis of responses gathered through a structured online questionnaire. This chapter explores factors influencing organic food adoption, considering both traditional and innovation-related variables. The research was conducted in two stages: Stage One involved a systematic review of key traditional factors from existing literature, while Stage Two empirically tested these factors using survey data.

The chapter is organised as follows: it begins with a demographic profile of the sample, providing essential context. This is followed by a univariate analysis, where each variable is assessed with descriptive statistics (mean, standard deviation, t-test results, and p-values) to identify initial patterns. Exploratory Factor Analysis (EFA) is then conducted to identify underlying factor structures and groupings within the data. EFA serves as a preliminary step to uncover latent variables, which are then subjected to further validation.

Following EFA, reliability and validity tests are conducted to confirm the internal consistency and robustness of each construct. Confirmatory Factor Analysis (CFA) is used to test the measurement model, assessing reliability through Composite Reliability (CR) and validity using Average Variance Extracted (AVE). Structural Equation Modelling (SEM) evaluates the relationships between the traditional and innovation-related factors identified in Stage One, and the dependent variables, through path analysis, including an examination of path coefficients, model fit, and significance levels.

Through this systematic approach, the chapter integrates findings from the systematic review with empirical testing, providing a comprehensive understanding of the factors shaping consumer behaviour toward organic food adoption.

6.1 Sample Profile

The respondents' demographic profile in Table 6.1 reveals that most of the participants were female (61%) while the rest were male (24%). The fact that the number of female participants was significantly greater than that of the male respondents can be explained in that women do most food shopping (Shamim et al., 2021, p. 2).

Table 6. 1: Sample Profile

Table 6.1: Summary of Demographics Profile of the study							
Demographics	Frequency (Percentage)						Missing
Gender	Male	Female					
	85 (24%)	214 (61%)					53 (15%)
Education	Matric	Diploma/ degree	postgrad	Prefer not to say			
	29 (8%)	158 (45%)	83 (24%)	40 (11%)			42(12%)
Race	African	White	Indian	Coloured	Prefer not to say		
	247 (70%)	22 (6%)	23 (7%)	7(2%)	10(3%)		16(5)
Age	18-20	21-30	31-40	41-50	51-60	Above 61	
	10 (3%)	113(32%)	128 (36%)	16(5%)	22 (6%)	31	32(9%)
Household income/month	< R10000	10K -30K	30K -50K	>R50000	Prefer not to say		
	89 (25%)	94 (27%)	108 (31%)	43 (12%)	10 (3%)	8 (3 %)	

The demographic profile of respondents, summarised in Table 6.1, reveals a diverse group with notable variations across key characteristics. The majority of participants were female (61%), while 24% were male, and 15% did not disclose their gender, reflecting the typical involvement of women in food shopping. In terms of education, 45% held a diploma or degree, 24% had postgraduate qualifications, 8% completed matric, and 12% chose not to disclose their educational background. The sample was predominantly African (70%), with smaller proportions of Indian (7%), White (6%), and Coloured (2%) participants, while 5% did not disclose their race. Most respondents were aged 31-40 (36%) and 21-30 (32%), with fewer participants in other age categories. Regarding household income, the largest group reported earning R30,000 - R50,000 (31%), followed by R10,000 - R30,000 (27%), and less than R10,000 (25%), while 12% earned more than R50,000, and 3% did not disclose their income. This profile highlights the diversity in gender, education, race, age, and income among the respondents.

6.2 Univariate Analysis

The descriptive analysis examines the data distribution for each construct, focusing on means, standard deviations, and response patterns. Most constructs show a negative skew, with responses clustering toward the higher end of the Likert scale, between values of 3 and 5. This

skewness indicates that responses predominantly clustered toward the higher end of the Likert scale, with values ranging from 3 to 5. Such a distribution suggests that respondents generally held neutral to positive views on organic food consumption, as reflected by the mean scores and relatively low standard deviations. This analysis follows Alkharusi (2022, p. 13) guidance on interpreting Likert scale questionnaire data.

6.2.1Complexity

The table below presents the results on the 'complexity' scale. Respondents were asked questions related to purchasing organic foods to measure their perception of complexity on organic food purchase.

Table 6. 2: Complexity descriptive analysis

Variable	Mean	Standard Deviation
The concept behind organic foods is difficult for me to understand (COMP1)	2.98	1.21
It is difficult to understand organic food information in general (COMP2)	3.05	1.14
Organic foods are too complicated to be understood (COMP3)	3.02	1.20
It is difficult to find organic foods in supermarkets (COMP4)	3.41	1.09

The complexity construct examines respondents' perceptions of the difficulty associated with understanding and accessing organic food products. Results indicate neutral perceptions of complexity, with mean scores ranging from 2.98 to 3.41 and standard deviations between 1.09 and 1.21. Most items align closely with the neutral midpoint, suggesting that respondents do not perceive organic foods as overly complex to understand or purchase. However, the item "It is difficult to find organic foods in supermarkets" (mean = 3.41) reflects a slightly stronger perception of difficulty in locating organic foods, which may be noteworthy in understanding consumer experiences.

6.2.2Compatibility

Compatibility refers to the degree to which an innovation aligns with the existing habits, values, beliefs, and needs of potential adopters (Kim & Dearing, 2016, p. 100; Rogers, 2003, p. 25). Table 6.3 presents the descriptive analysis of the "compatibility with purchasing organic foods" scale, which examines respondents' perceptions of how well organic food consumption fits with their lifestyle and cultural context.

Table 6. 3*: Compatibility descriptive analysis*

Variable	Mean	Standard Deviation
Organic food consumption is common in my society (COMPAT1)	2.59	1.07
Organic food consumption is part of my culture (COMPAT2)	2.81	1.08
Organic food is nutritional (COMPAT3)	3.97	0.843
Organic food is compatible to my taste (COMPAT4)	3.66	0.956
Organic food is good for my health (COMPAT5)	4.05	0.816
Organic food consumption means social prestige (COMPAT6)	3.64	0.971

The results indicate a range of perceptions, with mean scores spanning from 2.59 to 4.05. Respondents strongly associate organic food with personal health benefits (mean = 4.05) and nutritional value (mean = 3.97). However, lower scores for items such as "Organic food consumption is common in my society" (mean = 2.59) and "Organic food consumption is part of my culture" (mean = 2.81) suggest limited cultural and societal integration of organic foods. These findings highlight a contrast between individual benefits and societal acceptance.

6.2.3Relative advantage

Relative advantage refers to the extent to which an innovation is perceived as superior to existing products or solutions, influencing its adoption rate (Ali et al., 2019, p. 621; Kim & Dearing, 2016, p. 20; Thiyagarajan, 2018, p. 15). Table 6.4 summarises the results of the "relative advantage with purchasing organic foods" scale, which assessed respondents' perceptions of the benefits of organic food purchases compared to alternatives.

Table 6. 4: Relative advantage descriptive analysis

Variable	Mean	Standard Deviation
Buying organic foods would decrease environmental damage. (REL1)	3.77	0.936
Buying organic foods would be financially advantageous for me. (REL2)	3.05	1.16
Organic foods are better than other competitive alternatives. (REL3)	3.70	0.957
Organic food purchasing serves as a substitute for less desirable alternatives. (REL4)	3.54	0.972

The results indicate moderate to high perceptions of relative advantage, with mean scores ranging from 3.05 to 3.77. Respondents strongly associate organic foods with environmental benefits, as reflected in the high score for "Buying organic foods would decrease environmental damage" (mean = 3.77). However, financial benefits were perceived neutrally, with "Buying

organic foods would be financially advantageous for me" (mean = 3.05) scoring closer to the midpoint.

6.2.4Observability

Observability refers to the degree to which the benefits or results of an innovation are visible to others (Rogers, 2003, p. 25; Yap & Chen, 2017, p. 52). Table 6.5 presents the descriptive analysis of the "observability with purchasing organic foods" scale, which evaluates respondents' perceptions of the visibility of their organic food purchases.

Table 6. 5: Observability descriptive analysis

Variable	Mean	Standard Deviation
By buying organic foods, I show that I care about the environment. (OBS1)	3.69	0.911
If I buy organic foods, it would be noticed by people close to me. (OBS2)	3.35	1.02
Organic foods are easily identifiable. (OBS3)	3.32	1.03
I have observed organic food talks or seminars (OBS4)	3.12	1.10
I have observed organic food advertisements (OBS5)	3.26	1.16

The results indicate moderate perceptions of observability, with mean scores ranging from 3.12 to 3.69. Respondents somewhat associate organic food purchases with signalling environmental concern (mean = 3.69) and somewhat believe these purchases are noticed by those close to them (mean = 3.35). However, lower scores for attending organic food talks or seminars (mean = 3.12) suggest that observability is more prominent in personal and social contexts rather than public or educational settings.

6.2.5Trialability

Trialability refers to the extent to which an innovation can be tested or sampled on a limited basis before a full commitment is made (Ali et al., 2019, p. 621; Rogers, 2003, p. 25). Table 6.6 summarises the results of the "trialability with purchasing organic foods" scale, which examines respondents' perceptions of the opportunities to try organic foods before making a purchase.

Table 6. 6: Trialability Descriptive Analysis

Variable	Mean	Standard Deviation
Organic food tasting is common in supermarkets (TRA1)	2.36	1.03
It is easy to taste organic foods prior to purchasing (TRA2)	2.49	1.08
It is possible to buy organic foods in small quantities to try it out (TRA3)	3.42	1.08
Many restaurants have organic foods on their menus, which make it easier to try them (TRA4)	2.99	1.16

The results show mixed perceptions of trialability, with mean scores ranging from 2.36 to 3.42. Respondents generally disagree that organic food tasting is common in supermarkets (mean = 2.36) or that it is easy to taste organic foods prior to purchase (mean = 2.49), highlighting limited opportunities for sampling. However, respondents slightly agree that purchasing organic foods in small quantities provides a viable way to try them out (mean = 3.42). The availability of organic foods in restaurants received a more neutral response (mean = 2.99).

6.2.6Consumer innovativeness

Consumer Innovativeness (CI) refers to an individual's tendency to seek and adopt new products earlier than others, reflecting their openness to change and novel experiences (Michalak & Bartkowiak, 2020, p. 14617; Persaud & Schillo, 2017, p. 130; Rogers, 2003, p. 10). Table 6.7 presents the descriptive analysis of the Consumer Innovativeness scale, which measures respondents' attitudes toward exploring and experimenting with new food products.

Table 6. 7: Consumer innovativeness descriptive analysis

Variable	Mean	Standard Deviation
I know about new food products before most other people in my circle do (CONS1)	3.14	1.04
Compared to my friends, I seek out relatively large information about the new food products (CONS2)	3.29	1.06
If I heard about a new food product, I would look for ways to experiment with it (CONS3)	3.47	1.00
In general, I would look for ways to experiment with new products (CONS4)	3.51	1.03
I like to go to places where I will be exposed to information about new products (CONS5)	3.64	0.965
I frequently look for new products. (CONS6)	3.44	1.07

The results indicate moderate to strong consumer innovativeness, with mean scores ranging from 3.14 to 3.64. Respondents exhibit proactive behaviours in seeking and experimenting with new products, as seen in the high mean for "I like to go to places where I will be exposed to information about new products" (mean = 3.64). This suggests a generally positive disposition toward exploring and adopting novel food products.

6.2.7Attitude

Attitude reflects the degree to which an individual form a favourable or unfavourable judgment about engaging in a specific action (Lupindo et al., 2024, p. 2). Table 6.8 provides the descriptive analysis of the "attitude" scale, which examines respondents' perceptions of purchasing organic foods.

Table 6. 8: Attitude descriptive analysis

Variable	Mean	Standard Deviation
Buying organic food is a good idea. (ATT1)	4.10	0.723
Buying organic food is a wise choice. (ATT2)	4.12	0.767
I like the idea of buying organic food. (ATT3)	4.08	0.831
Buying organic food would be pleasant. (ATT4)	4.04	0.761

The results indicate positive attitudes toward organic food purchases, with mean scores ranging from 4.04 to 4.12. Respondents view buying organic food as a wise, enjoyable, and beneficial decision, as reflected in consistently high mean values across all items, particularly "Buying organic food is a wise choice" (mean = 4.12). This suggests a strong predisposition toward organic food, reinforcing its positive perception among consumers.

6.2.8Subjective Norm

Subjective norms refer to the social pressures or expectations from significant individuals, such as family members, friends, or society, that influence an individual's intention to engage in a particular behaviour (Zayed et al., 2022, p. 3). Table 6.9 provides the descriptive analysis of the "Subjective Norm" scale, which measures respondents' perceptions of social expectations regarding purchasing organic foods.

Table 6. 9: Subjective norm descriptive analysis

Variable	Mean	Standard Deviation
My friends think I should buy organic food. (SUBJ1)	2.91	1.09
My relatives think I should buy organic food. (SUBJ2)	2.92	1.08
My family thinks I should buy organic food. (SUBJ3)	2.97	1.09

The results indicate mean scores close to the neutral midpoint of 3.0, suggesting minimal or neutral perceptions of social pressure to purchase organic foods. These findings imply that respondents view purchasing organic foods more as a personal choice rather than being influenced by external expectations from family or friends.

6.2.9Perceived Behavioural Control

Perceived Behavioural Control (PBC) reflects the perceived ease or difficulty of adopting a behaviour, influenced by past experiences and anticipated obstacles (Macovei, 2014, p. 18). Table 6.10 presents the results of the "Perceived Behavioural Control" scale, which evaluates respondents' perceptions of their ability to purchase organic foods.

Table 6. 10: Perceived Behavioural Control descriptive analysis

Variable	Mean	Standard Deviation
I have enough money to buy organic food. (PERCV1)	2.95	1.12
I have the ability to buy organic food. (PERCV2)	3.27	1.03
I have the knowledge necessary to buy organic food. (PERCV3)	3.43	1.04

The results indicate that respondents generally feel neutral about knowledge (mean = 3.43) and capability (mean = 3.27) of purchasing organic foods. However, their neutral response regarding financial resources (mean = 2.95) suggests that economic factors may pose a potential barrier to their purchase intentions.

6.2.10 Health Consciousness

Health consciousness refers to the extent to which individuals prioritise health-related factors in their decisions, influencing their lifestyle choices and purchasing behaviours (Yadav & Pathak, 2016, p. 123). Table 6.11 summarises the results of the "Health Consciousness" scale, which examines respondents' awareness and consideration of health in their organic food purchases.

Table 6. 11: Health consciousness descriptive analysis

Variable	Mean	Standard Deviation
I choose food carefully to ensure good health. (HLTH1)	3.79	0.915
I consider myself a health-conscious consumer. (HLTH2)	3.73	0.963
I think often about health-related issues. (HLTH3)	3.81	0.922

The results indicate that health consciousness is a strong motivator among respondents, with mean scores ranging from 3.73 to 3.81. Respondents consistently demonstrate attentiveness to health in their food choices, as evidenced by positive responses to statements like "I choose food carefully to ensure good health" (mean = 3.79) and "I think often about health-related issues" (mean = 3.81). This highlights the importance of health awareness in driving organic food purchasing behaviour.

6.2.11 Environmental Concern

Environmental concern refers to an individual's awareness of environmental issues and their willingness to take personal responsibility for contributing to environmental sustainability (Yadav & Pathak, 2016, p. 123). Table 6.12 summarises the results of the "Environmental Concern" scale, which evaluates respondents' perceptions of environmental awareness in relation to their organic food purchasing behaviour.

Table 6. 12: Environmental concern descriptive analysis

Variable	Mean	Standard Deviation
The balance of nature is very delicate and can be easily upset. (ENVRN1)	3.86	0.806
Human beings are severely abusing the environment. (ENVRN2)	3.97	0.842
Humans must maintain the balance with nature in order to survive. (ENVRN3)	4.08	0.762
Human interferences with nature often produce disastrous consequences. (ENVRN4)	3.99	0.770

The results indicate moderate to high levels of environmental concern, with mean scores ranging from 3.86 to 4.08. These findings suggest that respondents are aware and concerned about environmental issues, they also recognise the importance of maintaining ecological balance. This awareness may translate into support for environmentally friendly actions, such as purchasing organic food, to contribute to environmental sustainability.

6.2.12 Trust

Trust is defined as “a heuristic used in situations where lack of knowledge, experience, or familiarity with firms, products, or processes hampers decision-making” (Canova et al., 2020, p. 3). Table 6.13 presents the descriptive analysis of the "Trust" scale, which evaluates respondents' perceptions of trust related to purchasing organic foods.

Table 6. 13: Trust descriptive analysis

Variable	Mean	Standard Deviation
I think that corporations in the field of organic foods are aware of their responsibilities. (TRST1)	3.42	0.966
I trust those who sell certified organic foods indeed sell quality organic foods. (TRST2)	3.41	0.968
I trust a quality organic food label or logo. (TRST3)	3.42	0.998
I trust the institutions certifying organic food products. (TRST4)	3.35	1.03

The results indicate neutral levels of trust in organic food products and certifying institutions, with mean scores ranging from 3.35 to 3.42. Respondents generally express neutral trust in certified organic foods and their labelling. Strengthening trust through improved transparency and credibility may further encourage organic food purchases.

6.2.13 Purchase intention

Purchase intention reflects the strength of an individual's determination to engage in a specific behaviour and is regarded as one of the strongest predictors of future actions (Nedra et al.,

2015, p. 68). Table 6.14 summarises the results of the "Purchase Intention" scale, which examines respondents' willingness to purchase organic foods.

Table 6. 14: Purchase intention descriptive analysis

Variable	Mean	Standard Deviation
I will purchase green products for personal use. (INT1)	3.76	0.917
I am willing to purchase green products for personal use. (INT2)	3.83	0.855
I will make an effort to purchase green products. (INT3)	3.72	0.935

The results indicate positive purchase intentions, with mean scores ranging from 3.72 to 3.83. Respondents express a moderate willingness to buy green products, as highlighted by the item “I am willing to purchase green products for personal use” (mean = 3.83). These findings suggest that purchase intentions are moderately strong and could serve as a driver for future purchases.

6.2.14 Purchase behaviour

Purchase behaviour begins with the recognition of a need or desire, followed by decision-making, and culminates in the act of purchasing (Gakobo & Jere, 2016, p. 1270). Table 6.15 provides the descriptive analysis of the "Purchase Behaviour" scale, which examines respondents' actual purchasing patterns for organic foods.

Table 6. 15: Purchase behaviour descriptive analysis

Variable	Mean	Standard Deviation
I have been purchasing organic foods on a regular basis. (PURCH1)	3.04	1.08
I purchase organic foods for my daily needs products. (PURCH2)	2.99	1.06
I have been purchasing organic foods over the past six months. (PURCH3)	3.02	1.17

Actual purchase behaviours reflect a more neutral stance, with mean scores near 3.0 across items. The lack of significant t-values suggests that positive intentions and attitudes toward organic foods may not always translate into regular purchasing behaviour, indicating potential barriers that limit actual purchases.

The univariate analysis reveals positive intentions and attitudes toward organic foods among respondents, with high levels of health consciousness, environmental concern, and perceived compatibility with personal values. However, challenges such as complexity, trialability, and neutral trust levels may affect actual purchasing behaviour. The overall pattern of responses suggests that while respondents are open to organic foods, further efforts to simplify

information, enhance product accessibility, and build trust may be essential to promote regular purchasing behaviour.

6.3 Structural equation models

This section presents the results of Structural Equation Modelling (SEM) to evaluate and compare the effects of various constructs on consumers' purchase intentions and behaviours toward organic food. The analysis addresses key research objectives, utilising distinct models to test the relationships between traditional factors, Diffusion of Innovation (DOI) factors, Consumer Innovativeness, and a comprehensive Dynamic Model that integrates all constructs. This multi-model approach provides understanding of the drivers of organic food adoption, highlighting the interplay between traditional and innovation-related factors.

6.3.1Traditional Factors Model Testing.

This section presents a detailed analysis of traditional factors and their influence on consumers' purchase intentions and behaviours toward organic products. Addressing Objective 2, which seeks to evaluate the effects of traditional factors on the intention to purchase organic food, the analysis employs a robust methodological framework. Key steps include sampling adequacy testing, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM) to validate the proposed model. This structured approach ensures a comprehensive understanding of how traditional constructs shape consumer decision-making in the context of organic food.

6.3.1.1 Sampling Adequacy Testing

This section presents sampling adequacy testing using Kaiser-Meyer-Olkin and Bartlett test of sphericity and its analysis.

Table 6. 16: Traditional factors - KMO and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,864
Bartlett's Test of Sphericity	Approx. Chi-Square	8038,698
	df	190
	Sig.	<0,001

This section presents sampling adequacy testing, using the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.864, indicating sufficient sample size for reliable factor extraction (Howard, 2016, p. 52). Bartlett's Test of Sphericity was significant ($\chi^2 = 8038.698$, df = 190, $p < 0.001$), confirming that correlations between items were adequate for factor analysis.

6.3.1.2 Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) using Principal Component Analysis (PCA) with Varimax rotation was conducted to identify distinct, interpretable factors, following Hair Jr et al. (2017, p. 107). The dataset of 352 cases met EFA sample size requirements (Howard, 2016, p. 51). Constructs with low factor loadings (Appendix D), such as Perceived Behavioural Control and Environmental Consciousness, had to be excluded to improve model fit, while remaining constructs showed strong loadings and reliability, supporting the measurement model's validity for further structural analysis. Key constructs demonstrated high factor loadings, with Attitude (ATT1–ATT4) ranging from 0.871 to 0.901, Subjective Norms (SUBJ1–SUBJ3) from 0.920 to 0.939, Trust (TRST1–TRST4) from 0.755 to 0.916, Health Consciousness (HLTH1–HLTH3) from 0.822 to 0.897, Intention (INT1–INT3) from 0.825 to 0.856, and Purchase Behaviour (PURCH1–PURCH3) from 0.857 to 0.910. These results confirm the constructs' suitability for Structural Equation Modelling (SEM) in analysing relationships related to organic food adoption.

6.3.1.3 Confirmatory Factor Analysis (CFA) and Reliability Testing

This section presents the results of the Confirmatory Factor Analysis (CFA) conducted to evaluate the reliability, convergent validity, and discriminant validity of the constructs measuring traditional factors influencing organic food adoption.

Table 6. 17: Traditional factors - Factor Loading Coefficient, Mean and Standard Deviation and Cronbach's Alpha

CONSTRUCT	Measured variables		Factor Loadings	Mean (SD)	Cronbach's Alpha
Attitudes	ATT1	Buying organic food is a good idea.	0,898	4.10 (0.723)	0.955
	ATT2	Buying organic food is a wise choice.	0,887	4.12 (0.767)	
	ATT3	I like the idea of buying organic food.	0,871	4.08 (0.831)	
	ATT4	Buying organic food would be pleasant.	0,901	4.04 (0.761)	

Trusts	TRST1	I think that corporations in the field of organic foods are aware of their responsibilities.	0,755	3.42 (0.966)	0.922
	TRST2	I trust those who sell certified organic foods indeed sell quality organic foods.	0,915	3.41 (0.968)	
	TRST3	I trust a quality organic food label or logo.	0,916	3.42 (0.998)	
	TRST4	I trust the institutions certifying organic food products.	0,898	3.35 (1.029)	
Subjective norms	SUBJ1	My friends think I should buy organic food	0,920	2.91 (1.089)	0.867
	SUBJ2	My relatives think I should buy organic food	0,949	2.92 (1.079)	
	SUBJ3	My family thinks I should buy organic food	0,939	2.97 (1.095)	
Purchase behaviour	PURCH 1	I have been purchasing organic foods on regular basis.	0,857	3.04 (1.076)	0.941
	PURCH 2	I purchase organic foods for my daily needs products.	0,910	2.99 (1.062)	
	PURCH 3	I have been purchasing organic foods over the past six months.	0,882	3.02 (1.168)	
Health consciousness	HLTH1	I chose food carefully to ensure the good health.	0,822	3.79 (0.915)	0.928
	HLTH2	I consider myself as health-conscious consumer.	0,897	3.73 (0.963)	
	HLTH3	I think often about health-related issues.	0,869	3.81 (0.922)	
Purchase Intention	INT1	I will purchase green products for personal use.	0,845	3.76 (0.917)	0.963
	INT2	I am willing to purchase green products for personal use.	0,856	3.83 (0.855)	
	INT3	I will purchase green products for personal use.	0,825	3.72 (0.935)	
Variance=89.12% Kaiser-Meyer-Olkin Measure of Sampling Adequacy=0.864 Bartlett's Test of Sphericity= ($p<0.001$; $X^2=8038,698$; df=190)					

Table 6.17 provides a summary of the standardised factor loadings, mean scores, standard deviations, and Cronbach's alpha values for each construct. High factor loadings (all above 0.7) demonstrate that the observed variables strongly represent their underlying latent constructs, supporting convergent validity (Goretzko et al., 2021, p. 3510). For example, the Attitudes construct exhibited loadings ranging from 0.871 to 0.901, while Trust ranged from 0.755 to 0.916, and Purchase Intention from 0.825 to 0.888. These results confirm that the measurement items reliably measure their respective constructs.

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.864, and Bartlett's Test of Sphericity produced a significant result ($\chi^2 = 8038.698$, df = 190, $p < 0.001$), confirming that the dataset was suitable for factor analysis (Howard, 2016, p. 5; Shrestha, 2021, p. 5). The measurement model explained 89.12% of the variance, indicating that the constructs effectively capture a substantial proportion of the observed variance and align with theoretical expectations.

Despite these strengths, the analysis revealed some areas for improvement. Constructs such as Subjective Norms demonstrated slightly overlapping variance with other constructs, as seen in the Maximum Shared Variance (MSV) values relative to Average Variance Extracted (AVE). For example, while the AVE for Subjective Norms was 0.908, its MSV was 0.338, indicating satisfactory discriminant validity but suggesting room for clearer differentiation between constructs (Hair Jr et al., 2017). Additionally, while the reliability of the constructs is robust, the strong correlations between certain variables (e.g., Trust and Attitudes) underscore the importance of ensuring conceptual clarity in subsequent analyses. (Goretzko et al., 2021, p. 3510; Hair Jr et al., 2017, p. 107)

6.3.1.4 Traditional factors: Scale reliability and construct validity

This section evaluates the measurement model's reliability and construct validity for traditional factors influencing organic product adoption.

Table 6. 18: Traditional factors - Composite Reliability, Average Variance Extracted, and Maximum Shared Square Values

	CR	AVE	MSV	MaxR(H)	Subj	Att	Health	Trusts	Intent	Purc
Subj	0,967	0,908	0,187	0,978	**0,953**					
Att	0,954	0,839	0,338	0,963	0,184	**0,916**				
Health	0,930	0,816	0,271	0,939	0,276	0,480	**0,903**			
Trusts	0,920	0,744	0,166	0,944	0,209	0,264	0,298	**0,863**		
Intention	0,963	0,898	0,338	0,969	0,285	0,581	0,521	0,408	**0,948**	
Purc	0,941	0,843	0,256	0,942	0,432	0,340	0,406	0,260	0,506	**0,918**

Table 6.18 demonstrates robust internal consistency, with Composite Reliability (CR) values exceeding 0.7 for all constructs (Fornell & Larcker, 1981, p. 39; Hair Jr et al., 2017, p. 107). Notable CR values include Subjective Norms (CR = 0.967), Attitudes (CR = 0.954), and Purchase Intention (CR = 0.963), supported by high Cronbach's alpha values, such as Attitudes ($\alpha = 0.954$) and Trust ($\alpha = 0.920$).

Convergent validity was confirmed as Average Variance Extracted (AVE) values exceeded 0.5 for all constructs, demonstrating that a substantial portion of variance in the indicators was explained by their latent constructs (Fornell & Larcker, 1981, p. 39; Hair Jr et al., 2017, p. 107). Attitudes (AVE = 0.839) and Health Consciousness (AVE = 0.816) displayed particularly strong convergent validity, aligning with theoretical expectations for organic food adoption.

Discriminant validity was confirmed by comparing Average Variance Extracted (AVE) values to Maximum Shared Variance (MSV), ensuring that constructs were conceptually distinct (Fornell & Larcker, 1981, p. 39). For instance, Attitudes (AVE = 0.839, MSV = 0.338) and Purchase Behaviour (AVE = 0.843, MSV = 0.256) demonstrated clear conceptual independence. However, Health Consciousness (AVE = 0.816, MSV = 0.271) exhibited a relatively close AVE-to-MSV ratio, suggesting minor thematic overlap that may warrant refinement in future studies to enhance construct clarity and precision (Goretzko et al., 2021, p. 3510; Hair Jr et al., 2017, p. 107).

Overall, the high CR, AVE, and Cronbach's alpha values, along with strong standardised factor loadings, validate the model's reliability and construct validity (Cheung et al., 2024, p. 745; Fornell & Larcker, 1981, p. 39; Hair Jr et al., 2017, p. 107). These findings confirm the robustness of the measurement model, providing a solid foundation for structural analysis and hypothesis testing. Future research could address areas of minor overlap, such as Health Consciousness, to enhance construct clarity and theoretical precision.

The next section transitions into model testing, where the relationships between traditional factors and consumer behaviour toward organic food adoption are analysed through Structural Equation Modelling (SEM). This approach will provide insights into the pathways influencing purchase intention and behaviour, further advancing the study's objectives.

6.3.1.5 Model Fitness Testing – Traditional factors

Model fitness evaluates how well the proposed measurement model aligns with observed data, ensuring theoretical and empirical consistency (Hu & Bentler, 1999, p. 5). This section assesses the overall fit of the traditional factors model using established fit indices. Results in Table 6.23 confirm the model's adequacy and readiness for structural and hypothesis testing.

Table 6. 19: Traditional factors - Model fitness indices for the MM

Fit Indices	Fit values	Criteria
χ^2 / df (p-value)	3.388(<.001)	<5
IFI	0.955	>.9
TLI	0.943	>.9
CFI	0.954	>.9
RMSEA	0.082	<0.08

The overall fit of the model was assessed using multiple fit indices, summarised in Table 6.19, to evaluate how well the model aligns with the observed data. The chi-square (χ^2) value was 518.364 with 153 degrees of freedom, resulting in a χ^2/df ratio of 3.388 ($p < .001$). While the

chi-square value is significant, this is expected given its sensitivity to larger sample sizes (Hair Jr et al., 2017, p. 107). The ratio indicates an acceptable fit within the recommended threshold of <5.

Fit indices further support the model's adequacy. The Incremental Fit Index (IFI = 0.955), Tucker-Lewis Index (TLI = 0.943), and Comparative Fit Index (CFI = 0.954) all exceed the minimum recommended value of 0.9, demonstrating strong alignment between the model and the data (Lancaster et al., 2015, p. 163; Tabachnick & Fidell, 2021, p. 100). The Root Mean Square Error of Approximation (RMSEA) was 0.082, slightly above the ideal cut-off of 0.08 but still within an acceptable range for complex models, suggesting only minor deviations from a perfect fit (Hu & Bentler, 1999, p. 5).

Overall, the results confirm a robust model fit across multiple indices. These findings validate the reliability of the hypothesised relationships, confirming the model's suitability for further structural analysis and hypothesis testing. Despite the slight elevation in RMSEA, the strong performance on other fit indices highlights the model's robustness and supports its use in analysing traditional factors influencing organic food adoption.

6.3.1.6 Structural Equation Model (Hypotheses Testing) (Traditional model)

The measurement model (MM) was converted into a path model, as shown in Figure 6.1, to illustrate the relationships between latent variables.

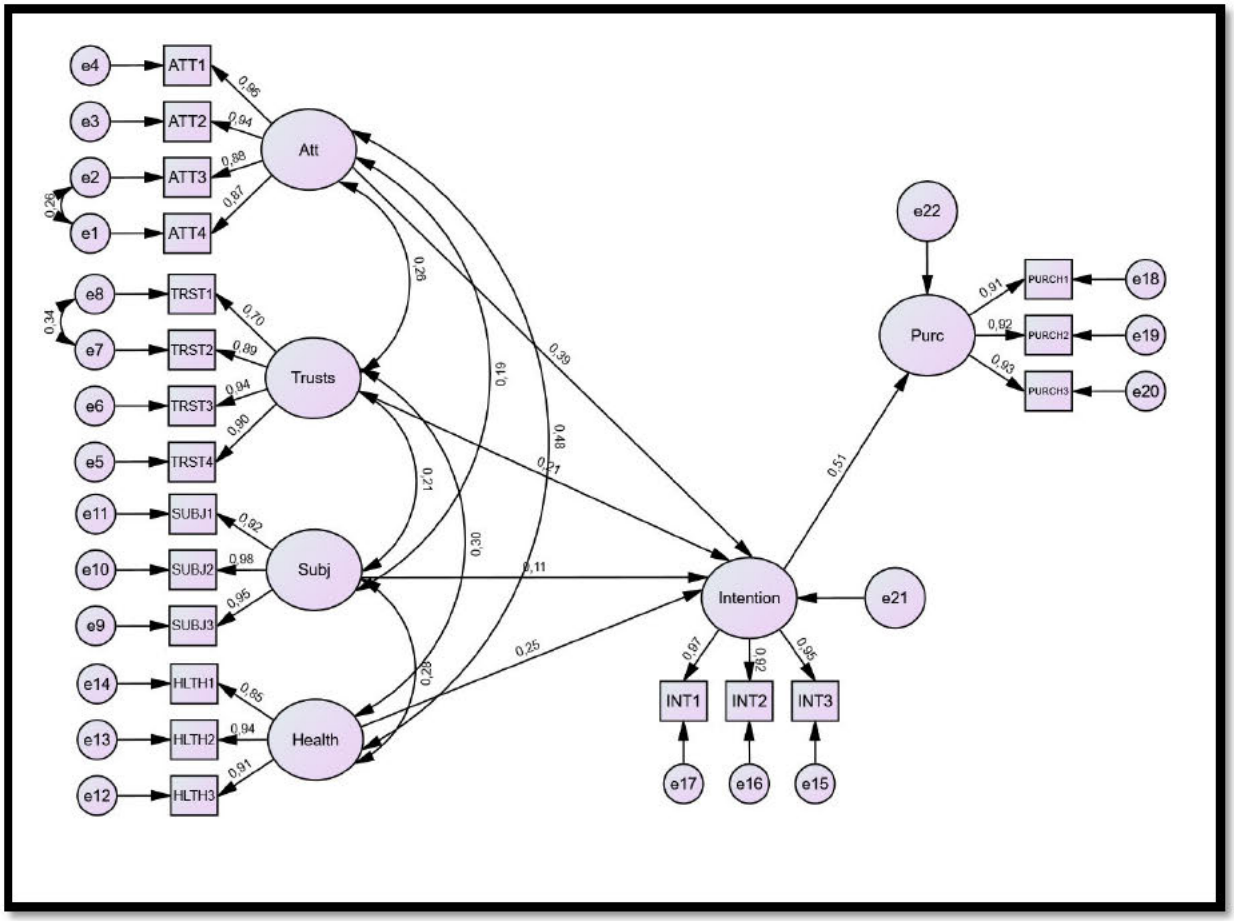

Figure 6. 1: SEM for traditional model

The Structural Equation Model (SEM) was constructed by transforming the measurement model into a path model to examine the hypothesised relationships among latent variables. The resulting model, presented in Figure 6.1, evaluates the direct effects of traditional factors; Attitude, Trust, Subjective Norms, and Health Consciousness on Purchase Intention and the subsequent effect of Intention on Purchase Behaviour.

The model demonstrated acceptable fit indices: $\chi^2 = 565.480$, df = 157, $p < 0.001$, $\chi^2/df = 3.602$, CFI = 0.949, IFI = 0.949, TLI = 0.938, and RMSEA = 0.086. These results suggest that the model aligns well with the observed data, providing a robust framework for hypothesis testing.

6.3.1.7 Path estimates and hypothesis testing – Traditional factors

This section analyses the path estimates and hypothesis testing results within the Structural Equation Model (SEM) for traditional factors influencing consumer behaviour toward organic food adoption. It highlights the impact of constructs such as Attitude, Trust, Subjective Norms,

and Health Consciousness on Purchase Intention and examines how these intentions translate into actual Purchase Behaviour.

During the analysis, factors such as Perceived Behavioural Control (PBC) and Environmental Concern (EC) were excluded due to low factor loadings, which indicated insufficient reliability for inclusion in further analysis. The results for the remaining hypotheses are presented in Table 6.20, detailing the path estimates, standardised coefficients (β), standard errors (S.E.), critical ratios (CR), and p-values.

Table 6. 20: Traditional factors - Path estimates and hypothesis testing

Hypotheses	Dependent Variable (DV)	Independent Variable (IV)	Standardised Coefficient (β)	S.E.	Critical Ratio (CR)	p-value	Decision
H2a	Intention	Att	0.388	0.066	7.789	***	Accepted
H2c	Intention	Trusts	0.212	0.044	4.687	***	Accepted
H2d	Intention	Subj	0.108	0.037	2.497	0.013	Accepted
H2e	Intention	Health	0.245	0.053	4.828	***	Accepted
H2g	Purc	Intention	0.512	0.056	10.097	***	Accepted

Table 6.20 summarises the standardised coefficients, standard errors, critical ratios, and p-values for the hypothesised relationships. The results highlight the significant contributions of traditional factors to Purchase Intention and Purchase Behaviour:

- **Attitude:** A moderate predictor of Purchase Intention ($\beta = 0.388$, $p < 0.001$), indicating that positive attitudes significantly enhance consumer intent to purchase organic food. This finding aligns with prior research emphasising the importance of favourable perceptions in shaping purchase decisions.
- **Trust:** A statistically significant contributor to Purchase Intention ($\beta = 0.212$, $p < 0.001$), suggesting that consumer confidence in the quality and authenticity of organic products plays a crucial role in influencing their intent to purchase.
- **Subjective Norms:** Although weaker in effect ($\beta = 0.108$, $p = 0.013$), Subjective Norms remained a significant predictor of Purchase Intention, highlighting the influence of social pressures and expectations on consumer behaviour.
- **Health Consciousness:** This factor demonstrated a strong positive effect on Purchase Intention ($\beta = 0.245$, $p < 0.001$), underscoring the importance of health-related motivations in driving consumer choices for organic products.

- **Purchase Intention to Purchase Behaviour**: The strongest observed relationship was between Purchase Intention and actual Purchase Behaviour ($\beta = 0.512$, $p < 0.001$), confirming that higher intention translates effectively into purchasing actions.

The results confirm that traditional factors; Attitude, Trust, Subjective Norms, and Health Consciousness are significant predictors of Purchase Intention, with Attitude exerting the most substantial influence. While Subjective Norms showed a weaker effect, their significance highlights the role of societal and peer influences in shaping consumer decisions. The strong relationship between Purchase Intention and Purchase Behaviour reinforces the validity of intention as a reliable predictor of actual behaviour.

These findings have practical implications for marketing strategies and policymaking. For example, campaigns that emphasise the health benefits and authenticity of organic foods can strengthen attitudes and trust, thereby enhancing purchase intentions. Additionally, leveraging social influence through peer endorsements and community-driven initiatives may further promote organic food adoption.

6.3.2 Structural Equation Model – Diffusion of Innovation Model

This section presents an analysis of the Diffusion of Innovation (DOI) Model, focusing on the effects of DOI constructs; Relative Advantage, Compatibility, Complexity, Observability, and Trialability on consumers' purchase intentions and behaviours toward organic products. Addressing Objective Three "To determine the effects of Diffusion of Innovation factors on intention to purchase organic food," this analysis employs a rigorous methodological framework.

Key steps include sampling adequacy testing, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM) to validate the DOI model and test the associated hypotheses. This structured approach ensures a robust evaluation of how innovation-related factors shape consumer decision-making in the context of organic food adoption.

6.3.2.1 Sampling Adequacy Testing

This section presents sampling adequacy testing using Kaiser-Meyer-Olkin and Bartlett test of sphericity and its analysis.

Table 6. 21: DOI - KMO and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,829
Bartlett's Test of Sphericity	Approx. Chi-Square	6921,491
	df	325
	Sig.	<0,001

Table 6.21 provides the results of the sampling adequacy testing, which confirm the dataset's suitability for factor analysis. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy yielded a value of 0.829, indicating that the sample size was sufficient for reliable factor extraction Howard and Henderson (2023, p. 2). Bartlett's test of sphericity was significant (χ^2 = 6921.491, df = 325, $p < 0.001$), demonstrating that the correlations between items were appropriate for conducting factor analysis.

These findings validate that the dataset meets the required criteria for both sampling adequacy and item correlation (Hair Jr et al., 2017, p. 107). Additionally, the cumulative variance explained of 75.59% indicates that the identified factors capture a substantial proportion of the total variance, further reinforcing the model's robustness and suitability for subsequent analyses (Shrestha, 2021, p. 5).

6.3.2.2 Exploratory Factor Analysis

The Exploratory Factor Analysis (EFA), using Principal Component Analysis (PCA) with Varimax rotation, as shown in *Appendix G* identified distinct and interpretable factors, following guidelines for dimensionality reduction with uncorrelated factors (Hair Jr et al., 2017, p. 107; Shrestha, 2021, p. 5). The rotation converged after seven iterations, resulting in a stable factor structure with minimal overlap, thereby enhancing the interpretability of the factors (Goretzko et al., 2021, p. 3510).

Items with low factor loadings, such as COMPAT1, COMPAT2, and OBS1, were excluded to improve the validity of the model. The retained items exhibited strong factor loadings, with most exceeding the recommended threshold of 0.5. Internal consistency for each construct was confirmed through Cronbach's alpha values, which demonstrated high reliability across constructs: Complexity ($\alpha = 0.887$), Intention ($\alpha = 0.963$), Purchase Behaviour ($\alpha = 0.941$), Trialability ($\alpha = 0.784$), Compatibility ($\alpha = 0.790$), Observability ($\alpha = 0.821$), and Relative Advantage ($\alpha = 0.745$).

These EFA results validate the robustness of the measurement instrument and provide a reliable basis for proceeding with Confirmatory Factor Analysis (CFA).

6.3.2.3 Confirmatory Factor Analysis (CFA) and Reliability Testing

This section presents the Confirmatory Factor Analysis (CFA) and reliability testing for constructs in the study on organic food adoption.

Table 6. 22: DOI- Confirmatory Factor Analysis (CFA) Results

CONSTRUCT	Measured variables		Factor Loadings	Mean (SD)	Cronbach's Alpha
Purchase Intention	INT1	I will purchase green products for personal use.	0,888	3.76 (0.917	0.963
	INT2	I am willing to purchase green products for personal use.	0,893	3.83 (0.855)	
	INT3	I will make an effort to purchase green products	0,865	3.72 (0.933)	
Purchase behaviour	PURCH1	I have been purchasing organic foods on regular basis.	0,836	3.04 (1.076)	0.941
	PURCH2	I purchase organic foods for my daily needs products.	0,859	2.99 (1.062)	
	PURCH3	I have been purchasing organic foods over the past six months.	0,826	3.02 (1.168)	
Compatibility	COMPAT3	Organic food is nutritional	0,880	3.97 (0.843)	0.790
	COMPAT4	Organic food is compatible to my taste	0,625	3.66 (0.956)	
	COMPAT5	Organic food is good for my health	0,878	4.05 (0.816)	
	COMPAT6	Organic food consumption means social prestige	0,532	3.64 (0.971)	
Trialability	TRA1	Organic food tasting is common in supermarkets	0,806	2.36 (1.034)	0.784
	TRA2	it is easy to taste organic foods prior to purchasing	0,823	2.49 (1.075)	
	TRA3	It is possible to buy organic foods in small quantities to try it out	0,549	3.42 (1.081)	
	TRA4	Many restaurants have organic foods on their menus, which make it easier to try them before purchasing	0,742	2.99 (1.163)	
Observability	OBS2	If I buy organic foods, it would be noticed by people close to me.	0,737	3.35 (1.018)	0.821
	OBS3	Organic foods are easily identifiable.	0,595	3.32 (1.030)	
	OBS4	I have observed organic food talks or seminars	0,745	3.12 (1.100)	
	OBS5	I have observed organic food advertisements	0,731	3.26 (1.163)	
Relative advantage	REL1	Buying organic foods would decrease environmental damage.	0,711	3.77 (0.936)	0.745
	REL2	Buying organic foods would be financially advantageous for me.	0,643	3.05 (1.161)	
	REL3	Organic foods are better than other competitive alternatives.	0,655	3.70 (0.957)	
	REL4	Organic food purchasing serves as a substitute for less desirable alternatives	0,748	3.54 (0.972)	

Complex	COMP1	The concept behind organic foods is difficult for me to understand	0,847	2.98 (1.208)	0.887
	COMP2	It is difficult to understand organic food information in general	0,882	3.05 (1.144)	
	COMP3	Organic foods are too complicated to be understood	0,864	3.02 (1.196)	
	COMP4	It is difficult to find organic foods in supermarkets	0,776	3.41 (1.088)	
Variance=75.59% Kaiser-Meyer-Olkin Measure of Sampling Adequacy=0.829 Bartlett's Test of Sphericity= ($p<0.001$; X^2=6921,491; df=325)					

Table 6.22 summarises the factor loadings, means, standard deviations, and Cronbach's alpha values for each construct, demonstrating robust internal consistency. Most factor loadings exceeded the recommended threshold of 0.7, confirming construct validity (Hair Jr et al., 2017, p. 107). To improve model validity, items with low loadings, such as COMPAT1, COMPAT2, and OBS1, were excluded, as retaining low-loading items can compromise construct reliability (Fornell & Larcker, 1981, p. 40). These adjustments ensured that the measurement model accurately captured the intended constructs.

Cronbach's alpha values for all constructs surpassed 0.7, confirming strong internal consistency (Hair Jr et al., 2017, p. 107). Key constructs displayed robust alpha values, including Purchase Intention (α = 0.963), Purchase Behaviour (α = 0.941), Complexity (α = 0.887), and Relative Advantage (α = 0.745). These results demonstrate the reliability of the measurement instrument and provide a solid basis for structural analysis.

6.3.2.4 DOI factors: Scale reliability and construct validity

The following discussion provides a comprehensive overview of the measurement model, focusing on the scale reliability and construct validity of the research instrument.

Table 6. 23: DOI - Composite Reliability, Average Variance Extracted, and Maximum Shared Square Values

	CR	AVE	MSV	MaxR(H)	Complex	Obser	Tria	Comp	Rel	Intent	Purc
Complex	0,893	0,682	0,098	0,934	**0,826**						
Obser	0,827	0,546	0,394	0,848	0,080	**0,739**					
Tria	0,833	0,630	0,250	0,874	0,291	0,500	**0,794**				
Comp	0,829	0,566	0,282	0,931	-0,153	0,355	0,023	**0,752**			
Rel	0,748	0,435	0,325	0,801	-0,158	0,447	0,245	0,531	**0,659**		
Intent	0,964	0,898	0,325	0,970	-0,313	0,433	0,169	0,365	0,570	**0,948**	
Purc	0,942	0,843	0,394	0,942	-0,055	0,628	0,410	0,234	0,448	0,504	**0,918**

Table 6.23 presents the Composite Reliability (CR), Average Variance Extracted (AVE), and Maximum Shared Variance (MSV) values for DOI constructs. Reliability was confirmed, with CR and Cronbach's alpha values exceeding the recommended threshold of 0.7 for all constructs, demonstrating strong internal consistency (Fornell & Larcker, 1981, p. 39). Notable CR values included Complexity (CR = 0.893), Observability (CR = 0.827), and Purchase Intention (CR = 0.964), highlighting consistent measurement across items.

Convergent validity was established, as AVE values exceeded 0.5 for all constructs, indicating that a substantial proportion of variance in the observed variables was explained by their latent constructs (Hair Jr et al., 2017, p. 107). For instance, Complexity (AVE = 0.682) and Purchase Intention (AVE = 0.898) demonstrated strong convergent validity, reflecting their ability to capture meaningful variance from their items. However, the Relative Advantage construct (AVE = 0.435) did not meet the recommended threshold of 0.5, suggesting weaker convergent validity. This implies that the items measuring Relative Advantage may not fully capture the intended construct or that additional items may be needed to enhance its explanatory power. Despite this limitation, the construct remains important for analysis, as its Cronbach's alpha and Composite Reliability (CR = 0.748) values indicate moderate internal consistency. Future research could refine this construct by revising existing items or adding new ones to better capture its conceptual scope.

Discriminant validity was verified by comparing each construct's AVE with its Maximum Shared Variance (MSV), as suggested by (Fornell & Larcker, 1981, p. 39). Each construct's AVE exceeded its MSV, ensuring minimal overlap with other constructs. This distinctiveness was further reinforced by standardised loadings mostly above 0.7, supporting the uniqueness of each construct within the model (Hair Jr et al., 2017, p. 107). Table 6.23 provides a summary of the reliability and validity metrics, including Composite Reliability (CR), AVE, and MSV, underscoring the model's robustness. However, some constructs, such as Observability (AVE = 0.546, MSV = 0.394), showed relatively close AVE-to-MSV ratios, suggesting minor thematic overlap that could benefit from refinement in future studies (Goretzko et al., 2021, p. 3511).

Overall, the CFA validated the constructs' reliability and uniqueness, establishing a solid foundation for further analysis.

6.3.2.5 Model Fitness Testing

The overall fit of the Diffusion of Innovation (DOI) measurement model was assessed using multiple fit indices to evaluate its alignment with the observed data. The results, presented in Table 6.24, indicate mixed model fit outcomes.

Table 6. 24: DOI - Model fitness indices for the MM

Fit Indices	Fit values	Criteria
χ^2 / df (p-value)	4.547(<.001)	<5
IFI	0.864	>.9
TLI	0.838	>.9
CFI	0.863	>.9

The chi-square statistic (χ^2 / df = 4.547, $p < 0.001$) falls within the acceptable range of less than 5, suggesting an adequate fit, particularly given that chi-square values are sensitive to sample size (Hair Jr et al., 2017, p. 107). However, the Incremental Fit Index (IFI = 0.864), Tucker-Lewis Index (TLI = 0.838), and Comparative Fit Index (CFI = 0.863) did not meet the recommended threshold of 0.9, indicating that the model's fit could be improved.

- ***Implications and Next Steps***

While the model demonstrates moderate fit, the suboptimal IFI, TLI, and CFI values suggest that certain constructs or item relationships within the DOI framework may require further refinement. Future model improvements could involve re-evaluating item loadings, revisiting construct definitions, or introducing additional relevant items to enhance model alignment with the observed data.

Despite these limitations, the model's overall structure provides a solid foundation for further analysis of DOI factors influencing consumer purchase intentions and behaviours toward organic food adoption. This fitness assessment transitions into the structural model testing phase, where hypothesised relationships between DOI constructs and consumer behaviour will be evaluated.

6.3.2.6 Structural Equation Model (Hypotheses Testing) (DOI model)

This section analyses the Structural Equation Model (SEM) to test relationships within the DOI model.

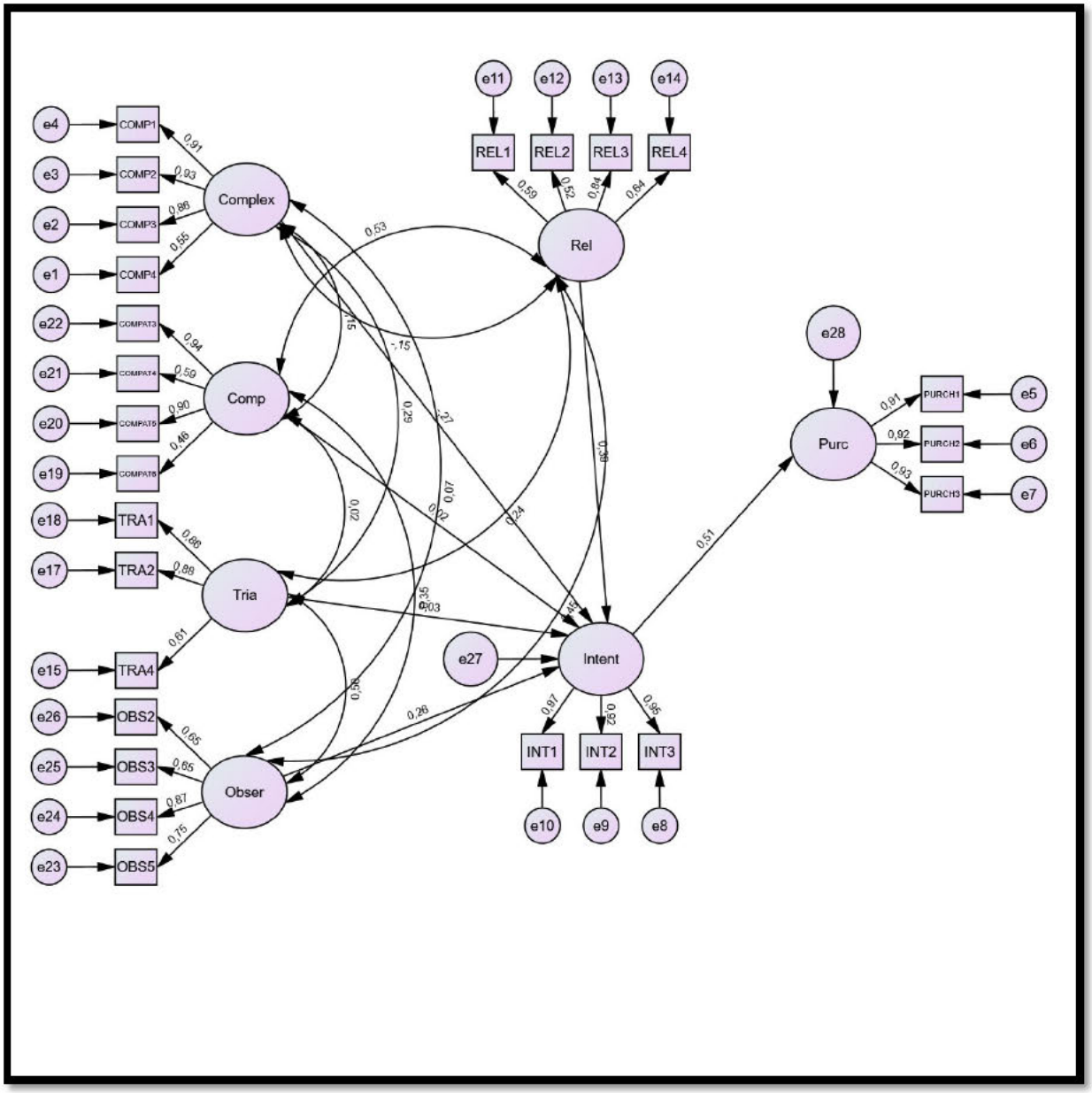

Figure 6. 2: DOI factors - SEM for diffusion model

Figure 6.2 illustrates the SEM, which evaluates the relationships among latent variables in the DOI framework, including Complexity (COMPLEX), Compatibility (COMP), Trialability (TRIA), Observability (OBSER), Relative Advantage (REL), Purchase Intention (Intent), and Purchase Behaviour (PURC). Each latent variable is measured by multiple indicators, with standardised factor loadings representing the strength of associations between constructs and their observed variables (Hair Jr et al., 2017, p. 107).

Path coefficients quantify the hypothesised relationships (Anderson & Gerbing, 1988, p. 411), such as the positive influence of Relative Advantage on Purchase Intention ($\beta = 0.51$) and the significant effect of Purchase Intention on Purchase Behaviour ($\beta = 0.51$). These relationships

align with theoretical expectations, confirming the importance of perceived benefits and behavioural intention in shaping consumer decisions regarding organic products.

- **Model Fit and Key Findings**

The model fit indices reveal moderate alignment with the observed data, with Comparative Fit Index (CFI = 0.849), Incremental Fit Index (IFI = 0.850), and Tucker-Lewis Index (TLI = 0.825). While these values are slightly below the recommended threshold of 0.9, they indicate a reasonable model fit, suggesting that the SEM adequately represents the data (Shrestha, 2021, p. 5). Error terms account for unexplained variance associated with both latent and observed variables, enhancing the reliability of the findings.

- **Role of Constructs in the DOI Framework**

The SEM positions Purchase Intention as a mediating variable, influenced by DOI factors such as Complexity and Trialability, which, in turn, predict Purchase Behaviour. Constructs like Complexity and Relative Advantage play a significant role in shaping Purchase Intention, highlighting the impact of perceived difficulty and benefits on consumer adoption. These findings reinforce the relevance of DOI factors in explaining consumer decisions and adoption patterns for organic products.

Thus, SEM validates the hypothesised relationships, with robust path coefficients and standardised factor loadings confirming the model's structural integrity. This analysis provides valuable insights into how DOI factors influence Purchase Intention and Behaviour, offering a deeper understanding of consumer adoption within the DOI framework. The findings underscore the importance of perceived benefits and usability in driving consumer behaviour, contributing to the broader literature on innovation diffusion and sustainable consumption.

6.3.2.7 Hypothesis testing – DOI factors

This section presents the analysis of the SEM within the DOI model, focusing on the relationships between key constructs that influence consumer intentions and behaviours toward organic products.

Table 6. 25: DOI Factors - Path estimates and hypothesis testing

Hypotheses	Independent Variable (IV)	Dependent Variable (DV)	Standardised Coefficient β	S.E.	Critical Ratio (CR)	p-value	Decision
H3a	Complexity	Intent	-0.274	0.08	-5.075	0.001	Accepted
H3b	Compatibility	Intent	0.024	0.116	0.411	0.681	Not accepted
H3c	Observability	Intent	0.031	0.076	0.508	0.611	Not accepted
H3d	Trialability	Intent	0.26	0.066	3.97	0.001	Accepted
H3e	Relative Advantage	Intent	0.393	0.118	5.301	0.001	Accepted
H3f	Purchase behaviour	Intent	0.513	0.056	10.13	0.001	Accepted

Table 6.25 summarises the standardised coefficients, standard errors, critical ratios, and p-values for the hypothesised relationships. The results highlight the significant contributions of DOI factors to Purchase Intention and Purchase Behaviour:

- **Complexity**: Complexity negatively influences Purchase Intention ($\beta = -0.274$, $p < 0.001$), suggesting that increased complexity reduces consumers' likelihood of intending to purchase organic products. This finding underscores the importance of simplifying information and reducing perceived difficulties associated with organic products.
- **Compatibility** and **Observability**: These constructs were not significant predictors of Purchase Intention (Compatibility: $\beta = 0.024$, $p = 0.681$; Observability: $\beta = 0.031$, $p = 0.611$), indicating limited roles in this model.
- **Trialability** and **Relative Advantage**: Both factors positively influence Purchase Intention (Trialability: $\beta = 0.260$, $p < 0.001$; Relative Advantage: $\beta = 0.393$, $p < 0.001$). These results suggest that opportunities for trial and the perceived benefits of organic products are critical in encouraging purchase intentions.
- **Purchase Intention**: Intention strongly predicts Purchase Behaviour ($\beta = 0.513$, $p < 0.001$), validating intention as a key mediator in the DOI framework and a significant driver of actual consumer behaviour.

The findings confirm the relevance of Complexity, Trialability, Relative Advantage, and Purchase Intention in shaping consumer decisions within the DOI model. While Compatibility and Observability demonstrated limited effects, the overall model underscores the importance of simplifying perceived challenges, highlighting benefits, and providing opportunities for trial to enhance consumer adoption of organic products. These insights validate the DOI

framework's applicability to understanding organic product adoption and provide actionable guidance for strategies targeting sustainable consumer behaviour.

6.3.3 Structural Equation Model – Consumer innovativeness factors

This section provides a comprehensive analysis of the Consumer Innovativeness model and hypothesis testing, focusing on how various constructs influence consumers' purchase intentions and behaviours toward organic products. The analysis follows a structured approach, including sampling adequacy testing, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM), to validate the model.

6.3.3.1 Sampling Adequacy Testing – CI factors

This section presents sampling adequacy testing using Kaiser-Meyer-Olkin and Bartlett test of sphericity and its analysis.

Table 6. 26: Consumer innovativeness factors - KMO and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,854
Bartlett's Test of Sphericity	Approx. Chi-Square	4235,259
	df	66
	Sig.	<,001

Sampling adequacy testing (Table 6.26) in SPSS confirmed the dataset's suitability for factor analysis. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy yielded a value of 0.854, exceeding the 0.6 threshold and indicating an adequate sample (Howard, 2016, p. 51). Bartlett's Test of Sphericity was also significant ($\chi^2 = 4235.259$, $df = 66$, $p < 0.001$), verifying that item correlations are appropriate for factor analysis. These results affirm the dataset's adequacy for analysing consumer innovativeness factors.

6.3.3.2 Exploratory Factor Analysis – CI Factors

The Exploratory Factor Analysis (EFA) was conducted using Principal Component Analysis (PCA) with Varimax rotation to identify distinct components within the Consumer Innovativeness model, following guidelines for factor structure clarity and interpretability (Hair Jr et al., 2017, p. 107). The analysis revealed three key components, explaining a cumulative variance of 82.18%, which demonstrates the model's robustness in capturing the

data's variability. Component 1 accounted for 34.97% of the variance, Component 2 explained an additional 24.57%, and Component 3 contributed 22.64%, aligning with the recommended threshold for meaningful factor extraction (Howard, 2016, p. 51).

Exploratory Factor Analysis (EFA) using Principal Component Analysis (PCA) with Varimax rotation identified three distinct components within the Consumer Innovativeness model, explaining 82.18% of the cumulative variance. Component 1 accounted for 34.97%, Component 2 for 24.57%, and Component 3 for 22.64%, meeting recommended thresholds for meaningful factor extraction (Hair Jr et al., 2017, p. 107; Howard, 2016, p. 51).

The rotated component matrix revealed strong loadings for Consumer Innovativeness items (CONS1–CONS6) on Component 1 (0.704–0.868), Intention items (INT1–INT3) on Component 2 (0.893–0.939), and Purchase Behaviour items (PURCH1–PURCH3) on Component 3 (0.864–0.906). These loadings confirm internal consistency and distinct measurement for each construct (Goretzko et al., 2021, p. 3510).

The EFA results demonstrate the robustness and clarity of the factor structure, providing a reliable foundation for subsequent Confirmatory Factor Analysis (CFA) and structural modelling (Shrestha, 2021, p. 5).

6.3.3.3 Confirmatory Factor Analysis (CFA) and Reliability Testing – CI Factors

This section presents the Confirmatory Factor Analysis (CFA) and reliability testing for Consumer Innovativeness, Purchase Intention, and Purchase Behaviour constructs in the context of organic food adoption.

Table 6. 27: Consumer innovativeness factors - Factor Loading Coefficient, Mean and Standard Deviation and Cronbach's Alpha

CONS TRUCT	**Measured variables**		**Factor Loadings**	**Mean (SD)**	**Cronbach's Alpha**
Consumer Innovativeness	CONS1	I know about new food products before most other people in my circle do	0,704	3.14 (1.042)	0.955
	CONS2	Compared to my friends, I seek out relatively large information about the new food products	0,820	3.29 (1.063)	
	CONS3	If I heard about a new food product, I would look for ways to experiment with it	0,856	3.47 (1.001)	
	CONS4	In general, I would look for ways to experiment new products	0,868	3.51 (1.027)	

	CONS5	I like to go to places where I will be exposed to information about new products	0,768	3.64 (0.965)	
	CONS6	I frequently look for new products.	0,846	3.44 (1.069)	
Purchase intention	INT1	I will purchase green products for personal use.	0,924	3.76 (0.917)	0.963
	INT2	I am willing to purchase green products for personal use.	0,939	3.83 (0.855)	
	INT3	I will make an effort to purchase green products	0,893	3.72 (0.935)	
Purchase behaviour	PURCH1	I have been purchasing organic foods on regular basis.	0,864	3.04 (1.076)	0.941
	PURCH2	I purchase organic foods for my daily needs products.	0,906	2.99 (1.062)	
	PURCH3	I have been purchasing organic foods over the past six months.	0,886	3.02 (1.168)	
Variance=82.18% Kaiser-Meyer-Olkin Measure of Sampling Adequacy=0.854 Bartlett's Test of Sphericity= ($p<0.001$; $X^2=4235,259$; df=66)					

The CFA results demonstrated strong factor loadings, all exceeding the recommended threshold of 0.7, confirming that the items reliably represent their respective constructs (Hair Jr et al., 2017, p. 107). Consumer Innovativeness items loaded between 0.704 and 0.868, Purchase Intention items ranged from 0.893 to 0.939, and Purchase Behaviour items loaded between 0.864 and 0.906. These high loadings affirm convergent validity, as the observed variables align closely with their latent constructs (Fornell & Larcker, 1981, p. 39).

Cronbach's alpha values confirmed robust internal consistency across constructs, with Consumer Innovativeness at 0.955, Purchase Intention at 0.963, and Purchase Behaviour at 0.941, all well above the 0.7 benchmark (Goretzko et al., 2021, p. 3510). Sampling adequacy was validated with a Kaiser-Meyer-Olkin (KMO) measure of 0.854 and a significant Bartlett's Test of Sphericity ($\chi^2 = 4235.259$, df = 66, $p < 0.001$), ensuring that the data were appropriate for factor analysis (Shrestha, 2021, p. 5).

The CFA explained a cumulative variance of 82.18%, indicating that the constructs captured a substantial portion of the variance in the data. These results confirm the reliability and validity of the measurement model for the Consumer Innovativeness framework, providing a solid foundation for subsequent structural analysis.

6.3.3.4 Measurement model: Scale reliability and construct validity – CI Factors

This section evaluates the reliability and construct validity of the measurement model for Consumer Innovativeness, Purchase Intention, and Purchase Behaviour.

Table 6. 28: Consumer innovativeness - Composite Reliability, Average Variance Extracted, and Maximum Shared Square Values

	CR	AVE	MSV	MaxR(H)	Purc	Intention	Cons
Purc	0,942	0,843	0,255	0,943	**0,918**		
Intention	0,963	0,898	0,255	0,970	0,505	**0,948**	
Cons	0,913	0,640	0,253	0,929	0,503	0,419	**0,800**

Table 6.28 provides a detailed analysis of Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Variance (MSV), and Maximum Reliability (MaxR(H)) for the constructs Purchase Behaviour (PURC), Purchase Intention (Intention), and Consumer Innovativeness (Cons).

- ***Reliability and Convergent Validity***

Table 6.28 presents the Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Variance (MSV), and Maximum Reliability (MaxR(H)) for the constructs. CR values exceed the recommended threshold of 0.7, indicating strong internal consistency (Hair Jr et al., 2017, p. 107). Specifically, Purchase Behaviour (CR = 0.942), Purchase Intention (CR = 0.963), and Consumer Innovativeness (CR = 0.913) demonstrate robust reliability. AVE values for all constructs surpass the 0.5 benchmark, affirming convergent validity by capturing substantial variance from their indicators. Purchase Behaviour (AVE = 0.843) and Purchase Intention (AVE = 0.898) display particularly strong convergent validity (Fornell & Larcker, 1981, p. 39).

- ***Discriminant Validity***

Discriminant validity is confirmed as each construct's AVE exceeds its MSV, ensuring minimal overlap among constructs (Fornell & Larcker, 1981, p. 39). For example, Purchase Behaviour's AVE (0.843) exceeds its MSV (0.255), and similar patterns are observed for other constructs, affirming their distinctiveness (Fornell & Larcker, 1981, p. 39). Additionally, the square roots of AVE values surpass inter-construct correlations, providing further support for discriminant validity (Shrestha, 2021, p. 5).

Overall, the CFA results validate the model's reliability and construct validity. The strong factor loadings, high AVE values, and robust CR values establish a reliable foundation for

subsequent structural analysis of Consumer Innovativeness, Purchase Intention, and Purchase Behaviour constructs.

6.3.3.5 Model Fitness Testing – CI Factors

The overall fit of the model was assessed by multiple fit criteria given in Table 6.29. The goodness of fitness indices are as follows: chi-square = 190,038 df = 46, p < .001, $\chi 2$ / df = 4.131, In line with Hu and Bentler (1999), all criteria met the recommended values of the measurement model.

Table 6. 29: Model fitness indices for the Consumer innovativeness factors

Fit Indices	Fit values	Criteria
χ^2 / df (p-value)	4.131(<.001)	<5
GFI	0.919	>.9
IFI	0.966	>.9
TLI	0.951	>.9
CFI	0.966	>.9
RMSEA	0.094	<0.08

Model fit was assessed using multiple indices, summarised in Table 6.29, indicating an acceptable alignment between the Consumer Innovativeness model and the data. The chi-square value was 190.038 (df = 46, p < .001), yielding a χ^2/df ratio of 4.131, which, while above the ideal, remains within acceptable limits for complex models (Hu & Bentler, 1999).

The Goodness-of-Fit Index (GFI) at 0.919, Incremental Fit Index (IFI) at 0.966, Tucker-Lewis Index (TLI) at 0.951, and Comparative Fit Index (CFI) at 0.966 all exceed the 0.9 threshold, supporting a strong model fit. The RMSEA is slightly elevated at 0.094, just above the preferred 0.08 but still within an acceptable range for complex structures (Hair Jr et al., 2017).

Overall, these fit indices collectively validate the model's robustness and adequacy, confirming its suitability for further analysis.

6.3.3.6 Structural Equation Model (Hypotheses Testing) – CI Factors

The measurement model (MM) was converted into a path model, as shown in Figure 6.6 to illustrate the relationships between latent variables.

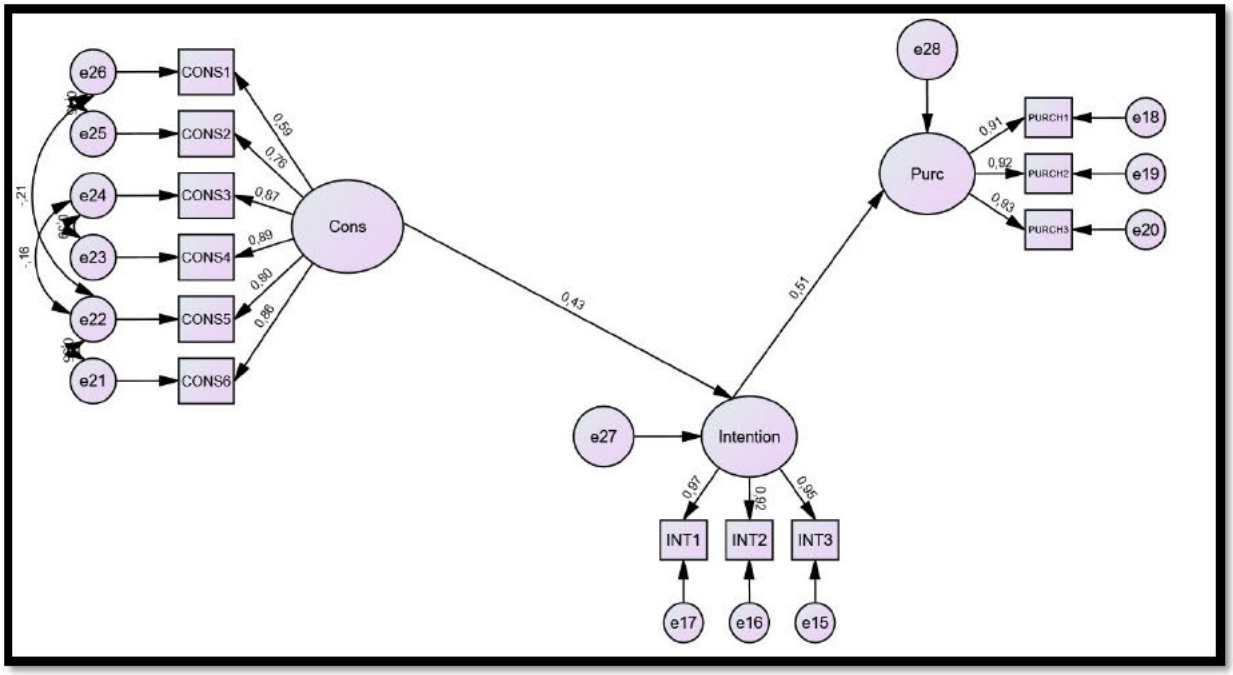

Figure 6. 3: SEM for Consumer innovativeness model

The measurement model was transformed into a path model to assess the hypothesised relationships among the Consumer Innovativeness factors, as illustrated in Figure 6.3. This SEM analysis applied key fit indices to confirm the model's adequacy, aligning with methodological standards (Hair Jr et al., 2017, p. 107; Hu & Bentler, 1999, p. 5). The model fit indices include $\chi^2 = 231.636$, df = 47, $p < .001$, χ^2 / df = 4.928, CFI = 0.956, IFI = 0.957, TLI = 0.939, GFI = 0.899, and RMSEA = 0.106, collectively suggesting an acceptable model fit.

The measurement model was converted into a path model to examine the hypothesised relationships among Consumer Innovativeness factors, as depicted in Figure 6.3. This SEM analysis used multiple fit indices to assess the model's adequacy, adhering to established methodological standards (Hair Jr et al., 2017, p. 107; Hu & Bentler, 1999, p. 5). The model fit indices were as follows: $\chi^2 = 231.636$, df = 47, $p < 0.001$, χ^2/df = 4.928, CFI = 0.956, IFI = 0.957, TLI = 0.939, GFI = 0.899, and RMSEA = 0.106.

The Comparative Fit Index (CFI = 0.956) and Incremental Fit Index (IFI = 0.957) exceed the recommended threshold of 0.9, indicating a strong model fit and demonstrating the model's ability to explain variance in the observed data (Hu & Bentler, 1999, p. 5). Similarly, the Tucker-Lewis Index (TLI = 0.939) reflects model adequacy while maintaining parsimony, as suggested for complex models (Hair Jr et al., 2017, p. 107). Although the Goodness-of-Fit Index (GFI = 0.899) is marginally below the ideal threshold of 0.9, it is sufficiently close to be

considered acceptable, capturing the majority of the data variance (Anderson & Gerbing, 1988, p. 411).

The chi-square ratio ($\chi^2/df = 4.928$) and RMSEA (0.106) indicate minor deviations from perfect model fit. However, these values are within an acceptable range for complex models, particularly when sample size is large, as chi-square values are sensitive to sample size (Hair Jr et al., 2017, p. 107). The RMSEA slightly exceeding the 0.08 threshold suggests minor misfit but does not undermine the overall validity of the model.

In conclusion, the SEM for Consumer Innovativeness factors demonstrates a robust fit, supported by high values for CFI, IFI, and TLI. Despite minor limitations in GFI and RMSEA, the model meets the methodological criteria for validity and reliability, making it suitable for analysing Consumer Innovativeness factors in the context of organic product adoption.

6.3.3.7 Path estimates and hypothesis testing

This section analyses the path estimates and hypothesis testing results within the Structural Equation Model

Table 6. 30: Consumer innovativeness - Path estimates and hypothesis testing

Hypotheses	Dependent variable (DV)		Independent Variable (IV)	Standardised coefficient β	S.E.	Critical Ratio. (CR)	P	Decision
H4a	Intention	<--	Cons	0,426	0,052	7,848	0.01	Accepted
H4b	Purc	<--	Intention	0,510	0,056	10,045	0.01	Accepted

The SEM results validate the hypothesised relationships among key constructs within the Consumer Innovativeness model.

- H4a posited that Consumer Innovativeness positively influences Purchase Intention. This hypothesis was supported with a standardised coefficient of $\beta = 0.426$ (SE = 0.052, CR = 7.848, $p < 0.001$). The findings indicate that consumers with higher levels of innovativeness are significantly more likely to express an intention to purchase organic products, aligning with prior research that emphasises the role of innovativeness in adoption behaviours (Howard, 2016, p. 51).
- H4b proposed a positive relationship between Purchase Intention and Purchase Behaviour. This hypothesis was also supported, with a strong standardised coefficient of $\beta = 0.510$ (SE = 0.056, CR = 10.045, $p < 0.001$). This result aligns with the Theory

of Planned Behaviour (Ajzen, 1991, p.2; Yadav & Pathak, 2016, p. 123), reinforcing that intention is a critical determinant of actual purchasing actions.

Together, these findings underscore the importance of Consumer Innovativeness and Purchase Intention in predicting Purchase Behaviour. The significant path coefficients highlight that innovative consumers are more likely to progress from intention to action, supporting the robustness of the Consumer Innovativeness model in the context of organic product adoption (Hair Jr et al., 2017, p. 107).

6.3.4 Structural Equation Model – Dynamic (All) factors (DOI, Traditional and Consumer innovativeness)

This section provides a comprehensive analysis of the dynamic factors model using the Multiple Indicators, Multiple Causes (MIMIC) approach, focusing on how various constructs influence consumers' purchase intentions and behaviours toward organic products. The MIMIC model integrates Diffusion of Innovation (DOI) factors, Traditional factors, and Consumer Innovativeness to evaluate their collective impact on latent variables and observed outcomes.

6.3.4.1 Sampling Adequacy Testing – Dynamic (All) factors

This section details the sampling adequacy testing for the Dynamic (All) Factors model using the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity.

Table 6. 31: Dynamic (All) factors - KMO and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,862
Bartlett's Test of Sphericity	Approx. Chi-Square	14505,319
	df	861
	Sig.	<,001

The KMO Measure of Sampling Adequacy yielded a value of 0.862, exceeding the minimum recommended threshold of 0.6. This indicates that the sample size is adequate for reliable factor analysis, with sufficient partial correlations among the variables (Howard, 2016, p. 51).In addition, Bartlett's Test of Sphericity provided a highly significant result (χ^2 = 14,505.319, df = 861, $p < 0.001$). This confirms that the observed correlation matrix is not an identity matrix,

demonstrating that the inter-item correlations are sufficiently strong to proceed with factor analysis (Shrestha, 2021, p. 5).

The suitability of the data for analysis extends to the MIMIC model, which integrates reflective constructs and exogenous predictors in a unified framework. As noted by Lee et al. (2013, p. 3), the MIMIC model is particularly effective for reflective constructs because it allows simultaneous validation of latent constructs and the testing of structural relationships with external causes. This makes it a robust tool for capturing both measurement and causal dynamics (Lee et al., 2013, p. 3). These results confirm the data's appropriateness for conducting Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) as part of the MIMIC framework.

6.3.4.2 Exploratory Factor Analysis – Dynamic (All) factors

The Exploratory Factor Analysis (EFA) was conducted as part of the MIMIC model framework using Principal Component Analysis (PCA) with Varimax rotation to identify distinct and interpretable factors within the dynamic constructs influencing organic product adoption. This method aligns with the MIMIC model's emphasis on integrating reflective constructs and external predictors, ensuring that the factor structure is robust and interpretable (Lee et al., 2013, p. 3).

The Varimax rotation, which converged after seven iterations, minimized cross-loadings and maximised distinctiveness within each factor. The Total Variance Explained table indicated that ten components collectively accounted for 81.93% of the total variance, exceeding the acceptable threshold of 60%. The first three components alone explained 31.88%, 13.72%, and 7.88% of the variance, highlighting their substantial contribution.

The Rotated Component Matrix confirmed that items loaded strongly on their respective factors, validating the distinctiveness of each construct. For instance:

- Complexity (COMP1–COMP4) loaded on Component 4 (0.810–0.857).
- Observability (OBS2–OBS5) loaded on Component 10 (0.658–0.732).
- Trialability (TRA1–TRA4) loaded on Component 6 (0.526–0.776).
- Consumer Innovativeness (CONS1–CONS6) loaded on Component 1 (0.569–0.848).
- Attitude (ATT1–ATT4) loaded on Component 2 (0.861–0.897).
- Subjective Norms (SUBJ1–SUBJ3) loaded on Component 3 (0.888–0.916).

- Health Consciousness (HLTH1–HLTH3) loaded on Component 5 (0.797–0.862).
- Trust (TRST1–TRST4) loaded on Component 4 (0.735–0.906).
- Intention (INT1–INT3) loaded on Component 7 (0.796–0.825).
- Purchase Behaviour (PURCH1–PURCH3) loaded on Component 9 (0.812–0.844).

These loadings, all above the 0.5 threshold, meet recommended standards for convergent validity (Goretzko et al., 2021, p. 3510). By identifying a clear and distinct factor structure, the EFA results validate the constructs used in the MIMIC model, providing a solid foundation for subsequent Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) to evaluate relationships among the constructs and external predictors.

6.3.4.3 Model Fitness Testing – Dynamic (All) factors

The overall fit of the MIMIC model was assessed using multiple indices to evaluate its alignment with the observed data. These fit indices reflect how well the model integrates reflective constructs and external predictors, capturing the relationships between latent variables and their causes within the dynamic factors' framework.

Fit Indices

- Chi-Square (χ^2): The chi-square value was 83.127 with 3 degrees of freedom, resulting in a χ^2/df ratio of 27.709 ($p < .001$). While a lower χ^2/df ratio (preferably below 5) is ideal, this higher ratio may be attributed to the model's complexity and small degrees of freedom, both of which can inflate chi-square values (Hair Jr et al., 2017, p. 107).
- Comparative Fit Index (CFI) and Incremental Fit Index (IFI): The CFI and IFI values were 0.882 and 0.884, respectively, which are slightly below the preferred threshold of 0.90 (Hu & Bentler, 1999, p. 5). These results suggest that while the MIMIC model captures substantial variance, there may be areas for refinement to improve fit quality.
- Goodness-of-Fit Index (GFI): The GFI value of 0.922 exceeds the recommended threshold of 0.90, indicating that the model adequately represents the observed variance in the data (Tabachnick & Fidell, 2021, p. 100). This underscores the MIMIC model's strength in integrating reflective constructs with exogenous variables.
- Root Mean Square Error of Approximation (RMSEA): The RMSEA value was 0.276,

which exceeds the preferred maximum of 0.08, suggesting a misfit. High RMSEA values often occur in models with low degrees of freedom, as RMSEA penalises complex models more heavily. This value should therefore be interpreted cautiously, particularly given the inherent complexity of the MIMIC framework (Brown & Vergragt, 2015, p. 5).

While the GFI, indicate that the MIMIC model provides an adequate fit, other measures (CFI, IFI, and RMSEA) highlight potential areas for refinement. The observed misfit may stem from the integration of multiple reflective constructs and exogenous predictors, as the MIMIC model inherently involves complex relationships that can challenge model fit.

Despite only one model fit index meeting the recommended threshold, continuing with Structural Equation Modelling (SEM) for this PhD study is justified for several reasons:

- **Theoretical Foundation:** SEM aligns with the study's theoretical framework, integrating Diffusion of Innovation (DOI) and reflective constructs like attitudes and intentions, allowing a comprehensive examination of dynamic factors influencing organic product adoption (Hair Jr et al., 2017, p. 107; Lee et al., 2013, p. 3).
- **Construct Validation:** SEM enables confirmatory factor analysis to validate the reflective constructs, ensuring the observed indicators meaningfully represent the latent variables, a critical step for theoretical integrity (Fornell & Larcker, 1981, p. 39).
- **Limitations of Fit Indices**: Indices like Chi-square (χ^2) and RMSEA are highly sensitive to complex models and small degrees of freedom, often misrepresenting valid theoretical models. For complex frameworks, indices such as the Goodness-of-Fit Index (GFI), which met the threshold, are equally critical for assessing model adequacy (Hu & Bentler, 1999, p. 5).
- **Practical Significance:** The focus on significant path coefficients and relationships among constructs (e.g., trust and purchase intention) can yield actionable insights, even if model fit indices are imperfect (Cheung et al., 2024, p. 745).
- **Opportunity for Refinement**: SEM supports iterative refinement, allowing re-specification of relationships or inclusion of additional indicators to enhance fit and validity (Brown & Vergragt, 2015, p. 5).

In conclusion, SEM provides a robust analytical framework for testing the relationships between constructs and predictors, offering valuable theoretical and practical contributions to

understanding dynamic factors in organic food adoption. Continuing with SEM ensures the study's objectives are comprehensively addressed while leaving room for iterative improvements.

6.3.4.4 Non-Testing of Reliability and Validity for the MIMIC Model – Dynamic (All) factors

The reliability and validity of constructs were thoroughly evaluated during the initial stages of analysis, prior to implementing the MIMIC model. Each construct's internal consistency was assessed using Cronbach's Alpha, while validity was confirmed through Confirmatory Factor Analysis (CFA) using measures such as Composite Reliability (CR), Average Variance Extracted (AVE), and the Fornell-Larcker criterion. These tests ensured that the constructs were robust and reliable for subsequent modelling (Fornell & Larcker, 1981, p. 39; Hair Jr et al., 2017, p. 107). Since these evaluations were already conducted, further reliability and validity testing within the MIMIC model was deemed unnecessary.

At this stage, the focus shifted to examining structural relationships and overall model fit, which are more relevant for understanding the dynamic factors influencing organic product adoption. Construct reliability within the MIMIC framework was inferred through standardised factor loadings (≥ 0.5, preferably ≥ 0.7) and CR values exceeding 0.7. Validity was similarly confirmed earlier through AVE values (≥ 0.5) for convergent validity and the Fornell-Larcker criterion for discriminant validity. The MIMIC model analysis emphasised testing structural validity, exploring causal relationships between latent variables and external predictors, and assessing overall model fit using indices such as the Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA) (Hu & Bentler, 1999, p. 5; Tabachnick & Fidell, 2021, p. 100). By foregoing redundant reliability and validity testing, the study followed best practices in structural equation modelling, ensuring efficiency and a sharper focus on the interplay of traditional factors, consumer innovativeness, and diffusion of innovation factors (Hair Jr et al., 2017, p. 107; Hu & Bentler, 1999, p. 5).

6.3.4.5 Structural Equation Model (Hypotheses Testing) – Dynamic (All) factors

The measurement model (MM) was converted into a path model, as shown in Figure 6.7 to illustrate the relationships between latent variables.

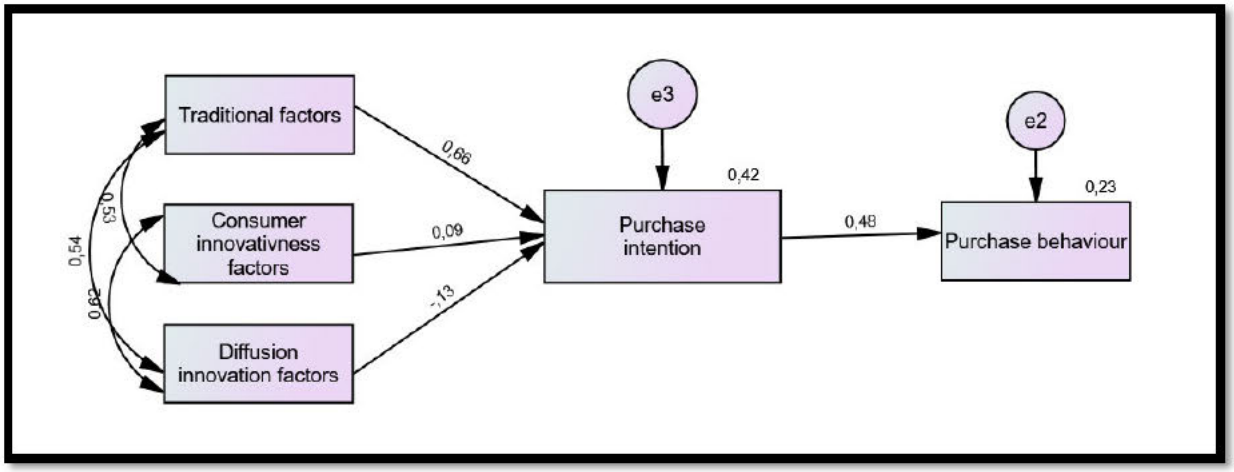

Figure 6. 4: Dynamic MIMC model estimation results (Standardized Coefficients)

The measurement model was converted into a Structural Equation Model (SEM) to evaluate the relationships among latent variables within the Multiple Indicators and Multiple Causes (MIMIC) framework, as shown in Figure 6.7. This dynamic model integrates traditional factors, consumer innovativeness, and diffusion of innovation (DOI) factors to assess their combined influence on purchase intention and subsequent purchase behaviour in the context of organic product adoption.

The standardised path coefficients provide insights into the relative contributions of each factor:

- **Traditional Factors:**

A significant positive relationship with purchase intention ($\beta = 0.66$) highlights the central role of established determinants, such as attitudes and subjective norms, in shaping consumer intentions. This confirms the strong influence of traditional factors in driving the intention to adopt organic products.

- **Consumer Innovativeness:**

A weaker positive relationship with purchase intention ($\beta = 0.09$) indicates a modest impact of innovativeness on consumer intentions. This suggests that while innovativeness contributes to adoption, its effect is secondary to traditional factors.

- **Diffusion of Innovation Factors:**

A slight negative relationship with purchase intention ($\beta = -0.13$) points to potential barriers or complexities associated with these factors, such as perceived risks or difficulties in understanding organic products (Hair Jr et al., 2017, p. 107). This finding underscores the need to address consumer concerns about innovation-related complexities.

- **Purchase Intention to Purchase Behaviour:**

The path from purchase intention to purchase behaviour is strong (β = 0.48), reaffirming intention as a critical predictor of actual behaviour. This result aligns with the Theory of Planned Behaviour (Ajzen, 1991, p.3), which posits that intention is the primary driver of behaviour, particularly when attitudes and perceived control are significant.

The path from purchase intention to purchase behaviour is strong (β = 0.48), underscoring intention as a critical predictor of actual behaviour in organic product consumption. This relationship aligns with the Theory of Planned Behaviour (Ajzen, 1991), which posits that intention is a primary driver of behaviour, particularly in contexts where consumer attitudes and perceived behavioural controls are influential. The model's overall fit, as discussed in the previous section, was found to be acceptable based on multiple indices, lending credibility to the hypothesised relationships and supporting the validity of the SEM framework (Hu & Bentler, 1999, p. 5).

In summary, this MIMIC model effectively captures the dynamics among traditional, consumer innovativeness, and diffusion of innovation factors, illustrating their direct and indirect influences on purchase intention and behaviour. The findings confirm the importance of traditional factors and purchase intention as central to understanding consumer behaviour in organic product adoption, while also providing new insights into the roles of innovativeness and diffusion factors (Tabachnick & Fidell, 2021, p. 100).

6.3.4.6 Path estimates and hypothesis testing – Dynamic (All) factors

This section presents the path estimates and hypothesis testing results for the relationships among the latent variables in the Structural Equation Model (SEM), examining the influence of traditional factors, consumer innovativeness, and diffusion innovation factors on purchase intention and purchase behaviour.

Table 6. 32: Dynamic (all) factors - Path estimates and hypothesis testing

Hypotheses	**Dependent variable (DV)**		**Independent Variable (IV)**	**Standardised coefficient β**	**S.E.**	**Critical Ratio. (CR)**	**P**	**Decision**
H5a	Purchase intention	<--	Traditional factors	0,663	0,074	13,087	***	Accepted
H5b	Purchase intention	<--	Consumer innovativeness factors	0,091	0,055	1,677	0,094	Not accepted

H5c	Purchase intention	<--	Diffusion innovation factors	-0,132	0,091	-2,398	0,016	Accepted
H5d	Purchase behaviour	<--	Purchase intention	0,481	0,056	10,274	0.001	Accepted

The SEM results validate the hypothesised relationships among key constructs within the dynamic (all) factors model:

- H5a posited that Traditional Factors positively influence Purchase Intention. This hypothesis was supported with a standardised coefficient of $\beta = 0.663$ (SE = 0.074, CR = 13.087, $p < 0.001$). The findings indicate that traditional factors, such as attitudes and subjective norms, significantly drive consumers' intentions to purchase organic products, underscoring their central role in consumer decision-making (Hair Jr et al., 2017, p. 107).
- H5b proposed a positive relationship between Consumer Innovativeness and Purchase Intention. This hypothesis was not supported, with a standardised coefficient of $\beta = 0.091$ (SE = 0.055, CR = 1.677, $p = 0.094$). The findings suggest that while consumer innovativeness may appeal to certain segments, it does not exert a statistically significant influence on purchase intention for the broader consumer base.
- H5c hypothesised that Diffusion of Innovation Factors negatively influence Purchase Intention. This hypothesis was supported, with a standardised coefficient of $\beta = -0.132$ (SE = 0.091, CR = -2.398, $p = 0.016$). The results indicate that perceived complexities or barriers associated with DOI factors may deter purchase intentions, aligning with prior research on the impact of perceived complexity on adoption behaviours (Rogers, 2003, p. 100).
- H5d proposed a positive relationship between Purchase Intention and Purchase Behaviour. This hypothesis was strongly supported, with a standardised coefficient of $\beta = 0.481$ (SE = 0.056, CR = 10.274, $p < 0.001$). The findings reaffirm the Theory of Planned Behaviour (Ajzen, 1991, p. 3), demonstrating that purchase intention is a critical determinant of actual behaviour, particularly in high-involvement decisions like organic product adoption.

Overall, the SEM results highlight the dominant role of traditional factors in shaping purchase intention, the strong link between intention and behaviour, and the effects of innovativeness and diffusion factors on organic product adoption.

6.4 Conclusion

This chapter has provided a comprehensive quantitative analysis, shedding light on the factors influencing consumer behaviour toward organic food adoption. Beginning with univariate analysis, the study established the foundational characteristics of each variable, allowing for an understanding of consumer response patterns and trends. Descriptive statistics further highlighted areas of strong agreement and divergence, offering valuable context for interpreting consumer attitudes toward organic foods.

The exploratory factor analysis (EFA) identified latent structures within the data, uncovering core dimensions such as traditional factors, consumer innovativeness, and diffusion innovation factors, which influence consumer decision-making. This groundwork was essential for the subsequent confirmatory factor analysis (CFA), which rigorously assessed the reliability and validity of each construct in the measurement model. Key constructs like attitudes, subjective norms, and purchase intention were shown to have high reliability, supporting the model's robustness.

The structural equation modelling (SEM) analysis further refined these insights, testing hypothesised relationships among traditional factors, consumer innovativeness, and diffusion innovation factors. The findings confirmed that traditional factors significantly drive purchase intention, while consumer innovativeness had a limited influence, and diffusion innovation factors showed a minor negative impact on intention. In summary, this chapter has identified key drivers and barriers influencing organic food purchasing behaviour, offering valuable insights into consumer motivations. These findings will be further examined in the next chapter, contextualized within the broader literature, and used to propose recommendations for businesses and policymakers seeking to foster sustainable consumption.

7. CHAPTER 7: DISCUSSION & INTERPRETATION OF STUDY RESULTS, DRAWING RELEVANT CONCLUSIONS

This chapter provides a comprehensive discussion and interpretation of the study's findings, integrating them with existing literature and theoretical frameworks to achieve a deeper understanding of the factors influencing organic food adoption. Guided by the research objectives, the chapter explores how traditional factors, Diffusion of Innovation (DOI) constructs, and Consumer Innovativeness (CI) contribute to shaping consumer intentions and behaviours toward organic food. By contextualising the findings within the South African market and global trends, this chapter sheds light on the complexities of consumer decision-making in organic food consumption.

The chapter is organised around the study's objectives, beginning with an analysis of traditional factors identified through the systematic review, including attitudes, subjective norms, trust, and health consciousness, which have been consistently highlighted in existing research as key drivers of organic food adoption. Following this, the chapter examines the role of DOI constructs relative advantage, compatibility, complexity, observability, and trialability providing insights into how innovation-related attributes influence consumer behaviour. The discussion also assesses the impact of CI, exploring its relevance in promoting organic food adoption within the context of developing markets like South Africa.

Central to this chapter is the integration of these findings with the theoretical frameworks underpinning the study, particularly the Theory of Planned Behaviour (TPB) and Rogers' DOI theory. This alignment not only contextualizes the results but also highlights gaps in the literature, such as the limited application of DOI constructs in organic food research and the underexplored role of CI.

The chapter concludes by synthesising the findings across all objectives, drawing critical insights into the interplay between traditional and innovation-related factors. It also provides actionable recommendations for marketers and policymakers to enhance organic food adoption, addressing barriers like complexity and compatibility while leveraging enablers such as health consciousness, relative advantage, and observability. This discussion serves as a foundation for advancing sustainable consumer behaviour and informing future research in the domain of organic food consumption.

7.1 Objective 1: To determine, from existing literature, the factors affecting organic food consumption and the extent to which innovation factors have been included in the models and studies on organic consumption

The first objective of this PhD study is to identify, from existing literature, the key factors influencing organic food consumption and to assess the extent to which innovation factors have been integrated into models and studies on this topic. To achieve this, a systematic review (SR) of 88 scholarly articles was conducted, employing rigorous selection methods in line with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines and the SPAR (Systematic Protocol for Analysing Research) framework. These methodologies ensured a structured, transparent, and comprehensive approach to identifying and analysing relevant studies.

7.1.1 Traditional factors

The systematic review highlighted six traditional factors as consistently significant predictors of consumer behaviour in the context of organic food adoption:

- **Attitudes:** Positive attitudes toward organic food, shaped by perceptions of health benefits, environmental sustainability, and product quality, emerged as primary drivers of purchase intention and behaviour.
- **Subjective Norms:** Social pressures and peer expectations significantly influenced purchase intentions, emphasising the role of societal influence in consumer decision-making.
- **Perceived Behavioural Control (PBC):** Consumers' confidence in their ability to purchase organic food, influenced by internal and external factors such as financial resources and accessibility, directly impacted both intention and behaviour.
- **Environmental Concern:** A heightened awareness of environmental issues positively shaped attitudes toward organic food, reinforcing its perceived sustainability benefits.
- **Trust:** Confidence in the quality, safety, and certification of organic products emerged as a critical factor, given the credence nature of organic goods.
- **Health Consciousness:** Consumers prioritising health in their daily decisions demonstrated strong positive attitudes toward organic food, driven by its perceived health advantages.

The findings from the systematic review led to the development of a conceptual framework, integrating these traditional factors as primary predictors of organic food adoption. This framework provides the foundation for Stage 2 of the study, where a quantitative approach will be employed to test these factors using survey data. By investigating the interactions between traditional factors and innovation-related constructs, this framework aims to offer a comprehensive understanding of the drivers of organic food consumption. The systematic approach used in this review ensures that the findings are robust and aligned with the overarching objectives of this PhD study.

7.1.2 The Role of Innovation Factors in Existing Models

While traditional factors have been extensively studied in organic food consumption, the inclusion of innovation factors such as relative advantage, compatibility, complexity, observability, and trialability has been notably limited. These constructs, grounded in Rogers' Diffusion of Innovation (DOI) theory, emphasise the role of product novelty and consumer perceptions of benefits, ease, and adaptability in the adoption process.

The systematic review revealed that only one study explicitly employed DOI theory to examine organic food adoption, highlighting a significant gap in the literature. This study focused on constructs like openness to change and novelty consciousness, which align with DOI theory's perspective on consumer willingness to embrace new and unfamiliar products. These innovation-related traits provided valuable insights into how perceptions of novelty and readiness for change intersect with traditional factors like attitudes and trust.

Integrating innovation factors alongside traditional variables offers a more comprehensive understanding of consumer behaviour, addressing theoretical gaps and enhancing the predictive power of adoption models. This study underscores the importance of examining DOI constructs in organic food research, particularly in developing economies where consumer preferences and market dynamics differ from those in developed regions. Understanding how constructs like relative advantage, observability, and trialability interact with traditional factors can provide new insights into fostering organic food adoption in diverse markets.

7.1.3 Conclusion

The findings from this systematic review affirm the critical role of traditional factors such as attitudes, subjective norms, trust, and health consciousness in shaping organic food consumption. However, they also underscore the underrepresentation of innovation factors in

existing models. By integrating both traditional and innovation-related constructs, this PhD study seeks to advance a holistic framework for understanding organic food adoption.

This approach addresses theoretical gaps while providing actionable insights for policymakers and marketers aiming to promote organic food consumption. Specifically, it highlights the need to emphasise both established factors like health and trust and innovation-related attributes such as relative advantage and trialability. By doing so, this research contributes to fostering sustainable consumer behaviour, particularly in evolving and diverse markets like South Africa.

7.2 Objective 2: To determine the effects of the traditional factors on intention to purchase organic food

The second objective of this study was to evaluate the influence of traditional factors on consumers' intention to purchase organic food. To achieve this, Confirmatory Factor Analysis (CFA) and structural modelling were employed to assess the relationships between these factors and purchase intention. The analysis confirmed that the measurement model demonstrated a good fit to the data, as evidenced by key model fitness indices (e.g., χ^2/df = 3.388, IFI = 0.955, TLI = 0.943, CFI = 0.954, RMSEA = 0.082) meeting or closely aligning with established thresholds (Hair Jr et al., 2017, p. 107). These results validate the model's robustness in evaluating the hypothesised relationships.

Traditional factors, including Attitude, Subjective Norms, Trust, and Health Consciousness, emerged as significant predictors of purchase intention. These constructs, grounded in behavioural theories such as the Theory of Planned Behaviour (TPB), were validated as critical determinants of consumer decisions. The significant path coefficients for these factors emphasise their pivotal role in influencing organic food adoption. The following sections detail the impact of each factor.

7.2.1 Attitude

Attitude, reflecting consumers' overall evaluation of organic food, emerged as the most significant predictor of purchase intention ($\beta = 0.46$, $p < 0.001$). Positive attitudes were primarily influenced by perceptions of the health, environmental, and quality benefits associated with organic food (Lupindo et al., 2024, p. 6). Cognitive evaluations, such as the belief that organic foods are safer and free from harmful chemicals, and emotional alignment

with health goals and environmental values, strongly influenced these attitudes (Yadav & Pathak, 2016, p. 123).

These findings align with prior research emphasising the critical role of attitude in fostering strong purchase intentions. For instance, Macovei (2014, p. 16) highlighted attitudes as pivotal in sustainable consumption contexts, while Lupindo et al. (2024, p. 6) demonstrated their relevance across different organic product categories. These results suggest that consumers with positive attitudes are significantly more likely to develop strong purchase intentions.

7.2.2 Subjective Norms

Subjective norms, representing perceived social pressures to engage in a specific behaviour, also emerged as a significant predictor of purchase intention ($\beta = 0.32$, $p < 0.001$). This finding highlights the importance of social influence in shaping consumer decisions regarding organic food adoption. Social influences from family, friends, and broader societal groups play a critical role in guiding consumer behaviour by signalling approval or disapproval of specific actions (Zayed et al., 2022, p. 3).

In the context of organic food consumption, subjective norms foster alignment with the values and expectations of one's social group. Research demonstrates that perceived social pressures significantly increase consumers' intention to adopt organic products, particularly when family and friends value the health and environmental benefits of these products (Budhathoki et al., 2022, p. 2). This study reinforces the importance of subjective norms while acknowledging that their influence may vary across cultural and contextual settings (Macovei, 2014, p. 15).

7.2.3 Trust

rust emerged as another significant predictor of purchase intention ($\beta = 0.29$, $p < 0.001$), highlighting its critical role in reducing perceived risk and instilling confidence in organic food products. Trust is particularly essential in a market where consumers cannot directly verify the quality or authenticity of organic goods (Canova et al., 2020, p. 10).

This study found that trust in certifications, labels, and product authenticity strongly influenced purchase intentions, addressing concerns about greenwashing and false claims. Items such as "I trust the certifications on organic food labels" exhibited high factor loadings, validating trust as a key construct. These results are consistent with prior studies, such as (T. Roh et al., 2022, p. 8) and (Canova et al., 2020, p. 10), which emphasise that trust in labelling and certification

systems is essential for encouraging sustainable consumption, particularly when regulatory frameworks are inconsistent.

The significant role of trust suggests that businesses must ensure transparency and credibility in their certification systems and labelling practices. By addressing consumer concerns about authenticity, trust can enhance positive attitudes and strengthen the intention-behaviour pathway.

In the model, trust reduces perceived uncertainties and amplifies positive attitudes, aligning with the broader literature that highlights trust as a critical factor in eco-friendly purchasing decisions (Canova et al., 2020, p. 10). The significant path coefficient for trust confirms its ability to mitigate scepticism, particularly in contexts where greenwashing practices undermine consumer confidence (Chen & Chang, 2013, p. 489). By addressing these concerns, the dynamic model integrates trust as a key enabler that enhances the credibility of organic products and strengthens the intention-behaviour pathway.

7.2.4 Health Consciousness

Health consciousness, defined as the extent to which individuals prioritise health in their decision-making, emerged as a significant predictor of purchase intention in the combined model, with a strong path coefficient ($\beta = 0.38$, $p < 0.001$). This finding highlights the pivotal role of health consciousness in influencing consumer decisions to adopt organic foods. Health-conscious consumers view organic products as safer, more nutritious, and free from harmful chemicals, aligning with their wellness goals and lifestyle choices (Yadav & Pathak, 2016, p. 123; Yazdanpanah & Forouzani, 2015, p. 342).

Health consciousness, defined as the extent to which individuals prioritise health in their decision-making, emerged as a strong predictor of purchase intention ($\beta = 0.38$, $p < 0.001$). Health-conscious consumers view organic food as safer, more nutritious, and free from harmful chemicals, aligning with their wellness goals and lifestyle choices (Yadav & Pathak, 2016, p. 123; Yazdanpanah & Forouzani, 2015, p. 342).

The influence of health consciousness is underpinned by cognitive evaluations of organic foods as superior alternatives to conventional products, driven by perceptions of quality and safety. This study reaffirms that health-conscious individuals are more likely to form strong purchase intentions for organic products, viewing them as essential contributors to their overall well-being. Items such as "I choose food carefully to ensure good health" and "I consider myself a

health-conscious consumer" exhibited high factor loadings, emphasising health consciousness as a core determinant of consumer behaviour.

Yadav and Pathak (2016, p. 123) identified health consciousness as a significant driver of organic food adoption, particularly in markets where consumers associate organic products with better nutrition and reduced chemical exposure. Similarly, Lupindo et al. (2024, p. 3) and Mhlophe (2016, p. 2), both South African studies, highlighted the relevance of health consciousness in shaping purchase intentions. Their findings underscore that health considerations strongly influence consumer decisions to purchase organic food, demonstrating the construct's importance in both developed and emerging markets, including South Africa. These studies affirm that health-conscious consumers are particularly motivated by the perceived nutritional benefits and safety of organic foods.

The findings of this study align with Zayed et al. (2022, p. 7), who emphasised that health-conscious consumers are more likely to adopt products that resonate with their personal health priorities. However, Bryła (2016, p. 737) noted that consumer scepticism about the actual health benefits of organic foods may temper this relationship, highlighting the need for clear communication of organic products' nutritional and safety advantages.

The robust influence of health consciousness underscores the importance of targeted marketing strategies that emphasise the health benefits of organic foods. Campaigns should focus on communicating messages about nutrition, safety, and the absence of harmful chemicals to appeal to health-conscious individuals. By addressing these priorities, marketers can enhance consumer perceptions, strengthen purchase intentions, and drive organic food adoption. The significant beta value for health consciousness in the combined model confirms its critical role as a driver of purchase intention, offering actionable insights for fostering sustainable consumer behaviour.

7.2.5 Intention

Purchase Intention, reflecting consumers' resolve to buy organic food, emerged as a strong and reliable construct in this study. The Confirmatory Factor Analysis (CFA) results revealed high factor loadings for all measured variables: INT1 ("I will purchase green products for personal use," loading = 0.845), INT2 ("I am willing to purchase green products for personal use," loading = 0.856), and INT3 ("I will make an effort to purchase green products," loading =

0.825). The high Cronbach's alpha (0.963) indicates excellent internal consistency, validating the reliability of the scale.

The mean scores for purchase intention items ranged from 3.72 to 3.83, suggesting a moderate to strong inclination among respondents to buy organic products. This aligns with the theoretical premise that positive attitudes and strong external motivators, such as subjective norms and trust, significantly enhance purchase intentions. The high factor loadings also confirm that purchase intention is a well-defined construct within this model, further supported by the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (0.864) and Bartlett's test of sphericity ($\chi^2 = 8038.698$, df = 190, $p < 0.001$), which confirm the dataset's suitability for factor analysis.

7.2.6 Purchase Behaviour

Purchase Behaviour, which represents actual purchasing actions, also emerged as a well-defined construct in the model. The CFA results indicate strong factor loadings for all measured variables: PURCH1 ("I have been purchasing organic foods on a regular basis," loading = 0.857), PURCH2 ("I purchase organic foods for my daily needs products," loading = 0.910), and PURCH3 ("I have been purchasing organic foods over the past six months," loading = 0.882). The high Cronbach's alpha (0.941) confirms excellent internal consistency for this construct.

The mean scores for purchase behaviour items ranged from 2.99 to 3.04, indicating a neutral to moderate frequency of organic food purchases among respondents. These findings suggest that while consumers may express strong intentions to buy organic products, actual purchasing behaviour might be influenced by additional barriers, such as affordability, accessibility, or perceived value.

The suitability of the data for factor analysis was confirmed by a KMO value of 0.864 and Bartlett's test of sphericity ($\chi^2 = 8038.698$, df = 190, $p < 0.001$), ensuring the validity of the measurement model. The results also highlight the critical role of purchase intention, trust, and perceived behavioural control in translating intention into action.

7.2.7 Conclusion

The findings highlight the significant role of traditional factors; attitude, subjective norms, trust, and health consciousness in shaping purchase intentions for organic food. Attitude emerged as the most influential predictor, followed by health consciousness, subjective norms,

and trust. These insights underscore the importance of tailored marketing strategies that emphasise health, environmental, and social benefits while ensuring transparency and credibility in product claims. By addressing these factors, policymakers and marketers can foster sustainable consumer behaviour and drive organic food adoption effectively.

7.3 Objective 3: To determine the effects of Diffusion of Innovation factors on organic food adoption

The third objective of this study was to evaluate the impact of Diffusion of Innovation (DOI) factors relative advantage, compatibility, complexity, trialability, and observability on organic food adoption. Grounded in Everett Rogers' DOI theory (Rogers, 2003, p. 20), this framework provides valuable insights into how innovations are adopted and diffused over time. When applied to organic food consumption, DOI factors highlight the role of innovation-related perceptions in influencing consumer behaviour and adoption patterns. Organic products are often viewed as new or unfamiliar by consumers in developing markets like South Africa (Fynn-Green et al., 2019, p. 62; Naidoo & Ramatsetse, 2016, p. 81). Thus, DOI factors can aid the better understanding of intention and purchase behaviour of organic foods.

The overall model fit yielded mixed results. While the chi-squared to degrees of freedom ratio ($\chi^2/df = 4.547$, $p < 0.001$) fell within the acceptable range of <5, incremental fit indices such as IFI (0.864), TLI (0.838), and CFI (0.863) were below the recommended threshold of >0.9 (Hu & Bentler, 1999, p. 10). These results suggest that, although the model demonstrates partial adequacy, there is room for improvement in capturing the data structure more effectively. Potential limitations, such as poorly performing items or insufficient model specification, may have influenced the overall fit.

7.3.1 Findings on Variance in Intention

The primary focus of this objective was to determine the extent to which the Diffusion of Innovation (DOI) factors complexity, compatibility, trialability, observability, and relative advantage explain the variance in purchase intention for organic food adoption. The results indicate that while the DOI factors collectively contribute to explaining purchase intention, their individual effects vary significantly.

The variance in intention explained by the DOI factors is reflected in the structural model's R^2 value, which provides a measure of the proportion of variance in intention accounted for by

these variables. In this study, the significant DOI predictors relative advantage, observability, and complexity played critical roles in shaping consumer purchase intention, while compatibility and trialability did not exhibit significant effects.

- **Relative advantage** emerged as the strongest predictor of intention ($\beta = 0.393$, $p < 0.001$), highlighting the importance of perceived benefits such as quality, environmental sustainability, and health in influencing consumer decisions. This factor explains a substantial portion of the variance in intention, aligning with the DOI theory's emphasis on the value of product superiority in driving adoption.
- **Observability** ($\beta = 0.260$, $p < 0.001$) also significantly contributed to intention, emphasising the role of visible benefits and social recognition in encouraging organic food adoption. This suggests that consumers are more likely to form intentions when the outcomes or benefits of organic food consumption are observable to others.
- **Complexity** ($\beta = -0.274$, $p < 0.001$) negatively influenced intention, demonstrating that perceived difficulty in understanding or accessing organic food can deter consumers. This finding underscores the importance of simplifying information and reducing perceived barriers to adoption.

However, compatibility ($\beta = 0.024$, $p = 0.681$) and trialability ($\beta = 0.031$, $p = 0.611$) were not significant predictors of purchase intention in this context. These findings suggest that while these factors hold theoretical relevance within the DOI framework, they may not strongly influence organic food adoption in this specific market or cultural setting. The lack of significance could stem from limited consumer familiarity with organic food products, restricted opportunities to trial them, or a perceived misalignment between organic foods and typical consumer lifestyles. To further investigate these results and better understand the variables, a more detailed analysis of their characteristics and potential shortcomings is warranted. This exploration could inform future qualitative research efforts and support the refinement of measurement scales, enhancing the model's applicability and explanatory power.

7.3.2 Observability

Observability, the degree to which the benefits of organic foods are visible to others, significantly influences adoption by fostering social approval and peer behaviour (Rogers, 2003, p. 25; Yap & Chen, 2017, p. 52). Observability ($\beta = 0.260$, $p < 0.001$) also significantly contributed to intention, emphasising the role of visible benefits and social recognition in encouraging organic food adoption.

In this study, Observability demonstrated moderate reliability, with a Cronbach's alpha of 0.821, Composite Reliability (CR) of 0.827, and Average Variance Extracted (AVE) of 0.546. The visibility of organic food consumption often hinges on indicators such as labels, certifications, and recommendations, given the credence nature of these products, where their authenticity and quality cannot be directly verified by consumers (Massey et al., 2018, p. 30). These external signals enhance the perceived advantages of organic foods, supporting adoption through visible social endorsement.

Items such as OBS2 ("If I buy organic foods, it would be noticed by people close to me") had a mean of 3.35, showing that consumers perceive organic food purchases as a way to mean something significant to people close to them. Similarly, OBS3 ("Organic foods are easily identifiable ") had a mean of 3.32, indicating that social recognition contributes to the decision to adopt organic foods. The visibility of organic food consumption, both in public and social settings, reinforces its adoption. This construct captures the dual role of social visibility and product identification, both of which contribute to the decision-making process.

- ***Social Visibility and Signalling Environmental Responsibility***

The influence of social visibility is well-supported in the literature. For instance, Thiyagarajan (2018, p. 2) found that the social visibility of organic food consumption positively influenced its adoption in India, where cultural norms emphasised community approval. Similarly, Yap and Chen (2017, p. 51) noted that consumers who perceive their environmentally friendly behaviours as visible to others are more likely to adopt sustainable products, including organic foods. These studies reinforce the idea that social approval and recognition act as key motivators for purchase intention, especially in contexts where organic consumption aligns with broader societal values.

- ***Product Identification and Trust***

OBS3 ("Organic foods are easily identifiable") had a mean score of 3.32, reflecting that moderate ease of identifying organic products plays a role in their adoption. Product identification reduces the cognitive effort required to distinguish organic foods from conventional alternatives and enhances trust in their authenticity. This is particularly relevant for credence goods like organic foods, where consumers rely on external cues (e.g., labels, certifications) to validate product claims (Massey et al., 2018a, p. 30).

Observability through easily recognisable certifications or packaging acts as an external signal of quality, mitigating concerns about product authenticity and reliability. Furthermore, (Mhlophe, 2016, p. 3) found that in South Africa, the lack of clear product identification often hinders organic food adoption, underscoring the need for visible and reliable indicators to build consumer confidence.

7.3.3 Relative Advantage

Relative advantage refers to the extent to which an innovation is perceived as superior to existing products or solutions, influencing its adoption rate (Ali et al., 2019, p. 621; Kim & Dearing, 2016, p. 20; Thiyagarajan, 2018, p. 15). This study found that relative advantage significantly influences adoption. Items such as REL1 ("Buying organic foods would decrease environmental damage") and REL3 ("Organic foods are better than other competitive alternatives") demonstrated positive consumer perceptions, with mean scores of 3.81 and 3.70, respectively.

Despite its significance, the construct's reliability was moderate, with a Cronbach's alpha of 0.745, Composite Reliability (CR) of 0.748, and an Average Variance Extracted (AVE) of 0.543. Lower-performing items, such as REL2 ("Buying organic foods would be financially advantageous"), suggest the need for refinement to better capture the perceived benefits of organic foods, such as convenience or social prestige.

The findings align with prior research emphasising that specific, tangible benefits such as reduced environmental impact, health advantages, and competitive quality drive consumer adoption (Chen, 2007, p. 1008; Mangafić et al., 2017, p. 285). However, the moderate reliability highlights opportunities to improve measurement precision, ensuring that relative advantage captures the full spectrum of perceived benefits. These insights underscore the importance of targeted marketing and educational initiatives to strengthen consumer perceptions of organic foods' superiority.

7.3.4 Complexity

Complexity refers to the degree to which an innovation is perceived as difficult to understand or use, which can significantly hinder its rate of adoption (Ali et al., 2019, p. 621; Kim & Dearing, 2016, p. 20; Thiyagarajan, 2018, p. 15). Products that are perceived as complex often require more time for consumers to comprehend and adopt (Barrena-Figueroa & Garcia-Lopez-de-Meneses, 2013, p. 579). In this study, the Complexity construct demonstrated high

reliability, with a Cronbach's alpha of 0.887, Composite Reliability (CR) of 0.893, and an Average Variance Extracted (AVE) of 0.682. These values confirm that complexity was measured consistently across items.

Key items such as COMP1 ("The concept behind organic foods is difficult for me to understand") and COMP2 ("It is difficult to understand organic food information in general") exhibited high factor loadings of 0.847 and 0.881, respectively. These responses highlight the challenges consumers face in comprehending organic food concepts and navigating the market. Interestingly, the findings suggest that many respondents were uncertain about whether they found organic food concepts complex, as reflected in mixed responses across items.

The negative impact of complexity on product adoption is well-documented in the literature. Yap and Chen (2017, p. 51) identified complexity as a significant barrier in contexts where consumer awareness is limited. This aligns with the current study's findings, which emphasise the need to simplify information about organic foods and improve transparency around labelling and certification processes. Addressing these barriers could help demystify organic foods, reduce perceived complexity, and encourage broader consumer adoption.

7.3.5 Compatibility

Compatibility, the degree to which an innovation aligns with consumers' habits, values, beliefs, and needs, is a key factor in adoption decisions (Kim & Dearing, 2016, p. 100; Rogers, 2003, p. 25). While prior research has highlighted the importance of compatibility in driving organic food adoption (Thiyagarajan, 2018, p. 25). This study found no significant relationship between compatibility and purchase intention ($\beta = 0.024$, CR = 0.411, $p = 0.681$). This suggests that alignment with personal or cultural values may not strongly influence purchase intentions in this context, potentially due to the limited societal integration of organic food consumption.

The analysis of mean scores revealed that health-related compatibility received the strongest agreement, with "Organic food is good for my health" (4.05) and "Organic food is nutritional" (3.97). In contrast, items reflecting societal and cultural alignment scored lower, such as "Organic food consumption is common in my society" (2.59) and "Organic food consumption is part of my culture" (2.81), indicating that organic food is not widely perceived as embedded in cultural norms.

Previous studies support this, showing that compatibility with health-conscious lifestyles and ethical concerns positively impacts adoption. Thiyagarajan (2018, p. 2) reported a positive relationship between organic food compatibility and adoption in India, aligning with findings from a study by Mangafić et al. (2017, p. 285) in Bosnia on consumer innovativeness and organic food purchase intentions. Future research should explore strategies to enhance cultural and societal alignment to boost adoption.

7.3.6 Trialability

Trialability refers to the extent to which an innovation can be tested or sampled on a limited basis before a full commitment is made (Ali et al., 2019, p. 621; Rogers, 2003, p. 25). In this study, trialability demonstrated acceptable reliability and validity, with a Cronbach's alpha of 0.784, Composite Reliability (CR) of 0.833, and Average Variance Extracted (AVE) of 0.630. However, the hypothesis that trialability positively influences purchase intention was not supported ($\beta = 0.031$, CR = 0.508, $p = 0.611$), indicating no significant effect.

These findings suggest that while trialability may conceptually influence adoption, its practical impact in this context is limited. This could be attributed to insufficient trial opportunities or a lack of emphasis on trialability within the studied market. Items such as "Organic food tasting is common in supermarkets" scored low means (2.36), highlighting limited availability of sampling options. Conversely, "It is possible to buy organic foods in small quantities to try it out" had a higher mean (3.42), suggesting that smaller packaging could provide a feasible avenue for testing organic products. The data also suggests that some respondents may have limited exposure to trial opportunities, particularly in dining settings, possibly reflecting the demographic characteristics of the sample.

Prior research supports the importance of trialability in shaping adoption behaviours. Mangafić et al. (2017, p. 285) and Thiyagarajan (2018, p. 2) emphasise that tasting opportunities and smaller packaging options reduce perceived risks and encourage consumers to switch from conventional to organic options. Despite the insignificant relationship in this study, strategies that enhance trialability, such as in-store sampling, promotional offers, and collaborations with restaurants, could still serve as effective tools for increasing consumer engagement and fostering adoption in future efforts.

7.3.7 Purchase Intention and Purchase behaviour

Purchase intention, the commitment to engage in a specific behaviour, is a well-established predictor of actual purchasing actions, particularly in sustainable contexts like organic food adoption (Nedra et al., 2015, p. 68). This study confirmed a strong correlation between intention and purchase behaviour, supported by robust reliability measures for intention (Cronbach's alpha = 0.963, CR = 0.964, AVE = 0.898) and purchase behaviour (Cronbach's alpha = 0.941, CR = 0.942, AVE = 0.843). These findings align with prior research highlighting the critical role of intention in bridging consumer motivations and actual behaviour.

The analysis highlights key factors influencing purchase intention and its subsequent impact on purchase behaviour. Relative Advantage ($\beta = 0.393$, CR = 5.301, $p < 0.001$) and Observability ($\beta = 0.260$, CR = 3.970, $p < 0.001$) significantly and positively influenced purchase intention, underscoring the importance of perceived benefits and visible social cues in motivating consumer decisions. Conversely, Complexity negatively impacted purchase intention ($\beta = -0.274$, CR = -5.075, $p < 0.001$), reflecting the deterrent effect of perceived difficulty in understanding or accessing organic food products.

Despite the inclusion of Compatibility ($\beta = 0.024$, CR = 0.411, $p = 0.681$) and Trialability ($\beta = 0.031$, CR = 0.508, $p = 0.611$) in the model, these factors did not exhibit significant effects on purchase intention in this study, suggesting that alignment with personal values or opportunities for experimentation may not be critical motivators in this context. Purchase intention emerged as a strong predictor of purchase behaviour ($\beta = 0.513$, CR = 10.130, $p < 0.001$), reinforcing its central role in translating consumer motivations into actionable outcomes. This finding aligns with established behavioural theories, emphasising that addressing barriers to intention can significantly enhance actual purchasing actions and foster greater organic food adoption.

7.3.8 Conclusion to Objective 3

The findings for Objective 3 underscore the varied influence of Diffusion of Innovation (DOI) factors on the adoption of organic foods, highlighting the complex interplay between innovation attributes and consumer decision-making. Among the DOI factors, Relative Advantage emerged as the most significant predictor of purchase intention, reaffirming the importance of tangible benefits such as health, environmental sustainability, and product quality in motivating consumers. Observability also significantly influenced intention,

emphasising the role of visible benefits and social approval in shaping consumer attitudes toward organic food.

Conversely, Complexity negatively impacted purchase intention, underscoring the barriers posed by perceived difficulty in understanding or accessing organic foods. This finding highlights the need for clearer product information, simplified labelling, and enhanced consumer education to mitigate these challenges. Compatibility and Trialability, although theoretically relevant, did not significantly influence intention in this study. These results may reflect market-specific barriers, such as limited societal integration of organic food consumption or insufficient trial opportunities, which constrain their practical impact.

Purchase intention was confirmed as a strong predictor of purchase behaviour, validating its critical role in bridging consumer motivation and action. However, the insignificant influence of certain DOI factors suggests the need for tailored strategies to address context-specific barriers and enhance the perceived relevance of organic foods. Future efforts should focus on leveraging the strengths of Relative Advantage and Observability while addressing the complexities and fostering trial opportunities to encourage broader adoption of organic products.

In summary, the findings underscore the importance of strategically enhancing perceived benefits, visibility, and ease of understanding to strengthen consumer intentions and drive sustainable purchasing behaviour. By addressing these factors, marketers and policymakers can develop targeted interventions to promote organic food adoption and support sustainable consumer practices.

7.4 Objective 4: To ascertain the impact of Consumer Innovativeness on adoption of organic foods

This study aimed to examine how Consumer Innovativeness (CI) affects the adoption of organic foods. Defined as the tendency of individuals to seek new experiences and adopt products early, CI plays a vital role in organic food consumption, as these consumers are more inclined to experiment with products perceived as novel alternatives to conventional foods. In this study, CI demonstrated strong internal consistency and validity, with a Cronbach’s Alpha of 0.955, Composite Reliability (CR) of 0.913, and Average Variance Extracted (AVE) of 0.640, indicating that CI effectively measures consumers' openness to new products.

An analysis of mean scores for the Consumer Innovativeness (CI) construct highlights consumers' novelty-seeking behaviour. The highest mean was observed for "I like to go to places where I will be exposed to information about new products" (CONS5, mean = 3.64), indicating a strong preference for discovery-driven environments. Other items, such as "In general, I would look for ways to experiment with new products" (CONS4, mean = 3.51) and "If I heard about a new food product, I would look for ways to experiment with it" (CONS3, mean = 3.47), reflect a proactive approach to exploring innovations.

Lower means for "Compared to my friends, I seek out relatively large information about new food products" (CONS2, mean = 3.29) and "I know about new food products before most other people in my circle do" (CONS1, mean = 3.14) suggest moderate peer comparison in seeking novelty. Overall, the findings confirm CI as a critical factor in identifying consumers likely to adopt organic foods, emphasising its importance for targeted marketing strategies to drive adoption.

Path analysis confirmed that CI significantly influences both Purchase Intention (INT) and Purchase Behaviour (PURCH). The path coefficient from CI to Purchase Intention was 0.426 ($p < 0.001$), indicating that innovative consumers have stronger intentions to purchase organic foods. The direct path from CI to Purchase Behaviour showed a coefficient of 0.257 ($p < 0.01$), suggesting that these consumers are more likely to translate their intentions into action.

These findings align with prior research, highlighting the critical role of CI in organic food adoption. Mangafić et al. (2017, p. 285) noted that innovative consumers are early adopters of organic products, often driven by positive attitudes toward sustainability and health. Michalak and Bartkowiak (2020, p. 14616) observed that such consumers contribute to value co-creation, actively shaping product development through feedback, which supports broader acceptance. Additionally, Yap and Chen (2017, p. 51) emphasised that targeting innovative consumers can accelerate organic food adoption, especially in emerging markets like South Africa.

7.4.1Conclusion to Objective 4

In conclusion, this study highlights the crucial role of Consumer Innovativeness (CI) in driving organic food adoption, with innovative consumers more likely to develop strong purchase intentions and translate these into actual purchases. High reliability and validity scores confirm the robustness of the measures. Innovative consumers are less hindered by perceived barriers,

often adopting early and influencing peers. Marketing strategies targeting these consumers should emphasise the novelty, health, and environmental benefits of organic foods to further enhance adoption and promote sustainable consumption patterns.

7.5 Objective 5: To investigate the relative role of traditional factors, Diffusion of Innovation, and Consumer Innovativeness in affecting organic food adoption.

This study aimed to evaluate the relative influence of traditional factors, Diffusion of Innovation (DOI) constructs, and Consumer Innovativeness (CI) on the adoption of organic foods. The findings provide critical insights into the varying roles of these factors in shaping purchase intention and behaviour.

7.5.1 Traditional Factors and Purchase Intention

Traditional factors emerged as the strongest predictor of purchase intention, with a standardised coefficient of $\beta = 0.663$ (SE = 0.074, CR = 13.087, $p < 0.001$). This significant positive relationship underscores the central role of constructs such as attitudes and subjective norms in shaping consumers' intentions to adopt organic foods. These findings align with prior research emphasising the importance of well-established motivational drivers, such as personal values and social norms, in consumer decision-making processes (Hair Jr et al., 2017, p. 107). The results affirm that consumers are motivated to purchase organic foods when these align with their beliefs and societal expectations.

7.5.2 Consumer Innovativeness and Purchase Intention

Consumer Innovativeness was hypothesised to positively influence purchase intention, but this relationship was not statistically significant ($\beta = 0.091$, SE = 0.055, CR = 1.677, $p = 0.094$). While CI reflects consumers' openness to new and novel products, its limited impact suggests that in the context of organic food, novelty-seeking behaviour alone may not strongly drive intentions. This finding indicates that other factors, such as perceived utility or cultural norms, may override the influence of innovativeness. The result points to the potential need for targeted strategies to appeal to specific consumer segments who value innovation.

7.5.3 Diffusion of Innovation Factors and Purchase Intention

Interestingly, DOI factors exhibited a significant negative relationship with purchase intention ($\beta = -0.132$, SE = 0.091, CR = -2.398, $p = 0.016$). This finding suggests that perceived barriers

or complexities associated with DOI constructs, such as compatibility and complexity, may deter consumers from forming intentions to adopt organic foods. Such challenges are consistent with prior research highlighting how factors like perceived difficulty in understanding or adopting a product can inhibit its uptake (Rogers, 2003). Addressing these barriers through clearer communication, enhanced accessibility, and simplified processes is crucial for mitigating the negative impact of DOI-related perceptions.

7.5.4 Purchase Intention and Purchase Behaviour

Purchase intention was a significant and strong predictor of purchase behaviour ($\beta = 0.481$, SE = 0.056, CR = 10.274, $p < 0.001$). This result reaffirms the Theory of Planned Behaviour (Ajzen, 1991), which posits that intention is the primary determinant of actual behaviour. In the context of organic food, these finding highlights that when consumers form strong purchase intentions driven by motivational and contextual factors they are more likely to translate those intentions into tangible actions. The strength of this relationship underscores the importance of fostering intention to achieve higher adoption rates of organic products.

7.5.5 Integration of Findings

The findings demonstrate the dominant role of traditional factors in driving purchase intention, with DOI factors presenting potential barriers that must be addressed to improve adoption. While CI contributes to understanding consumer segments, its influence appears secondary in this context. Importantly, the strong link between intention and behaviour emphasises the need to enhance motivational drivers while addressing practical barriers that hinder the conversion of intention into action.

To improve organic food adoption, marketers and policymakers should prioritise strategies that enhance traditional motivational factors, such as aligning messaging with personal values and social norms. Addressing perceived complexities through simplified labelling and increased accessibility can mitigate the negative impact of DOI factors. Additionally, while consumer innovativeness plays a less significant role, strategies targeting novelty-seekers can complement broader efforts to increase market penetration. Strengthening the intention-behaviour link through targeted interventions, such as loyalty programs or incentives, can further encourage consumers to act on their intentions, ultimately driving sustainable consumption behaviours.

7.5.6 Conclusion to Objective 5

This study highlights the intricate dynamics between traditional factors, Diffusion of Innovation (DOI) constructs, and Consumer Innovativeness (CI) in influencing organic food adoption. Traditional factors emerged as the most significant drivers of purchase intention, reaffirming the importance of established motivational constructs such as attitudes and subjective norms in shaping consumer decisions. This finding underscores the critical role of aligning organic food messaging with personal values and societal expectations to foster strong purchase intentions.

While Consumer Innovativeness did not significantly impact purchase intention, it offers insights into niche consumer segments that value novelty and experimentation, suggesting opportunities for targeted marketing strategies. Conversely, DOI factors presented barriers to intention formation, with perceptions of complexity and misalignment acting as deterrents. These findings highlight the necessity for marketers and policymakers to address perceived challenges through enhanced communication, transparent labelling, and simplified processes to improve adoption rates.

The strong relationship between purchase intention and purchase behaviour reinforces the importance of bridging the gap between consumer motivation and action. By fostering intention through motivational drivers and addressing practical barriers, stakeholders can increase the likelihood of converting intentions into actual purchases. Strategic interventions, such as loyalty programs, targeted incentives, and educational campaigns, can further strengthen this link, promoting sustainable consumer behaviour and driving organic food adoption at scale. These insights provide a robust foundation for future research and practical strategies aimed at expanding the organic food market.

7.6 Conclusion

This chapter presented a comprehensive discussion and interpretation of the study's findings, contextualised within theoretical frameworks and existing literature, to deepen the understanding of factors influencing organic food adoption. The analysis was guided by the study's five objectives, examining the roles of traditional factors, Diffusion of Innovation (DOI) constructs, and Consumer Innovativeness (CI) in shaping consumer intentions and behaviours.

The findings reaffirm the critical role of traditional factors such as attitudes, subjective norms, trust, and health consciousness as primary drivers of purchase intention. Attitudes and subjective norms emerged as the strongest predictors, underscoring the importance of aligning organic food messaging with consumers' personal values and societal expectations. Trust and health consciousness were also validated as pivotal constructs, emphasising the need for transparent communication of product authenticity, safety, and health benefits.

DOI constructs, while conceptually relevant, revealed mixed effects. Relative advantage and observability positively influenced purchase intention, highlighting the importance of perceived benefits and social visibility in motivating consumer behaviour. However, complexity negatively impacted intention, indicating that perceived barriers such as difficulty in understanding or accessing organic foods deter adoption. Compatibility and trialability did not exhibit significant effects, suggesting market-specific challenges, such as limited societal integration and trial opportunities, which constrain their influence.

Consumer Innovativeness, though not a significant predictor of purchase intention, offered insights into niche consumer segments that value novelty and experimentation. These consumers are more likely to adopt organic foods early, presenting opportunities for targeted marketing strategies focused on innovation and novelty-seeking behaviours.

Purchase intention was confirmed as a strong predictor of purchase behaviour, reinforcing its central role in translating motivation into action. This finding highlights the importance of fostering intention through tailored strategies and addressing practical barriers, such as affordability and accessibility, to drive actual purchasing behaviour.

The chapter integrates these findings with theoretical frameworks, particularly the Theory of Planned Behaviour (TPB) and Rogers' DOI theory, to provide understanding of consumer decision-making in sustainable consumption. It underscores the dominant role of traditional factors, the challenges posed by DOI constructs, and the potential of CI in promoting organic food adoption.

In conclusion, the chapter offers actionable insights for marketers and policymakers, emphasising the need for strategies that strengthen traditional motivational drivers, address perceived complexities, and target innovative consumer segments. By fostering strong purchase intentions and bridging the gap to purchase behaviour, these strategies can enhance organic food adoption and support sustainable consumption practices.

8. CHAPTER 8. RECOMMENDATIONS, CONTRIBUTIONS, LIMITATIONS, FUTURE RESEARCH DIRECTIONS AND OVERALL CONCLUSION

This chapter presents the key contributions, implications, and recommendations of the study on organic food adoption in South Africa. The study has aimed to address gaps in understanding both traditional and innovation-driven factors influencing consumer behaviour in this area, utilising frameworks such as the Diffusion of Innovation (DOI) and Consumer Innovativeness (CI). This chapter will detail the study's conceptual and theoretical contributions, its implications for practice and management, suggestions for future research and limitations are outlined.

Chapter 1 laid the groundwork for this study, offering an overview of Adoption Behaviour, theories, and relevant research issues. Chapter 2 provided an extensive literature review, covering the theoretical foundations and empirical perspectives related to the study constructs. Chapter 3 detailed Stage One of the study, outlining the PRISMA process used for the systematic review. In Chapter 4, the top six traditional factors namely; attitude, perceived behavioural control, subjective norms, environmental concern, health consciousness, and trust were identified for testing in Stage Two. Chapter 5 discussed the research methodology, describing the study's objective ontology, positivist paradigm, and quantitative design using non-probability convenience sampling. It also explained the development of the questionnaire, drawing from established measurement scales, while addressing ethical considerations in data collection through online surveys and mall intercepts.

Chapter 6 outlined the statistical tools employed for descriptive and inferential analyses, including SPSS 27 and AMOS 27 software, which helped verify the conceptual framework from Chapter 3. Chapter 7 presented the analysis results, where seven of eight hypotheses were confirmed. A subsequent discussion and interpretation of these results followed.

This study empirically examined the factors influencing organic food consumption in South Africa, combining traditional factors, Diffusion of Innovation (DOI), and Consumer Innovativeness. It concluded that integrating these models offers deeper insight into the complex drivers behind organic food adoption in the country.

The implications for managers, policymakers, and marketers are significant. By understanding the combination of DOI and traditional factors, strategic efforts can be directed toward promoting organic food consumption effectively. Further research could extend this study to other developing markets to explore the broader applicability of these findings

Retailers in South Africa could promote trialability through product sampling and smaller packaging sizes.

8.1 Theoretical and Empirical Contribution

This study provides a distinctive contribution to both theoretical understanding and empirical research on organic food adoption, particularly within the context of emerging markets like South Africa. By integrating traditional factors and Consumer Innovativeness into a cohesive framework while critically examining the Diffusion of Innovation (DOI) theory, the research highlights key insights and challenges in the field of sustainable consumption.

Despite using validated and reliable DOI measures, the DOI model did not fit well in this study, nor did the final dynamic model combining DOI, traditional factors, and Consumer Innovativeness. One possible explanation lies in the contextual relevance and understanding of DOI items in the South African organic food market. Many DOI items yielded means close to 3 (neither agree nor disagree), indicating neutral responses. This suggests that respondents may not have fully understood the DOI constructs in the context of organic food, limiting the ability to draw robust conclusions about the true role of DOI in explaining purchase intentions. Future qualitative research is recommended to explore respondents' understanding of DOI items in this specific context and refine the scales to better align with the South African market.

Consumer Innovativeness (CI) was found to influence intention when assessed on its own, as the CI model demonstrated good fit. However, in the dynamic model incorporating DOI, CI did not show a significant role in explaining purchase intentions. This is likely due to issues with the DOI factors, which may have confounded the model's ability to capture the unique contribution of CI.

In contrast, traditional factors rooted in the Theory of Planned Behaviour (TPB) clearly emerged as the most robust predictors of purchase intention and behaviour. The TPB framework explained a significant proportion of variance in intention within the traditional factors model. Even in the poorly fitting dynamic model, traditional factors, including attitudes,

subjective norms, and perceived behavioural control, demonstrated a much stronger influence on intention compared to DOI or CI. The critical relationship between intention and behaviour was also reaffirmed, highlighting that consumers with strong intentions are more likely to act on their motivations.

Overall, the findings reinforce the enduring relevance of the TPB in understanding organic food adoption, especially in developing markets. While DOI and CI offer additional insights, their application in this context requires refinement and further exploration. Marketers and policymakers should focus on leveraging traditional motivational drivers, such as health consciousness and social norms, while addressing the contextual challenges of applying DOI constructs. Strategic interventions that enhance clarity, relevance, and alignment of DOI measures with consumer perceptions can strengthen future research and practice in organic food adoption.

Key contributions of the study include:

- **Novel Conceptual Model**: The study introduces a comprehensive model that integrates DOI constructs, such as relative advantage and compatibility, with traditional factors like attitudes, health consciousness, and trust, alongside Consumer Innovativeness. This model offers fresh insights into the interplay between innovation-related attributes and social-contextual factors in shaping organic food adoption.
- **Validation of Constructs**: Through empirical analysis, the study verifies the interrelationships between these constructs, demonstrating their relevance and applicability in explaining organic food consumption. The results highlight the significance of traditional factors as primary drivers, while identifying specific barriers and enablers within DOI and innovativeness constructs.
- **Theory Integration and Extension**: The research reinforces the applicability of the Theory of Planned Behaviour (TPB) to organic food adoption in developing markets, while adapting DOI theory to account for consumer innovativeness. By incorporating social and contextual factors, the study expands traditional models, offering understanding of consumer behaviour.
- **Emerging Market Context**: Focusing on South Africa, the study addresses the scarcity of research on organic food adoption in emerging economies. This context adds valuable cultural and economic dimensions, emphasising the unique challenges and opportunities in promoting sustainable consumption in developing markets.

- **Pathways for Future Research**: By highlighting the dynamic interactions between traditional, innovative, and contextual factors, the study identifies potential areas for further exploration, including the role of social norms, accessibility, and perceived complexity in shaping organic food adoption.

In summary, this research enriches the theoretical discourse on organic food adoption by blending established and innovative constructs into a unified framework, while its empirical findings provide actionable insights for enhancing sustainable consumption in diverse market settings.

8.2 Contributions of the Study

This study makes significant contributions to theory, practice, and policy by advancing the understanding of consumer behaviour in organic food adoption. By integrating traditional consumer behaviour models with Diffusion of Innovation (DOI) theory and Consumer Innovativeness (CI), the study offers new theoretical insights into sustainable consumption. Additionally, it provides practical marketing strategies for businesses seeking to bridge the attitude-behaviour gap and drive organic food adoption. From a policy perspective, the findings highlight the importance of consumer education, affordability, and accessibility initiatives to promote sustainable consumption. The following sections outline these contributions in detail.

8.2.1 Theoretical contributions

This study makes several theoretical contributions by extending existing consumer behaviour models and integrating Diffusion of Innovation (DOI) theory and Consumer Innovativeness (CI) theory with traditional behavioural models such as the Theory of Planned Behaviour (TPB) and the Theory of Reasoned Action (TRA) in the context of organic food adoption.

- *Extending Consumer Behaviour Theories:*

While TPB and TRA have been extensively used to explain purchase intention, this study incorporates DOI factors (e.g., relative advantage, compatibility, and trialability) and Consumer Innovativeness to offer better understanding of organic food adoption. The findings demonstrate that DOI attributes, particularly compatibility and observability, significantly impact purchase intention and actual behaviour, thus expanding the theoretical scope of green consumer research.

- *Bridging the Attitude-Behaviour Gap:*

The study contributes to the longstanding debate on the attitude-behaviour gap in sustainable consumption by demonstrating how trust, perceived barriers, and subjective norms influence purchase intention but do not always translate into behaviour. This provides a new theoretical lens on how behavioural intentions in green marketing contexts can be transformed into actual consumer actions, an area that remains underdeveloped in the literature.

- *Consumer Innovativeness as a Moderator:*

Prior research on organic food adoption has largely overlooked the role of Consumer Innovativeness. This study introduces and empirically tests CI as a moderator, revealing that highly innovative consumers are more likely to adopt organic food despite economic or informational barriers. This advances knowledge in green consumer segmentation and diffusion of sustainable innovations.

By integrating these behavioural and innovation-based theories, this study provides a comprehensive, interdisciplinary framework that can be applied in future research to explore organic food adoption in other emerging markets.

8.2.2 Practical contributions

The findings from this study offer valuable strategic insights for marketing professionals and businesses seeking to promote organic food adoption.

- Strategic Marketing Implications
    - *Attitude Enhancement*: Since attitudes significantly influence purchase intention, marketers should develop health-focused, environmentally conscious campaigns using influencer endorsements, expert testimonials, and social media advocacy.
    - *Building Consumer Trust*: Transparency in organic labelling, third-party certifications, and ethical sourcing should be emphasised to counteract scepticism regarding the authenticity of organic products.
    - *Leveraging Compatibility*: Marketers can promote organic foods as integral to daily consumption patterns, e.g., offering convenient organic meal kits, culturally relevant organic products, and affordable organic bundles.

    - *Influencing Social Norms*: Since subjective norms impact organic food adoption, businesses should use social proof strategies such as peer endorsements, customer testimonials, and community-driven marketing to increase adoption.
- Enhancing Consumer Innovativeness & Early Adoption
    - *Targeting Early Adopters*: The role of Consumer Innovativeness suggests that marketing organic foods as novel, exclusive, and trendy can enhance appeal. Limited-edition organic products or collaborations with food-tech startups can help attract innovative consumers.
    - *Trialability & Accessibility*: Retailers should implement sampling initiatives, loyalty programs, and in-store promotions to encourage hesitant consumers to try organic products with minimal risk.
- Bridging the Attitude-Behaviour Gap

Despite positive attitudes, consumers face economic and availability barriers. Marketing strategies should address this by:

- *Price Bundling*: Offering organic products in cost-effective packages with everyday grocery items.
- *Discounts & Rewards*: Implementing loyalty programs to incentivise repeat purchases.
- *Retail Placement*: Ensuring prime shelf space and visibility of organic products in supermarkets and restaurants.

- Encouraging Observability

    - *In-store Visibility & Branding*: High-impact advertisements, organic product displays, and "organic zones" in supermarkets can increase observability.
    - *Restaurant Partnerships*: Collaborating with restaurants and food delivery services to include organic meal options can normalize consumption.

These strategies can help businesses close the intention-action gap and drive long-term organic food adoption.

8.2.3 Policy contributions

The study also provides critical policy recommendations for promoting organic food accessibility, affordability, and awareness.

- Consumer Education & Awareness Campaigns
    - *Government & NGO Involvement*: Policymakers should implement nationwide educational campaigns on the health and environmental benefits of organic foods.
    - *School & Public Institution Programs*: Introducing organic meal programs in schools, hospitals, and government canteens can familiarize consumers with organic consumption from a young age.
- Subsidies & Incentives for Organic Farming
    - *Financial Support for Organic Farmers*: High costs remain a major barrier to organic food adoption. Governments should provide subsidies, tax incentives, or low-interest loans to organic farmers to reduce production costs and retail prices.
    - *Retailer Incentives*: Supermarkets and grocery stores should be encouraged to stock affordable organic options through government-backed incentives.
- Improving Accessibility & Market Development
    - *Supporting Local Organic Supply Chains*: Investments in organic farming infrastructure can enhance production efficiency and affordability.
    - *Expansion of Organic Markets*: Public markets and cooperatives selling locally sourced organic produce should be promoted to reduce costs and carbon footprints.
- Policy-Driven Trialability Initiatives
    - *Government-Sponsored Organic Food Events*: Hosting organic food fairs and farmers' markets can create opportunities for consumers to sample organic products risk-free.
    - *Public-Private Partnerships*: Governments can partner with retailers, restaurants, and food delivery services to introduce organic options in mainstream food outlets.

These policy interventions can address economic barriers, enhance awareness, and increase accessibility, ultimately fostering a sustainable organic food market in South Africa.

8.3 Managerial Implications and Recommendations

The study identifies a noticeable gap between positive attitudes towards organic food and actual purchasing behaviour. To address this, managers in the organic food sector should focus on designing marketing campaigns that directly confront this discrepancy. Campaigns should emphasise the clear and tangible benefits of organic food, such as improved health, environmental sustainability, and product quality. Additionally, addressing common misconceptions, such as the higher costs and limited availability of organic products, will help bridge this gap, ensuring that favourable attitudes lead to increased consumer adoption.

8.4 Limitations of the Study

While this study offers valuable insights, several limitations should be acknowledged:

- **Sample Diversity:** Participation was limited to individuals who accessed the survey link or were present at locations where data collectors operated. Additionally, a significant portion of the sample consisted of younger consumer, which may not adequately represent the broader population of consumers in terms of income, life stage, or purchasing power. This sampling limitation could restrict the generalisability of the findings. Future studies should aim to recruit a more balanced sample to capture diverse consumer profiles and enhance representativeness.
- **Response Patterns and Variability:** A considerable number of items showed scores clustering around the midpoint (e.g., close to 3), which could indicate a lack of clear differentiation in participant responses. While responses with a standard deviation below 0.3 were excluded to improve reliability analysis (Maharana et al., 2022, p. 92), the remaining data may still reflect some degree of central tendency bias. Future studies could consider using scale enhancements or alternative measurement techniques to encourage more differentiated responses.
- **Cross-Sectional Design**: As data was collected at a single point in time, this cross-sectional design limits the ability to draw causal inferences between variables (Kesmodel, 2018, p. 388). Although this approach was chosen for its efficiency, it restricts insights into the dynamic nature of consumer behaviour. Future research could employ a longitudinal design to explore changes over time, offering stronger evidence for causal relationships.

- **Reliance on Self-Reported Data**: The study's reliance on self-reported data introduces the risk of social desirability and recall biases, potentially leading participants to overstate or understate their attitudes and behaviours. Incorporating objective measures, such as actual purchase data or observational methods, in future research could validate the findings and provide deeper insights into consumer behaviour.
- **Single-Market Focus:** The study's focus on organic food adoption within a single national context limits the generalisability of findings across different cultural or economic settings. Future studies could compare consumer behaviour across multiple regions or countries to uncover universal and context-specific factors driving organic food adoption.
- **Limited Exploration of External Influences:** While this study examined psychological and innovation-related factors, it did not account for external influences such as governmental policies, economic conditions, or environmental factors. Including these variables in future research could provide a more comprehensive framework for understanding organic food adoption.
- **Potential Omission of Relevant Constructs**: The study's theoretical model, while robust, may omit other influential constructs, such as environmental knowledge or perceived risks associated with organic products. Future research could explore additional variables to capture a fuller picture of consumer motivations.
- **Response Centrality:** A notable number of items in the survey had mean scores close to the midpoint of the scale (e.g., around 3), indicating a tendency for respondents to provide neutral or non-committal answers. This central tendency could limit the ability to discern clear attitudes or preferences, potentially reducing the sensitivity of the analysis. Future research could address this issue by refining the survey design, such as rewording items to reduce ambiguity, using a broader scale to capture responses, or employing techniques like forced-choice questions to encourage more definitive answers.

Addressing these limitations in future studies could lead to a more comprehensive understanding of organic food adoption and help refine strategies to promote sustainable consumer behaviour.

8.5 Future Research Directions

Based on the findings and limitations of this study, several areas for future research are recommended to enhance the understanding of organic food adoption. These recommendations address gaps identified during the study and propose avenues for further exploration:

- Broader Demographic Analysis
  - Recommendation: Future studies should explore the influence of demographic factors such as age, gender, income, and education on organic food adoption in greater detail.
  - Rationale: While this study focused predominantly on Millennials, differences across other demographic groups were not thoroughly examined. For example, understanding how older consumers or those with lower income levels perceive organic food could provide more targeted insights.
- Addressing Sampling Limitations
  - Recommendation: Employ probability sampling techniques in future studies to enhance generalisability.
  - Rationale: This study relied on non-probability sampling, which limited the ability to generalise findings to the broader population. Future research using a stratified or random sampling method could provide a more representative picture of consumer behaviour.
- Longitudinal Research on Consumer Behaviour
  - Recommendation: Conduct longitudinal studies to investigate changes in consumer attitudes and behaviours over time.
  - Rationale: This study's cross-sectional design restricted the ability to examine causality or shifts in consumer behaviour. Longitudinal research could reveal how external factors, such as economic conditions or evolving consumer preferences, influence organic food adoption.
- Exploring Cultural and Geographic Variations
  - Recommendation: Extend the study to include cross-cultural or multi-regional comparisons of organic food adoption.
  - Rationale: This study was limited to a single national context. Investigating

consumer behaviour in different cultural or economic environments could uncover unique drivers and barriers specific to those contexts, offering a more global perspective on organic food adoption.

- Investigating External Influences
  - Recommendation: Examine the role of external factors such as government policies, pricing strategies, and environmental conditions on organic food adoption.
  - Rationale: This study focused primarily on psychological and innovation-related factors. Including external influences in future research could provide a more comprehensive understanding of the interplay between consumer behaviour and external contexts.
- Deeper Analysis of Observed Trends
  - Recommendation: Future research should investigate why certain variables, such as trust or trialability, strongly influence purchase intentions and explore strategies to enhance these factors further.
  - Rationale: While this study identified these as significant drivers, the underlying mechanisms behind their impact require deeper exploration to inform effective marketing and policy interventions.
- Extending Scope to Other Industries
  - Recommendation: Apply the research framework to other industries, such as sustainable fashion, renewable energy products, or eco-tourism, to explore parallels in consumer adoption behaviour.
  - Rationale: The constructs and findings of this study, such as the importance of attitudes, trust, and compatibility, could provide valuable insights into other sectors promoting sustainability.
- Using Alternative Methodologies
  - Recommendation: Future studies could utilize mixed-methods approaches or qualitative techniques such as interviews or focus groups.
  - Rationale: While this study relied on quantitative methods, incorporating qualitative data could provide richer insights into consumer motivations and barriers, particularly for complex factors like attitudes or social norms.
- Investigating Poor-Fitting Models
  - Recommendation: Apply alternative modelling techniques and refine the measurement items for constructs like Diffusion of Innovation (DOI) and

Consumer Innovativeness (CI) to address issues of poor model fit. Future studies should also consider testing these constructs in alternative frameworks or contexts to ensure their robustness and applicability.

- Rationale: The DOI and CI constructs in this study failed to load successfully, indicating potential issues with item clarity, contextual relevance, or model specification. Addressing these limitations through improved scale development, qualitative validation, and alternative analytical approaches could enhance the constructs' explanatory power and contribute to more robust theoretical models in consumer behaviour research

By addressing these areas, future research can build on the foundations of this study, providing a deeper, understanding of organic food adoption and contributing to broader efforts to promote sustainable consumer behaviour.

8.6 Overall Conclusion

This study set out to address the problem of understanding the factors influencing organic food adoption, particularly in the South African context, where consumption remains low despite increasing global awareness of sustainable food practices. Using both traditional factors, such as attitude, subjective norms, trust, and health consciousness, and innovation-driven factors from the Diffusion of Innovation (DOI) framework, the research aimed to provide a comprehensive perspective on consumer behaviour in this market. By incorporating Consumer Innovativeness (CI), the study further explored how individual tendencies to adopt new products influence organic food purchase intentions. The findings demonstrate that both traditional and innovation-related factors significantly impact organic food adoption. Positive attitudes and trust play a pivotal role, while DOI factors, such as relative advantage and compatibility, enhance adoption. However, complexity in certifications and labelling presents a barrier, underscoring the need for simplified product information.

This research makes three significant contributions. Firstly, it offers managerial insights by identifying actionable strategies for marketers and policymakers, such as leveraging health-conscious messaging, enhancing product visibility, and addressing affordability barriers to bridge the attitude-behaviour gap. Secondly, it provides theoretical contributions by integrating DOI and CI frameworks with traditional factors, expanding their application to organic food

adoption in a developing market. Lastly, the study makes methodological contributions by highlighting the limitations of current measures, suggesting refinements for future research. These contributions provide a foundation for promoting sustainable organic food consumption, emphasising the importance of aligning marketing strategies with consumer values and addressing external barriers. By doing so, the research advances the understanding of organic food adoption and its potential for broader environmental and societal impact.

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APPENDICES

Appendix A: Informed Consent

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

APPLICATION FOR ETHICS APPROVAL
For research with human participants

Information Sheet and Consent to Participate in Research

Date: 11 October 2023

Greetings,

My name is Sandile Mkhize from the School of Management, Information Technology and Governance, Department of Marketing and Supply Chain Management, contact number (072 9955 953, email addresses (hycinth82@gmail.com, 200273745@stu.ukzn.ac.za)

You are being invited to consider participating in a study titled: **'Factors affecting the organic products market in Durban, KwaZulu-Natal: A diffusion of innovation perspective'** that involves research in organic food purchase decision making. The aim and purpose of this research is to ascertain the factors affecting the purchase of organic foods. The study is expected to include 500 respondents in KwaZulu Natal. It will involve respondents completing a questionnaire. The duration of your participation if you choose to participate and remain in the study is, expected to be approximately 25 minutes. The study is not funded.

The study does not involve any known risks and/or discomforts. The study will provide no direct benefits to participants.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number: HSSREC/00003958/2022).

In the event of any problems or concerns/questions you may contact the researcher using the contact details above or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban 4000 KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557- Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

Your participation in the study is voluntary and by participating, you are granting the researcher permission to use your responses. You may refuse to participate or withdraw from the study at any time with no negative consequence. Your anonymity will be maintained by the researcher and the School of Management, I.T. & Governance and your responses will not be used for any purposes outside of this study.

All data, both electronic and hard copy, will be securely stored during the study and archived for 5 years. After this time, all data will be destroyed.

If you have any questions or concerns about participating in the study, please contact me or my research supervisor using the contact details listed herein.

Sincerely

Sandile Simphiwe Mkhize

Supervisor: Prof Debbie Ellis
Email: vigard@ukzn.ac.za

CONSENT TO PARTICIPATE

I (Name) _____have been informed about the study entitled Factors affecting the organic products market in Durban, KwaZulu-Natal: A diffusion of innovation perspective by Sandile Simphiwe Mkhize.

I understand the purpose and procedures of the study.

I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

I have been informed about any available compensation or medical treatment if injury occurs to me as a result of study-related procedures.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at Cell no. 072 9955 953, email addresses (hycinth82@gmail.com, 200273745@stu.ukzn.ac.za)

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557 - Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

_____ _____

Signature of Participant **Date**

Appendix B: Questionnaire

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
1. Complexity					
1.1 The concept behind organic foods is difficult for me to understand					
1.2 It is difficult to understand organic food information in general					

1.3 Organic foods are too complicated to be understood					
1.4 It is difficult to find organic foods in supermarkets					
2. Compatibility					
2.1 Organic food consumption is common in my society					
2.2 Organic food consumption is part of my culture					
2.3 Organic food is nutritional					
2.4 Organic food is compatible to my taste					
2.5 Organic food is good for my health					
2.6 Organic food consumption means social prestige					
3. Relative Advantage					
3.1 Buying organic foods would decrease environmental damage.					
3.2 Buying organic foods would be financially advantageous for me.					
3.3 Organic foods are better than other competitive alternatives.					
3.4 Organic food purchasing serves as a substitute for less desirable alternatives					
4. Observability					
4.1 By buying organic foods, I show that I care about the environment.					
4.2 If I buy organic foods, it would be noticed by people close to me.					
4.3 Organic foods are easily identifiable.					
4.4 I have observed organic food talks or seminars					
4.5 I have observed organic food advertisements					
5. Trialability					
5.1 Organic food tasting is common in supermarkets					
5.2 it is easy to taste organic foods prior to purchasing					
5.3 It is possible to buy organic foods in small quantities to try it out					
5.4 Many restaurants have organic foods on their menus, which make it easier to try them before purchasing					
6. Consumer innovativeness					
6.1 I know about new food products before most other people in my circle do					
6.2 Compared to my friends, I seek out relatively large information about the new food products					
6.3 If I heard about a new food product, I would look for ways to experiment with it					
6.4 In general, I would look for ways to experiment new products					
6.5 I like to go to places where I will be exposed to information about new					

products					
6.6 I frequently look for new products.					
7. Attitude					
7.1 Buying organic food is a good idea.					
7.2 Buying organic food is a wise choice.					
7.3 I like the idea of buying organic food.					
7.4 Buying organic food would be pleasant.					
8. Subjective norms					
8.1 My friends think I should buy organic food					
8.2 My relatives think I should buy organic food					
8.3 My family thinks I should buy organic food					
9. Perceived behavioural control					
10. I have enough money to buy organic food					
11. I have the ability to buy organic food					
12. I have the knowledge necessary to buy organic food					
13. Health Consciousness					
13.1I chose food carefully to ensure the good health.					
13.2I consider myself as health-conscious consumer.					
13.3I think often about health-related issues.					
14. Environmental Concern					
14.1The balance of nature is very delicate and can be easily upset.					
14.2Human beings are severely abusing the environment.					

14.3 Humans must maintain the balance with nature in order to survive.					
14.4 Human interferences with nature often produce disastrous consequences.					
15. Trust					
15.1 I think that corporations in the field of organic foods are aware of their responsibilities.					
15.2 I trust those who sell certified organic foods indeed sell quality organic foods.					
15.3 I trust a quality organic food label or logo.					
15.4 I trust the institutions certifying organic food products.					
16. Intention					
16.1 I will purchase green products for personal use.					
16.2 I am willing to purchase green products for personal use.					
16.3 I will make an effort to purchase green products					
17. Purchase behaviour					
17.1 I have been purchasing organic foods on regular basis.					
17.2 I purchase organic foods for my daily needs products.					
17.3 I have been purchasing organic foods over the past six months.					

1. Please fill in details

Age	Less than 20	
	21 – 30	
	31 – 40	
	41 – 50	
	51 – 60	

	Above 61	

Gender	Male	Female	Other

Ethnicity	Black (African)	
	White	
	Indian	
	Coloured	
	Other	

Education level	No qualifications	
	Matric	
	Diploma/Degree	
	Post Graduate qualification	
	Other	

Household income	Below R10 000 per month	
	Between R10 000 to R30 000 per month	
	Between R30 000 and R50 000	
	Above R50 000 per month	
	Prefer not to say	

Employed		Student		Self employed		Pensioner		Unemployed	

Province	KwaZulu Natal	
	Gauteng	
	Mpumalanga	

	Eastern Cape	
	Western Cape	
	Free State	
	Northern Cape	
	Limpopo	
	North West	
	Other	
	Prefer not to say	

Number of kids in household	Below 5 years	
	Between 12 and 18 years	
	Older than 18 years	
	No kids in household	
	Prefer not to say	

Appendix C – Ethical Clearance: Stage One

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

22 March 2022

Sandile Simphiwe Mkhize (200273745)
School Of Man Info Tech & Gov
Pietermaritzburg Campus

Dear SS Mkhize,

Protocol reference number: HSSREC/00003958/2022
Project title: Factors affecting the organic products market in Durban, KwaZulu-Natal: A diffusion of innovation perspective
Degree: PhD

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 15 March 2022 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

- **Please note that approval is granted for phase 1 only**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 22 March 2023.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,

[redacted]

Professor Dipane Hlalele (Chair)

/dd

Appendix D: Ethical Clearance – Stage Two

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

19 October 2023

Sandile Simphiwe Mkhize (200273745)
School of Man Info Tech & Gov
Pietermaritzburg Campus

Dear SS Mkhize,

Protocol reference number: HSSREC/00003958/2022
Project title: Factors affecting the organic products market in Durban, KwaZulu-Natal: A diffusion of innovation perspective
Degree: PhD

Approval Notification – Amendment Application

This letter serves to notify you that your application and request for an amendment received on 23 October 2023 has now been approved as follows:

- Change in Methodology- Approval is granted for phase 2 of the study

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form; Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

HSSREC is registered with the South African National Health Research Ethics Council (REC-040414-040).

Best wishes for the successful completion of your research protocol.

Yours faithfully

[redacted]

.....
Professor Dipane Hlalele (Chair)

/dd

Appendix E: List of articles

No	Title	Authors	Journal details	Year	Country
1	Toward a better understanding of the attitude-behavior gap in organic food conative loyalty~ a moderation and moderated mediation analysis	Anisimova, T., & Weiss, J..	Asia Pacific Journal of Marketing and Logistics(ahead-of-print).	2022	Australia
2	Individual and Socio-Cultural Factors as Driving Forces of the Purchase Intention for Organic Food by Middle Class Consumers in Indonesia	Mukhamad Najib, Ujang Sumarwan, Stevia Septiani, Hermann Waibel, Dwi Suhartanto & Farah Fahma	Journal of International Food & Agribusiness Marketing	2022	Indonesia
3	Factors affecting consumer purchase intentions of organic food through fuzzy AHP	A. Arora, N. Rani, C. Devi and S. Gupta	International Journal of Quality & Reliability Management	2022	Punjab, India
4	Do normative triggers and motivations influence the intention to purchase organic food? An application of the goalframing theory	Kamran Khan, Irfan Hameed, Umair Akram, Syed Karamatullah Hussainy	British Food Journal	2022	Karachi, Pakistan.
5	What drives attitude, purchase intention and consumer buying behavior toward organic food? A self-determination theory and theory of planned behavior perspective	Yamna Khan, Irfan Hameed, Umair Akram	British Food Journal	2022	Pakistan
6	Unveiling ways to reach organic purchase: Green perceived value, perceived knowledge, attitude, subjective norm, and trust	Taewoo Roh, Junhee Seok, Yaeri Kim	Journal of Retailing and Consumer Services	2022	China
7	Key influencing factors of green vegetable consumption in Beijing, China	Zhengqing Yin, Bo Li, Shufei Li, Junqi Ding, Lingxian Zhang	Journal of Retailing and Consumer Services	2022	Beijing, China
8	Examining the Factors That Affect Consumers' Purchase Intention of Organic Food Products in a Developing Country	Zayed, M. F., Gaber, H. R., & El Essawi, N.	Sustainability, 14(10), 5868.	2022	Egypt
9	Environmental and Health Factors as Organic Fruit Purchase Drivers and the	Llanos-Herrera G., Vega-Muñoz A., Salazar-Sepúlveda G. , Contreras-Barraza N. and Gil-Marín M.	Horticulturae	2022	Chile

	Mediating Role of Price and Effort				
10	The same only different? How a pandemic shapes consumer organic food purchasing	Stefanie Sohn, Barbara Seegebarth, David M. Woisetschläger	Journal of Consumer Behaviour	2022	German
11	Chinese Consumers' Purchase Intention for Organic Meat~ An Extension of the Theory of Planned Behaviour	Bhutto, M. Y., Zeng, F., Khan, M. A., & Ali, W.	Asian Academy of Management Journal, 27(1), 155-174.	2022	China
12	Marketing Organic Food from Millennials' Perspective~ A Multi-Theoretical Approach	Tan, B. C., Pang, S. M., & Lau, T. C.	Foods, 11(18), 2721.	2022	Malaysia
13	An Analysis on the Factors Influencing Green Purchase Intention among Young Consumers in the Philippine Bpo Industry	Palmero, K. L., & Montemayor, C. T.	Polish Journal of Management Studies, 22(1), 371-384.	2020	Phillipine
14	Perception and motivation to purchase organic products in Mediterranean countries An empirical study in Tunisian context	B. A. Nedra, S. Sharma and A. Dakhli	Journal of Research in Marketing and Entrepreneurship	2015	Tunisia
15	Decisional factors driving organic food consumption Generation of consumer purchase intentions	C. C. Teng and Y. M. Wang	British Food Journal	2015	Taiwan
16	Consumer buying motives and attitudes towards organic food in two emerging markets China and Brazil	J. Thogersen, M. D. de Barcellos, M. G. Perin and Y. F. Zhou	International Marketing Review	2015	China nd Brazil
17	Application of the Theory of Planned Behaviour to predict Iranian students' intention to purchase organic food	Yazdanpanah, M., & Forouzani, M.	Journal of Cleaner Production, 107, 342-352.	2015	Iran
18	Exploring the Antecedents of Organic Food Purchase Intention~ An Extension of the Theory of Planned Behavior	Teixeira, S. F., Barbosa, B., Cunha, H., & Oliveira, Z.	Sustainability, 14(1), 242.	2022	Portugal
19	Sustainable packaging~ Does eating organic really make a difference on product-packaging interaction~	Santos, V., Gomes, S., & Nogueira, M	Journal of Cleaner Production, 304, 127066.	2021	Portugal

20	Rational and Moral Considerations in Organic Coffee Purchase Intention~ Evidence from Indonesia	Wibowo, S. F., Najib, M., Sumarwan, U., & Asnawi, Y. H.	Economies, 10(12), 308.	2022	Indonesia
21	Do behavioral and socio-demographic factors determine consumers' purchase intention towards traceable organic rice~ Evidence from Thailand	Cavite, H. J., Mankeb, P., Kerdsriserm, C., Joedsak, A., Direksri, N., & Suwanmaneepong, S.	Organic Agriculture, 12(2), 243-258.	2022	Thailand
22	Integrating the Theory of Planned Behavior and the Norm Activation Model to Investigate Organic Food Purchase Intention~ Evidence from Vietnam	Le, M. H., & Nguyen, P. M.	Sustainability, 14(2), 816.	2022	Vietnam
23	Impacts of consumer innovativeness on the intention to purchase sustainable products	Li, L., Wang, Z., Li, Y., & Liao, A.	Sustainable Production and Consumption, 27, 774-786.	2021	China
24	Buying Organic Food Products: The Role of Trust in the Theory of Planned Behavior	Luigina Canova*, Andrea Bobbio and Anna Maria Manganelli	Frontiers in Psychology	2020	Italy
25	Purchase Intention towards Organic Food among Undergraduate Students	YATY SULAIMAN, WANNA PROMMANOP EH KAN, MARUF GBADEBO SALIMON	Wseas Transactions on Environment and Development	2020	Malaysia
26	Factor affecting consumer's intention to purchase organic food: Empirical study from Malaysian context	R. Saleki, F. Quoquab and J. Mohammad	International Journal of Business Innovation and Research	2020	Malaysia
27	Antecedents of Organic Food Products Intention and Behaviors: Evidence from Vietnam	H. C. Pham	Journal of Asian Finance, Economics and Business	2020	Vietnam
28	Why do people buy organic food? The moderating role of environmental concerns and trust	Anushree Tandon, Amandeep Dhir, Puneet Kaur, Shiksha Kushwah, Jari Salo	Journal of Retailing and Consumer Services	2020	India
29	Consumer purchasing behaviour of organic food in an emerging market	Tuan Le-Anh, Tam Nguyen-To	International Journal of Consumer Studies	2020	Vietnam
30	What motivates Indian consumers' to buy organic food in an emerging market?	Heerah Jose, Vijay Kuriakose and Moli P. Koshy	Asia-Pacific Journal of Business Administration	2020	India

31	Consumer's perceptions of organic foods in Ambato, Ecuador	Juan Carlos Castro Analuiza, Cristina Checa* and José Perea	Esic Market Economics and Business Journal	2020	Ambato, Ecuador
32	Influences on purchase intentions of organic food consumers in an emerging economy	Dangi, N., Narula, S. A., & Gupta, S. K.	Journal of Asia Business Studies, 14(5), 599-620.	2020	India
33	Consumer motives for purchasing organic coffee The moderating effects of ethical concern and price sensitivity	Lee, K. H., Bonn, M. A., & Cho, M.	International Journal of Contemporary Hospitality Management, 27(6), 1157-1180.	2015	South Korea
34	Factors influencing Indian consumers' actual buying behaviour towards organic food products	Anupam Singh, Priyanka Verma	Journal of Cleaner Production	2017	India
35	Integrating Multiple Factors Affecting Consumer Behavior Toward Organic Foods: The Role of Healthism, Hedonism, and Trust in Consumer Purchase Intentions of Organic Foods	Tatiana Anisimova	l of Food Products Marketing	2016	Australia
36	Organic food as self-presentation:The role of psychological motivation in older consumers'purchase intention of organic food	Jiyoung Hwang	Journal ofRetailingandConsumerServices	2016	USA
37	An analysis of factors affecting growth of organic food Perception of consumers in Delhi-NCR (India)	Richa Misra and Deepak Singh	British Food Journal	2016	India
38	Factors influencing on the purchase intention of organic food products in Sri Lanka	R. A. S. Weerasiri and N. H. K. Cooray	International Journal of Applied Business and Economic Research	2016	Sri-Lanka
39	Narrowing the gap: Factors driving organic food consumption	Brahim Chekima, Aisat Igau Oswald, Syed Azizi Wafa Syed Khalid Wafa, Khadidja Chekima	Journal of Cleaner Production	2017	Malaysia
40	Influences on the intention to buy organic food in an emerging market	E. W. Mainardes, D. V. de Araujo, S. Lasso and D. M. Andrade	Marketing Intelligence & Planning	2017	Brazil
41	Factors influencing purchase intention of organic meat among consumers in Klang Valley, Malaysia	Wong, S., & Aini, M.	International Food Research Journal, 24(2): 767-778	2017	Malaysia

42	The role of food eating values and exploratory behaviour traits in predicting intention to consume organic foods~ An extended planned behaviour approach	Sadiq, M. A., Rajeswari, B., Ansari, L., & Kirmani, M. D.	Journal of Retailing and Consumer Services, 59, 102352.	2021	India
43	Antecedents of Consumers' Purchase Intention towards Organic Food~ Integration of Theory of Planned Behavior and Protection Motivation Theory	Pang, S. M., Tan, B. C., & Lau, T. C.	Sustainability, 13(9), 5218.	2021	Malaysia
44	Purchase intention of organic food under the influence of attributes, consumer trust and perceived value	I. C. G. Curvelo, E. A. M. Watanabe and S. Alfinito	Revista de Gestão	2019	Brazil
45	Factors Influencing Consumer Purchase Intentions of Organically Grown Products in Shelly Centre, Port Shepstone, South Africa	Siphelele Vincent Wekeza and Melusi Sibanda	International Journal of Environmental Research and Public Healt	2019	South Africa
46	Are green consumers really green? Exploring the factors behind the actual consumption of organic food products	Francesco Testa, Silvia Sarti, Marco Frey	Business Strategy and the Environment	2019	Italy
47	Factors affecting consumers' purchase intention of eco-friendly food in China: The evidence from respondents in Beijing	Q. L. He, Y. Q. Duan, R. W. Wang and Z. T. Fu	International Journal of Consumer Studies	2019	Beijing
48	Factors influencing organic foods purchase intention of Indian customers	Deepak Pandey & Amit Kakkar & Mohd Farhan & Tufail Ahmad Khan	Organic Agriculture	2019	India
49	Understanding the Antecedents of Organic Food Consumption in Pakistan: Moderating Role of Food Neophobia	Ahsan Akbar, Saqib Ali , Muhammad Azeem Ahmad, Minhas Akbar and Muhammad Danish	International Journal of Environmental Research and Public Health	2019	Pakistan
50	Consumer behavioural intention and perception towards organic foods in national capital of India	Satyapriya, S., Singh, P., Sangeetha, V., Paul, S., Barua, S., Mathur, P., Rathore, H., & Keshava, K.	Indian Journal of Agricultural Sciences, 89(4), 588-595.	2019	India
51	Consumers' buying intention towards healthy foods during the COVID-19 pandemic in an emerging economy	Alam, S. S., Wang, C.-K., Lin, C.-Y., Masukujjaman, M., & Ho, Y.-H.	Cogent Business & Management, 9(1), 2135212.	2022	Malaysia

52	Organic consumerism~ A comparison between India and the USA	Boobalan, K., & Nachimuthu, G. S.	Journal of Retailing and Consumer Services, 53, 101988.	2020	India and USA
53	Organic food products in China~ determinants of consumers' purchase intentions	Chen, J., & Lobo, A.	The International Review of Retail, Distribution and Consumer Research, 22(3), 293-314.	2012	China
54	Factors Influencing Green Purchase Intention: Moderating Role of Green Brand Knowledge	Saeed Siyal, Munawar Javed Ahmed 3, Riaz Ahmad, Bushra Shahzad Khan and Chunlin Xin 1	International Journal of Environmental Research and Public Health	2021	Pakistan
55	Influences of background factors on consumers' purchase intention in China's organic food market: Assessing moderating role of word-of-mouth (WOM)	Shimiao Li & Nor Siah Jaharuddin	Cogent Business & Management	2021	China
56	Why do consumers buy organic food? Results from an S–O–R model	Austin Rong-Da Liang, Wai-Mun Lim	Asia Pacific Journal of Marketing and Logistics	2021	Taiwan
57	Factors influencing consumers' continuous purchase intention on fresh food e-commerce platforms: An organic foods-centric empirical investigation	Jiabao Lin, Ting Li, Jinyuan Guo	Electronic Commerce Research and Applications	2021	China
58	What drives willingness to purchase and stated buying behavior toward organic food? A Stimuluse Organisme Behaviore Consequence (SOBC) perspective	Shalini Talwar, Fauzia Jabeen, Anushree Tandon, Mototaka Sakashita, Amandeep Dhir	Journal of Cleaner Production	2021	Japan
59	Factors Affecting Consumers' Purchase Behaviour for Health and Wellness Food Products in an Emerging Market	Tabassum Ali, Aftab Alam, Jabir Ali	Global Business Review	2021	India
60	Factors influencing green purchasing inconsistency of Ecuadorian millennials	Nelson Geovany Carrion Bosquez and Leopoldo Gabriel Arias-Bolzmann	British Food Journal	2021	Ecuador
61	Drinking "Green": What Drives Organic Wine Consumption in an Emerging Wine Market	Christina Geng-Qing Chi, Zhe (Chris) Ouyang, Lu Lu, and Rong Zou	Cornell Hospitality Quarterly	2021	China
62	AN EMPIRICAL STUDY ON THE FACTORS AFFECTING ORGANIC FOOD PURCHASING BEHAVIOR IN	Shanjida Chowdhury, Abdelrhman Meero, Abdul Aziz Abdu Rahman, K. M. Anwarul Islam, Nurul Mohammad Zayed, K. B. M. Rajibul Hasan,	Academy of Strategic Management Journal	2021	Dhaka, Bangladesh

	BANGLADESH: ANALYZING A FEW FACTORS				
63	Critical Factors Affecting Consumer Buying Behaviour of Organic Vegetables in Vietnam*	Huy Quang DOAN	Journal of Asian Finance, Economics and Business	2021	Vietnam
64	Who buys organic food? Understanding different types of consumers	Gunjan Gumber & Jyoti Rana	Cogent Business & Management	2021	India
65	What motivates consumers to buy organic foods? Results of an empirical study in the United States	Raghava R. Gundala, Anupam Singh	Plos one	2021	Midwest, United States.
66	The role of trust in the relationship between consumers, producers and retailers of organic food: A sector-based approach	Richard Ladwein, Andrea Milena S´anchez Romero	Journal of Retailing and Consumer Services	2021	France
67	The Impact of Psychological and Environmental Factors on Consumers' Purchase Intention toward Organic Food: Evidence from Vietnam	Dinh Toan NGUYEN, Dinh Chien TRUONG	Journal of Asian Finance, Economics and Business	2021	Vietnam
68	Organic Foods Purchase Behavior among Generation Y of Bangladesh: The Moderation Effect of Trust and Price Consciousness	Guang-Wen Zheng, Nazma Akter, Abu Bakkar Siddik, and Mohammad Masukujjaman	Foods	2021	Bangladeshi
69	Role of consumer health consciousness, food safety & attitude on organic food purchase in emerging market~ A serial mediation model	Nagaraj, S. Journal of Retailing and Consumer Services, 59, 102423.	Journal of Retailing and Consumer Services, 59, 102423.	2021	India
70	Antecedents of Purchase Intention toward Organic Food in an Asian Emerging Market~ A Study of Urban Vietnamese Consumers	Nguyen, T. T. M., Phan, T. H., Nguyen, H. L., Dang, T. K. T., & Nguyen, N. D.	Sustainability, 11(17), 4773.	2019	Vietnam
71	The purchase of organic fish in Bangladesh~ Safeguarding against COVID-19	Prince, S. A., & Saira Wahid, I.	Cogent Business & Management, 7(1), 1841524.	2020	Bangladesh
72	Sustainable Consumption~ Will They Buy It Again~ Factors Influencing the	Thanki, H., Shah, S., Oza, A., Vizureanu, P., & Burduhos-Nergis, D. D.	Foods, 11(19), 3046.	2022	**India**

	Intention to Repurchase Organic Food Grain				
73	"I Eat Organic for My Benefit and Yours": Egoistic and Altruistic Considerations for Purchasing Organic Food and Their Implications for Advertising Strategists	I. Kareklas, J. R. Carlson and D. D. Muehling	Journal of Advertising	2014	**USA**
74	Understanding organic food consumption: attitude as a mediator	S. Cabuk, C. Tanrikulu and L. Gelibolu	International Journal of Consumer Studies	2014	**Turkey**
75	Drivers of organic food purchase intentions in mainland China – evaluating potential customers' attitudes, demographics and segmentation	J. Chen, A. Lobo and N. Rajendran	International Journal of Consumer Studies	2014	**China**
76	Underlying Motivations of Organic Food Purchase Intentions	V. A. Nasir and F. Karakaya	Agribusiness	2014	**Europe**
77	Enthusiastically consuming organic food	Liang, R.-D. .	Internet research: Electronic networking applications and policy, 24(5), 3-4.	2014	Taiwan
78	Price fairness, satisfaction, and trust as antecedents of purchase intentions towards organic food	Faruk Anıl Konuk	Journal of Consumer Behaviour	2018	Turkey
79	Antecedents of Perceived Value and Repurchase Intention of Organic Food	Deonir De Toni, Luciene Eberle, Fabiano Larentis & Gabriel Sperandio Milan	Journal of Food Products Marketing	2018	Brazil
80	Mediating influences of attitude on internal and external factors influencing consumers' intention to purchase organic foods in China	K. M. Chu	Sustainability (Switzerland)	2018	China
81	Determinants of Consumers' Purchase Intentions of Organic Vegetables: Some Insights from Malaysia	Norazah Mohd Suki	Journal of Food Products Marketing	2018	Malaysia
82	What drives organic food purchasing~ – evidence from Croatia	Ham, M., Pap, A., & Stanic, M.	British Food Journal, 120(4), 734-748.	2018	Croatia
83	What drives Malaysian consumers' organic food purchase intention~ The role of moral norm, self-identity, environmental concern and price consciousness	Saleki, R., Quoquab, F., & Mohammad, J.	Journal of Agribusiness in Developing and Emerging Economies, 9(5), 584-603.	2019	Malaysia

84	Mediating role of consumer identity between factors influencing purchase intention and actual behavior in organic food consumption in Thailand	Aungatichart, N., Fukushige, A., & Aryupong, M.	Pakistan Journal of Commerce and Social Sciences (PJCSS), 14(2), 424-449.	2020	Thailand
85	Consumers' anti-consumption behavior toward organic food purchase: an analysis using SEM	Ashraf, M. A., Joarder, M. H. R., & Ratan, S. R. A.	British Food Journal, 121(1), 104-122.	2019	Bangladesh
86	What Motivates Young Indian Consumers to Buy Organic Food?	Matharu, G. K., von der Heidt, T., Sorwar, G., & Sivapalan, A.	Journal of International Consumer Marketing, 34(5), 497-516.	2022	India
87	Identifying the key purchase factors for organic food among Chinese consumers	Li, S., & Jaharuddin, N. S.	Frontiers of Business Research in China, 14(1), 1-23.	2020	China
88	Intention to buy organic fish among Danish consumers~ Application of the segmentation approach and the theory of planned behaviour	Budhathoki, M., Zølner, A., Nielsen, T., Rasmussen, M. A., & Reinbach, H. C.	Aquaculture, 549, 737798.	2022	Danish

Appendix F: Factor Loading for DOI factors

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7,707	29,641	29,641	7,707	29,641	29,641	3,221	12,387	12,387
2	4,101	15,772	45,413	4,101	15,772	45,413	3,116	11,986	24,373
3	2,457	9,451	54,863	2,457	9,451	54,863	2,916	11,217	35,590
4	1,520	5,846	60,709	1,520	5,846	60,709	2,785	10,711	46,301
5	1,458	5,609	66,319	1,458	5,609	66,319	2,705	10,405	56,706
6	1,305	5,018	71,337	1,305	5,018	71,337	2,595	9,980	66,685
7	1,105	4,250	75,587	1,105	4,250	75,587	2,314	8,901	75,587
8	,808	3,106	78,692						
9	,723	2,782	81,474						
10	,606	2,329	83,804						
11	,563	2,164	85,968						
12	,529	2,034	88,002						
13	,498	1,917	89,919						
14	,412	1,584	91,503						
15	,368	1,414	92,917						
16	,323	1,243	94,161						
17	,254	,976	95,136						
18	,241	,926	96,062						
19	,213	,818	96,880						
20	,177	,681	97,561						
21	,142	,547	98,108						
22	,137	,528	98,636						
23	,115	,444	99,080						
24	,099	,381	99,461						
25	,080	,306	99,767						
26	,061	,233	100,000						
Extraction Method: Principal Component Analysis.									

Rotated Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
COMP1	,847						
COMP2	,881						
COMP3	,866						
COMP4	,778						
COMPAT3				,883			
COMPAT4				,635			
COMPAT5				,876			
COMPAT6				,506			
REL1							,711
REL2							,643
REL3							,655
REL4							,748
OBS2						,737	
OBS3						,595	
OBS4						,745	
OBS5						,731	
TRA1					,806		
TRA2					,823		
TRA3					,549		
TRA4					,742		
INT1		,891					
INT2		,894					
INT3		,869					
PURCH1			,829				
PURCH2			,860				
PURCH3			,825				

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Appendix G: Factor Loading for Traditional factors

Rotated Component Matrix[a]						
	Component					
	1	2	3	4	5	6
ATT1	,898					
ATT2	,887					
ATT3	,871					
ATT4	,901					
SUBJ1			,920			
SUBJ2			,949			
SUBJ3			,939			
TRST1		,755				
TRST2		,915				
TRST3		,916				
TRST4		,898				
HLTH1					,822	
HLTH2					,897	
HLTH3					,869	
INT1						,845
INT2						,856
INT3						,825
PURCH1				,857		
PURCH2				,910		
PURCH3				,882		
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.						
a. Rotation converged in 6 iterations.						

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8,376	41,879	41,879	8,376	41,879	41,879	3,670	18,349	18,349
2	2,763	13,815	55,694	2,763	13,815	55,694	3,348	16,739	35,088
3	2,441	12,206	67,899	2,441	12,206	67,899	2,869	14,345	49,433
4	1,617	8,083	75,982	1,617	8,083	75,982	2,726	13,632	63,065
5	1,477	7,384	83,366	1,477	7,384	83,366	2,621	13,107	76,172
6	1,150	5,750	89,116	1,150	5,750	89,116	2,589	12,944	89,116
7	,432	2,162	91,278						
8	,257	1,284	92,562						
9	,223	1,114	93,676						
10	,192	,962	94,638						
11	,173	,863	95,502						
12	,164	,822	96,324						
13	,137	,686	97,010						
14	,125	,624	97,634						
15	,108	,538	98,172						
16	,094	,471	98,643						
17	,090	,452	99,095						
18	,069	,345	99,439						
19	,067	,334	99,773						
20	,045	,227	100,000						

Extraction Method: Principal Component Analysis.

Appendix H: Factor Loading for Consumer Innovativeness

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6,180	51,498	51,498	6,180	51,498	51,498	4,196	34,966	34,966
2	2,240	18,666	70,164	2,240	18,666	70,164	2,949	24,574	59,540
3	1,442	12,020	82,184	1,442	12,020	82,184	2,717	22,644	82,184
4	,684	5,698	87,882						
5	,405	3,376	91,257						
6	,277	2,304	93,562						
7	,191	1,591	95,153						
8	,168	1,398	96,551						
9	,141	1,175	97,725						
10	,117	,975	98,700						
11	,086	,718	99,418						
12	,070	,582	100,000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]			
	Component		
	1	2	3
CONS1	,704		
CONS2	,820		
CONS3	,856		
CONS4	,868		
CONS5	,768		
CONS6	,846		
INT1		,924	
INT2		,939	
INT3		,893	
PURCH1			,864
PURCH2			,906
PURCH3			,886
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 4 iterations.			

Appendix I: Factor Loading for Dynamic model

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12,115	31,881	31,881	12,115	31,881	31,881	4,296	11,306	11,306
2	5,214	13,722	45,603	5,214	13,722	45,603	3,872	10,190	21,497
3	2,995	7,882	53,485	2,995	7,882	53,485	3,491	9,186	30,683
4	2,533	6,666	60,151	2,533	6,666	60,151	3,225	8,486	39,169
5	1,727	4,544	64,694	1,727	4,544	64,694	2,974	7,827	46,996
6	1,624	4,273	68,967	1,624	4,273	68,967	2,724	7,167	54,163
7	1,458	3,838	72,805	1,458	3,838	72,805	2,714	7,143	61,306
8	1,221	3,214	76,019	1,221	3,214	76,019	2,628	6,915	68,221
9	1,159	3,050	79,069	1,159	3,050	79,069	2,605	6,855	75,076
10	1,086	2,859	81,927	1,086	2,859	81,927	2,603	6,851	81,927
11	,812	2,137	84,064						
12	,621	1,634	85,698						
13	,583	1,533	87,231						
14	,545	1,436	88,667						
15	,522	1,373	90,040						
16	,421	1,108	91,148						
17	,342	,901	92,049						
18	,311	,819	92,868						
19	,289	,760	93,628						
20	,248	,652	94,280						
21	,221	,581	94,861						
22	,219	,578	95,438						
23	,189	,497	95,936						
24	,174	,459	96,395						
25	,159	,418	96,813						
26	,154	,404	97,217						
27	,149	,392	97,609						
28	,137	,361	97,970						
29	,129	,340	98,309						
30	,112	,295	98,605						
31	,093	,245	98,850						
32	,087	,228	99,078						
33	,075	,197	99,276						
34	,069	,181	99,457						
35	,061	,160	99,617						

36	,055	,146	99,762						
37	,052	,138	99,900						
38	,038	,100	100,000						
Extraction Method: Principal Component Analysis.									

Rotated Component Matrix[a]										
	Component									
	1	2	3	4	5	6	7	8	9	10
COMP1				,813						
COMP2				,840						
COMP3				,857						
COMP4				,810						
OBS2										,732
OBS3										,700
OBS4										,715
OBS5										,658
TRA1								,746		
TRA2								,776		
TRA3								,526		
TRA4								,713		
CONS1	,569									
CONS2	,731									
CONS3	,808									
CONS4	,848									
CONS5	,727									
CONS6	,830									
ATT1		,874								
ATT2		,874								
ATT3		,861								
ATT4		,897								
SUBJ1					,888					
SUBJ2					,915					
SUBJ3					,916					
HLTH1						,797				
HLTH2						,862				
HLTH3						,829				
TRST1			,735							
TRST2			,903							
TRST3			,906							
TRST4			,885							
INT1							,819			
INT2							,825			
INT3							,796			
PURCH1									,812	
PURCH2									,844	
PURCH3									,816	

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 7 iterations.