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**Exploring Portuguese green-purchase behaviour: from environmental concerns to green products choice**

Marta Mateus Tavares

Master's in Management of Services and Technology

Supervisor:

PhD Isabel Cristina de Seixas Patrício Duarte de Almeida, Invited Assistant Professor  
ISCTE-IUL

March, 2021

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Department of Marketing, Operations and General Management

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“Every time you spend money, you're casting a vote for the kind of world you want.”

Anna Lappe

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## Acknowledgment

It is with great pride that I see another stage of my life completed. This dissertation was a milestone, which will make the transition from a school phase to my quest to find myself in the professional world. It was not an easy path, I went through several obstacles, and for that I am so incredibly grateful for all the support and motivation that people gave me during this journey. This achievement could not have happened without the support of people who were crucial in this process.

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## Resumo

Devido às ações irresponsáveis do ser humano, o planeta está a chegar a um ponto de rutura. Contudo, assim como fomos os criadores desse problema, também podemos ser a solução. O consumo verde tem provado ser uma forma eficaz de minimizar o impacto negativo do consumo no meio ambiente. A investigação relacionada com o comportamento de consumo verde em Portugal ainda é escassa. Desta forma, o presente estudo utilizou uma versão alargada da Teoria do Comportamento Planeado, na qual foram incluídos dois construtos adicionais (Valor Percebido e Disposição de Pagar um Prémio), para medir a intenção e o comportamento de compra verde do consumidor.

Os consumidores mostram interesse e preocupação com o meio ambiente e as suas atitudes são na sua maioria positivas, no entanto, os padrões de comportamento muitas vezes não são consistentes com as atitudes/intenções. Assim, pretende-se investigar as inconsistências no comportamento do consumidor e analisar quais os determinantes mais relevantes na intenção do comportamento relativamente aos consumidores portugueses. O método de inquérito por questionário foi utilizado para recolher dados de 605 consumidores portugueses através de um questionário online, no qual os dados foram posteriormente analisados através do IBM SPSS e AMOS. Os resultados identificaram o Valor Percebido e a Atitude como os determinantes de maior impacto na intenção de compra e, conseqüentemente, no comportamento de compra de produtos verdes. As inconsistências abordadas, neste estudo de caso, não puderam ser devidamente estudadas, uma vez que os resultados não foram dotados dessas inconsistências que muitas vezes são comuns nessas áreas de estudo.

**Palavras-chave:** Produtos Verdes, Teoria do Comportamento Planeado, Valor Percebido, Disposição de Pagar um Prémio, Intenção de Compra

### **JEL Classification System:**

D91 - Role and Effects of Psychological, Emotional, Social, and Cognitive Factors on Decision Making

Q56 - Environment and Development • Environment and Trade • Sustainability • Environmental Accounts and Accounting • Environmental Equity • Population Growth

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## Abstract

Due to the irresponsible actions of the human being, the planet is reaching a breaking point. However, just as we were the creators of this problem, we can also be the solution. Green consumption is proved to be an effective way to minimize the negative impact of consumption on the environment. The research related to green consumption behaviour in Portugal is still scarce. Considering this, the present study used an extended version of the Theory of Planned Behaviour, in which it was included two additional constructs (Perceived Value and Willingness to Pay Premium), to measure consumer green purchase intention and behaviour.

Consumers show interest and concern for the environment and their attitudes are mostly positive, however, behaviour patterns are often not consistent with the attitudes/intentions. Therefore, it is intended to investigate the inconsistencies in consumer behaviour and analyse which are the most relevant determinants of behaviour intention regarding the Portuguese consumers. The questionnaire survey method was used to collect data from 605 Portuguese consumers via an online questionnaire, in which the data was then analysed through IBM SPSS and AMOS. The results identified Perceived Value and Attitude as the determinants that have the greatest impact on the purchase intention and, consequently, on the purchase behaviour of green products. The inconsistencies addressed, in this case study, could not be properly studied since the results were not endowed with those inconsistencies that are often common in these areas of study.

**Keywords:** Green Products, Theory of Planned Behaviour; Perceived Value, Willingness to Pay Premium, Purchase Intention

### **JEL Classification System:**

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# Glossary

ATT - Attitude

BB - Behavioural Belief

CB – Control Belief

H - Hypotheses

MC – Motivation to Comply

NB – Normative Belief

OE - Outcome Evaluation

PBC – Perceived Behaviour Control

PI – Purchase Intention

PB – Purchase Behaviour

PP – Perceived Power

PV – Perceived Value

SEM - Structural Equation Modelling

SN – Subjective Norm

TPB – Theory of Planned Behaviour

TRA – Theory of Reasoned Action

UN – United Nations

WPP – Willingness to Pay Premium

WTP – Willingness To Pay

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# CHAPTER 1

## Introduction

We live in a culture in which consumerism defines our idea of what a good life is. Our society promotes a consumerist lifestyle, in which people's happiness is largely linked to material goods. If we think about previous generations, it's easy to assess that today's basic needs are vastly higher than in the past. According to the Australian Academy of Science<sup>1</sup>, we have consumed more resources in the last 50 years than all mankind before us.

The ongoing technological and industrial revolution played an important role for this change, since it has had an impact on the quality of life and transformed the way resources are consumed and produced (Akehurst, Afonso, & Gonçalves, 2012). Consequently, with this change, there will always be a tendency to increase consumption, however, if part of this consumption is diverted to green products, it is possible to reduce the environmental effects of consumption. Several studies have revealed that unreasonable consumption habits and patterns were significant factors to the environment, causing almost 40% of environmental degradation (Zhang, Fan, Zhang, & Zhang, 2019).

Over-consumption is one of the main factors responsible for the destruction of the environment, making the consumption of green products crucial to sustainable development (Wu & Chen, 2014). Of course, the ideal is also to reduce and reuse, but the act of purchase will always be present, so it is important to buy in a sustainable and conscious way.

Consumers have the responsibility of protecting the environment by choosing to buy environmentally friendly products over goods that harm the environment. Also, consumers should adopt a proactive attitude and put pressure on governments and organizations with regard to their ethical and socio-environmental responsibility.

The consumer is therefore a key player as it has the power to influence other stakeholders and thus expand the good of their action. A good example is that, if a company sells a product of its choice, but the consumer does not buy, it will be forced to withdraw it from the market in order to avoid losses. On the other hand, if there is a considerable demand for green products and there is still no supply from the companies, they will perceive this new trend as a market

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<sup>1</sup> <https://www.science.org.au/curious/earth-environment/population-environment>

opportunity and possible competitive advantage, and so will respond to demand. Even if many do not want to join will be forced to do so in order to not lose market share.

Stakeholders such as governments and manufacturers also play a fundamental role. According to Wu and Chen (2013), the government have the mission to spread awareness and educate people about the ill effects of goods that harm the environment, just as manufacturers have a responsibility to lessen their impact on the environment by producing more sustainably and choosing to deliver environmentally friendly products to the market.

Following this line of reasoning, it is possible to conclude that human behaviour is intrinsically related to the environmental problems we are struggling nowadays (Baca-Motes, Brown, Gneezy, Keenan, & Nelson, 2013). It therefore becomes critical to study the behaviour of individuals in more depth, to understand what moves them or what stops them, to find an effective way to modify harmful behaviours for others more environmentally friendly. According to Steg and Vlek (2009), individuals can have an enormous impact in achieving long-term environmental sustainability, through the adoption of pro-environmental behaviour patterns.

To move towards sustainability, Paul, Modi and Patel (2016) suggested motivating consumption of green products among customers. However, companies will only act in this direction if they first understand the needs of consumers. It is common knowledge, that human behaviour is quite complex, so there are many variables to consider and discrepancies to understand. Peattie (2001) indicated that each customer have divergent preferences towards different attributes of an eco-friendly product, and it is very challenging to correlate attributes of green consumer with customers' demographic characteristics.

However, the real problem that still raises many doubts today is the discrepancy between the intention to purchase green products and the actual behaviour of the purchase. As widely postulated on social psychology literature, attitudes guide human behaviour (Arli, Tan, Tjiptono, & Yang, 2018; Bredahl, 2001). Multi-attribute models, such as the Theory of Reasoned Action (Fishbein & Ajzen, 1975) and the Theory of Planned Behaviour (Ajzen 1985, 1991, 2005), hypothesised that attitudes affect people's intentions to perform a certain behaviour, and intentions, as a result, impact the behaviour (Petty, Unnava, & Strathman, 1991). Consumers have shown a positive attitude towards environmental protection, having even expressed their demand for green products to organizations (Joshi & Rahman, 2015).



In recent years, the number of individuals willing to buy green products has been increasing, however, the evidence does not suggest that the purchase of green products has increased (Joshi & Rahman, 2015). Even consumers with an environmental concern and a positive attitude towards sustainability and green products, end up neglecting environmental considerations in their purchasing decisions, ignoring the environmental impacts of their purchases (Mohr, Webb, & Harris, 2001).

Looking at the literature, it is possible to understand that even the most recent researchers have just started to explore the factors that help explain the green consumption behaviours (Nguyen, Nguyen, & Hoang, 2019). The focus of many of these studies, however, fell only on intention (Hanss, Böhm, Doran, & Homburg, 2016; Liu, Qu, Lei, & Jia, 2017). In order to respond to the needs imposed by further research on actual behaviour, others began to investigate the antecedents, that range from culture and values (Dietz, Fitzgerald, & Shwom, 2005; Pepper, Jackson, & Uzzell, 2009), sociodemographic characteristics (Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003; Laroche, Bergeron, & Barbaro-Forleo, 2001), to attitudes, subjective norms, perceived control and intention (Paul et al., 2016; Wu & Chen, 2014).

Several models were employed to explain consumption behaviour, in which the Theory of Reasoned Action and its extension, the Theory of Planned Behaviour, were the most applied and provided solid results (Ceglia, Lima, & Leocádio, 2015; Hanss et al., 2016). The “attitude-behaviour” gap was a recurring theme in this line of research, which reflects the fact that “environmental knowledge and strongly held pro-environmental values, attitudes, and intentions frequently fail to translate into green purchasing and other pro-environmental behaviour in practice” (Peattie, 2010, p. 213). This gap is not an isolated event, having already been observed in several countries (Durif, Roy, & Boivin, 2012; Young, Hwang, McDonald, & Oates, 2009), which has led scholars to ask for further research in order to better understand the gap and close it.

This study attempts to make several contributions to the literature, by developing a conceptual framework based on the theory of planned behaviour (Ajzen, 1991). First, the results of this study pretend to help explain the attitude-behaviour gap in the context of green consumption behaviour. Second, it is intended to contribute to the literature regarding the gap between intention and behaviour in general. Studies on consumer behaviours generally consider the intention to be the same or at least highly correlated with actual behaviour (Ajzen &

Fishbein, 2005). Nevertheless, there is always a gap between intention and actual behaviour, a phenomenon called as “literal inconsistency”. This concept is defined as the failure to act in accordance with the stated intention (Ajzen & Fishbein, 2005, p. 178). This study tries to highlight the determining role of intention in explaining behaviour, and at the same time try to explain the theoretical inconsistency, at least in green consumption.

Thirdly, this study also seeks to increase knowledge about the country of study, namely Portugal. Although this is a theme that is widely explored internationally, Portugal presents few studies made in this regard (Akehurst et al., 2012; Gonçalves, Menezes, & Marques, 2015; Marques & Almeida, 2013; Oliveira-Brochado, Oliveira-Brochado, & Caldeira, 2015; Paço & Raposo, 2008 e 2009). Despite the increased awareness and consequently increased sales of this type of product, there is still a large gap between consumers claim to be willing to purchase environmentally sustainable goods and services and the actual behaviour (Chang, 2011).

To accomplish that, it will be use an extended version of the Theory of Planed Behaviour developed by Yadav and Pathak (2017). This is an extensively used theory in the purchase intention for green products, in which it proved to be a solid model with a good predictive power and is also a flexible model as it allows adding variables to suit the theme of the study and its needs. Empirical results have proved that this theory is suitable for green consumption (Ceglia et al., 2015; Nguyen et al., 2019).

Concerns regarding environmental problems have grown considerably and are today one of the most discussed topics worldwide. To overcome this problem requires the commitment of all, so consumers need to assume this responsibility and consequently change their consumption behaviour to one that is more sustainable. My thesis intends to follow this new trend and to understand it more deeply. Therefore, this research aims to answer the following questions: What are the determinants that most affect Portuguese consumers in their intention to purchase green products? Why Portuguese consumers may have an intention to purchase green products but then do not engage in the actual behaviour?

In order to answer these questions, the study was structured as follows:

- Introduction, in which the problem to be studied will be introduced, as well as the objectives of the study, the research gap and the research questions;
- Literature Review, exposing all the relevant topics for this research by presenting past studies to support the present study. It will also be addressed the model used and its

variables to be later applied in a questionnaire. This chapter will therefore be the basis of this work, in which it will provide all the information necessary to proceed with the study;

- Methodology, which will explain all the steps from data collection to analysis of results;
- Results and Discussion, in which statistical data and analysis will be presented, validating the model's reliability and which were the most significant determinants;
- Conclusions, explaining the implications of the results previously presented and the limitations, stating recommendations for further research in the field.

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## CHAPTER 2

# Literature Review

### 2.1. Theoretical Framework

#### 2.1.1. Background on Environmental Problems

Everything we do affects the world around us; however, it was not always with today's magnitude. The Earth's landscape underwent a major change with the industrial revolution, as it changed the foundations of an agricultural society and placed it on the path of modern economic development (Steinberg, 1986). The relationship between humankind and nature was deeply affected, marking a new and significant chapter in the earth's environmental history.

The environmental concerns started in the 1960s, regarding air and water pollution from factories and dense urban living conditions, which quickly evolved into a variety of other conditions such as soil erosion, pesticide contamination, deforestation, loss of biodiversity (Dunlap & Jorgenson, 2012; Lu, Bock, & Joseph, 2013). Gradually, they've merged into environmental problems as we know it today. At that time, thought was focused on growing as much, and as fast, as possible, disregarding the potential impact on the environment and even humans itself.

In 1987, World Commission on Environment and Development has linked environment protection with global development, by recognizing sustainable development as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Stenzel, 2010, p. 1). Five years later, the United Nations convened an international Conference on the Human Environment in Stockholm, that marked a turning point in the development of international environmental politics. This was the first world conference to make the environment a major issue. This conference marked the first global summit to consider human impacts on the environment and the first major attempt in placing the need to reconcile economic development with environmental protection, which despite being considered incompatible so far, has been successful (Purvis, Mao, & Robinson, 2019).

The year 1992 registered another United Nations Conference, on Environment and Development, in Rio de Janeiro, in which Europe was already following the political trends with the foundation of important "Green Parties" and the environmental problems were now considered a prominent issue for citizens and governments around the world (Dunlap & Jorgenson, 2012).

Although several initiatives were taken, during the 70s, 80s and 90s, with the purpose of increase environmental awareness, proved to be insufficient. Our new lifestyle has proved to be incompatible with our planet's present capacity. The environment is constantly being damaged due to various economic activities and consumption patterns (Haake & Seuring, 2009). Humanity first saw ecological deficit in the early 1970s, now, in 2019, humanity is using nature 1.75 times faster than our planet's ecosystems can regenerate. According to Global Footprint Network<sup>2</sup>, an international sustainability organization, more than 80 percent of the world's population lives in countries that are running ecological deficits, using more resources than what their ecosystems can renew.

It is important to understand that the natural resources depletion has a secondary and durable effect in the environment beyond what was expected from the immediate overexploitation of those resources. Indeed, a product's environmental impacts generally occur through using natural resources during the life cycle of the product, from cradle (from the extraction of raw materials from the earth to manufacturing) to grave (after it has been discarded by the consumer). Thus, well-designed operations and products cost less to elaborate, use less energy and natural resources. They are better incorporated into the communities and they are also less likely to contribute to health and environmental problems, and more likely to enhance productivity in a sustainable way.

### **2.1.2. Green Products**

Green Product can be defined as a product that meets the consumer needs while preventing or reducing environmental impact and thus contributes to a more sustainable world (Joshi & Rahman, 2015). These are made of materials that are safer for the environment, recyclable and do not require as much packaging (Chan & Chai, 2010). Organic products, energy efficient

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<sup>2</sup> <https://www.footprintnetwork.org/>

lightbulbs, herbal products, eco-friendly washing machine are some of the many examples of green products.

Green products are designed to have the least environmental impact during production and consumption. This phenomenon is possible by conserving energy or resources and by reducing or eliminating the use of toxic substances, pollution and wastes (Esmailpour & Bahmiary, 2017). The green concept can be extended to practically all stages of procuring raw materials, production, storage, packaging, shipping, and product distribution (Marques & Almeida, 2013). In short, a green product is a product that was designed to minimize the environmental impact during its life cycle (Noor, Masuod, Said, Kamaruzaman, & Mustafa, 2016).

According to Schlegelmilch., Bohlen, and Diamantopoulos (1996), green products could be divided into 5 categories, namely general green products, recycled paper products, products not tested on animals, environmentally friendly detergents, organically-grown fruit and vegetables, ozone-friendly aerosols and energy-efficient products.

### **2.1.3. Green Consumer**

Today's consumers are increasingly aware about the environmental and social problems we face (Aitken, Watkins, Williams, & Kean, 2020; Chen & Chang, 2013; Yue, Sheng, She, & Xu, 2020). This awareness made people start to worry about the environment which led to a new type of consumer who expresses their concerns at the time of purchase. These consumers are called green consumers (Esmailpour & Bahmiary, 2017).

Green consumers are people who are characterized by a concern for the environment and who have developed a more responsible attitude towards protecting the environment and, therefore, at the time of purchase, they choose products with minimal impact on the environment (Chen & Hung, 2016; Lu et al., 2013). That is, they examine the impact of the production and consumption process of the products on the environment to make the most conscious and environmentally friendly choice. Although the environment is a concern, these consumers also consider whether the products offers them benefits as well (Montague & Mukherjee, 2010; Ottman, Stafford, & Hartman, 2006; Schuitema & Groot, 2014).

This type of consumer is more demanding, it is not enough to buy green products, they also require companies to adopt a more environmentally friendly posture throughout their supply chain. They expect companies to engage in green practices, such as recycling, energy efficiency or even production of more environmentally products (Noor et al., 2016; Montague & Mukherjee, 2010).

In general, green consumers are distinguished by being those who avoid products that can compromise their health and the others, that causes serious damage to the environment during manufacture, consume a lot of energy, create unnecessary waste, and consists of materials that come from endangered species and threatened habitats (Lee, 2008; Sharma & Joshi, 2017).

This change in the consumers' behaviour has contributed to the beginning of the green revolution, which aims to protect the environment from further aggressions (Juwaheer, Pudaruth, & Noyaux, 2012). The desire to preserve the environment is a matter of great importance for consumers, so much so that they are willing to pay a higher price for products that comply with environmental standards. This new way of thinking and acting led companies to adopt new ways of managing and doing business to respond to the new needs imposed by the market (Paço, Raposo, & Filho, 2009, Noor et al., 2016; Luz, Mantovani, & Nepomuceno, 2020).

#### **2.1.4. Profiling the Green Consumer**

Consumers have different levels of concern and knowledge regarding the environment (Schuhwerk & Lefkoff-Hagius, 1995). In addition, based on their attitudes and behaviours it is possible to classify their degree of commitment to the environment and segment the green market (Lu et al., 2013; Schuhwerk & Lefkoff-Hagius, 1995). A segmentation used by the Roper Organization, divides the consumers into five categories according to their degree of commitment to the environment (Suplico, 2009).

First, we have the so-called “true-blue green” consumers, characterized by being the most active pro-environmental and environmentally conscious consumer group. They firmly believe that they can make a difference to solve environmental problems, and for that they are willing to pay more for green products and willingly engage in ecological activities, like composting and recycling. Also, this type of consumers is careful to buy their products only from trusted and environmentally conscious companies.



Second, we have the “greenback green” consumers who support environmental causes with their money, rather than engage in environmental activities and to take the time to be politically active. They choose to protect their lifestyle, being that these consumers only engage in environmental activities through monetary means, like being more willing than the average consumer to purchase green products.

Third, the “sprouts”, are consumers that don’t believe they have enough power to preserve the environment. These consumers believe in environmental causes in theory through the support of environmental regulations; however, in practice, the same does not happen. They are less likely to spend more money on green products.

Fourth, the “grouzers” known to tend to be uneducated about environmental issues. This group believe that it is not their responsibility to solve environmental issues. They also choose to buy regular products over green products to reduce costs.

Finally, we have the group least involved in problems regarding the environment, called “basic browns”. These consumers are the least educated among all consumer segments. They do not care enough about the environment to act and believe that environmental indifference is the trend (Suplico, 2009).

#### **2.1.5. Profiling the Portuguese Green Consumer**

Research on environment friendly consumers can be traced to the beginnings of the early 1970s. The literature has several studies about a consumer’s segmentation based on environmental attitudes and behaviours, in which Portugal has also been the subject of research. However, to characterize the Portuguese green consumer, besides the works of Afonso (2010), Paço and Raposo (2010), and Paiva and Proença (2011), few scientific studies are published in this context.

Thus, the description of the Portuguese green consumer, as follows, is the one outlined by Paço and Raposo (2010). A market study was conducted in this country with the aim of identify distinct market segments based on several environmental variables and to investigate individuals’ behaviours and perceptions about green consumerism. For this purpose, was conducted a survey among 887 Portuguese citizens (aged over 18) in which were classified

between three segments: “the uncommitted”, representing 36% of the sample, “the green activists”, with 35%, and “the undefined” with of 29%.

The first segment mainly consists of young people (between 18 to 34 years old) with educational levels between the secondary and higher education, incomes between 500€ to 1000€ and living in urban environments. The results showed low scores in some environmental aspects such as “environmentally friendly buying behaviour” and “recycling,” although they affirm to have knowledge about the issue.

The following segment was composed by individuals in the age groups between 25-34 and 45-54 years, with a high education level (higher education) and qualified jobs with incomes accordingly. The findings presented positive scores on “perceived efficiency”, “environmentally friendly buying behaviour”, “recycling”, “sensitivity to the economic factor” and “resource saving”.

The final segment includes individuals from the higher age groups, with lower educational levels and incomes up to 1000€. They showed a positive attitude towards “recycling” and “activism”, however, their role as consumers were low in terms of “effectiveness”. Also, the environment does not occupy a prominent place in their concerns.

In short, Paço & Raposo (2010) concluded that the Portuguese suffer a gap between their claims and their actual behaviour. Although encouraging and supporting policies that promote environmental well-being, there is no transition from their concerns to real measures. The author ended by saying that it is quite likely that when consumers become more aware of the limitations of natural resources, they will change their behaviour.

#### **2.1.6. Green Purchasing Gap**

Eco Innovation and Green Consumption are two ways to contribute to the sustainable development of planet Earth. Eco innovation aims to integrate sustainable practices throughout the process of creating products and services (Joshi & Rahman, 2015). With Green Consumption, we have individuals who consider the environment impact when buying, using, and disposing of products, or even when using green services (Moisander, 2007).

According to Grunert (1993), consumer household purchases have a huge environmental impact, being responsible for 40% of environmental damage. In addition, related statistics have shown that unhealthy consumption accounted for 30% to 40% of environmental degradation (Lin & Niu, 2018). In this way, it is easily understood the importance that consumers have in preventing and/or reducing environmental damage through the purchase of green products.

Several studies have shown that consumers have a positive attitude when it comes to protecting the environment, having even shown their interest in green products to companies. In fact, in recent years, there has been an increase in individuals willing to buy green products, nevertheless, the purchase of green products has not kept up with this trend (Arlı et al., 2018; Joshi & Rahman, 2015). For instance, as stated by Hughner, McDonagh, Prothero, Shultz, and Stanton (2007), 67% of people showed a positive attitude when buying organic food, but only 4% actually bought this type of product, and other results are similar (Chekima, Oswald, Wafa, & Chekima, 2017; Feil, Cyrne, Sindelar, Barden, & Dalmoro, 2020). Also, some scholars claim that green consumption represents a modest share of global consumption, more specifically, less than 4% (Blok, Long, Gaziulusoy, Ciliz, Lozano, Huisingh, Csutora & Boks, 2015; Bray, Johns, & Kilburn, 2011).

This suggests that environmental considerations, at the time of purchase decisions, do not have a significant role when compared with other variables to lead the consumer to adopt a more environmentally friendly purchasing posture (Joshi & Rahman, 2015; Medeiros, Ribeiro, & Cortimiglia, 2016; Mohr et al., 2001).

Many studies related to green purchase behaviour have shown a discrepancy or “gap” between consumers’ favourable attitudes and actual purchase behaviour. This gap is also called as “green purchasing inconsistency” or “green attitude-behaviour gap”. The Theory of Reasoned Action by Ajzen and Fishbein (1980) and the Theory of Planned Behaviour by Ajzen (1985) were the two prominent theoretical approaches followed by most of the studies regarding the explanation of consumer green purchase behaviour (Joshi & Rahman, 2015).

## **2.2. Construct definition and research hypotheses**

This chapter focuses on the theory adopted, in which hypotheses will be drawn. Just a gentle reminder about the research questions - What are the determinants that most affect Portuguese consumers in their intention to purchase green products? Why Portuguese consumers may have an intention to purchase green products but then do not engage in the actual behaviour? - presented in the section 1, that were the basis for the construction of the related propositions/hypothesis.

The conceptual framework applied in this study is founded on the Theory of Planned Behaviour (TPB) (Ajzen, 1991), for examining the purchasing behaviour towards green products. In this sense, the next sections will explore the theory used as well as each construct that composes it and the respective hypotheses.

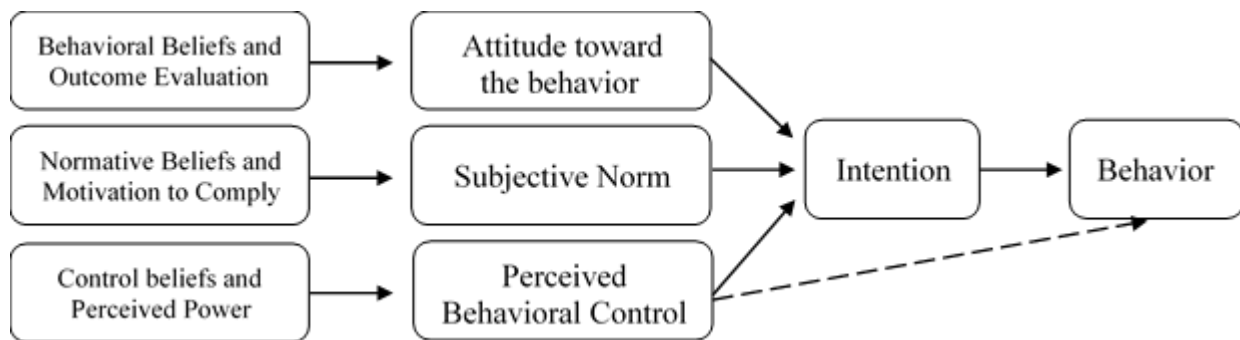
### **2.2.1. Theory of Planned Behaviour**

The Theory of Planned Behaviour is one of the most popular social psychological models to explain the antecedents of behaviour (Dowd & Burke, 2013). It was designed to predict and explain human behaviour in a specific context (Ajzen,1991) and it has been widely used to explore the decision-making framework concerning ethical behaviour (Canova, Bobbio, & Manganelli, 2020; Ramayah, Lee, & Lim, 2012; Randall & Gibson, 1991). The purchase of green products is considered an ethical decision (Hopfenbeck, 1993).

This model was first described in 1985 (Ajzen, 1985), and is an extension of the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980) and the multi-attribute attitude model (Fishbein & Ajzen,1975). TRA was developed by Fishbein and Ajzen and allows to predict behaviour through the evaluation of intention to perform the specified behaviour (Ajzen, 1991). Intentions, in this context, can be defined as the effort that an individual is willing to devote to perform the behaviour (Ajzen, 1991). However, the theory considers only volitional factors, such as attitude and subjective norm (SN), and fails to address possession of requisite opportunities and resources to explain an individual's behavioural intention (Madden, Ellen, & Ajzen, 1992). Volitional control states that a person must have the resources, opportunities and support available to perform a specific behaviour (Ajzen, 1991).

This way, the omission of certain non-volitional factors for determining human behaviours questioned the applicability of TRA (Han, Hsu, & Sheu, 2010). Following this line of reasoning, since this theory does not address factors that can affect behavioural intentions, it cannot fully explain human behaviour.

Perceived behavioural control was therefore added to the TRA to create the Theory of Planned Behaviour (Ajzen, 1991). The concept was proposed by Icek Ajzen to improve the predictive power of TRA. This variable allowed to deal with situations in which people do not have total control of the behaviour in question (Ajzen, 2002). For instance, when the availability of a product becomes a limiting factor to purchase a product or due to low income a person may not have the opportunity to buy green products that are sometimes more expensive. So, with the addition of this construct, we ended up with the model presented in the Figure 2.1.



**Figure 2.1|** Model of the Theory of Planned Behaviour (Model adapted from Ajzen, 1989)

The theory of planned behaviour, in the field of psychology, is seen as a theory that links beliefs to behaviour. TPB defends that there are three main components - attitude, subjective norm and perceived behavioural control - that together shape an individual's behavioural intentions. Behavioural intention is considered the closest determinant of human social behaviour.

To sum up everything that was been stated so far, TRA defines behaviour as a product of attitudes and subjective norms mediated by behavioural intention (Fishbein & Ajzen, 1975). The Theory of Planned Behaviour added a third variable known as perceived behavioural control to address the limitation of the original model to deal with incomplete volitional control (Ajzen, 1991). This theory, therefore, considers behaviour as the product of the mediating effect of behavioural intention on attitudes, subjective norms and perceived behavioural control. In a

broader sense, the TPB “allows us to examine the influence of personal determinants and social surroundings as well as non-volitional determinants on intention” (Han et al., 2010).

Based on 185 studies, it was possible to determine that the TPB allows to explain 27% and 39% of the variance in behaviour and intention, respectively (Armitage & Conner, 2001). The studies used covered a wide variety of behaviours. The inclusion of the PBC was supported since it added 2% to the prediction of behaviour after controlling for intention, and 6% to the prediction of intention, over attitude and subjective norm (Armitage & Conner, 2001).

TPB is an extensively used theory to predict consumer intention and behaviour in a wide range of fields and has demonstrated solid results in explaining environmentally friendly behaviour (Yadav & Pathak, 2016a, b; Zhang et al., 2019). More specifically, the theory was also applied in cases related to consumers’ green purchase behaviour (Canova et al., 2020; Chan & Lau, 2002; Chen & Hung, 2016; Paul et al., 2016; Yadav & Pathak, 2016b).

The literature has proven that many environmental problems are magnified due to consumers' buying behaviour (Wu & Chen, 2014). Therefore, it is essential to understand the factors that influence of consumers’ purchase behaviour for green products, so that organizations use this knowledge to improve their market strategy and so attract more consumers to buy green products, instead of others harmful to the environment.

### **2.2.2. Attitude toward Green Products**

Attitudes are essential for consumer behaviour research. For that reason, marketing often seeks to comprehend attitudes to more accurately predict consumer behaviour and also to change their attitudes to obtain an appropriate behaviour (Barber, Taylor, & Strick, 2009). According to Allport (1935), attitude is a mental and neural state of readiness, in which influences the individual's response towards all objects and situations with which it is confronted.

The Theory of Planned Behaviour argues that attitude towards a behaviour, subjective norm, and perceived behavioural control are three independent determinants of behavioural intention. The first determinant of behavioural intention is attitude, which refers to the degree to which an individual has a favourable or unfavourable evaluation towards a specific behaviour (Ajzen, 1991).

Attitude is an outcome of Behavioural Beliefs (BB) and Outcome Evaluations (OE). Behavioural Beliefs refers to the individual belief about the consequences of performing a certain behaviour, while the Outcome Evaluations is related to the evaluation about the possible consequences of the behaviour (Ajzen, 1991). The theory predicts that the more positive the perceived consequences of a behaviour, the more favourable the attitude toward the behaviour of an individual, and, consequently, the more likely the individual will intend to perform that behaviour (Fishbein & Ajzen, 1975). For instance, attitude towards green purchase is influenced by the environmental consequences perceived by consumers.

Individuals build their attitudes based on expectations about how the object of the attitude (e.g. environmental condition) affects the specific sets of people or things they value (Stern & Dietz, 1994). Some researchers focused on the interrelationship between attitude and purchase intention for green products, in which they concluded that attitude constitutes a crucial variable to predict consumers' purchase intention (Zhang et al., 2019). Ajzen (1991) defended that stronger attitudes, subjective norms and perceived behavioural control lead to a stronger behavioural intention to perform the behaviour in question.

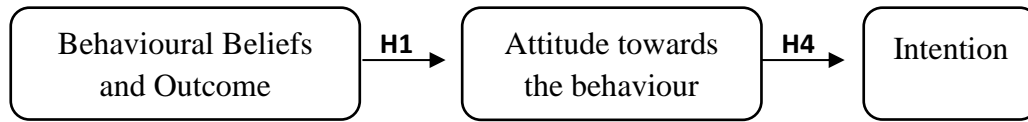
Conceptually, attitudes can be divided into general attitude and specific attitude. In studies focused on this thematic, general attitude refers to the attitude toward environmental problems, and specific attitude indicates the attitude toward green products or a specific green product (Nguyen, Lobo, & Greenland, 2016; Sun & Willson, 2008; Zhang et al., 2019). Previous research has posited that specific attitude is more likely to manifest in green behaviour (Hines, Hungerford, & Tomera, 1987; Nguyen et al., 2016; Zhang et al., 2019).

Attitude, as a construct in the TPB, has been widely studied in past research regarding the purchase intention for green products. Additionally, it was have found that attitude positively affects the purchase intention of green products (Sreen, Purbey, & Sadarangani, 2018). Mostafa (2007b) also concluded that this positive relationship between attitude and behavioural intention regarding green products has been established across many cultures, further strengthening this assumption. Therefore, the following hypotheses are proposed:

**Hypothesis 1.** Behavioural beliefs and Outcome Evaluation positively influence the attitude towards green products.

**Hypothesis 4.** Attitude positively influence the intention to purchase green products.

The referred hypotheses are related to the intention, which will be addressed and explained in the section 2.2.5. Figure 2.2 shows how the variables and hypotheses are related.



**Figure 2.2|** Hypotheses related with the construct of Attitude towards Green Products

### 2.2.3. Subjective Norm

Subjective Norm is one of the constructs in the framework of TPB and represents the second determinant of behavioural intention. This determinant introduced the social component in the TPB. Subjective norm can be comprehended as the perceived social pressure that encourages an individual to engage in a specific behaviour (Ajzen, 1991). The influence of significant others, who are important to an individual, such as spouses, close friends, relatives, colleagues, constitutes a significant determinant in an individual's behaviour (Bearden, Netemeyer, & Teel, 1989; Reis, Collins, & Berscheid, 2000).

The model predicts that the more an individual comprehends that significant others think that he/she should perform a certain behaviour, the greater the likelihood that the individual will actually intends do so (Fishbein & Ajzen, 1975). In certain situations, social pressure may even be more influential than the individual's own attitude towards the behaviour (Ajzen & Fishbein, 1980).

Subjective norm is a result of Normative Belief (NB) and Motivation to Comply (MC). Normative Belief represents an individual perception about how significant others would like one to behave in a particular situation, while Motivation to Comply is about the individual's motivation to comply with the opinion of significant others (Ajzen, 1991).

Many previous researchers have explored the effect of subjective norms on purchase intention for green products using TPB (Wu & Chen, 2014; Zhang et al., 2019). According to Thøgersen (2006), subjective social norms are directly and positively related to pro-environmental behaviours. In addition, Yadav and Pathak (2017) proved that subjective norms



positively influence the consumers' purchase intention for green products. The discussion leads to the following hypotheses that are:

**Hypothesis 2.** Normative Beliefs and Motivation to Comply positively influence the subjective norm.

**Hypothesis 5.** Subjective norms positively influence the intention to purchase green products.

The referred hypotheses are related with the intention, which will be addressed and explained in the section 2.2.5. Figure 2.3 shows how the variables and hypotheses are related.



**Figure 2.3|** Hypotheses related with the construct of Subjective Norm

#### 2.2.4. Perceived Behaviour Control

Perceived Behaviour Control is the most significant antecedent among the three in TPB, when it comes to behaviours that are partially under volitional control (Paul et al., 2016). Perceived behaviour control is defined as the people's perception of the ease or difficulty to perform a particular behaviour, playing an important role in TPB (Ajzen & Madden, 1986). PBC can be understood from two aspects, namely, the self-efficacy of an individual and the idea of barriers (Ajzen, 2002), always emphasizing however the importance of situational constraints (Bamberg & Möser, 2007). The theory also dictates that the greater the perceived behavioural control, the stronger should be an individual's intention to perform the particular behaviour (Randall & Gibson, 1991).

PBC is an element that was not part of the initial model, namely the Theory of Reasoned Action. To overcome some limitations, it was then considered forming the Theory of Planned Behaviour. In situations where the individual has complete control over the behaviour, PBC may add a little to the prediction. However, when the individual feels limitations to his ability to perform a behaviour, this variable already has great weight as a predecessor of intention (Randall & Gibson, 1991).

Perceived Behavioural Control derives from Control Beliefs (CB) and Perceived Power (PP). Control Beliefs refers to the belief of the individual regarding the presence of certain factors that may facilitate or obstruct the performance of a specific behaviour. For instance, some factors can be time, money and opportunity. Perceived power is concerned to the personal assessment of the impact of these factors in enabling or obstructing the particular behaviour (Ajzen, 1991).

In addition, this construct can be divided into internal and external PBC. Regarding the internal PBC, it is related to the control over the internal personnel resources (e.g. required skills, confidence, ability and planning) necessary to execute a certain behaviour (Armitage & Conner, 1999). The external PBC explains the perception of individuals in relation to their ability to overcome the external limitations (e.g. time and money), needed to perform a specific behaviour (Kidwell & Jewell, 2003).

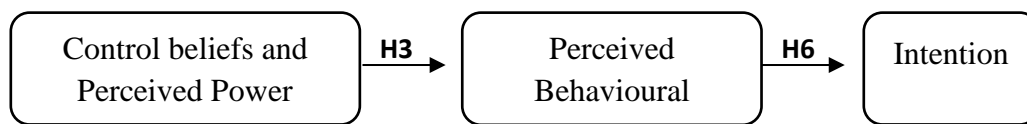
Adopting a new, more sustainable consumption style through the purchase of green products is not as straightforward as it may appear. Consumers actually face obstacles when implementing green consumerism. PBC reflects these complications and situations where people are not in volitional control of their behaviour (Ajzen, 2002; Wang, Wang, Wang, Li, & Zhao, 2018).

Several studies have tried to understand the relation between PBC and the intention of purchase green products. Numerous studies have established that PBC is positively related with intention in several research contexts, such as composting and recycling (Cho, 2019; Taylor & Todd, 1995), green hotels (Chen & Tung, 2014; Han et al., 2010), organic foods (Canova et al., 2020; Tarkiainen & Sundqvist, 2005), and green products (Maichum, Parichatnon, & Peng, 2016; Moser, 2015). Thus, based on previous researches, it was considered that the stronger the perceived behaviour control, the more confidence an individual will have to perform a certain behaviour. Therefore, this study proposes the following hypotheses:

**Hypothesis 3.** Control beliefs and Perceived Power positively influence the perceived behavioural control.

**Hypothesis 6.** Perceived behaviour control positively influences the intention to purchase green products.

The referred hypotheses are related with the intention, which will be addressed and explained in the section 2.2.5. Figure 2.4 shows how the variables and hypotheses are related.



**Figure 2.4|** Hypotheses related with the construct of Perceived Behavioural Control

### 2.2.5. Intention

The purpose of the Theory of Planned Behaviour is to predict and explain an individual's behaviour (Ajzen, 1985). The model tells us that intention is the immediate antecedent of behaviour (Ajzen, 2002). Intention can be perceived as an indication of an individual's readiness to perform a certain behaviour (Ajzen,1991). This determinant occupies a central position in both theories, TRA and TPB.

Behavioural intention is described as the result of the combination of three determinants: attitude towards the behaviour, subjective norms and perceived behavioural control (Randall & Gibson, 1991). The importance of the three elements should vary according to the type of behaviour that is being predicted and the conditions under which the behaviour is to be performed (Ajzen & Fishbein, 1980).

Behaviour can be determined from the intention with significant accuracy (Ajzen, 1991). Several studies shown that intention is a strong predictor of behaviour, however this claim was inconsistent in some cases. This inconsistency could be linked to the gap between intention and actual behaviour (Grunert & Juhl, 1995). Nevertheless, Sheppard, Hartwick, and Warshaw (1988), and several other scholars, advocates a high degree of correlation between intention and behaviour.

The theory predicts that the stronger the intent to perform a behaviour, the greater the probability that the individual will engage in the behaviour (Randall & Gibson, 1991). In other words, the more favourable the attitude towards the behaviour, the more favourable the subjective norm, and the greater perceived behavioural control, the stronger the individual's intention to perform a certain behaviour.

This study is concerned with the consumer intention and behaviour in relation to the purchase of green products. Green purchase intention refers to the likelihood of a consumer

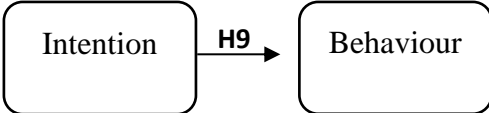
giving preference to environmentally friendly products over traditional products at their purchase considerations, that is, it expresses the consumer's willingness to act in favour of the environment (Cheung, Lam, & Lau, 2015; Jaiswal & Kant, 2018).

The literature is full of examples in which the TPB has been applied to a wide range of environmentally friendly products and services (Chen & Tung, 2014; Yadav & Pathak 2016a; Zhang et al., 2019), that have proven, in most cases, its strength as well as its predictability to measure eco-friendly purchase intent and behaviour (Yadav & Pathak, 2017). According to the meta-analysis conducted by Bamberg and Möser (2007), an average correlation of 0.52 was found between these two constructs. This finding was confirmed by empirical research focused on the purchase behaviour of environmentally friendly products (Akehurst et al., 2012; Nguyen et al., 2019; Soyez, 2012).

In general, researchers have reported positive relationships between intention (*vide* section 2.2.5) and behaviour as it will be better explained in the section (*vide* section 2.2.9) (Ajzen & Fishbein, 1980; Chan, 2001; Chan & Yam, 1995; Khan, Saengon, Alganad, Chongcharoen, & Farrukh, 2020; Sheng, Xie, Gong, & Pan, 2019). These results confirm the classic behavioural proposition that intention is the most immediately relevant predictor of behaviour (Ajzen & Fishbein, 1980). This way, it is hypothesized that:

**Hypothesis 9.** Intention to purchase green products positively influences the green purchase behaviour.

The referred hypothesis is related with the behaviour, which will be addressed and explained in the section 2.2.9. Figure 2.5 shows how the variables and the hypothesis are related.



**Figure 2.5|** Hypothesis related with the construct of Intention

### **2.2.6. Inclusion of Constructs in the TPB**

TPB has already proven to be an effective model in predicting behaviour (Yazdanpanah & Forouzani, 2015), which does not mean that the theory has stalled. Several scholars claim that the addition of other variables may allow an increase in the predictability of the model, always taking into account the behaviour and context in question (Armitage & Conner, 2001; Hwang, Kim, & Gulzar, 2020; Yadav & Pathak, 2017). The literature already presents several cases that prove the effectiveness of adding new variables, proving what many already assumed (Donald, Cooper, & Conchie, 2014; Read, Brown, Thorsteinsson, Morgan, & Price, 2013; Yadav & Pathak, 2016b).

In addition, Ajzen (1991) indicated that the model was open for expansion through the addition of new constructs if these demonstrate to have a significant weight in the variation of intention or behaviour. However, it is necessary to understand that although the inclusion of new variables can be important in certain situations, it does not mean that it must be adopted in all cases (Burton, 2004).

The present study presents a model that expands the TPB by incorporating two new constructs that are, namely, the perceived value and willingness to pay premium (WPP) along with the TPB constructs to understand consumer behaviour regarding the purchase of green products.

The perceived value is a relevant determinant in the green purchase decision, as the consumer is not willing to give up the functional benefit of the product just to protect the environment. Marketing, therefore, has the important task of understanding how consumers value green products. In addition, a green product tends to be priced higher than traditional products, and this willingness to pay a premium can be seen as an obstacle for more price-sensitive consumers (Yadav & Pathak, 2017). The proposed model of the modified TPB is outlined and explained in the section 2.2.10.

### **2.2.7. Theoretical and empirical support for including Perceived Value**

Perceived value refers to the general consumer assessment of the net benefit of a product or service based on perceptions of what is received and what is given (Zeithaml, 1988). It is typically used from the consumer's perspective (Ryu, Han, & Kim, 2008), in which it can be

described as the worth that a product or service is perceived by consumers. This concept has been essential in understanding the purchasing behaviour of consumers, representing a growing concern for consumers and organizations (Gonçalves et al., 2015; Kainth & Verma, 2011).

Perceived value is a powerful construct that has a prominent role in several relationships, namely, it presents itself as an important factor in long-term customer relationships (Cheung et al., 2015; Sweeney & Soutar, 2001), it also significantly affects the purchase intentions (Confente, Scarpi, & Russo, 2020; Patterson & Spreng, 1997; Zhuang, Cumiskey, Xiao, & Alford, 2010) and helps to build customer trust (Cheung et al., 2015; Kim, Zhao, & Yang, 2008).

Consumer judgment is often based on incomplete information, so the perceived value of products guides consumers, allows to create a positive word-of-mouth effect and raise purchase intentions (Chen & Chang, 2012; Chen, Tsai, & Hsieh, 2017; Kardes, Posavac, & Cronley, 2004; Noor et al., 2016). According to Ashton, Scott, Solnet, & Breakey (2010), the relationship between perceived value and the intention to purchase implies a trade-off between the benefit that the consumer perceives of a product and the perceived sacrifice to pay for it, which can be monetary and / or non-monetary.

It is also important to realize that consumers are now more sensitive to organizations that adopt and promote social and ethical practices (Chen, 2001; Sreen et al., 2018). An organization's ethics is an extremely important aspect in customers' purchasing decisions, for which customers are willing to pay a higher price to reward an organization's ethical behaviour (Kang, Stein, Heo, & Lee, 2012). By adopting an environmentally friendly image, organizations will improve their reputation with consumers and will also allow consumers to feel that they are doing their part by purchasing a product or service from a socially responsible company.

Nevertheless, some companies promote their products through misleading claims about the environmental value of their products, which makes consumers to distrust them and become averse to buying their products (Junior, Martínez, Correa, Moura-Leite, & Silva, 2019; Kalafatis, Pollard, East, & Tsogas, 1999; Lin, Lobo, & Leckie, 2017). As a result, consumers can get the perception that they are not getting value for money by purchasing green products (Gan, Wee, Ozanne, & Kao, 2008). This way, organizations must apply green marketing strategies to increase the perceived value of their products and reduce the perceived risk (Arli et al., 2018; Chen & Chang, 2012).

Albrecht (1992) argues that “the only thing that matters in the new world of quality is delivering customer value”, being that value creation is often a part of organizations’ mission statements and objectives. Both academics and professionals emphasized the fundamental role of delivering value to the consumer as the key to long-term success of organizations (Steenkamp & Geyskens, 2006).

Recognizing the importance of the different dimensions of value is important for retailers because it allows them to develop positioning strategies more sophisticated (Gonçalves et al., 2015; Sweeney & Soutar, 2001). When value presents itself in a situation of relevance to the consumer, this becomes an opportunity for retailers to fully exploit all value dimensions of the customer to determine the most appropriate market approach (Gonçalves et al., 2015; Sweeney & Soutar, 2001). Value refers to a set of tangible and intangible consumer considerations that may be subject to change (e.g. time, circumstances). Ultimately, value is a personal and idiosyncratic judgment (Kelly, Johnston, & Danheiser, 2017).

Nowadays, environmental consciousness is a topic that has been growing considerably. This greener movement even led to the creation of an adapted version of perceived value. Chen and Chang (2012) created the green perceived value and define it as “a consumer’s overall appraisal of the net benefit of a product or service between what is received and what is given based on the consumer’s environmental desires, sustainable expectations, and green needs”. Previous studies have concluded that green perceived value, green trust and perceived quality are the drivers for the adoption of green products (Cheung et al., 2015; Gil & Jacob, 2018).

Consumers are interested in adopting greener purchasing behaviours, however, several studies have shown that consumers perceive the performance of green products to be inferior when compared to conventional products (D’Souza, Taghian, Lamb, & Peretiatkos, 2006; Glegg, Richards, Heard, & Dawson, 2005; Khan et al., 2020). Consumers may have this perception due to several factors, such as the fact that green products are made from used or recycled materials or that have a lower level of technical performance when compared to alternative products (for example, green detergents) (Gan et al., 2008).

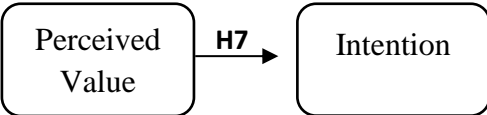
Although consumers want to protect the environment, they are not willing to compromise on product characteristics, such as quality, performance, price, convenience, and availability for green characteristics (Lu et al., 2013; Yadav & Pathak, 2017). Following the line of thought, consumers will not buy a product just because it has green features, it must also contain an additional benefit, such as safety, health or cost efficiency (Lu et al., 2013; Yadav & Pathak,

2017). Therefore, the green perceived value plays an extremely important role today, and this is because a poor perceived value can lead in the loss of the consumer’s purchase intentions (Chen et al., 2017; Sweeney & Soutar, 2001). As a result, companies understood the importance of value making it their primary objective, value delivery (Slack, Singh, & Sharma, 2020).

The literature shows that the perceived value of customers is positively related to the consumer’s purchase intentions (Brady & Robertson, 1999; Cronin, Brady, Brand, Hightower, & Shemwell, 1997; Hsu, Chang, & Lin, 2017; Patterson & Spreng, 1997; Tam, 2004). This means that the greater the perception of the value of a product by the consumer, the greater the probability for the consumer to purchase it (Chen & Chang, 2012; Medeiros et al., 2016). In addition, a research on environmentally responsible behaviour concluded that perceived value positively influences the environmentally responsible behaviour (Chiu, Lee, & Chen, 2014). Therefore, the study includes the following hypothesis:

**Hypothesis 7.** Perceived Value positively influences the intention to purchase green products.

The referred hypothesis is related with the intention, that has been previous explained in the section 2.2.5. Figure 2.6 shows how the variables and the hypothesis are related.



**Figure 2.6|** Hypothesis related with the construct of Perceived Value

**2.2.8. Theoretical and empirical support for including Willingness to Pay Premium**

Price is one of the most important factors in the consumer’s decision-making process (Gadema & Oglethorpe, 2011). When considering green consumption, consumers see price as a barrier (Gleim, Smith, Andrews, & Cronin, 2013). Green products are considerably more expensive than traditional products, so the price is likely to drive away many non-green consumers (Gleim et al., 2013; Munerah, Koay, & Thambiah, 2020). The higher price is usually due to the higher costs inherent in the process, ranging from material to certification (Ling, 2013).

Yet, although some green products are more expensive at the time of purchase, they do save money in the long run (e.g. energy-efficient washing machine) (Berger, 2019). There is



thus a conflict between the short- and long-term benefits, seen in many behaviours relevant to the environment (Bruderer, 2013). From the organizations' point of view, it will be interesting to deepen the understanding of the willingness to pay premium for environmentally friendly products in order to better adapt their market strategy.

The concept of Willingness To Pay (WTP) refers to the maximum amount of money a consumer is willing to pay for a product or service (Koschate-Fischer, Stefan, & Hoyer, 2012). This variable plays a decisive leverage on the consumer choice behaviour, and these because the adoption of environmentally friendly practices, such as green consumption, depends on the consumer's inclination to pay the green price premium (Biswas, 2016). Therefore, based on the characteristics of green products, such as additional costs, ecological features, WTP should be highlighted in the purchase decision processes, since it represents the last stage of the evaluation, before the purchase intention is formed (Ayadi & Lapeyre, 2014). In addition, Miller, Hofstetter, Krohme and Zhang (2011) argued that measuring consumers' WTP is also critical for formulating competitive strategies, developing new products, and implementing pricing tactics.

Literature has several studies on the willingness to pay premium for green products that have produced mixed results (Borin, Lindsey-Mullikin, & Krishnan, 2013; Gupta & Ogden, 2009). The inconclusive findings make this variable even more interesting to conduct further research in order to add value and clarification if possible, to the literature so far made.

Numerous researches claim that higher prices constitute one of the main reasons for consumers not to purchase green products (Sreen et al., 2018). In fact, there are many consumers who claim to be willing to pay a small premium, yet their willingness to pay decreases as the premium rises (Kucher, Hełdak, Kucher, & Raszka, 2019). It is important to note, however, that this willingness to pay premium is also dependent on the category of the product and the perceived benefits (Sharma & Joshi, 2017; Shen, 2008).

Even among consumers with green attitudes, many are still not super enthusiastic to purchase green products (Berger, 2019). Consumers face obstacles and difficulties when implementing green consumerism (Moser, 2015). Creating a new habit takes time and persistence, so it is necessary to be aware that adopting a greener purchasing behaviour is not something that happens overnight.

Ling (2013) conducted a study in which he found that the willingness to pay more was negatively correlated with the purchase intention of consumer on green personal care products. Other authors carried out a study regarding the hosting industry in India and concluded that despite a positive disposition towards environmentally friendly practices, most consumers are not willing to pay for them (Manaktola & Jauhari, 2007). Also, according to Choi and Parsa (2006) and Joshi and Rahman (2015), many consumers are hesitant towards paying a premium for green products.

A few studies were carried out in Portugal in which they concluded that consumers are aware of environmental problems and understand the challenges, although their concerns do not always translate into environmentally friendly behaviour. Nevertheless, it was found that there is a segment of greener consumers that differs in some features regarding the other market segments. This way, there are consumers who are willing to base their purchasing decisions on products that do not damage the environment (Paço & Raposo, 2010; Lin et al., 2017; Sreen et al., 2018).

Therefore, price does not necessarily become a constraint, if consumers are willing to accept higher prices (Moser, 2015). For instance, consumers with a high environmental motivation tend to be less sensitive to price (Tanner & Kast, 2003) and are willing to accept trade-offs between environmental benefits and higher expenses (Moser, 2015). Several studies showed that consumers with environmental concerns are more willing to pay a premium for green products for the benefit of the environment (Bang, Ellinger, Hadjimarcou & Traichal, 2000; Yadav, & Pathak, 2017). In fact, the literature strongly indicates that environmental concerns are reflected in consumers' purchasing behaviour. A positive association was found between environmental concern and a willingness to pay for green products in several studies (Kang et al., 2012; Shen, 2008; Zhang et al., 2019).

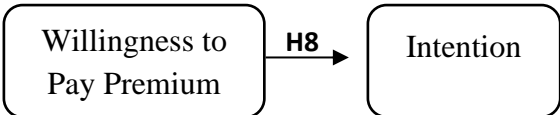
Over the years, consumers have realized that they have the power to contribute to the solution of many environmental problems through the adoption of a more conscious purchasing behaviour. Some facts that can better prove this statement are exactly the growing number of consumers who are willing to pay more for environmentally friendly products (Laroche et al., 2001), as well as the demand for green products that has increased over the decades (Berger, 2019).

When consumers agree to pay a premium price and value the features of green products, they no longer see price as a barrier to the green purchasing behaviour (Moser, 2015). Thus,

based on the literature, this variable proved to be a critical predictor of green purchasing, having therefore been added to the original model. The hypothesis is, therefore, as follows:

**Hypothesis 8.** Willingness to pay premium (WPP) positively influences the intention to purchase green products.

The referred hypothesis is related with the intention that has been previous explained in the section 2.2.5. Figure 2.7 shows how the variables and the hypothesis are related.



**Figure 2.7|** Hypothesis related with the construct of Willingness to Pay Premium

**2.2.9. Green Purchasing Behaviour**

Many environmental challenges are rooted in human actions, therefore, the solution may be through the promotion and adoption of environmentally friendly behaviours, such as greener purchasing patterns (Dagher & Itani, 2014; Shafiei & Maleksaeidi, 2020).

Purchasing behaviour can be understood as the consumer’s search, purchase, usage, appraisal, and disposal of products, services, or ideas to satisfy their needs (Lin & Niu, 2018). Entering in the environmental dimension, there is a more suitable concept. Namely the green purchase behaviour that represents a complex form of ethical decision-making behaviour and is considered a type of socially responsible behaviour (Joshi & Rahman, 2015). Green purchase behaviour refers to the purchase of environmentally friendly or sustainable products, that are beneficial to the environment, avoiding products that harm the environment and society (Jaiswal & Kant, 2018; Mostafa, 2007a). Consumer behaviour for green purchasing is usually assessed in terms of their consumers' willingness or intention to buy green products (Jaiswal & Kant, 2018).

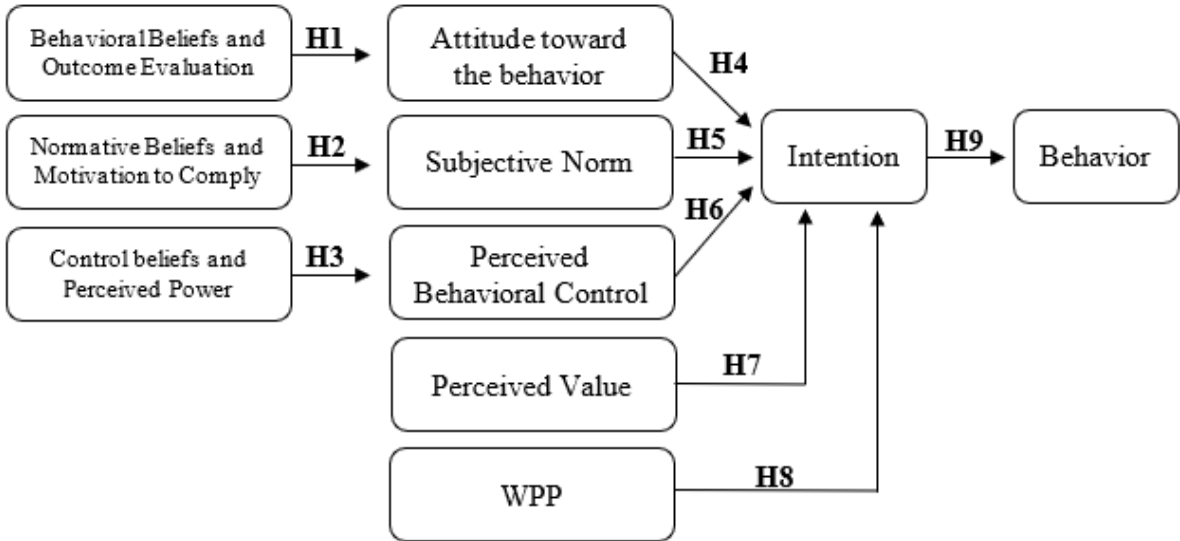
Several models were used in consumer behaviour research, such as the case of TRA (Fishbein & Ajzen, 1975), which suggests that consumer behaviour is determined by intentions, incorporated with attitude and subjective norms. Subsequently, the TPB (Ajzen & Fishbein, 1980), an extended model of TRA, added the construct of perceived behavioural control. These

classic models have been widely used by several scholars, alike or with some modifications to validate the purchase intention and the purchasing behaviour of green products (Yadav & Pathak, 2016b; Yazdanpanah & Forouzani, 2015).

However, there are several studies in the literature that end their model in intention, disregarding the actual behaviour. Nevertheless, the most recent statements in the literature have promoted the need to focus on actual behaviour along with behavioural intentions, since behavioural intentions alone may not accurately represent actual purchase behaviour (Canova et al., 2020).

**2.2.10. Hypotheses and model illustration**

Based on the assumptions of the TPB and the literature discussed above, the following model was arrived at, which will be applied in this study. The image below shows all the constructs used, as well as the connections between them and the hypotheses developed.



**Figure 2.8** | Theoretical framework adopted in the present study (adapted from Yadav & Pathak, 2017)

Yadav and Pathak (2017) developed this model, through the addition of two new constructs in the theory of planned behaviour, in which it was demonstrated in their article that the theory supported the consumer's intentions to purchase green products, which in turn influences their green purchase behaviour.

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## CHAPTER 3

# Methodology

### 3.1. Target population

For this study, a sample of adults with an age of 18 or over was chosen. The theme to be explored presents some conceptual complexity (regarding the green and sustainability context) and needs some maturity in order to understand what is required, so for minors it can be a challenge (Paul et al., 2016). Adults have a greater ability to compare and evaluate the available options and make a conscious choice, so they were the target chosen to collect the necessary data. Also, according to Paul et al. (2016), highly educated people tend to more easily understand the topic under consideration and help provide accurate data when compared to less educated people, proving once again that adults will be the right choice.

### 3.2. Data Collection

There are several research approaches when developing a study, namely, explanatory, descriptive, and causal research<sup>3</sup>; depending on the needs imposed by the study in question. The present study seeks to study variables that have a cause-effect relationship, therefore, a causal research approach will be undertaken.

The current research demands for quantitative data, so it was employed a quantitative research method through the application of a survey questionnaire. This type of method is usually related to the achievement of objective facts allowing to obtain the best and more reliable scientific evidence (Saunders, Lewis & Thornhill, 2019).

The purpose of this thesis is to understand the predictors for green purchasing behaviour regarding the Portuguese population. Thus, Portugal is the research setting and can be described as a country that has embarked on a green growth agenda, aiming to be a national leader in sustainable and economic growth. Therefore, the plan of action is to collect the data, examine

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<sup>3</sup> <https://www.surveymonkey.com/mp/3-types-survey-research/>

the conceptual framework shown in Figure 2.8, and test the research hypotheses presented along the Chapter 2.

The questionnaire was developed on Google Forms and elaborated in Portuguese, in order to suit the language of the study population. The data was collected online, through social networks platforms, as well as offline, through a direct approach.

The social media approach was made through shares on Facebook and Instagram. In order to reach a greater number of people, shares were included on universities pages on Facebook and, on Instagram, a page renowned in Portugal in the sale and awareness of matters related to the environment called “Mind the Trash” also share the questionnaire. Regarding messaging platforms, WhatsApp and Messenger were used. According to Statista (2020)<sup>4</sup>, Facebook, WhatsApp, Facebook Messenger, and Instagram constitute four of the biggest social networking platforms, all with over 1 billion monthly active users each.

### **3.3. Pre-test of the Survey**

The validity of the questionnaire content was verified before sending it to the respondents. A pre-test was conducted with some respondents from different age groups and levels of education to identify potential problems which might have been overlooked and to remove any possible ambiguity from the questions.

With the pre-tests it was possible to reformulate an expression to better suit the original questionnaire and add extra information to help respondents to better understand what is asked. The process, therefore, resulted in some minor changes. The questionnaire was then administered through an online survey.

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<sup>4</sup> <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/>

### **3.4. Questionnaire Design**

To develop the survey, it is necessary to define the items that support the previous stated constructs. Therefore, every item was adapted from previous studies (see Appendix 2), in order to guarantee the validity and reliability of this research. Since this study is targeting the Portuguese population, the items were translated to Portuguese (Appendix 1). It was used a simple and unbiased wording to allow the respondents to understand the questions easily. To ensure full completion of the questionnaire, all questions were mandatory.

The questionnaire survey employed consisted of three parts. The first part, comprised demographic variables such as age, gender, residence area, concluded academic qualifications, marital status, number of children, monthly net income and professional status. The second part included the questions related to the belief constructs (Behavioural Beliefs and Outcome Evaluation, Normative Beliefs and Motivation to Comply, Control beliefs and Perceived Power). The third and final part concerns the remaining constructs (Attitude, Subjective Norm, Perceived Behavioural Control, Perceived Value, Willingness to Pay Premium, Intention, Behaviour) in which questions were made to test the hypotheses proposed in this study.

### **3.5. Data Analysis**

To analyse the data from the questionnaire, IBM SPSS version 27 and AMOS version 26 were used. Initially, and through the SPSS software, the variables were coded according to their specifications and the ones that required it, were adapted and recoded. Also, the invalid answers were deleted due to the respondents do not fit the target, meaning they were under the age of 18. After the database was prepared, it was performed an analysis to better understand the socio-demographic characteristics and several analyses were performed for each construct. Finally, the software AMOS 26 was used to apply the Structural Equation modelling (SEM). SEM is a widely used analytical tool in the social sciences that facilitates the discovery and confirmation of relationships among multiple variables (Hair, Gabriel, & Patel, 2014). According to Weston and Gore (2006, p.720), SEM can be understood as a “hybrid of factor analysis and path analysis” that allows to build, test and confirm models of complex relationships (Gallagher, Ting, & Palmer, 2008).



## **3.6. Measures**

### **3.6.1. Belief Constructs**

For beliefs constructs, it is common to develop the items through an elicitation study accompanied by a literature review. Ajzen and Fishbein (1980) recommended the use of the elicitation method for salient beliefs and referents when faced with a new context and population. However, in this study, instead of developing new items to measure beliefs constructs and referents, will be applied the same items of the model on which this thesis is based.

The model in question was developed by Yadav and Pathak (2017) in which they adapted the original model of the Theory of Planned Behaviour. The purpose of their study coincides with this thesis, which is an attempt to understand the consumer behaviour to purchase green products. Therefore, the items designed in their work satisfy the needs of this study for which they will be applied.

The model created by these authors proved to be quite effective. Therefore, it will be interesting to stay as faithful as possible to the model, to also understand the model's versatility, and its predictive power, since it is facing a different study population. A robust model will be ready to be tested in different contexts, so this study will allow to comprehend the model's effectiveness.

Through a discussion with a group and open-ended questionnaire, the authors ended up with a questionnaire of eleven items for beliefs (Behavioural Belief (BB), Normative Belief (NB), and Control Belief (CB)) and eleven items for evaluative components (Outcome Evaluation (OE), Motivation to Comply (MC), and Perceived Power (PP)). The referents identified were family, friends and colleagues. The measuring items for belief constructs are presented in Appendix 2.

#### **3.6.1.1. Behavioural Belief**

For behavioural belief, five items were applied using the 5-point Likert's scale (strongly disagree (1)/strongly agree (5)). Initially the idea was to use a scale of 7-point Likert's scale (strongly disagree (1)/strongly agree (7)) to comply with the Yadav and Pathak (2017) study.

However, when preparing the questionnaire in Google Forms it was found that the options were not all visible (it was necessary to drag a bar to see all the options), and at the risk of this influencing the respondents' responses it was decided to adopt the measure of 5-point Likert's scale.

In addition, after some research it was possible to understand that the 5-point Likert scale also offered some additional benefits. This scale has been the most recommended by researchers, since it allows to reduce the level of frustration of the respondents and also to increase the response rate and the quality of the response (Hameed, Basheer, Iqbal, Anwar, & Ahmad, 2018). The five items are as follows:

Buying a green product would enable me to:

**BB1** - help save the environment.

**BB2** - be a responsible citizen.

**BB3** - stay in a clean & better environment.

**BB4** - perform eco-friendly practices.

**BB5** - implement green initiatives in my life.

### **3.6.1.2. Outcome Evaluation**

Next, we have the outcome evaluation, in which it was measured on a 5-point scale (not at all important (1)/extremely important (5)). This scale was also changed from a 7-point scale to a 5-point scale, for the reasons mentioned above and to be in conformity with the other constructs. Outcome evaluation was evaluated through five items, which are below:

**OE1** - to me helping to save the environment is

**OE2** - to me being responsible towards society is

**OE3** - to me staying in clean and better environment is

**OE4** - to me performing eco-friendly practices is

**OE5** - to me implementing green initiatives in my life is

According to the Theory of Planned Behaviour and the proposal of Ajzen and Fishbein, the outcomes were recoded at SPSS (see Appendix 3).

### **3.6.1.3. Normative Belief**

To measure normative belief, three items (one item for each referent) and a 5-point scale (strongly disagree (1) / strongly agree (5)) were used. The items are as follows:

**NB1** - my family thinks I should purchase green products in place of conventional non-green products.

**NB2** - my friends think I should purchase green products in place of conventional non-green products.

**NB3** - my colleagues think I should purchase green products in place of conventional non-green products.

### **3.6.1.4. Motivation to Comply**

Then follows the motivation to comply in which we have three items to include each referent (family, friends, colleagues), using a 5-point scale (extremely unlikely (1) / extremely probable (5)). In the original model, this scale was of seven and, for all the reasons already mentioned, changed to five. The items are described below:

**MC1** - how likely it is for you to do what your family thinks you should do?

**MC2** - how likely it is for you to do what your friends think you should do?

**MC3** - how likely it is for you to do what your colleagues think you should do?

According to the Theory of Planned Behaviour and the proposal of Ajzen and Fishbein, the outcomes were recoded at SPSS (see Appendix 4).

### **3.6.1.5. Control Belief**

Control belief will be measured from three items. The items were scored on a 5-point Likert scale (strongly disagree (1) / strongly agree (5)) and are as follows:

**CB1** - while buying the green products, the location needs to be convenient.

**CB2** - buying green products requires time and effort.

**CB3** - my company/school/others that pay(s) for my expenses encourage(s) me to use green products.

### **3.6.1.6. Perceived Power**

Finally, there is the perceived power, which is the consequent of the control belief. This construct was also measured using three items on a 5-point scale (strongly disagree (1) / strongly agree (5)). The items are described below:

**PP1** - location is a critical factor while making decision to buy green products.

**PP2** - time and effort needed to buy is very important while making decision to buy green products.

**PP3** - the expenses available to me is very critical while making decision to buy green products.

Ajzen's (1991) suggestion was followed during the statistical analysis, in which all items of each belief were multiplied by their evaluative components (behavioural beliefs = behavioural belief (BB) \* outcome evaluation (OE), normative belief = normative belief (NB) \* motivation to comply (MC), control belief = control belief (CB) \* perceived power (PP)).

### **3.6.2. Other constructs**

In relation to the other seven constructs used in this study, namely, attitude, subjective norm, perceived behavioural control, perceived value, willingness to pay premium (WPP), purchase intention and actual behaviour, were measured based on existing validated items from previous literature in the field of pro-environmental behaviour.

### **3.6.2.1. Attitude**

Starting with Attitude, this construct was measured with a five-point semantic differential scale, adopting six items from Kim and Han (2010). The items are as follows:

Buying green product is:

**ATT1** - extremely bad (1)/extremely good (5)

**ATT2** - extremely undesirable (1)/extremely desirable (5)

**ATT3** - extremely unenjoyable (1)/extremely enjoyable (5)

**ATT4** - extremely foolish (1)/extremely wise (5)

**ATT5** - extremely unfavourable (1)/extremely favourable (5)

**ATT6** - extremely unpleasant (1)/extremely pleasant (5)

### **3.6.2.2. Subjective Norm**

To measure Subjective Norm, two items adopted by Chan and Lau (2002) were used. These items were measured with a 5-point Likert's scale, which ranges from strongly disagree (1) to strongly agree (5). The items to measure this construct are the following:

**SN1** - most people who are important to me would want me to purchase eco-friendly products.

**SN2** - most people who are important to me would think I should purchase green products.

### **3.6.2.3. Perceived Behaviour Control**

To assess the construct of Perceived Behaviour Control, three items were applied. These were adopted from the authors Kim and Han (2010). The items will be scored on a 5-point Likert scale (1=strongly disagree; 5=strongly agree). The items are, therefore, as follows:

**PBC1** - Whether or not I buy green product at place of conventional non-green product is completely up to me.

**PBC2** - I have resources, time and opportunities to buy green product.

**PBC3** - I am confident that if I want to, I can buy green product at place of conventional non-green product.

#### **3.6.2.4. Perceived Value**

Perceived Value is one of the constructs added to the original model. To evaluate it, five items will be used, which are based on the study conducted by Chen and Chang (2012). A scale of 5-point Likert scale (1=strongly disagree; 5=strongly agree) will be used once again for the five items in question, which are:

**PV1** - The green product's environmental functions provide good value to me.

**PV2** - The green product's environmental performance meets my expectations.

**PV3** - I purchase green product because it has more environmental concern than non-green products.

**PV4** - I purchase green product because it is environmentally friendly.

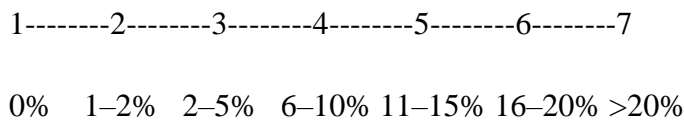
**PV5** - I purchase green product because it has more environmental benefit than non-green products.

#### **3.6.2.5. Willingness to Pay Premium**

Next, there is the construct of Willingness to Pay Premium which constitutes the second and last construct added to the theory of planned behaviour. It will be measured with the help of two items adopted from Kang et al. (2012). A scale of 5-point Likert scale (1=strongly disagree; 5=strongly agree) will be used to score the two items mentioned. The items are as follows:

**WPP1** - I would pay more for a green product that is making efforts to be environmentally sustainable.

**WPP2** - I would be willing to pay this extra percentage on the green products to support the organization's/product efforts to be environmentally sustainable.



### 3.6.2.6. Purchase Intention

The five constructs mentioned above are the antecedents of the purchase intention. This construct will be measured through three items adopted from Kim, Njite, and Hancer (2013) and will be scored with a 5-point Likert scale (1=strongly disagree; 5=strongly agree). Thus, it is possible to see below the three items:

**PI1** - I will purchase green products for personal use.

**PI2** - I am willing to purchase green products for personal use.

**PI3** - I will make an effort to purchase green products.

### 3.6.2.7. Purchase Behaviour

Finally, we have the last construct called purchase behaviour. This will be measured by three items adopted from Wan, Cheung, and Shen (2012) and will be scored with a 5-point Likert scale (1=strongly disagree; 5=strongly agree). The items are as follows:

**PB1** - I have been purchasing green products at regular basis.

**PB2** - I have green purchasing behaviour for my daily needs products.

**PB3** - I have green purchasing behaviour over the past six months.

In Appendix 2, it is possible to view all this information in a summarized table. This contains the details of the measurement items, scales used, and their respective sources.

## CHAPTER 4

### **Results and Discussion**

The study sample consists of several Portuguese individuals over 18 years of age. After applying the questionnaire, it was possible to arrive at a sample, whose demographic and socio-economic characteristics are shown in the Table below (Table 1). Of a total of 605 responses, and after a first analysis of the results, five responses were considered invalid because they did not meet the age requirement. Therefore, the valid responses were reduced to 600 responses, and these will be the ones that will be considered for future analysis.

#### **4.1. Sample Profile**

The sample consists of 600 respondents, of whom 406 are female (67,7%) and 194 are male (32,3%). The sample population is quite young, with 334 of the 600 respondents between 18 and 24 years old and the average age is in the 25 to 31 age group. It is observed that 39,3% of respondents completed high school, and 35,5% have a bachelor's degree in academic qualifications. The variable age and academic qualifications were recoded in order to better suit the reality of this study.

Regarding age, a tripartite division was made due to the characteristics of the sample and also because we wanted to make a division at the age of 30, since this represents a milestone. It is from the age of 30 that people generally start to have a more stable professional life, children, more economic difficulties and for all that and much more people also start to see the world differently. In relation to the academic qualifications, the questionnaire was asked more exhaustively, after which it was divided only between people with higher education and without higher education. The division was made this way since the faculty influences people and differentiated them from those with a lower academic qualification. This information is detailed in the Table 4.1.



**Table 4.1| Demographic Statistics: Sex, Age and Concluded Academic Qualifications**

|                                   |                       | N   | %     |
|-----------------------------------|-----------------------|-----|-------|
| Sex                               | Female                | 406 | 67,7  |
|                                   | Male                  | 194 | 32,3  |
|                                   | Total                 | 600 | 100,0 |
| Age                               | 18 to 24 years old    | 334 | 55,7  |
|                                   | 25 to 31 years old    | 120 | 20,0  |
|                                   | > 31 years old        | 146 | 24,3  |
|                                   | Total                 | 600 | 100,0 |
| Concluded Academic Qualifications | No Higher Education   | 282 | 47,0  |
|                                   | With Higher Education | 318 | 53,0  |
| Total                             |                       | 600 | 100,0 |

Still, in this sample, it is possible to verify that single people (78,2%) and without children (78,5%) are in greater number. Regarding professional status, 42% of individuals are students and 35,7% are currently working.

**Table 4.2| Demographic Statistics: Marital and Professional Status**

|                     |                   | N   | %     |
|---------------------|-------------------|-----|-------|
| Marital Status      | Single            | 469 | 78,2  |
|                     | Married           | 92  | 15,3  |
|                     | Divorced          | 22  | 3,7   |
|                     | Widowed           | 3   | 0,5   |
|                     | Another situation | 14  | 2,3   |
|                     | Total             | 600 | 100,0 |
| Professional Status | Self-employed     | 46  | 7,7   |
|                     | Employed          | 214 | 35,7  |
|                     | Student           | 252 | 42,0  |
|                     | Unemployed        | 27  | 4,5   |
|                     | Retired           | 5   | 0,8   |
|                     | Student Worker    | 51  | 8,5   |
|                     | Other             | 5   | 0,8   |
|                     | Total             | 600 | 100,0 |

**Table 4.3| Demographic Statistics: Number of children**

|                    |       | N   | %     |
|--------------------|-------|-----|-------|
| Number of children | 0     | 471 | 78,5  |
|                    | 1     | 48  | 8,0   |
|                    | 2     | 62  | 10,3  |
|                    | 3     | 17  | 2,8   |
|                    | > 3   | 2   | 0,3   |
|                    | Total | 600 | 100,0 |

The residence area that predominated in this study was Lisbon with 331 responses (55,17%), the second most significant area is the A.R. of Madeira with 50 respondents (8,33%) and the third was Leiria with 49 respondents (8,17%). Although not all areas have the same expression, responses were obtained from all districts and therefore representation from the entire country was obtained.

**Table 4.4| Demographic Statistics: Residence Area**

|                 |                  | N   | %    |
|-----------------|------------------|-----|------|
| Residence Area  | Aveiro           | 18  | 3,0  |
|                 | Beja             | 2   | 0,3  |
|                 | Braga            | 14  | 2,3  |
|                 | Bragança         | 4   | 0,7  |
|                 | Castelo Branco   | 8   | 1,3  |
|                 | Coimbra          | 13  | 2,2  |
|                 | Évora            | 4   | 0,7  |
|                 | Faro             | 25  | 4,2  |
|                 | Guarda           | 2   | 0,3  |
|                 | Leiria           | 49  | 8,2  |
|                 | Lisboa           | 331 | 55,2 |
|                 | Portalegre       | 3   | 0,5  |
|                 | Porto            | 16  | 2,7  |
|                 | Santarém         | 13  | 2,2  |
|                 | Setúbal          | 39  | 6,5  |
|                 | Viana do Castelo | 1   | 0,2  |
|                 | Vila Real        | 1   | 0,2  |
| Viseu           | 5                | 0,8 |      |
| R.A. da Madeira | 50               | 8,3 |      |

|                 |     |       |
|-----------------|-----|-------|
| R.A. dos Açores | 2   | 0,3   |
| Total           | 600 | 100,0 |

In terms of income, it was found that 167 of the respondents (27,8%) earned less than 500 €, followed by 165 respondents (27,5%) who earned between 500€ to 999€ and still with a significant amount there are 96 respondents to receive between 1000€ to 1499€. The remaining respondents have an income ranging from 2000€ up to 3500€ or more and represent only 3,2% of the sample. There were 127 individuals who preferred not to say how much they receive.

**Table 4.5| Demographic Statistics: Income**

|        |                   | N   | %     |
|--------|-------------------|-----|-------|
| Income | < 500€            | 167 | 27,8  |
|        | 500€ to 999€      | 165 | 27,5  |
|        | 1000€ to 1499€    | 96  | 16,0  |
|        | 1500€ to 1999€    | 25  | 4,2   |
|        | 2000€ to 2499€    | 8   | 1,3   |
|        | 2500€ to 2999€    | 5   | 0,8   |
|        | 3000€ to 3499€    | 2   | 0,3   |
|        | = or > 3500€      | 5   | 0,8   |
|        | Prefer not to say | 127 | 21,2  |
|        | Total             | 600 | 100,0 |

## 4.2. Analysis and interpretation of Construct Results

### 4.2.1. Behavioural Belief

The Behavioural Belief about the purchase of green products was assessed using five indicators on a 5-point Likert scale.

**Table 4.6| Behavioural Belief about the purchase of green products (means)**

|                                      |     |
|--------------------------------------|-----|
| Help save the environment            | 4,4 |
| Be a responsible citizen             | 4,4 |
| Stay in a clean & better environment | 4,4 |

|  |     |
|--|-----|
| Perform eco-friendly practices         | 4,5 |
| Implement green initiatives in my life | 4,4 |

Scale: 1 = strongly disagree; 5 = strongly agree

As we can see, the five beliefs have almost identical mean values, with only a difference of 0,1. Based on the average of the five indicators, a synthetic index (construct) of Behavioural Belief regarding the purchase of green products was constructed, with the following distribution by the respondents:

**Table 4.7|** Behavioural Belief by sex, age, and education (means)

|                         |                       | Behavioural Belief |
|-------------------------|-----------------------|--------------------|
| Sex                     | Female                | 4,5                |
|                         | Male                  | 4,2                |
|                         | Total                 | 4,4                |
| Age                     | 18 to 24 years old    | 4,5                |
|                         | 25 to 31 years old    | 4,6                |
|                         | > 31 years old        | 4,1                |
|                         | Total                 | 4,4                |
| Academic Qualifications | No Higher Education   | 4,4                |
|                         | With Higher Education | 4,4                |
|                         | Total                 | 4,4                |

Scale: 1 = minimum; 5 = maximum

There are only statistically significant differences in sex ( $t(419) = 3,292; p < 0,05$ ), and in age, between the three age groups ( $F(2,597) = 10,081; p < 0,001$ ). Appendix 5 shows more information about this construct, obtained through the SPSS program.

#### 4.2.2. Outcome Evaluation

The construct Outcome Evaluation was also evaluated using five indicators on a 5-point scale.

**Table 4.8|** Outcome Evaluation about the purchase of green products (means)

|  |     |
|--|-----|
| To me helping to save the environment is           | 4,8 |
| To me being responsible towards society is         | 4,7 |
| To me staying in clean and better environment is   | 4,9 |
| To me performing eco-friendly practices is         | 4,7 |
| To me implementing green initiatives in my life is | 4,6 |

Scale: 1 = strongly disagree; 5 = strongly agree

The five items shown in the Table above (Table 4.8) have close mean values, ranging from 4,6 to 4,9. Based on the average of the five indicators, a synthetic index of Outcome Evaluation regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.9|** Outcome Evaluation by sex, age, and education (means)

|                         |                       | Outcome Evaluation |
|-------------------------|-----------------------|--------------------|
| Sex                     | Female                | 4,8                |
|                         | Male                  | 4,5                |
|                         | Total                 | 4,7                |
| Age                     | 18 to 24 years old    | 4,7                |
|                         | 25 to 31 years old    | 4,8                |
|                         | > 31 years old        | 4,8                |
|                         | Total                 | 4,7                |
| Academic Qualifications | No Higher Education   | 4,7                |
|                         | With Higher Education | 4,8                |
|                         | Total                 | 4,7                |

Scale: 1 = minimum; 5 = maximum

There are statistically significant differences in sex ( $t(598) = 7,104; p < 0,05$ ), academic qualifications ( $t(598) = -2,314; p < 0,05$ ) and in age, between the three age groups ( $F(2,597) = 4,973; p < 0,001$ ). Appendix 6 shows more information about this construct, obtained through the SPSS program.

### 4.2.3. Normative Belief

The construct Normative Belief was evaluated using three indicators on a 5-point Likert scale.

**Table 4.10|** Normative Belief about the purchase of green products (means)

|  |     |
|--|-----|
| My family thinks I should purchase green products in place of conventional non-green products    | 2,7 |
| My friends think I should purchase green products in place of conventional non-green products    | 3,0 |
| My colleagues think I should purchase green products in place of conventional non-green products | 2,7 |

Scale: 1 = strongly disagree; 5 = strongly agree

The three items presented in the Table 4.10 show close mean values, ranging from 2,7 to 3,0. Based on the average of the five indicators, a synthetic index of Normative Belief regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.11|** Normative Belief by sex, age and education (means)

|                         |                       | Normative Belief |
|-------------------------|-----------------------|------------------|
| Sex                     | Female                | 2,8              |
|                         | Male                  | 2,7              |
|                         | Total                 | 2,8              |
| Age                     | 18 to 24 years old    | 2,7              |
|                         | 25 to 31 years old    | 2,6              |
|                         | > 31 years old        | 3,0              |
|                         | Total                 | 2,8              |
| Academic Qualifications | No Higher Education   | 3,0              |
|                         | With Higher Education | 2,6              |
|                         | Total                 | 2,8              |

Scale: 1 = minimum; 5 = maximum

There are only statistically significant differences in academic qualifications ( $t(598) = 3,279$ ;  $p < 0,05$ ). Appendix 7 shows more information about this construct, obtained through the SPSS program.

#### 4.2.4. Motivation to Comply

The construct Motivation to Comply was evaluated using three indicators on a 5-point Likert scale.

**Table 4.12|** Motivation to Comply about the purchase of green products (means)

|  |     |
|--|-----|
| How likely it is for you to do what your family thinks you should do?    | 3,5 |
| How likely it is for you to do what your friends think you should do?    | 3,2 |
| How likely it is for you to do what your colleagues think you should do? | 2,8 |

Scale: 1 = strongly disagree; 5 = strongly agree

The three items represented in the Table 4.12 show mean values with a small discrepancy, ranging from 2,8 to 3,5. Based on the average of the three indicators, a synthetic index of Motivation to Comply regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.13|** Motivation to Comply by sex, age and education (means)

|                         |                       | Motivation to Comply |
|-------------------------|-----------------------|----------------------|
| Sex                     | Female                | 3,2                  |
|                         | Male                  | 3,1                  |
|                         | Total                 | 3,2                  |
| Age                     | 18 to 24 years old    | 3,2                  |
|                         | 25 to 31 years old    | 3,1                  |
|                         | > 31 years old        | 3,2                  |
|                         | Total                 | 3,2                  |
| Academic Qualifications | No Higher Education   | 3,3                  |
|                         | With Higher Education | 3,1                  |
|                         | Total                 | 3,2                  |

Scale: 1 = minimum; 5 = maximum

There are only statistically significant differences in academic qualifications ( $t(598) = 2,430$ ;  $p < 0,05$ ). Appendix 8 shows more information about this construct, obtained through the SPSS program.

#### 4.2.5. Control Belief

The construct Control Belief was evaluated using three indicators on a 5-point Likert scale.

**Table 4.14|** Control Belief about the purchase of green products (means)

|  |     |
|--|-----|
| While buying the green products, the location needs to be convenient                       | 3,8 |
| Buying green products requires time and effort   | 3,1 |
| My company/school/others that pay(s) for my expenses encourage(s) me to use green products | 2,3 |

Scale: 1 = strongly disagree; 5 = strongly agree

The three items in the Table 4.14 illustrate mean values with a small discrepancy, ranging from 2,3 to 3,8. Based on the average of the three indicators, a synthetic index of Control Belief regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.15|** Control Belief by sex, age and education (means)

|                         |                       | Control Belief |
|-------------------------|-----------------------|----------------|
| Sex                     | Female                | 3,1            |
|                         | Male                  | 3,1            |
|                         | Total                 | 3,1            |
| Age                     | 18 to 24 years old    | 3,1            |
|                         | 25 to 31 years old    | 3,0            |
|                         | > 31 years old        | 3,1            |
|                         | Total                 | 3,1            |
| Academic Qualifications | No Higher Education   | 3,1            |
|                         | With Higher Education | 3,0            |
|                         | Total                 | 3,1            |

Scale: 1 = minimum; 5 = maximum

There are no statistically significant differences in the variables of sex, academic qualifications and age, regarding this construct. Appendix 9 shows more information about this construct, obtained through the SPSS program.

**4.2.6. Perceived Power**

The construct Perceived Power was evaluated using three indicators on a 5-point Likert scale.

**Table 4.16|** Perceived Power about the purchase of green products (means)

|   |     |
|---|-----|
| Location is a critical factor while making decision to buy green products                   | 3,6 |
| Time and effort needed to buy is very important while making decision to buy green products | 3,5 |
| The expenses available to me is very critical while making decision to buy green products   | 3,8 |

Scale: 1 = strongly disagree; 5 = strongly agree



The three items in the Table 4.16 show close mean values, ranging from 3,5 to 3,8. Based on the average of the three indicators, a synthetic index of Perceived Power regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.17|** Perceived Power by sex, age and education (means)

|                         |                       | Perceived Power |
|-------------------------|-----------------------|-----------------|
| Sex                     | Female                | 3,7             |
|                         | Male                  | 3,6             |
|                         | Total                 | 3,6             |
| Age                     | 18 to 24 years old    | 3,6             |
|                         | 25 to 31 years old    | 3,7             |
|                         | > 31 years old        | 3,6             |
|                         | Total                 | 3,6             |
| Academic Qualifications | No Higher Education   | 3,6             |
|                         | With Higher Education | 3,7             |
|                         | Total                 | 3,6             |

Scale: 1 = minimum; 5 = maximum

There are no statistically significant differences in the variables of sex, academic qualifications and age, regarding this construct. Appendix 10 shows more information about this construct, obtained through the SPSS program.

#### 4.2.7. Attitude

The construct Attitude was evaluated using six indicators on a 5-point semantic differential scale.

**Table 4.18|** Attitude about the purchase of green products (means)

|   |     |
|---|-----|
| Extremely bad (1)/extremely good (5)                | 4,6 |
| Extremely undesirable (1)/extremely desirable (5)   | 4,5 |
| Extremely unenjoyable (1)/extremely enjoyable (5)   | 3,7 |
| Extremely foolish (1)/extremely wise (5)            | 4,5 |
| Extremely unfavourable (1)/extremely favourable (5) | 4,4 |
| Extremely unpleasant (1)/extremely pleasant (5)     | 4,2 |

Scale: 1 = strongly disagree; 5 = strongly agree

As we can see, the six items have mean values, ranging from 3,7 to 4,6. Based on the average of the six indicators, a synthetic index of Attitude regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.19|** Attitude by sex, age and education (means)

|                         |                       | Attitude |
|-------------------------|-----------------------|----------|
| Sex                     | Female                | 4,4      |
|                         | Male                  | 4,0      |
|                         | Total                 | 4,3      |
| Age                     | 18 to 24 years old    | 4,2      |
|                         | 25 to 31 years old    | 4,4      |
|                         | > 31 years old        | 4,4      |
|                         | Total                 | 4,3      |
| Academic Qualifications | No Higher Education   | 4,3      |
|                         | With Higher Education | 4,3      |
|                         | Total                 | 4,3      |

Scale: 1 = minimum; 5 = maximum

There are only statistically significant differences in sex ( $t(598) = 8,168; p < 0,05$ ), and in age, between the three age groups ( $F(2,597) = 8,114; p < 0,001$ ). Appendix 11 shows more information about this construct, obtained through the SPSS program.

#### 4.2.8. Subjective Norm

The construct Subjective Norm was evaluated using two indicators on a 5-point Likert scale.

**Table 4.20|** Subjective Norm about the purchase of green products (means)

|   |     |
|---|-----|
| Most people who are important to me would want me to purchase eco-friendly products | 2,9 |
| Most people who are important to me would think I should purchase green products    | 2,9 |

Scale: 1 = strongly disagree; 5 = strongly agree

As we can see, the two items have equal mean values, namely, 2,9. Based on the average of the two indicators, a synthetic index of Subjective Norm regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.21|** Subjective Norm by sex, age and education (means)

|                         |                       | Subjective Norm |
|-------------------------|-----------------------|-----------------|
| Sex                     | Female                | 2,8             |
|                         | Male                  | 3,1             |
|                         | Total                 | 2,9             |
| Age                     | 18 to 24 years old    | 2,9             |
|                         | 25 to 31 years old    | 2,6             |
|                         | > 31 years old        | 3,2             |
|                         | Total                 | 2,9             |
| Academic Qualifications | No Higher Education   | 3,1             |
|                         | With Higher Education | 2,8             |
|                         | Total                 | 2,9             |

Scale: 1 = minimum; 5 = maximum

There are only statistically significant differences in sex ( $t(598) = -2,027$ ;  $p < 0,05$ ) and academic qualifications ( $t(577) = 2,758$ ;  $p < 0,05$ ). Appendix 12 shows more information about this construct, obtained through the SPSS program.

#### 4.2.9. Perceived Behavioural Control

The construct Perceived Behavioural Control was evaluated using three indicators on a 5-point Likert scale.

**Table 4.22|** Perceived Behavioural Control about the purchase of green products (means)

|  |     |
|--|-----|
| Whether or not I buy green product at place of conventional non-green product is completely up to me | 3,8 |
| I have resources, time and opportunities to buy green product  | 3,3 |
| I am confident that if I want to, I can buy green product at place of conventional non-green product | 3,7 |

Scale: 1 = strongly disagree; 5 = strongly agree

As we can see, the three items shown in the Table above (Table 4.22) have mean values, ranging from 3,3 to 3,8. Based on the average of the three indicators, a synthetic index of Perceived Behavioural Control regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.23|** Perceived Behavioural Control by sex, age and education (means)

|                         |                       | Perceived Behavioural Control |
|-------------------------|-----------------------|-------------------------------|
| Sex                     | Female                | 3,6                           |
|                         | Male                  | 3,6                           |
|                         | Total                 | 3,6                           |
| Age                     | 18 to 24 years old    | 3,5                           |
|                         | 25 to 31 years old    | 3,7                           |
|                         | > 31 years old        | 3,6                           |
|                         | Total                 | 3,6                           |
| Academic Qualifications | No Higher Education   | 3,5                           |
|                         | With Higher Education | 3,6                           |
|                         | Total                 | 3,6                           |

Scale: 1 = minimum; 5 = maximum

There are no statistically significant differences in the variables of sex, academic qualifications and age, regarding this construct. Appendix 13 shows more information about this construct, obtained through the SPSS program.

#### 4.2.10. Perceived Value

The construct Perceived Value was evaluated using five indicators on a 5-point Likert scale.

**Table 4.24|** Perceived Value about the purchase of green products (means)

|  |     |
|--|-----|
| The green product's environmental functions provide good value to me                       | 3,9 |
| The green product's environmental performance meets my expectations                        | 3,8 |
| I purchase green product because it has more environmental concern than non-green products | 4,2 |
| I purchase green product because it is environmentally friendly                            | 4,3 |
| I purchase green product because it has more environmental benefit than non-green products | 4,3 |

Scale: 1 = strongly disagree; 5 = strongly agree

As we can see, the five items shown in the Table 4.24 show mean values, ranging from 3,8 to 4,3. Based on the average of the five indicators, a synthetic index of Perceived Value

regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.25|** Perceived Value by sex, age and education (means)

|                         |                       | Perceived Value |
|-------------------------|-----------------------|-----------------|
| Sex                     | Female                | 4,2             |
|                         | Male                  | 3,8             |
|                         | Total                 | 4,1             |
| Age                     | 18 to 24 years old    | 4,1             |
|                         | 25 to 31 years old    | 4,2             |
|                         | > 31 years old        | 4,1             |
|                         | Total                 | 4,1             |
| Academic Qualifications | No Higher Education   | 4,1             |
|                         | With Higher Education | 4,2             |
|                         | Total                 | 4,1             |

Scale: 1 = minimum; 5 = maximum

There are only statistically significant differences in sex ( $t(598) = 5,851; p < 0,05$ ). Appendix 14 shows more information about this construct, obtained through the SPSS program.

**4.2.11. Willingness to Pay Premium**

The construct Willingness to Pay Premium was evaluated using two indicators on a 5-point Likert scale.

**Table 4.26|** Willingness to Pay Premium about the purchase of green products (means)

|   |     |
|---|-----|
| I would pay more for a green product that is making efforts to be environmentally sustainable   | 3,6 |
| I would be willing to pay this extra percentage on the green products to support the organization's / product efforts to be environmentally sustainable | 3,5 |

Scale: 1 = strongly disagree; 5 = strongly agree

As we can see, the two items shown in the Table 4.26 show close average values, namely, 3,5 and 3,6. Based on the average of the two indicators, a synthetic index of Willingness to Pay Premium regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.27|** Willingness to Pay Premium by sex, age and education (means)

|                         |                       | Willingness to Pay Premium |
|-------------------------|-----------------------|----------------------------|
| Sex                     | Female                | 3,6                        |
|                         | Male                  | 3,5                        |
|                         | Total                 | 3,6                        |
| Age                     | 18 to 24 years old    | 3,6                        |
|                         | 25 to 31 years old    | 3,7                        |
|                         | > 31 years old        | 3,5                        |
|                         | Total                 | 3,6                        |
| Academic Qualifications | No Higher Education   | 3,5                        |
|                         | With Higher Education | 3,7                        |
|                         | Total                 | 3,6                        |

Scale: 1 = minimum; 5 = maximum

There are no statistically significant differences in the variables of sex, academic qualifications and age, regarding this construct. Appendix 15 shows more information about this construct, obtained through the SPSS program.

#### 4.2.12. Purchase Intention

The construct Purchase Intention was evaluated using three indicators on a 5-point Likert scale.

**Table 4.28|** Purchase Intention about the purchase of green products (means)

|  |     |
|--|-----|
| I will purchase green products for personal use          | 4,0 |
| I am willing to purchase green products for personal use | 4,3 |
| I will make an effort to purchase green products         | 4,2 |

Scale: 1 = strongly disagree; 5 = strongly agree

Analysing the Table 4.28 it's possible to see that the three items have close mean values, ranging from 4,0 to 4,3. Based on the average of the three indicators, a synthetic index of Purchase Intention regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.29** Purchase Intention by sex, age and education (means)

|                         |                       | Purchase Intention |
|-------------------------|-----------------------|--------------------|
| Sex                     | Female                | 4,3                |
|                         | Male                  | 3,8                |
|                         | Total                 | 4,2                |
| Age                     | 18 to 24 years old    | 4,1                |
|                         | 25 to 31 years old    | 4,4                |
|                         | > 31 years old        | 4,1                |
|                         | Total                 | 4,2                |
| Academic Qualifications | No Higher Education   | 4,1                |
|                         | With Higher Education | 4,3                |
|                         | Total                 | 4,2                |

Scale: 1 = minimum; 5 = maximum

There are statistically significant differences in sex ( $t(303) = 7,108$ ;  $p < 0,05$ ), academic qualifications ( $t(544) = -2,844$ ;  $p < 0,05$ ). Appendix 16 shows more information about this construct, obtained through the SPSS program.

#### 4.2.13. Purchase Behaviour

The construct Purchase Behaviour was evaluated using three indicators on a 5-point Likert scale.

**Table 4.30** Purchase Behaviour about the purchase of green products (means)

|   |     |
|---|-----|
| I have been purchasing green products at regular basis        | 3,2 |
| I have green purchasing behaviour for my daily needs products | 3,2 |
| I have green purchasing behaviour over the past six months    | 3,4 |

Scale: 1 = strongly disagree; 5 = strongly agree

Analysing the Table above (Table 4.30) it's possible to see that the three items have similar mean values, ranging from 3,2 to 3,4. Based on the average of the three indicators, a synthetic index of Purchase Behaviour regarding the purchase of green products was constructed, with the following distribution among respondents:

**Table 4.31** | Purchase Behaviour by sex, age and education (means)

|                         |                       | Purchase Behaviour |
|-------------------------|-----------------------|--------------------|
| Sex                     | Female                | 3,4                |
|                         | Male                  | 2,9                |
|                         | Total                 | 3,3                |
| Age                     | 18 to 24 years old    | 3,0                |
|                         | 25 to 31 years old    | 3,6                |
|                         | > 31 years old        | 3,6                |
|                         | Total                 | 3,3                |
| Academic Qualifications | No Higher Education   | 3,1                |
|                         | With Higher Education | 3,4                |
|                         | Total                 | 3,3                |

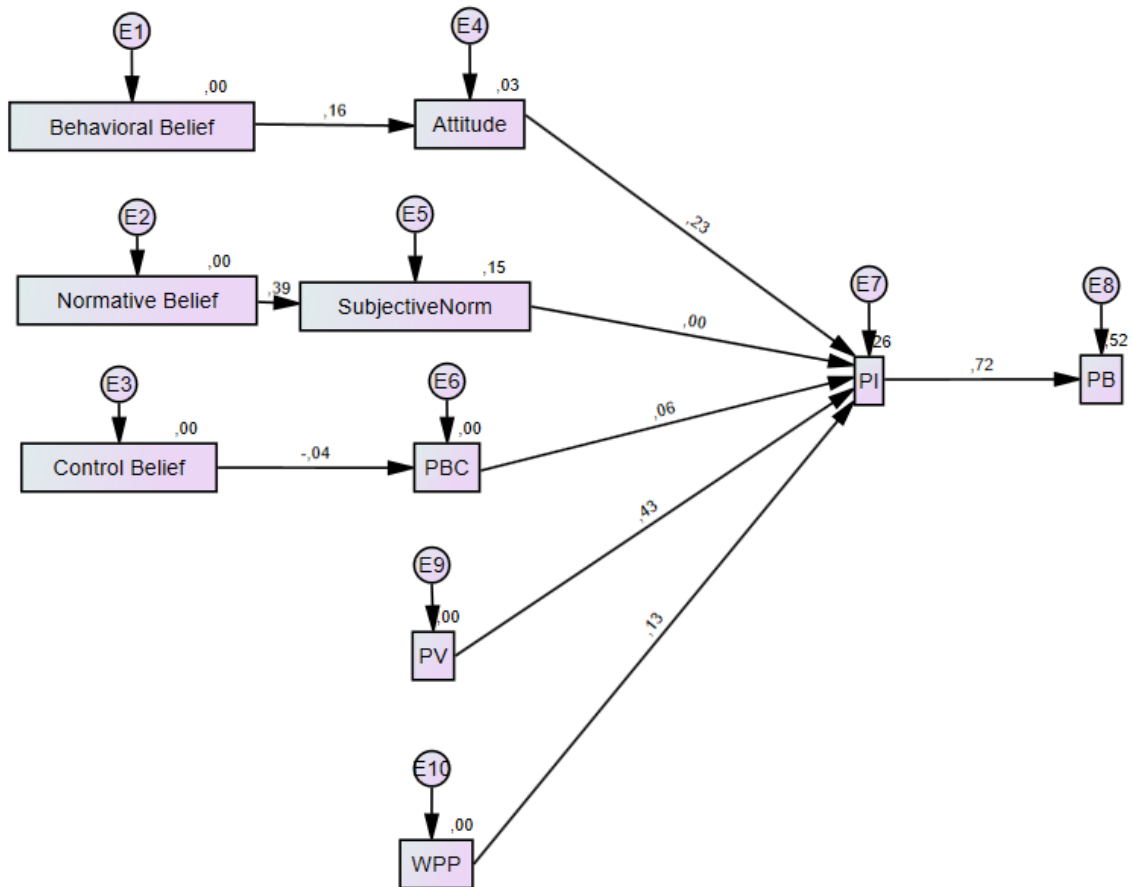
Scale: 1 = minimum; 5 = maximum

There are statistically significant differences in sex ( $t(384) = 4,328; p < 0,05$ ), academic qualifications ( $t(586) = -2,456; p < 0,05$ ) and in age, between the three age groups ( $F(2,597) = 15,903; p < 0,001$ ). Appendix 17 shows more information about this construct, obtained through the SPSS program.

#### 4.2.14. Structural Model

The model presented below was generated using IBM SPSS AMOS 26 and illustrates the model used in this thesis. The structural model allowed us to understand that the model explains 0,72 of the purchase behaviour of green products. Since the maximum is 1, we can conclude that this model effectively explains the purchasing behaviour.





Legend: PBC=Perceived Behavioural Control; PV=Perceived Value; WPP=Willingness to Pay Premium; PI=Purchase Intention; PB=Purchase Behaviour

**Figure 4.1|** Structural Model

To see the analysis output generated in the Amos software, see Appendix 18.

## CHAPTER 5

# Conclusions

To analyse the influence that different dimensions have on the purchase behaviour of green products by Portuguese consumers, this study was carried out. The conclusions of the results obtained are presented below, which provide theoretical and practical evidence that the model effectively explains the purchasing behaviour. Limitations are also presented, as well as suggestions for conducting future investigations.

### 5.1. Main Findings

The present research used the Theory of Planned Behaviour and incorporated two new constructs, respectively, perceived value and willingness to pay premium (WPP) to the original model with the aim of understand the behaviour of Portuguese consumers regarding the purchase of green products.

In relation to the salient belief constructs of the TPB, behavioural belief and normative belief were found to have a positive influence on their respective predictor construct (attitude and subjective norm, respectively), while control belief showed the opposite, that is, it negatively influenced their respective predictor construct (perceived behavioural control). Moving forward, we can see that most predictor constructs influenced the consumer's intention to purchase green products, which in turn influences their purchase behaviour. The subjective norm has not been shown to have any impact on purchase intention.

Considering the constructs added, perceived value was reported to have a significant positive influence on the purchase intention, which highlights the role of the perceived value of green products in decision making. Willingness to pay premium (WPP) didn't demonstrate to have a significant impact on the consumer's green purchase intention, however, it positively influenced the purchase intention. This importance may be more modest, compared to other constructs, due to the fact that price may still be an issue for Portuguese consumers (price sensitivity).

Based on a sample of 600 Portuguese adults, it was concluded that the research hypotheses were supported, in which the model explains 0,72 of purchase behaviour. Therefore, the results obtained proved the usefulness and applicability of TPB in determining the intention and behaviour of consumers towards purchasing green products in the Portuguese context. In addition, it also supported the inclusion of constructs to the original model, as they made it possible to improve the predictive power of the Theory of Planned Behaviour in determining the intention and behaviour of consumers' green purchasing.

The first research question of this work sought to understand what were the determinants that most affect Portuguese consumers in their intention to purchase green products. This study tested five determinants regarding the purchase of green products, in which attitude proved to be a relevant variable in explaining intention and green behaviour, however the variable with the greatest influence on behavioural intention was the perceived value.

Moving on to the second research question, this concerns the fact that Portuguese consumers have an intention to buy green products that often do not materialize in the actual purchase, thus leading to the famous gaps mentioned in the introduction and in the literature. Regarding the gap between intention and behaviour and through the structural model, it is possible to understand that the purchase intention explains 0.72 of the purchase behaviour, so there is consistency in this case study. Regarding the gap that surrounds the attitude and behaviour, we can see that although it is not endowed with enormous relevance, it is, in this case, the second construct with the greatest impact on the purchase intention and, consequently, in the purchase behaviour. In this way, this is a model that has proven its solidity and consistency, thus suppressing the gaps that often appear associated with this model.

## **5.2. Contributions**

Many studies related to sustainability and behaviour prediction apply the Theory of Planned behaviour (Ajzen, 1991) as the theoretical framework. However, this theory has limitations that were mitigated in this study. The Theory of Planned Behaviour (Ajzen, 1991) consists of three constructs as predictors of behaviour intention, however, over the years, it was realized that although this structure is strong, it might lack on the variables it use (Ajzen, 2002). Therefore,

many researches have been adapting and extending this model with other variables with the objective of obtaining results closer to reality.

This study was no different and added new variables to the model – perceived value and willingness to pay premium – and evaluate the relevance of the constructs to the behaviour intention of the TPB. The perceived value and willingness to pay premium were, correspondingly, the first and third most significant determinants to behaviour intention. Following this line of reasoning, can be concluded that there is a great benefit in incorporating variables in the original TPB. Thus, by providing further evidence for the belief in the addition of variables, it contributes theoretically to rethinking or adapting the TPB model.

Studies in the literature concerning the Portuguese population on the themes of sustainability and green purchase behaviour are scarce. Therefore, this study allows to enrich the existing knowledge and to provide new information about the motivations for purchase intention that are critical for the companies that are interested in this market area.

From the literature and data collected in this investigation, it is possible to perceive that both the population and the market are prepared to evolve towards a greener reality. This shift opens the door to new business opportunities for the Portuguese market and forces marketing strategies to reinvent themselves in all aspects, from the new offer to eco-friendly communication.

### **5.3. Limitations and Future Research Recommendations**

Throughout this investigation, there was an effort to conduct it in the most enriching and rigorous way possible, but limitations are part and this case was no exception. Thus, the limitations of this investigation will be explained to guide future research on this topic.

First, it is important to remember that the findings presented in this thesis result from limitations inherent to a small sample research and the fact that the results derive from a given context and country. The number of responses that make up the sample is reduced, consequently, it is neither probabilistic nor large enough to extrapolate its characteristics to the Portuguese population. It should be noted however that this study was also not designed for this purpose, as it is an exploratory study that sought to capture the perceptions of the themes under analysis. Still, it can be seen as a preliminary study within this topic.

Within the sample of 20 districts, the distribution of responses was not homogeneous, in which the majority of responses came from the district of Lisbon (see Table 4). This high number of responses in Lisbon is justified by being a significant part of the author's personal network. Inevitably, a biased sample can be considered.

Future studies should take these deficiencies into account and mitigate them. A greater number of responses from all regions of Portugal should be guaranteed. It would also be interesting, instead of studying Portuguese consumers in general, to compare between geographical locations. For example, between the littoral and the interior. Or between mainland Portugal and the archipelagos of Madeira and Azores. Although Portugal is a small country, it is very rich at a cultural level, so it is an interesting topic to explore.

Second, this research measured green products in general, however, the results may be different if specific green products had been used (each has its intensity). Previous studies have reported that behavioural intention differs depending on the type of green products (Yadav & Pathak, 2017). Future research should test the proposed model and apply it to different types of green products, such as recyclable products, organic products, among others.

Third, this model was adapted from the Theory of Planned Behaviour in which two variables were added, which are willingness to pay premium and perceived value. Future research may also try to include other constructs, mediators or moderators in addition to those tested on this model, in order to increase the understanding about the green consumer behaviour and provide more insights.

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## References

- Afonso, C. (2010). *Green Target: As Novas Tendências do Marketing Verde*. 1ª Edição, Smartbook, Setembro, Lisboa.
- Aitken, R., Watkins, L., Williams, J., & Kean, A. (2020). The positive role of labelling on consumers' perceived behavioural control and intention to purchase organic food. *Journal of Cleaner Production*, 255, 120334. <https://doi.org/10.1016/j.jclepro.2020.120334>
- Ajzen, I. (2005). *Attitudes, personality, and behaviour* (2nd. Edition). Milton-Keynes, England: Open University Press / McGraw-Hill.
- Ajzen, I. (1989). Attitude structure and behaviour. In A. R. Pratkanis, S. J. Breckler, & A. G. Greenwald (Eds.), *The third Ohio State University Vol. on attitudes and persuasion. Attitude structure and function* (p. 241–274). Lawrence Erlbaum Associates, Inc.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behaviour. Action control. Berlin, Germany: Springer. [https://doi.org/10.1007/978-3-642-69746-3\\_2](https://doi.org/10.1007/978-3-642-69746-3_2)
- Ajzen, I. (2002). Perceived behavioural control, self-efficacy, locus of control, and the theory of planned behaviour. *Journal of Applied Social Psychology*, 32(4), 665–683. <https://doi.org/10.1111/j.1559-1816.2002.tb00236.x>
- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behaviour. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 173–221). Mahwah, NJ: Lawrence Erlbaum Associates.
- Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*. Englewood Cliffs, NJ: Prentice-Hall.
- Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behaviour: Attitudes, intentions, and perceived behavioural control. *Journal of Experimental Social Psychology*, 22(5), 453–474. [https://doi.org/10.1016/0022-1031\(86\)90045-4](https://doi.org/10.1016/0022-1031(86)90045-4)
- Akehurst, G., Afonso, C., & Gonçalves, H. M. (2012). Re-examining green purchase behaviour and the green consumer profile: New evidences. *Management Decision*, 50(5), 972–988. <https://doi.org/10.1108/00251741211227726>
- Albrecht, K. (1992). *The only thing that matters: Bringing the power of the customer into the center of your business*. New York: HarperBusiness.
- Allport, G. W. (1935). *Attitudes*. In *A Handbook of Social Psychology* (p. 798–844). Clark University Press.

- Arli, D., Tan, L. P., Tjiptono, F., & Yang, L. (2018). Exploring consumers' purchase intention towards green products in an emerging market: The role of consumers' perceived readiness. *International Journal of Consumer Studies*, 42(4), 389–401. <https://doi.org/10.1111/ijcs.12432>
- Armitage, C. J., & Conner, M. (1999). Distinguishing perceptions of control from self-efficacy: Predicting consumption of a low-fat diet using the theory of planned behaviour. *Journal of Applied Social Psychology*, 29(1), 72–90. <https://doi.org/10.1111/j.1559-1816.1999.tb01375.x>
- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471–499. <https://doi.org/10.1348/014466601164939>
- Ashton, A. S., Scott, N., Solnet, D., & Breakey, N. (2010). Hotel Restaurant Dining: The Relationship between Perceived Value and Intention to Purchase. *Tourism and Hospitality Research*, 10(3), 206–218. <https://doi.org/10.1057/thr.2010.5>
- Ayadi, N., & Lapeyre, A. (2014). Consumer purchase intentions for green products: Mediating role of WTP and moderating effects of framing. *Journal of Marketing Communications*, 22(4), 367–384. <https://doi.org/10.1080/13527266.2014.888574>
- Baca-Motes, K., Brown, A., Gneezy, A., Keenan, E. A., & Nelson, L. D. (2013). Commitment and behaviour change: Evidence from the field. *Journal of Consumer Research*, 39(5), 1070–1084. <https://doi.org/10.1086/667226>
- Bamberg, S., & Möser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology*, 27(1), 14–25. <https://doi.org/10.1016/j.jenvp.2006.12.002>
- Bang, H. K., Ellinger, A. E., Hadjimarcou, J., & Traichal, P. A. (2000). Consumer concern, knowledge, belief, and attitude toward renewable energy: An application of the reasoned action theory. *Psychology and Marketing*, 17(6), 449–468. [https://doi.org/10.1002/\(SICI\)1520-6793\(200006\)17:6<449::AID-MAR2>3.0.CO;2-8](https://doi.org/10.1002/(SICI)1520-6793(200006)17:6<449::AID-MAR2>3.0.CO;2-8)
- Barber, N., Taylor, C., & Strick, S. (2009). Wine consumers' environmental knowledge and attitudes: Influence on willingness to purchase. *International Journal of Wine Research*, 1(1), 59–72. <https://doi.org/10.2147/IJWR.S4649>
- Bearden, W. O., Netemeyer, R. G., & Teel, J. E. (1989). Measurement of Consumer Susceptibility to Interpersonal Influence. *Journal of Consumer Research*, 15(4), 473. <https://doi.org/10.1086/209186>
- Berger, J. (2019). Signaling can increase consumers' willingness to pay for green products. Theoretical model and experimental evidence. *Journal of Consumer Behaviour*, 18(3), 233–246. <https://doi.org/10.1002/cb.1760>



- Biswas, A. (2016). A Study of Consumers' Willingness to Pay for Green Products. *Journal of Advanced Management Science*, 4(3), 211–215. <https://doi.org/10.12720/joams.4.3.211-215>
- Blok, V., Long, T. B., Gaziulusoy, A. I., Ciliz, N., Lozano, R., Huisingh, D., Csutora, M., & Boks, C. (2015). From best practices to bridges for a more sustainable future: Advances and challenges in the transition to global sustainable production and consumption: Introduction to the ERSCP stream of the Special volume. *Journal of Cleaner Production*, 108, 19–30. <https://doi.org/10.1016/j.jclepro.2015.04.119>
- Borin, N., Lindsey-Mullikin, J., & Krishnan, R. (2013). An analysis of consumer reactions to green strategies. *Journal of Product & Brand Management*, 22(2), 118–128. <https://doi.org/10.1108/10610421311320997>
- Brady, M. K., & Robertson, C. J. (1999). An exploratory study of service value in the USA and Ecuador. *International Journal of Service Industry Management*, 10(5), 469–486. <https://doi.org/10.1108/09564239910289003>
- Bray, J., Johns, N., & Kilburn, D. (2011). An Exploratory Study into the Factors Impeding Ethical Consumption. *Journal of Business Ethics*, 98(4), 597–608. <https://doi.org/10.1007/s10551-010-0640-9>
- Bredahl, L. (2001). Determinants of Consumer Attitudes and Purchase Intentions With Regard to Genetically Modified Food – Results of a Cross-National Survey. *Journal of Consumer Policy*, 24(1), 23–61. <https://doi.org/10.1023/a:1010950406128>
- Bruderer Enzler, H. (2013). Consideration of Future Consequences as a Predictor of Environmentally Responsible Behaviour. *Environment and Behaviour*, 47(6), 618–643. <https://doi.org/10.1177/0013916513512204>
- Burton, R. J. F. (2004). Reconceptualising the “behavioural approach” in agricultural studies: A socio-psychological perspective. *Journal of Rural Studies*, 20(3), 359–371. <https://doi.org/10.1016/j.jrurstud.2003.12.001>
- Canova, L., Bobbio, A., & Manganelli, A. M. (2020). Buying Organic Food Products: The Role of Trust in the Theory of Planned Behaviour. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.575820>
- Ceglia, D., Lima, S. H. O., & Leocádio, A. L. (2015). An alternative theoretical discussion on cross-cultural sustainable consumption. *Sustainable Development*, 23(6), 414–424. <https://doi.org/10.1002/sd.1600>
- Chan, R. Y. K. (2001). Determinants of Chinese consumers' green purchase behaviour. *Psychology and Marketing*, 18(4), 389–413. <https://doi.org/10.1002/mar.1013>
- Chan, R. Y. K., & Lau, L. B. Y. (2002). Explaining green purchasing behaviour: A cross-cultural study on American and Chinese consumers. *Journal of International Consumer Marketing*, 14(2–3), 9–40. [https://doi.org/10.1300/J046v14n02\\_02](https://doi.org/10.1300/J046v14n02_02)

- Chan, R. Y. K., & Yam, E. (1995). Green movement in a newly industrializing area: A survey on the attitudes and behaviour of the Hong Kong citizens. *Journal of Community & Applied Social Psychology*, 5(4), 273–284. <https://doi.org/10.1002/casp.2450050405>
- Chekima, B., Oswald, A. I., Wafa, S. A. W. S. K., & Chekima, K. (2017). Narrowing the gap: Factors driving organic food consumption. *Journal of Cleaner Production*, 166, 1438–1447. <https://doi.org/10.1016/j.jclepro.2017.08.086>
- Chen, H. S., Tsai, B. K., & Hsieh, C. M. (2017). Determinants of Consumers' Purchasing Intentions for the Hydrogen-Electric Motorcycle. *Sustainability*, 9(8), 1447. <https://doi.org/10.3390/su9081447>
- Chen, M. F., & Tung, P. J. (2014). Developing an extended Theory of Planned Behaviour model to predict consumers' intention to visit green hotels. *International Journal of Hospitality Management*, 36, 221–230. <https://doi.org/10.1016/j.ijhm.2013.09.006>
- Chen, S. C., & Hung, C. W. (2016). Elucidating the factors influencing the acceptance of green products: An extension of theory of planned behaviour. *Technological Forecasting and Social Change*, 112, 155–163. <https://doi.org/10.1016/j.techfore.2016.08.022>
- Chen, Y. S., & Chang, C. H. (2012). Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decision*, 50(3), 502–520. <https://doi.org/10.1108/00251741211216250>
- Chen, Y. S., & Chang, C. H. (2013). Towards green trust: The influences of green perceived quality, green perceived risk, and green satisfaction. *Management Decision*, 51(1), 63–82. <https://doi.org/10.1108/00251741311291319>
- Cheung, R., Lam, A. Y. C., & Lau, M. M. (2015). Drivers of green product adoption: the role of green perceived value, green trust and perceived quality. *Journal of Global Scholars of Marketing Science*, 25(3), 232–245. <https://doi.org/10.1080/21639159.2015.1041781>
- Chiu, Y. T. H., Lee, W. I., & Chen, T. H. (2014). Environmentally responsible behaviour in ecotourism: Antecedents and implications. *Tourism Management*, 40, 321–329. <https://doi.org/10.1016/j.tourman.2013.06.013>
- Choi, G., & Parsa, H. G. (2006). Green practices II: Measuring restaurant managers' psychological attributes and their willingness to charge for the “green practices.” *Journal of Foodservice Business Research*, 9(4), 41–63. [https://doi.org/10.1300/J369v09n04\\_04](https://doi.org/10.1300/J369v09n04_04)
- Cho, M. (2019). Campus sustainability. *International Journal of Sustainability in Higher Education*, 20(6), 1042–1060. <https://doi.org/10.1108/ijsh-06-2018-0107>
- Confente, I., Scarpi, D., & Russo, I. (2020). Marketing a new generation of bio-plastics products for a circular economy: The role of green self-identity, self-congruity, and perceived value. *Journal of Business Research*, 112, 431–439. <https://doi.org/10.1016/j.jbusres.2019.10.030>

- Cronin, J. J., Brady, M. K., Brand, R. R., Hightower, R., & Shemwell, D. J. (1997). A cross-sectional test of the effect and conceptualization of service value. *Journal of Services Marketing, 11*(6), 375–391. <https://doi.org/10.1108/08876049710187482>
- Dagher, G. K., & Itani, O. (2014). Factors influencing green purchasing behaviour: Empirical evidence from the Lebanese consumers. *Journal of Consumer Behaviour, 13*(3), 188–195. <https://doi.org/10.1002/cb.1482>
- Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R., & Bohlen, G. M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research, 56*(6), 465–480. [https://doi.org/10.1016/S0148-2963\(01\)00241-7](https://doi.org/10.1016/S0148-2963(01)00241-7)
- Dietz, T., Fitzgerald, A., & Shwom, R. (2005). Environmental values. *Annual Review of Environment and Resources, 30*(1), 335–372. <https://doi.org/10.1146/annurev.energy.30.050504.144444>
- Donald, I. J., Cooper, S. R., & Conchie, S. M. (2014). An extended theory of planned behaviour model of the psychological factors affecting commuters' transport mode use. *Journal of Environmental Psychology, 40*, 39–48. <https://doi.org/10.1016/j.jenvp.2014.03.003>
- D'Souza, C., Taghian, M., Lamb, P., & Peretiatkos, R. (2006). Green products and corporate strategy: an empirical investigation. *Society and Business Review, 1*(2), 144–157. <https://doi.org/10.1108/17465680610669825>
- Dowd, K., & Burke, K. J. (2013). The influence of ethical values and food choice motivations on intentions to purchase sustainably sourced foods. *Appetite, 69*, 137–144. <https://doi.org/10.1016/j.appet.2013.05.024>
- Dunlap, R. E., & Jorgenson, A. K. (2012). Environmental Problems. In *The Wiley-Blackwell Encyclopedia of Globalization*. John Wiley & Sons, Ltd. <https://doi.org/10.1002/9780470670590.wbeog174>
- Durif, F., Roy, J., & Boivin, C. (2012). Could perceived risks explain the “green gap” in green product consumption? *Electronic Green Journal, 1*(3). <https://escholarship.org/uc/item/1p65c93>
- Esmailpour, M., & Bahmiary, E. (2017). Investigating the impact of environmental attitude on the decision to purchase a green product with the mediating role of environmental concern and care for green products. *Management and Marketing, 12*(2), 297–315. <https://doi.org/10.1515/mmcks-2017-0018>
- Feil, A. A., Cyrne, C. C. S., Sindelar, F. C. W., Barden, J. E., & Dalmoro, M. (2020). Profiles of sustainable food consumption: Consumer behavior toward organic food in southern region of Brazil. *Journal of Cleaner Production, 258*, 120690. <https://doi.org/10.1016/j.jclepro.2020.120690>

- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behaviour*. Reading, MA: Addison-Wesley
- Gadema, Z., & Oglethorpe, D. (2011). The use and usefulness of carbon labelling food: A policy perspective from a survey of UK supermarket shoppers. *Food Policy*, *36*(6), 815–822. <https://doi.org/10.1016/j.foodpol.2011.08.001>
- Gallagher, D., Ting, L., & Palmer, A. (2008). A journey into the unknown; taking the fear out of structural equation modelling with AMOS for the first-time user. *The Marketing Review*, *8*(3), 255–275. <https://doi.org/10.1362/146934708x337672>
- Gan, C., Wee, H. Y., Ozanne, L., & Kao, T. H. (2008). Consumers' purchasing behaviour towards green products in New Zealand. *Innovative Marketing*, *4*(1), 93-102.
- Gil, M. T., & Jacob, J. (2018). The relationship between green perceived quality and green purchase intention: a three-path mediation approach using green satisfaction and green trust. *International Journal of Business Innovation and Research*, *15*(3), 301. <https://doi.org/10.1504/ijbir.2018.089750>
- Glegg, G., Richards, J., Heard, J., & Dawson, J. (2005). Barriers to green buying: Household chemicals. A report for the clean water initiative. Marine and Coastal Policy Research Group, United Kingdom: University of Plymouth.
- Gleim, M. R., Smith, J. S., Andrews, D., & Cronin, J. J. (2013). Against the Green: A Multi-method Examination of the Barriers to Green Consumption. *Journal of Retailing*, *89*(1), 44–61. <https://doi.org/10.1016/j.jretai.2012.10.001>
- Gonçalves, M. F., Menezes, J., & Marques, C. (2015). Grocery consumer relational perceptions in green consumption context. *Tourism & Management Studies*, *11*(1), 160-163.
- Grunert, S. (1993). Everybody seems concern about the environment but is this concern reflected in (Danish) consumers' food choice? *European Advances in Consumer Research*, *1*, 428-433.
- Grunert, S. C., & Juhl, H. J. (1995). Values, environmental attitudes, and buying of organic foods. *Journal of Economic Psychology*, *16*(1), 39–62. [https://doi.org/10.1016/0167-4870\(94\)00034-8](https://doi.org/10.1016/0167-4870(94)00034-8)
- Gupta, S., & Ogden, D. T. (2009). To buy or not to buy? A social dilemma perspective on green buying. *Journal of Consumer Marketing*, *26*(6), 378–393. <https://doi.org/10.1108/07363760910988201>
- Haake, H., & Seuring, S. (2009). Sustainable procurement of minor items - exploring limits to sustainability. *Sustainable Development*, *17*(5), 284–294. <https://doi.org/10.1002/sd.424>
- Hair Jr., J. F., Gabriel, M. L. D. S., & Patel, V. K. (2014). Modelagem de Equações Estruturais Baseada em Covariância (CB-SEM) com o AMOS: Orientações sobre a sua aplicação como

- uma Ferramenta de Pesquisa de Marketing. *Revista Brasileira de Marketing*, 13(2), 44–55. <https://doi.org/10.5585/remark.v13i2.2718>
- Hameed, W. U., Basheer, M. F., Iqbal, J., Anwar, A., & Ahmad, H. K. (2018). Determinants of Firm's open innovation performance and the role of R & D department: an empirical evidence from Malaysian SME's. *Journal of Global Entrepreneurship Research*, 8(1), 29. <https://doi.org/10.1186/s40497-018-0112-8>
- Han, H., Hsu, L. T. (Jane), & Sheu, C. (2010). Application of the Theory of Planned Behaviour to green hotel choice: Testing the effect of environmental friendly activities. *Tourism Management*, 31(3), 325–334. <https://doi.org/10.1016/j.tourman.2009.03.013>
- Hanss, D., Böhm, G., Doran, R., & Homburg, A. (2016). Sustainable consumption of groceries: The importance of believing that one can contribute to sustainable development. *Sustainable Development*, 24(6), 357–370. <https://doi.org/10.1002/sd.1615>
- Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and Synthesis of Research on Responsible Environmental Behaviour: A Meta-Analysis. *The Journal of Environmental Education*, 18(2), 1–8. <https://doi.org/10.1080/00958964.1987.9943482>
- Hopfenbeck, W. (1993). *The green management revolution: Lessons in environmental excellence*. New York: Prentice Hall.
- Hsu, S. Y., Chang, C. C., & Lin, T. T. (2017). Safety, sustainability, and consumers' perceived value in affecting purchase intentions toward organic food. In *2017 IEEE International Conference on Industrial Engineering and Engineering Management, IEEM 2017* (Vol. 2017-December, pp. 2312-2316). IEEE Computer Society. <https://doi.org/10.1109/IEEM.2017.8290304>
- Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour*, 6(2–3), 94–110. <https://doi.org/10.1002/cb.210>
- Hwang, J., Kim, I., & Gulzar, M. A. (2020). Understanding the eco-friendly role of drone food delivery services: Deepening the theory of planned behaviour. *Sustainability*, 12(4), 1–12. <https://doi.org/10.3390/su12041440>
- Jaiswal, D., & Kant, R. (2018). Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers. *Journal of Retailing and Consumer Services*, 41, 60–69. <https://doi.org/10.1016/j.jretconser.2017.11.008>
- Joshi, Y., & Rahman, Z. (2015). Factors Affecting Green Purchase Behaviour and Future Research Directions. *International Strategic Management Review*, 3(1–2), 128–143. <https://doi.org/10.1016/j.ism.2015.04.001>

- Junior, S. B., Martínez, M. P., Correa, C. M., Moura-Leite, R. C., & Silva, D. (2019). Greenwashing effect, attitudes, and beliefs in green consumption. *RAUSP Management Journal*, 54(2), 226–241. <https://doi.org/10.1108/RAUSP-08-2018-0070>
- Juwaheer, D. T., Pudaruth, S., & Noyaux, M.M.E. (2012). Analysing the impact of green marketing strategies on consumer purchasing patterns in Mauritius. *World Journal of Entrepreneurship, Management and Sustainable Development*, 8(1), 36-59. <https://doi.org/10.1108/20425961211221615>
- Kainth, J. S., & Verma, H. V. 2011. Consumer perceived value: construct apprehension and its evolution. *Journal of Advanced Social Research*, 1, 20-57.
- Kalafatis, S. P., Pollard, M., East, R., & Tsogas, M. H. (1999). Green marketing and Ajzen's theory of planned behaviour: A cross-market examination. *Journal of Consumer Marketing*, 16(5), 441–460. <https://doi.org/10.1108/07363769910289550>
- Kang, K. H., Stein, L., Heo, C. Y., & Lee, S. (2012). Consumers' willingness to pay for green initiatives of the hotel industry. *International Journal of Hospitality Management*, 31(2), 564–572. <https://doi.org/10.1016/j.ijhm.2011.08.001>
- Kardes, F. R., Posavac, S. S., & Cronley, M. L. (2004). Consumer inference: A review of processes, bases, and judgment contexts. *Journal of Consumer Psychology*, 14(3), 230–256. [https://doi.org/10.1207/s15327663jcp1403\\_6](https://doi.org/10.1207/s15327663jcp1403_6)
- Kelly, S., Johnston, P., & Danheiser, S. (2017). Value-ology: Aligning sales and marketing to shape and deliver profitable customer value propositions. Springer International Publishing. <https://doi.org/10.1007/978-3-319-45626-3>
- Khan, M. S., Saengon, P., Alganad, A. M. N., Chongcharoen, D., & Farrukh, M. (2020). Consumer green behaviour: An approach towards environmental sustainability. *Sustainable Development*, 28(5), 1168–1180. <https://doi.org/10.1002/sd.2066>
- Kidwell, B., & Jewell, R. D. (2003). An Examination of Perceived Behavioural Control: Internal and External Influences on Intention. *Psychology and Marketing*, 20(7), 625–642. <https://doi.org/10.1002/mar.10089>
- Kim, Y., & Han, H. (2010). Intention to pay conventional-hotel prices at a green hotel - a modification of the theory of planned behaviour. *Journal of Sustainable Tourism*, 18(8), 997–1014. <https://doi.org/10.1080/09669582.2010.490300>
- Kim, Y. J., Njite, D., & Hancer, M. (2013). Anticipated emotion in consumers' intentions to select eco-friendly restaurants: Augmenting the theory of planned behaviour. *International Journal of Hospitality Management*, 34(1), 255–262. <https://doi.org/10.1016/j.ijhm.2013.04.004>
- Kim, C., Zhao, W., & Yang, K. H. (2008). An empirical study on the integrated framework of e-CRM in online shopping: Evaluating the relationships among perceived value,

- satisfaction, and trust based on customers' perspectives. *Journal of Electronic Commerce in Organizations*, 6(3), 1–19. <https://doi.org/10.4018/jeco.2008070101>
- Koschate-Fischer, N., Stefan, I. V., & Hoyer, W. D. (2012). Willingness to Pay for Cause-Related Marketing: The Impact of Donation Amount and Moderating Effects. *Journal of Marketing Research*, 49(6), 910–927. <https://doi.org/10.1509/jmr.10.0511>
- Kucher, A., Heldak, M., Kucher, L., & Raszka, B. (2019). Factors forming the consumers' willingness to pay a price premium for ecological goods in Ukraine. *International Journal of Environmental Research and Public Health*, 16(5), 859. <https://doi.org/10.3390/ijerph16050859>
- Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, 18(6), 503–520. <https://doi.org/10.1108/EUM00000000006155>
- Lee, K. (2008). Opportunities for green marketing: Young consumers. *Marketing Intelligence and Planning*, 26(6), 573–586. <https://doi.org/10.1108/02634500810902839>
- Lin, J., Lobo, A., & Leckie, C. (2017). The role of benefits and transparency in shaping consumers' green perceived value, self-brand connection and brand loyalty. *Journal of Retailing and Consumer Services*, 35, 133–141. <https://doi.org/10.1016/j.jretconser.2016.12.011>
- Lin, S. T., & Niu, H. J. (2018). Green consumption: Environmental knowledge, environmental consciousness, social norms, and purchasing behaviour. *Business Strategy and the Environment*, 27(8), 1679–1688. <https://doi.org/10.1002/bse.2233>
- Ling, C.Y. (2013). Consumers' purchase intention of green products: an investigation of the drivers and moderating variable. *Elixir Marketing Management*, 57(A), 14503–14509.
- Liu, Y., Qu, Y., Lei, Z., & Jia, H. (2017). Understanding the evolution of sustainable consumption research. *Sustainable Development*, 25(5), 414–430. <https://doi.org/10.1002/sd.1671>
- Lu, L., Bock, D., & Joseph, M. (2013). Green marketing: What the Millennials buy. *Journal of Business Strategy*, 34(6), 3–10. <https://doi.org/10.1108/JBS-05-2013-0036>
- Luz, V.V., Mantovani, D., & Nepomuceno, M. V. (2020). Matching green messages with brand positioning to improve brand evaluation. *Journal of Business Research*, 119, 25–40. <https://doi.org/10.1016/j.jbusres.2020.07.024>
- Madden, T. J., Ellen, P. S., & Ajzen, I. (1992). A Comparison of the Theory of Planned Behaviour and the Theory of Reasoned Action. *Personality and Social Psychology Bulletin*, 18(1), 3–9. <https://doi.org/10.1177/0146167292181001>

- Maichum, K., Parichatnon, S., & Peng, K.C. (2016). Application of the Extended Theory of Planned Behaviour Model to Investigate Purchase Intention of Green Products among Thai Consumers. *Sustainability*, 8(10), 1077. <https://doi.org/10.3390/su8101077>
- Manaktola, K., & Jauhari, V. (2007). Exploring consumer attitude and behaviour towards green practices in the lodging industry in India. *International Journal of Contemporary Hospitality Management*, 19(5), 364–377. <https://doi.org/10.1108/09596110710757534>
- Marques, C. P., & Almeida, D. (2013). A path model of attitudinal antecedents of green purchase behaviour. *Economics and Sociology*, 6(2), 135–144. <https://doi.org/10.14254/2071-789X.2013/6-2/12>
- Medeiros, J. F., Ribeiro, J. L. D., & Cortimiglia, M. N. (2016). Influence of perceived value on purchasing decisions of green products in Brazil. *Journal of Cleaner Production*, 110, 158–169. <https://doi.org/10.1016/j.jclepro.2015.07.100>
- Miller, K. M., Hofstetter, R., Krohmer, H., & Zhang, Z. J. (2011). How Should Consumers' Willingness to Pay be Measured? An Empirical Comparison of State-of-the-Art Approaches. *Journal of Marketing Research*, 48(1), 172–184. <https://doi.org/10.1509/jmkr.48.1.172>
- Mohr, L. A., Webb, D. J., & Harris, K. E. (2001). Do consumers expect companies to be socially responsible? The impact of corporate social responsibility on buying behaviour. *Journal of Consumer Affairs*, 35(1), 45–72. <https://doi.org/10.1111/j.1745-6606.2001.tb00102.x>
- Moisander, J. (2007). Motivational complexity of green consumerism. *International Journal of Consumer Studies*, 31(4), 404–409. <https://doi.org/10.1111/j.1470-6431.2007.00586.x>
- Montague, J. and Mukherjee, A. (2010). Marketing green products: what really matters? *Proceedings of the Northeast Business and Economics Association*, 433-441.
- Moser, A. K. (2015). Thinking green, buying green? Drivers of pro - Environmental purchasing behaviour. *Journal of Consumer Marketing*, 32(3), 167–175. <https://doi.org/10.1108/JCM-10-2014-1179>
- Mostafa, M. M. (2007a). Gender differences in Egyptian consumers' green purchase behaviour: The effects of environmental knowledge, concern and attitude. *International Journal of Consumer Studies*, 31(3), 220–229. <https://doi.org/10.1111/j.1470-6431.2006.00523.x>
- Mostafa, M. M. (2007b). A hierarchical analysis of the green consciousness of the Egyptian consumer. *Psychology and Marketing*, 24(5), 445–473. <https://doi.org/10.1002/mar.20168>
- Munerah, S., Koay, K. Y., & Thambiah, S. (2020). Factors influencing non-green consumers' purchase intention: A partial least squares structural equation modelling (PLS-SEM) approach. *Journal of Cleaner Production*, 280. <https://doi.org/10.1016/j.jclepro.2020.124192>



- Nguyen, T. N., Lobo, A., & Greenland, S. (2016). Pro-environmental purchase behaviour: The role of consumers' biospheric values. *Journal of Retailing and Consumer Services*, 33, 98–108. <https://doi.org/10.1016/j.jretconser.2016.08.010>
- Nguyen, H. V., Nguyen, C. H., & Hoang, T. T. B. (2019). Green consumption: Closing the intention-behaviour gap. *Sustainable Development*, 27(1), 118–129. <https://doi.org/10.1002/sd.1875>
- Noor, M. N. M., Masuod, M. S., Said, A. M. A., Kamaruzaman, I. F., & Mustafa, M. A. (2016). Understanding consumers and green product purchase decision in Malaysia: A structural equation modeling - partial least square (SEM-PLS) approach. *Asian Social Science*, 12(9), 51–64. <https://doi.org/10.5539/ass.v12n9p51>
- Oliveira-Brochado, F., Oliveira-Brochado, A., & Caldeira, T. (2015). Os determinantes psicológicos do consumidor verde. *Tourism & Management Studies*, 11(2), 104–111. <https://doi.org/10.18089/tms.2015.11213>
- Ottman, J. A., Stafford, E. R., & Hartman, C. L. (2006). Avoiding green marketing myopia: Ways to improve consumer appeal for environmentally preferable products. *Environment*, 48(5), 22–36. <https://doi.org/10.3200/ENVT.48.5.22-36>
- Paço, A. M. F., & Raposo, M. L. B. (2008). Determining the characteristics to profile the “green” consumer: An exploratory approach. *International Review on Public and Nonprofit Marketing*, 5(2), 129–140. <https://doi.org/10.1007/s12208-008-0010-9>
- Paço, A. M. F., & Raposo, M. L. B. (2010). Green consumer market segmentation: Empirical findings from Portugal. *International Journal of Consumer Studies*, 34(4), 429–436. <https://doi.org/10.1111/j.1470-6431.2010.00869.x>
- Paço, A. M. F., & Raposo, M. L. B. (2009). “Green” segmentation: An application to the Portuguese consumer market. *Marketing Intelligence and Planning*, 27(3), 364–379. <https://doi.org/10.1108/02634500910955245>
- Paço, A. M. F., Raposo, M. L. B., & Filho, W. L. (2009). Identifying the green consumer: A segmentation study. *Journal of Targeting, Measurement and Analysis for Marketing*, 17(1), 17–25. <https://doi.org/10.1057/jt.2008.28>
- Paiva, T., & Proença, R. (2011). *Marketing Verde*. Lisboa: Actual Editora
- Patterson, P. G., & Spreng, R. A. (1997). Modelling the relationship between perceived value, satisfaction and repurchase intentions in a business-to-business, services context: An empirical examination. *International Journal of Service Industry Management*, 8(5), 414–434. <https://doi.org/10.1108/09564239710189835>
- Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using theory of planned behaviour and reasoned action. *Journal of Retailing and Consumer Services*, 29, 123–134. <https://doi.org/10.1016/j.jretconser.2015.11.006>

- Peattie, K. (2010). Green consumption: Behaviour and norms. *Annual Review of Environment and Resources*, 35(1), 195–228. <https://doi.org/10.1146/annurev-environ-032609-094328>
- Peattie, K. (2001). Towards Sustainability: The Third Age of Green Marketing. *The Marketing Review*, 2(2), 129–146. <https://doi.org/10.1362/1469347012569869>
- Pepper, M., Jackson, T., & Uzzell, D. (2009). An examination of the values that motivate socially conscious and frugal consumer behaviours. *International Journal of Consumer Studies*, 33(2), 126–136. <https://doi.org/10.1111/j.1470-6431.2009.00753.x>
- Petty, R. E., Unnava, R. H., and Strathman, A. J. (1991). Theories of attitude change. In Roberston, T. S. and Kassarjian, H. H. (Eds), *Handbook of Consumer Behaviour*. Englewood Cliffs, N.J.: Prentice Hall, 241-280.
- Purvis, B., Mao, Y., & Robinson, D. (2019). Three pillars of sustainability: in search of conceptual origins. *Sustainability Science*, 14(3), 681–695. <https://doi.org/10.1007/s11625-018-0627-5>
- Ramayah, T., Lee, J. W. C., & Lim, S. (2012). Sustaining the environment through recycling: An empirical study. *Journal of Environmental Management*, 102, 141–147. <https://doi.org/10.1016/j.jenvman.2012.02.025>
- Randall, D. M., & Gibson, A. M. (1991). Ethical decision making in the medical profession: An application of the theory of planned behaviour. *Journal of Business Ethics*, 10(2), 111–122. <https://doi.org/10.1007/BF00383614>
- Read, D. L., Brown, R. F., Thorsteinsson, E. B., Morgan, M., & Price, I. (2013). The theory of planned behaviour as a model for predicting public opposition to wind farm developments. *Journal of Environmental Psychology*, 36, 70–76. <https://doi.org/10.1016/j.jenvp.2013.07.001>
- Reis, H. T., Collins, W. A., & Berscheid, E. (2000). The relationship context of human behaviour and development. *Psychological Bulletin*, 126(6), 844–872. <https://doi.org/10.1037/0033-2909.126.6.844>
- Ryu, K., Han, H., & Kim, T. H. (2008). The relationships among overall quick-casual restaurant image, perceived value, customer satisfaction, and behavioural intentions. *International Journal of Hospitality Management*, 27(3), 459–469. <https://doi.org/10.1016/j.ijhm.2007.11.001>
- Saunders, M.N.K., Lewis, P., & Thornhill, A. (2019). *Research methods for business students (8th ed.)* London: Pearson Education Limited.
- Schlegelmilch, B. B., Bohlen, G. M., & Diamantopoulos, A. (1996). The link between green purchasing decisions and measures of environmental consciousness. *European Journal of Marketing*, 30(5), 35–55. <https://doi.org/10.1108/03090569610118740>

- Schuhwerk, M. E., & Lefkoff-Hagius, R. (1995). Green or non-green? Does type of appeal matter when advertising a green product? *Journal of Advertising*, 24(2), 45–54. <https://doi.org/10.1080/00913367.1995.10673475>
- Schuitema, G., & de Groot, J. I. M. (2014). Green consumerism: The influence of product attributes and values on purchasing intentions. *Journal of Consumer Behaviour*, 14(1), 57–69. <https://doi.org/10.1002/cb.1501>
- Shafiei, A., & Maleksaeidi, H. (2020). Pro-environmental behaviour of university students: Application of protection motivation theory. *Global Ecology and Conservation*, 22, e00908. <https://doi.org/10.1016/j.gecco.2020.e00908>
- Sharma, A., & Joshi, S. (2017). Green consumerism: overview and further research directions. *International Journal of Process Management and Benchmarking*, 7(2), 206. <https://doi.org/10.1504/ijpmb.2017.083106>
- Shen, J. (2008). Understanding the determinants of consumers' willingness to pay for eco-labeled products: An empirical analysis of the China Environmental Label. *OSIPP Discussion Paper*. <https://ideas.repec.org/p/osp/wpaper/08e001.html>
- Sheng, G., Xie, F., Gong, S., & Pan, H. (2019). The role of cultural values in green purchasing intention: Empirical evidence from Chinese consumers. *International Journal of Consumer Studies*, 43(3), 315–326. <https://doi.org/10.1111/ijcs.12513>
- Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The Theory of Reasoned Action: A Meta-Analysis of Past Research with Recommendations for Modifications and Future Research. *Journal of Consumer Research*, 15(3), 325. <https://doi.org/10.1086/209170>
- Slack, N., Singh, G., & Sharma, S. (2020). Impact of perceived value on the satisfaction of supermarket customers: developing country perspective. *International Journal of Retail and Distribution Management*, 48(11), 1235–1254. <https://doi.org/10.1108/IJRDM-03-2019-0099>
- Soyez, K. (2012). How national cultural values affect pro-environmental consumer behaviour. *International Marketing Review*, 29(6), 623–646. <https://doi.org/10.1108/02651331211277973>
- Sreen, N., Purbey, S., & Sadarangani, P. (2018). Impact of culture, behaviour and gender on green purchase intention. *Journal of Retailing and Consumer Services*, 41, 177–189. <https://doi.org/10.1016/j.jretconser.2017.12.002>
- Steenkamp, J. B. E. M., & Geyskens, I. (2006). How Country Characteristics Affect the Perceived Value of Web Sites. *Journal of Marketing*, 70(3), 136–150. <https://doi.org/10.1509/jmkg.70.3.136>
- Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology*, 29(3), 309–317. <https://doi.org/10.1016/j.jenvp.2008.10.004>

- Steinberg, T. L. (1986). An Ecological Perspective on the Origins of Industrialization. *Environmental History Review*, 10(4), 261–276. <https://doi.org/10.2307/3984350>
- Stenzel, P. L. (2010). Sustainability, the triple bottom line, and the global reporting initiative. *Global Edge Business Review*, 4(6), 1–2.
- Stern, P. C., & Dietz, T. (1994). The Value Basis of Environmental Concern. *Journal of Social Issues*, 50(3), 65–84. <https://doi.org/10.1111/j.1540-4560.1994.tb02420.x>
- Sun, J., & Willson, V. L. (2008). Assessing General and Specific Attitudes in Human Learning Behaviour. *Educational and Psychological Measurement*, 68(2), 245–261. <https://doi.org/10.1177/0013164407308510>
- Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of Retailing*, 77(2), 203–220. [https://doi.org/10.1016/S0022-4359\(01\)00041-0](https://doi.org/10.1016/S0022-4359(01)00041-0)
- Tam, J. L. M. (2004). Customer Satisfaction, Service Quality and Perceived Value: An Integrative Model. *Journal of Marketing Management*, 20(7–8), 897–917. <https://doi.org/10.1362/0267257041838719>
- Tanner, C., & Kast, S. W. (2003). Promoting Sustainable Consumption: Determinants of Green Purchases by Swiss Consumers. *Psychology and Marketing*, 20(10), 883–902. <https://doi.org/10.1002/mar.10101>
- Tarkiainen, A., & Sundqvist, S. (2005). Subjective norms, attitudes and intentions of Finnish consumers in buying organic food. *British Food Journal*, 107(11), 808–822. <https://doi.org/10.1108/00070700510629760>
- Taylor, S., & Todd, P. (1995). An Integrated Model of Waste Management Behaviour. *Environment and Behaviour*, 27(5), 603–630. <https://doi.org/10.1177/0013916595275001>
- Thøgersen, J. (2006). Norms for environmentally responsible behaviour: An extended taxonomy. *Journal of Environmental Psychology*, 26(4), 247–261. <https://doi.org/10.1016/j.jenvp.2006.09.004>
- Wan, C., Cheung, R., & Shen, G. Q. (2012). Recycling attitude and behaviour in university campus: A case study in Hong Kong. *Facilities*, 30(13), 630–646. <https://doi.org/10.1108/02632771211270595>
- Wang, J., Wang, S., Wang, Y., Li, J., & Zhao, D. (2018). Extending the theory of planned behaviour to understand consumers' intentions to visit green hotels in the Chinese context. *International Journal of Contemporary Hospitality Management*, 30(8), 2810–2825. <https://doi.org/10.1108/IJCHM-04-2017-0223>
- Weston, R., & Gore, P. A. (2006). A Brief Guide to Structural Equation Modelling. *The Counselling Psychologist*, 34(5), 719–751. <https://doi.org/10.1177/0011000006286345>

- Wu, J. Z., & Chen, C. N. (2013). The manufacturing strategy decision analysis framework for excelling operating excellence of Taiwan light emitting diode industry. *Journal of Quality*, 20(4), 403–425. <https://doi.org/10.6220/joq.2013.204.03>
- Wu, S.I., & Chen, J.Y. (2014). A model of green consumption behaviour constructed by the theory of planned behaviour. *International Journal of Marketing Studies*, 6(5), 119–132. <https://doi.org/10.5539/ijms.v6n5p119>
- Yadav, R., & Pathak, G. S. (2017). Determinants of Consumers' Green Purchase Behaviour in a Developing Nation: Applying and Extending the Theory of Planned Behaviour. *Ecological Economics*, 134, 114–122. <https://doi.org/10.1016/j.ecolecon.2016.12.019>
- Yadav, R., & Pathak, G. S. (2016a). Intention to purchase organic food among young consumers: Evidences from a developing nation. *Appetite*, 96, 122–128. <https://doi.org/10.1016/j.appet.2015.09.017>
- Yadav, R., & Pathak, G. S. (2016b). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behaviour. *Journal of Cleaner Production*, 135, 732–739. <https://doi.org/10.1016/j.jclepro.2016.06.120>
- Yazdanpanah, M., & Forouzani, M. (2015). Application of the Theory of Planned Behaviour to predict Iranian students' intention to purchase organic food. *Journal of Cleaner Production*, 107, 342–352. <https://doi.org/10.1016/j.jclepro.2015.02.071>
- Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2009). Sustainable consumption: Green consumer behaviour when purchasing products. *Sustainable Development*, 18, 20–31. <https://doi.org/10.1002/sd.394>
- Yue, B., Sheng, G., She, S., & Xu, J. (2020). Impact of consumer environmental responsibility on green consumption behaviour in China: The role of environmental concern and price sensitivity. *Sustainability (Switzerland)*, 12(5), 1–16. <https://doi.org/10.3390/su12052074>
- Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*, 52(3), 2–22. <https://doi.org/10.1177/002224298805200302>
- Zhang, L., Fan, Y., Zhang, W., & Zhang, S. (2019). Extending the Theory of Planned Behaviour to Explain the Effects of Cognitive Factors across Different Kinds of Green Products. *Sustainability*, 11(15), 4222. <https://doi.org/10.3390/su11154222>
- Zhuang, W., Cumiskey, K.J., Xiao, Q., & Alford, B.L. (2010). The impact of perceived value on behaviour intention: an empirical study. *Journal of Global Business Management*, 6 (2), 1-7.

# Appendix

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## **Appendix 1** | Survey in Portuguese

Title: Qual a sua opinião sobre a compra de Produtos Verdes?

Introduction:

Caro(a)s entrevistado(a)s,

Este questionário surge no âmbito de uma tese de mestrado em Gestão de Serviços e da Tecnologia do ISCTE, no qual o foco de investigação reside no estudo do comportamento dos portugueses na compra de produtos verdes.

Por favor, considere "produtos verdes" como aqueles que são fabricados segundo uma política deliberada de gestão ambiental, onde a produção é efetuada segundo critérios de eficiência energética, conservação de recursos naturais, preocupação com a saúde do consumidor, segurança ambiental, facilidade de reutilização, durabilidade e biodegradabilidade. Papel reciclado, produtos bio, discos desmaquilhantes reutilizáveis em algodão bio e lâmpadas e eletrodomésticos de baixo consumo energético, são alguns dos muitos exemplos de produtos verdes.

O objetivo desta pesquisa é estudar os fatores que influenciam a atitude do consumidor português face à hipótese de aquisição de produtos verdes. Este trabalho segue a Teoria do Comportamento Planeado, que se tem mostrado o modelo menos complexo, dentro das teorias de ação, para o estudo de atitudes, normas sociais e controlo percebido.

As respostas serão utilizadas para fins estatísticos, sendo garantida a confidencialidade e anonimato da informação recolhida.

A sua contribuição e opinião neste estudo são muito importantes para o êxito da investigação, pelo que agradeço antecipadamente a sua colaboração e disponibilidade!

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## 1<sup>st</sup> Block: Demographic information

Sexo \*

- Feminino
- Masculino

Idade \*

- Inferior a 18 anos
- 18 a 24 anos
- 25 a 31 anos
- 32 a 38 anos
- 39 a 45 anos
- 46 a 52 anos
- 53 a 59 anos
- 60 anos ou mais

Local de Residência \*

Grau de Escolaridade (concluído) \*

- Ensino básico 1º ciclo (1º ao 4º ano)
- Ensino básico 2º ciclo (5º ao 6º ano)
- Ensino básico 3º ciclo (7º ao 9º ano)
- Ensino Secundário (10º ao 12º ano)
- Licenciatura
- Mestrado
- Pós-Graduação
- Doutoramento
- Outra: \_\_\_\_\_

Estado Civil \*

- Solteiro(a)
- Casado(a)
- Divorciado(a)
- Viúvo(a)
- Outra: \_\_\_\_\_

Número de Filhos \*

- 0
- 1
- 2
- 3
- Mais de 3

Rendimento Líquido Mensal \*

- Inferior a 500€
- 500€ a 999€
- 1000€ a 1499€
- 1500€ a 1999€
- 2000€ a 2499€
- 2500€ a 2999€
- 3000€ a 3499€
- Igual ou superior a 3500€
- Prefiro não dizer

Situação Profissional \*

- Estudante
- Trabalhador(a) Estudante
- Trabalhador(a) por conta própria
- Trabalhador(a) por conta de outrem
- Desempregado(a)
- Reformado(a)
- Outra: \_\_\_\_\_

## 2nd block: Evaluation of model variables (Belief Constructs)

Comprar um produto verde permitir-me-ia... \*

|   | Discordo totalmente   | Discordo parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo totalmente   |
|---|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|
| ajudar a salvar o meio ambiente.              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| ser um cidadão responsável.                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| viver num ambiente limpo e melhor.            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| realizar práticas amigas do ambiente.         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| implementar iniciativas verdes na minha vida. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

Em relação às afirmações que se seguem, escolha o grau de importância com que mais se identifica: \*

|   | Não é importante      | Pouco importante      | Neutro(a)             | Moderadamente importante | Muito importante      |
|---|-----------------------|-----------------------|-----------------------|--------------------------|-----------------------|
| Para mim ajudar a salvar o meio ambiente é              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> |
| Para mim ser responsável perante a sociedade é          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> |
| Para mim viver num ambiente limpo e melhor é            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> |
| Para mim realizar práticas amigas do ambiente é         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> |
| Para mim implementar iniciativas verdes na minha vida é | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/> |

Com base nas afirmações que se seguem, indique qual o seu grau de concordância:

Sinto influência para a compra de produtos verdes no lugar de produtos convencionais não verdes, por parte... \*

|                   | Discordo totalmente   | Discordo parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo totalmente   |
|-------------------|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|
| da minha família. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| dos meus amigos.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| dos meus colegas. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

Quão provável é para si fazer o que... \*

|                                       | Extremamente<br>Improvável | Improvável            | Neutro(a)             | Provável              | Extremamente<br>Provável |
|---------------------------------------|----------------------------|-----------------------|-----------------------|-----------------------|--------------------------|
| a sua família acha que deve fazer.    | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    |
| os seus amigos acham que deve fazer.  | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    |
| os seus colegas acham que deve fazer. | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    |

Com base nos fatores mencionados, indique o seu grau de concordância em relação ao peso que estes apresentam na compra de produtos verdes: \*

|  | Discordo<br>totalmente | Discordo<br>parcialmente | Não<br>concordo<br>nem<br>discordo | Concordo<br>parcialmente | Concordo<br>totalmente |
|--|------------------------|--------------------------|------------------------------------|--------------------------|------------------------|
| Para comprar produtos verdes, a localização precisa de ser conveniente.                        | <input type="radio"/>  | <input type="radio"/>    | <input type="radio"/>              | <input type="radio"/>    | <input type="radio"/>  |
| Comprar produtos verdes requer tempo e esforço.  | <input type="radio"/>  | <input type="radio"/>    | <input type="radio"/>              | <input type="radio"/>    | <input type="radio"/>  |
| A minha empresa/escola/outros que paga as minhas despesas incentiva-me a usar produtos verdes. | <input type="radio"/>  | <input type="radio"/>    | <input type="radio"/>              | <input type="radio"/>    | <input type="radio"/>  |

Com base nos fatores condicionantes mencionados para a tomada de decisão de compra de produtos verdes, indique o seu grau de concordância: \*

|   | Discordo totalmente   | Discordo parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo totalmente   |
|---|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|
| A localização é um fator crítico na tomada de decisão de comprar produtos verdes.                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| O tempo e o esforço necessários para comprar são muito importantes na tomada de decisão de comprar produtos verdes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| O meu rendimento disponível é muito crítico na tomada de decisão de comprar produtos verdes.                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

### 3<sup>rd</sup> block: Evaluation of model variables (Other Constructs)

Relativamente à atitude perante a intenção de compra de produtos verdes, escolha a resposta mais adequada das afirmações que se seguem:

AT1: Comprar produtos verdes é \*

|                  |                       |                       |                       |                       |                       |                  |
|------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|
|                  | 1                     | 2                     | 3                     | 4                     | 5                     |                  |
| Extremamente Mau | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Extremamente Bom |

AT2: Comprar produtos verdes é \*

|                          |                       |                       |                       |                       |                       |                        |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|
|                          | 1                     | 2                     | 3                     | 4                     | 5                     |                        |
| Extremamente Indesejável | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Extremamente Desejável |

AT3: Comprar produtos verdes é \*

|                         |                       |                       |                       |                       |                       |                        |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|
|                         | 1                     | 2                     | 3                     | 4                     | 5                     |                        |
| Extremamente Aborrecido | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Extremamente Divertido |

AT4: Comprar produtos verdes é \*

|                        |                       |                       |                       |                       |                       |                    |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------|
|                        | 1                     | 2                     | 3                     | 4                     | 5                     |                    |
| Extremamente Insensato | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Extremamente Sábio |

AT5: Comprar produtos verdes é \*

|                           |                       |                       |                       |                       |                       |                        |
|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|
|                           | 1                     | 2                     | 3                     | 4                     | 5                     |                        |
| Extremamente Desfavorável | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Extremamente Favorável |

AT6: Comprar produtos verdes é \*

|                           |                       |                       |                       |                       |                       |                        |
|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|
|                           | 1                     | 2                     | 3                     | 4                     | 5                     |                        |
| Extremamente Desagradável | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Extremamente Agradável |

Relativamente ao seu contexto social, indique o grau de concordância com as seguintes afirmações: \*

|   | Discordo totalmente   | Discordo parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo totalmente   |
|---|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|
| A maioria das pessoas que me é importante quer que eu compre produtos amigos do ambiente.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| A maioria das pessoas que me é importante considera que eu deveria comprar produtos verdes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

Com base na percepção do controlo que possui, indique o grau de concordância com as seguintes afirmações: \*

|   | Discordo totalmente   | Discordo parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo totalmente   |
|---|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|
| Se eu compro ou não um produto verde no lugar de um produto convencional não verde depende totalmente de mim.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Tenho recursos, tempo e oportunidades para comprar produtos verdes.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Estou confiante de que, se quiser, posso comprar produtos verdes no lugar de produtos convencionais não verdes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |



Com base na sua percepção do valor dos produtos verdes, indique o grau de concordância com as seguintes afirmações: \*

|   | Discordo totalmente   | Discordo parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo totalmente   |
|---|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|
| As características ambientais dos produtos verdes proporcionam um bom valor para mim.       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| O desempenho ambiental dos produtos verdes correspondem às minhas expectativas.             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Eu compro produtos verdes porque têm mais preocupação ambiental do que produtos não verdes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Eu compro produtos verdes porque são amigos do ambiente.                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Eu compro produtos verdes porque têm mais benefícios ambientais do que produtos não verdes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

Relativamente à disposição para pagar mais pela compra de produtos verdes, indique o grau de concordância com as seguintes afirmações: \*

|  | Discordo totalmente   | Discordo parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo totalmente   |
|--|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|
| Eu pagaria mais por um produto verde que se esforça para ser ambientalmente sustentável. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

Ainda, referente à disposição para pagar mais pela compra de produtos verdes, escolha a percentagem com que mais se identificar: \*

|  | 0%                    | 1-2%                  | 2-5%                  | 6-10%                 | 11-15%                | 16-20%                | >20%                  |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Eu estaria disposto(a) a pagar a seguinte percentagem extra sobre os produtos verdes para apoiar os esforços da organização/produto para ser ambientalmente sustentável. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Relativamente à intenção do comportamento de compra, indique o grau de concordância com as seguintes afirmações: \*

|   | Discordo totalmente   | Discordo parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo totalmente   |
|---|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|
| Vou comprar produtos verdes para uso pessoal.                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Estou disposto(a) a comprar produtos verdes para uso pessoal. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Farei um esforço para comprar produtos verdes.                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

Relativamente ao comportamento de compra, indique o grau de concordância com as seguintes afirmações: \*

|   | Discordo totalmente   | Discordo parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo totalmente   |
|---|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|
| Tenho comprado produtos verdes regularmente.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Tenho um comportamento de compra verde para os meus produtos de necessidades diárias. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Tenho um comportamento de compra verde nos últimos seis meses.                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

**Appendix 2** | Constructs and measuring items

| Constructs   |   | Measuring Items  | Sources                  |
|--|---|--|--------------------------|
| <b>Behavioural Belief (BB)</b><br>(strongly disagree (1)/strongly agree (5))         | Buying a green product would enable me to | BB1: help save the environment.  | Yadav and Pathak, (2017) |
|  |   | BB2: be a responsible citizen.   |                          |
|  |   | BB3: stay in a clean & better environment.   |                          |
|  |   | BB4: perform eco- friendly practices.  |                          |
|  |   | BB5: implement green initiatives in my life.   |                          |
| <b>Outcome Evaluation (OE)</b><br>(not at all important (1)/extremely important (5)) |   | OE1: to me helping to save the environment is  |                          |
|  |   | OE2: to me being responsible towards society is  |                          |
|  |   | OE3: to me staying in clean and better environment is  |                          |
|  |   | OE4: to me performing eco-friendly practices is  |                          |
|  |   | OE5: to me implementing green initiatives in my life is  |                          |
| <b>Normative belief (NB)</b><br>(strongly disagree (1)/strongly agree (5))           |   | NB1: my family thinks I should purchase green products in place of conventional non-green products.    |                          |
|  |   | NB2: my friends think I should purchase green products in place of conventional non-green products.    |                          |
|  |   | NB3: my colleagues think I should purchase green products in place of conventional non-green products. |                          |
| <b>Motivation to comply (MC)</b><br>(extremely unlikely (1)/extremely likely (5))    |   | MC1: how likely it is for you to do what your family thinks you should do?                             |                          |
|  |   | MC2: how likely it is for you to do what your friends think you should do?                             |                          |
|  |   | MC3: how likely it is for you to do what your colleagues think you should do?                          |                          |
| <b>Control belief (CB)</b><br>(strongly disagree (1)/strongly agree (5))             |   | CB1: while buying the green products, the location needs to be convenient.                             |                          |
|  |   | CB2: buying green products requires time and effort.   |                          |
|  |   | CB3: my company/school/others that pay(s) for my expenses encourage(s) me to use green products.       |                          |
| <b>Perceived power (PP)</b><br>(strongly disagree (1)/strongly agree (5))            |   | PP1: location is a critical factor while making decision to buy green products.                        |                          |
|  |   | PP2: time and effort needed to buy is very important while making decision to buy green products.      |                          |
|  |   | PP3: the expenses available to me is very critical while making decision to buy green products.        |                          |
| <b>Attitude</b>  | Buying green product is                   | ATT1: extremely bad (1)/extremely good (5)   | Kim & Han (2010)         |
|  |   | ATT2: extremely undesirable (1)/extremely desirable (5)  |                          |
|  |   | ATT3: extremely unenjoyable (1)/extremely enjoyable (5)  |                          |
|  |   | ATT4: extremely foolish (1)/extremely wise (5)   |                          |
|  |   | ATT5: extremely unfavourable (1)/extremely favourable (5)  |                          |
|  |   | ATT6: extremely unpleasant (1)/extremely pleasant (5)  |                          |

|  |  |                                |
|--|--|--------------------------------|
| <b>Subjective norm</b><br>(strongly disagree (1)/strongly agree (5))               | SN1: most people who are important to me would want me to purchase eco-friendly products.  | Chan & Lau (2002)              |
|  | SN2: most people who are important to me would think I should purchase green products.   |                                |
| <b>Perceived behavioural control</b><br>(strongly disagree (1)/strongly agree (5)) | PBC1: whether or not I buy green product at place of conventional non-green product is completely up to me.  | Kim & Han (2010)               |
|  | PBC2: I have resources, time and opportunities to buy green product.   |                                |
|  | PBC3: I am confident that if I want to, I can buy green product at place of conventional non-green product.  |                                |
| <b>Perceived value</b><br>(strongly disagree (1)/strongly agree (5))               | PV1: the green product's environmental functions provide good value to me.   | Chen & Chang (2012)            |
|  | PV2: the green product's environmental performance meets my expectations.  |                                |
|  | PV3: I purchase green product because it has more environmental concern than non-green products.   |                                |
|  | PV4: I purchase green product because it is environmentally friendly.  |                                |
|  | PV5: I purchase green product because it has more environmental benefit than non-green products.   |                                |
| <b>Willingness to pay premium</b><br>(strongly disagree (1)/strongly agree (5))    | WPP1: I would pay more for a green product that is making efforts to be environmentally sustainable.   | Kang, Stein, Heo, & Lee (2012) |
|  | WPP2: I would be willing to pay this extra percentage on the green products to support the organization's/product efforts to be environmentally sustainable.<br>1-----2-----3-----4-----5-----6-----7<br>0% 1-2% 2-5% 6-10% 11-15% 16-20% >20% |                                |
| <b>Purchase intention</b><br>(strongly disagree (1)/strongly agree (5))            | PI1: I will purchase green products for personal use.  | Kim, Njite, & Hancer (2013)    |
|  | PI2: I am willing to purchase green products for personal use.   |                                |
|  | PI3: I will make an effort to purchase green products.   |                                |
| <b>Purchase behaviour</b><br>(strongly disagree (1)/strongly agree (5))            | PB1: I have been purchasing green products at regular basis.   | Wan, Cheung, & Shen (2012).    |
|  | PB2: I have green purchasing behaviour for my daily needs products.  |                                |
|  | PB3: I have green purchasing behaviour over the past six months.   |                                |

**Appendix 3** | Recoding the Outcome Evaluation variable

| <b>Scale</b>         | <b>Before</b> | <b>Recoded Variable</b> |
|----------------------|---------------|-------------------------|
| Not at all important | 1             | -2                      |
| Somewhat important   | 2             | -1                      |
| Neutral              | 3             | 0                       |
| Very important       | 4             | 1                       |
| Extremely important  | 5             | 2                       |

**Appendix 4** | Recoding the Motivation to Comply variable

| <b>Scale</b>       | <b>Before</b> | <b>Recoded Variable</b> |
|--------------------|---------------|-------------------------|
| Extremely unlikely | 1             | -2                      |
| Unlikely           | 2             | -1                      |
| Neutral            | 3             | 0                       |
| Likely             | 4             | 1                       |
| Extremely likely   | 5             | 2                       |

## Appendix 5| Behavioural Belief Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                              | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|------------------------------|--------|-----|-------|----------------|-----------------|
| Behavioural Belief Construct | Female | 406 | 4,494 | ,9105          | ,0452           |
|                              | Male   | 194 | 4,249 | ,8190          | ,0588           |

**Independent Samples Test**

|                              |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                              |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                              |                             |   |      |                              |         |                 |                 |                       | Lower                                     | Upper |
| Behavioural Belief Construct | Equal variances assumed     | ,026                                    | ,872 | 3,171                        | 598     | ,002            | ,2441           | ,0770                 | ,0929                                     | ,3953 |
|                              | Equal variances not assumed |   |      | 3,292                        | 418,687 | ,001            | ,2441           | ,0742                 | ,0983                                     | ,3899 |

**Group Statistics**

|                              | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|------------------------------|-------------------------|-----|-------|----------------|-----------------|
| Behavioural Belief Construct | No Higher Education     | 282 | 4,408 | ,9628          | ,0573           |
|                              | With Higher Education   | 318 | 4,421 | ,8187          | ,0459           |

**Independent Samples Test**

|                              |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                              |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                              |                             |   |      |                              |         |                 |                 |                       | Lower                                     | Upper |
| Behavioural Belief Construct | Equal variances assumed     | 1,723                                   | ,190 | -,178                        | 598     | ,859            | -,0130          | ,0727                 | -,1558                                    | ,1299 |
|                              | Equal variances not assumed |   |      | -,176                        | 554,702 | ,860            | -,0130          | ,0735                 | -,1572                                    | ,1313 |

| Tests of Homogeneity of Variances |                                      |                  |     |         |      | ANOVA                        |                |     |             |        |      |
|-----------------------------------|--------------------------------------|------------------|-----|---------|------|------------------------------|----------------|-----|-------------|--------|------|
|                                   |                                      | Levene Statistic | df1 | df2     | Sig. | Behavioural Belief Construct |                |     |             |        |      |
| Behavioural Belief Construct      | Based on Mean                        | 31,438           | 2   | 597     | ,000 |                              | Sum of Squares | df  | Mean Square | F      | Sig. |
|                                   | Based on Median                      | 15,086           | 2   | 597     | ,000 | Between Groups               | 15,452         | 2   | 7,726       | 10,081 | ,000 |
|                                   | Based on Median and with adjusted df | 15,086           | 2   | 363,844 | ,000 | Within Groups                | 457,539        | 597 | ,766        |        |      |
|                                   | Based on trimmed mean                | 26,502           | 2   | 597     | ,000 | Total                        | 472,991        | 599 |             |        |      |

**Descriptives**

Behavioural Belief Construct

|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 4,480 | ,7028          | ,0385      | 4,404                            | 4,555       | 1,0     | 5,0     |
| 25 to 31 years old | 120 | 4,570 | ,6829          | ,0623      | 4,447                            | 4,693       | 1,0     | 5,0     |
| > 31 years old     | 146 | 4,138 | 1,2800         | ,1059      | 3,929                            | 4,348       | 1,0     | 5,0     |
| Total              | 600 | 4,415 | ,8886          | ,0363      | 4,343                            | 4,486       | 1,0     | 5,0     |

**Multiple Comparisons**

Dependent Variable: Behavioural Belief Construct

Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|------|-------------------------|-------------|
|                    |                    |                       |            |      | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | -,0904                | ,0732      | ,435 | -,263                   | ,083        |
|                    | > 31 years old     | ,3413*                | ,1127      | ,008 | ,075                    | ,608        |
| 25 to 31 years old | 18 to 24 years old | ,0904                 | ,0732      | ,435 | -,083                   | ,263        |
|                    | > 31 years old     | ,4316*                | ,1229      | ,002 | ,142                    | ,722        |
| > 31 years old     | 18 to 24 years old | -,3413*               | ,1127      | ,008 | -,608                   | -,075       |
|                    | 25 to 31 years old | -,4316*               | ,1229      | ,002 | -,722                   | -,142       |

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

## Appendix 6 | Outcome Evaluation Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                              | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|------------------------------|--------|-----|-------|----------------|-----------------|
| Outcome Evaluation Construct | Female | 406 | 4,817 | ,3582          | ,0178           |
|                              | Male   | 194 | 4,544 | ,5735          | ,0412           |

**Independent Samples Test**

|                              |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                              |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                              |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Outcome Evaluation Construct | Equal variances assumed     | 55,017                                  | ,000 | 7,104                        | 598     | ,000            | ,2724           | ,0383                 | ,1971                                     | ,3477 |
|                              | Equal variances not assumed |   |      | 6,074                        | 267,236 | ,000            | ,2724           | ,0448                 | ,1841                                     | ,3607 |

**Group Statistics**

|                              | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|------------------------------|-------------------------|-----|-------|----------------|-----------------|
| Outcome Evaluation Construct | No Higher Education     | 282 | 4,683 | ,5455          | ,0325           |
|                              | With Higher Education   | 318 | 4,769 | ,3573          | ,0200           |

**Independent Samples Test**

|                              |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |        |
|------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|--------|
|                              |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |        |
|                              |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper  |
| Outcome Evaluation Construct | Equal variances assumed     | 12,857                                  | ,000 | -2,314                       | 598     | ,021            | -,0862          | ,0373                 | -,1594                                    | -,0130 |
|                              | Equal variances not assumed |   |      | -2,259                       | 474,549 | ,024            | -,0862          | ,0382                 | -,1612                                    | -,0112 |

| Tests of Homogeneity of Variances |                                      |                  |     |         | ANOVA |                              |         |             |       |       |      |
|-----------------------------------|--------------------------------------|------------------|-----|---------|-------|------------------------------|---------|-------------|-------|-------|------|
|                                   |                                      | Levene Statistic | df1 | df2     | Sig.  | Outcome Evaluation Construct |         |             |       |       |      |
|                                   |                                      |                  |     |         |       | Sum of Squares               | df      | Mean Square | F     | Sig.  |      |
| Outcome Evaluation Construct      | Based on Mean                        | 7,100            | 2   | 597     | ,001  |                              |         |             |       |       |      |
|                                   | Based on Median                      | 6,414            | 2   | 597     | ,002  | Between Groups               | 2,052   | 2           | 1,026 | 4,973 | ,007 |
|                                   | Based on Median and with adjusted df | 6,414            | 2   | 479,883 | ,002  | Within Groups                | 123,135 | 597         | ,206  |       |      |
|                                   | Based on trimmed mean                | 6,107            | 2   | 597     | ,002  | Total                        | 125,187 | 599         |       |       |      |

| Descriptives                 |     |       |                |            |                                  |             |         |         |  |
|------------------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|--|
| Outcome Evaluation Construct |     |       |                |            |                                  |             |         |         |  |
|                              | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |  |
|                              |     |       |                |            | Lower Bound                      | Upper Bound |         |         |  |
| 18 to 24 years old           | 334 | 4,677 | ,4597          | ,0252      | 4,627                            | 4,726       | 1,8     | 5,0     |  |
| 25 to 31 years old           | 120 | 4,802 | ,2973          | ,0271      | 4,748                            | 4,855       | 3,6     | 5,0     |  |
| > 31 years old               | 146 | 4,788 | ,5398          | ,0447      | 4,699                            | 4,876       | 1,0     | 5,0     |  |
| Total                        | 600 | 4,729 | ,4572          | ,0187      | 4,692                            | 4,765       | 1,0     | 5,0     |  |

| Multiple Comparisons                             |                    |                       |            |      |                         |             |  |
|--|--------------------|-----------------------|------------|------|-------------------------|-------------|--|
| Dependent Variable: Outcome Evaluation Construct |                    |                       |            |      |                         |             |  |
| Games-Howell                                     |                    |                       |            |      |                         |             |  |
| (I) Age  | (J) Age            | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |  |
|  |                    |                       |            |      | Lower Bound             | Upper Bound |  |
| 18 to 24 years old                               | 25 to 31 years old | -,1250*               | ,0370      | ,002 | -,212                   | -,038       |  |
|  | > 31 years old     | -,1110                | ,0513      | ,079 | -,232                   | ,010        |  |
| 25 to 31 years old                               | 18 to 24 years old | ,1250*                | ,0370      | ,002 | ,038                    | ,212        |  |
|  | > 31 years old     | ,0140                 | ,0523      | ,961 | -,109                   | ,137        |  |
| > 31 years old                                   | 18 to 24 years old | ,1110                 | ,0513      | ,079 | -,010                   | ,232        |  |
|  | 25 to 31 years old | -,0140                | ,0523      | ,961 | -,137                   | ,109        |  |

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



## Appendix 7 | Normative Belief Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                            | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|----------------------------|--------|-----|-------|----------------|-----------------|
| Normative Belief Construct | Female | 406 | 2,803 | 1,2593         | ,0625           |
|                            | Male   | 194 | 2,747 | 1,2006         | ,0862           |

**Independent Samples Test**

|                            |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|----------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                            |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                            |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Normative Belief Construct | Equal variances assumed     | 1,339                                   | ,248 | ,513                         | 598     | ,608            | ,0555           | ,1083                 | -,1571                                    | ,2682 |
|                            | Equal variances not assumed |   |      | ,522                         | 396,981 | ,602            | ,0555           | ,1065                 | -,1538                                    | ,2648 |

**Group Statistics**

|                            | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|----------------------------|-------------------------|-----|-------|----------------|-----------------|
| Normative Belief Construct | No Higher Education     | 282 | 2,960 | 1,3289         | ,0791           |
|                            | With Higher Education   | 318 | 2,630 | 1,1350         | ,0636           |

**Independent Samples Test**

|                            |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|----------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                            |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                            |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Normative Belief Construct | Equal variances assumed     | 5,288                                   | ,022 | 3,279                        | 598     | ,001            | ,3298           | ,1006                 | ,1323                                     | ,5274 |
|                            | Equal variances not assumed |   |      | 3,248                        | 555,926 | ,001            | ,3298           | ,1016                 | ,1304                                     | ,5293 |

| Tests of Homogeneity of Variances |                                      |                  |     |         |      | ANOVA                      |         |             |       |       |      |  |
|-----------------------------------|--------------------------------------|------------------|-----|---------|------|----------------------------|---------|-------------|-------|-------|------|--|
|                                   |                                      | Levene Statistic | df1 | df2     | Sig. | Normative Belief Construct |         |             |       |       |      |  |
|                                   |                                      |                  |     |         |      | Sum of Squares             | df      | Mean Square | F     | Sig.  |      |  |
| Normative Belief Construct        | Based on Mean                        | 6,772            | 2   | 597     | ,001 | Between Groups             | 13,493  | 2           | 6,746 | 4,439 | ,012 |  |
|                                   | Based on Median                      | 6,066            | 2   | 597     | ,002 | Within Groups              | 907,328 | 597         | 1,520 |       |      |  |
|                                   | Based on Median and with adjusted df | 6,066            | 2   | 590,760 | ,002 | Total                      | 920,821 | 599         |       |       |      |  |
|                                   | Based on trimmed mean                | 6,641            | 2   | 597     | ,001 |                            |         |             |       |       |      |  |

**Descriptives**

Normative Belief Construct

|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 2,746 | 1,1909         | ,0652      | 2,617                            | 2,874       | 1,0     | 5,0     |
| 25 to 31 years old | 120 | 2,597 | 1,0948         | ,0999      | 2,399                            | 2,795       | 1,0     | 5,0     |
| > 31 years old     | 146 | 3,030 | 1,4201         | ,1175      | 2,797                            | 3,262       | 1,0     | 5,0     |
| Total              | 600 | 2,785 | 1,2399         | ,0506      | 2,686                            | 2,884       | 1,0     | 5,0     |

**Multiple Comparisons**

Dependent Variable: Normative Belief Construct

Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|------|-------------------------|-------------|
|                    |                    |                       |            |      | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | ,1483                 | ,1193      | ,429 | -,133                   | ,430        |
|                    | > 31 years old     | -,2842                | ,1344      | ,089 | -,601                   | ,033        |
| 25 to 31 years old | 18 to 24 years old | -,1483                | ,1193      | ,429 | -,430                   | ,133        |
|                    | > 31 years old     | -,4325*               | ,1543      | ,015 | -,796                   | -,069       |
| > 31 years old     | 18 to 24 years old | ,2842                 | ,1344      | ,089 | -,033                   | ,601        |
|                    | 25 to 31 years old | ,4325*                | ,1543      | ,015 | ,069                    | ,796        |

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

## Appendix 8 | Motivation to Comply Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                                | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|--------------------------------|--------|-----|-------|----------------|-----------------|
| Motivation to Comply Construct | Female | 406 | 3,183 | ,8498          | ,0422           |
|                                | Male   | 194 | 3,143 | ,8775          | ,0630           |

**Independent Samples Test**

|                                |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|--------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                                |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                                |                             |   |      |                              |         |                 |                 |                       | Lower                                     | Upper |
| Motivation to Comply Construct | Equal variances assumed     | ,222                                    | ,638 | ,540                         | 598     | ,589            | ,0405           | ,0750                 | -,1067                                    | ,1877 |
|                                | Equal variances not assumed |   |      | ,534                         | 369,407 | ,594            | ,0405           | ,0758                 | -,1086                                    | ,1896 |

**Group Statistics**

|                                | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|--------------------------------|-------------------------|-----|-------|----------------|-----------------|
| Motivation to Comply Construct | No Higher Education     | 282 | 3,260 | ,9135          | ,0544           |
|                                | With Higher Education   | 318 | 3,090 | ,7993          | ,0448           |

**Independent Samples Test**

|                                |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|--------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                                |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                                |                             |   |      |                              |         |                 |                 |                       | Lower                                     | Upper |
| Motivation to Comply Construct | Equal variances assumed     | 5,993                                   | ,015 | 2,430                        | 598     | ,015            | ,1699           | ,0699                 | ,0326                                     | ,3072 |
|                                | Equal variances not assumed |   |      | 2,410                        | 562,324 | ,016            | ,1699           | ,0705                 | ,0315                                     | ,3083 |

| Tests of Homogeneity of Variances |                                      |                  |     |         |      | ANOVA                          |         |             |      |       |      |  |
|-----------------------------------|--------------------------------------|------------------|-----|---------|------|--------------------------------|---------|-------------|------|-------|------|--|
|                                   |                                      | Levene Statistic | df1 | df2     | Sig. | Motivation to Comply Construct |         |             |      |       |      |  |
|                                   |                                      |                  |     |         |      | Sum of Squares                 | df      | Mean Square | F    | Sig.  |      |  |
| Motivation to Comply Construct    | Based on Mean                        | 13,245           | 2   | 597     | ,000 | Between Groups                 | 1,500   | 2           | ,750 | 1,018 | ,362 |  |
|                                   | Based on Median                      | 11,755           | 2   | 597     | ,000 | Within Groups                  | 439,826 | 597         | ,737 |       |      |  |
|                                   | Based on Median and with adjusted df | 11,755           | 2   | 569,790 | ,000 | Total                          | 441,327 | 599         |      |       |      |  |
|                                   | Based on trimmed mean                | 12,752           | 2   | 597     | ,000 |                                |         |             |      |       |      |  |

**Descriptives**

Motivation to Comply Construct

|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 3,165 | ,7796          | ,0427      | 3,081                            | 3,249       | 1,0     | 5,0     |
| 25 to 31 years old | 120 | 3,094 | ,7935          | ,0724      | 2,951                            | 3,238       | 1,0     | 5,0     |
| > 31 years old     | 146 | 3,244 | 1,0587         | ,0876      | 3,071                            | 3,417       | 1,0     | 5,0     |
| Total              | 600 | 3,170 | ,8584          | ,0350      | 3,101                            | 3,239       | 1,0     | 5,0     |

**Multiple Comparisons**

Dependent Variable: Motivation to Comply Construct

Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|------|-------------------------|-------------|
|                    |                    |                       |            |      | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | ,0702                 | ,0841      | ,681 | -,128                   | ,269        |
|                    | > 31 years old     | -,0796                | ,0974      | ,693 | -,310                   | ,150        |
| 25 to 31 years old | 18 to 24 years old | -,0702                | ,0841      | ,681 | -,269                   | ,128        |
|                    | > 31 years old     | -,1498                | ,1137      | ,386 | -,418                   | ,118        |
| > 31 years old     | 18 to 24 years old | ,0796                 | ,0974      | ,693 | -,150                   | ,310        |
|                    | 25 to 31 years old | ,1498                 | ,1137      | ,386 | -,118                   | ,418        |

## Appendix 9 | Control Belief Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                          | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|--------------------------|--------|-----|-------|----------------|-----------------|
| Control Belief Construct | Female | 406 | 3,057 | ,9557          | ,0474           |
|                          | Male   | 194 | 3,101 | ,9925          | ,0713           |

**Independent Samples Test**

|                          |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|--------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                          |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                          |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Control Belief Construct | Equal variances assumed     | ,203                                    | ,652 | -,530                        | 598     | ,597            | -,0447          | ,0845                 | -,2106                                    | ,1212 |
|                          | Equal variances not assumed |   |      | -,522                        | 367,527 | ,602            | -,0447          | ,0856                 | -,2131                                    | ,1236 |

**Group Statistics**

|                          | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|--------------------------|-------------------------|-----|-------|----------------|-----------------|
| Control Belief Construct | No Higher Education     | 282 | 3,148 | 1,0259         | ,0611           |
|                          | With Higher Education   | 318 | 3,003 | ,9081          | ,0509           |

**Independent Samples Test**

|                          |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|--------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                          |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                          |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Control Belief Construct | Equal variances assumed     | 4,120                                   | ,043 | 1,832                        | 598     | ,068            | ,1446           | ,0790                 | -,0105                                    | ,2997 |
|                          | Equal variances not assumed |   |      | 1,818                        | 565,271 | ,070            | ,1446           | ,0795                 | -,0116                                    | ,3008 |

**Tests of Homogeneity of Variances**

|                          |                                      | Levene Statistic | df1 | df2     | Sig. |
|--------------------------|--------------------------------------|------------------|-----|---------|------|
| Control Belief Construct | Based on Mean                        | ,586             | 2   | 597     | ,557 |
|                          | Based on Median                      | ,472             | 2   | 597     | ,624 |
|                          | Based on Median and with adjusted df | ,472             | 2   | 595,893 | ,624 |
|                          | Based on trimmed mean                | ,558             | 2   | 597     | ,573 |

**ANOVA**

| Control Belief Construct |                |     |             |       |      |
|--------------------------|----------------|-----|-------------|-------|------|
|                          | Sum of Squares | df  | Mean Square | F     | Sig. |
| Between Groups           | 2,367          | 2   | 1,184       | 1,267 | ,283 |
| Within Groups            | 557,932        | 597 | ,935        |       |      |
| Total                    | 560,299        | 599 |             |       |      |

**Descriptives**

**Control Belief Construct**

|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 3,120 | ,9469          | ,0518      | 3,018                            | 3,222       | 1,0     | 5,0     |
| 25 to 31 years old | 120 | 2,958 | ,9926          | ,0906      | 2,779                            | 3,138       | 1,0     | 5,0     |
| > 31 years old     | 146 | 3,053 | ,9901          | ,0819      | 2,891                            | 3,214       | 1,0     | 5,0     |
| Total              | 600 | 3,071 | ,9672          | ,0395      | 2,994                            | 3,149       | 1,0     | 5,0     |

**Multiple Comparisons**

Dependent Variable: Control Belief Construct

Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|------|-------------------------|-------------|
|                    |                    |                       |            |      | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | ,1614                 | ,1044      | ,271 | -,085                   | ,408        |
|                    | > 31 years old     | ,0672                 | ,0969      | ,767 | -,161                   | ,296        |
| 25 to 31 years old | 18 to 24 years old | -,1614                | ,1044      | ,271 | -,408                   | ,085        |
|                    | > 31 years old     | -,0942                | ,1222      | ,721 | -,382                   | ,194        |
| > 31 years old     | 18 to 24 years old | -,0672                | ,0969      | ,767 | -,296                   | ,161        |
|                    | 25 to 31 years old | ,0942                 | ,1222      | ,721 | -,194                   | ,382        |

## Appendix 10| Perceived Power Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                           | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|---------------------------|--------|-----|-------|----------------|-----------------|
| Perceived Power Construct | Female | 406 | 3,667 | 1,1162         | ,0554           |
|                           | Male   | 194 | 3,581 | 1,0620         | ,0762           |

**Independent Samples Test**

|                           |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|---------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                           |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                           |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Perceived Power Construct | Equal variances assumed     | ,312                                    | ,577 | ,904                         | 598     | ,366            | ,0867           | ,0959                 | -,1016                                    | ,2751 |
|                           | Equal variances not assumed |   |      | ,920                         | 397,700 | ,358            | ,0867           | ,0942                 | -,0986                                    | ,2720 |

**Group Statistics**

|                           | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|---------------------------|-------------------------|-----|-------|----------------|-----------------|
| Perceived Power Construct | No Higher Education     | 282 | 3,604 | 1,1501         | ,0685           |
|                           | With Higher Education   | 318 | 3,671 | 1,0521         | ,0590           |

**Independent Samples Test**

|                           |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|---------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                           |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                           |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Perceived Power Construct | Equal variances assumed     | 1,607                                   | ,205 | -,743                        | 598     | ,458            | -,0668          | ,0899                 | -,2434                                    | ,1097 |
|                           | Equal variances not assumed |   |      | -,739                        | 573,062 | ,460            | -,0668          | ,0904                 | -,2444                                    | ,1107 |

**Tests of Homogeneity of Variances**

|                           |                                      | Levene Statistic | df1 | df2     | Sig. |
|---------------------------|--------------------------------------|------------------|-----|---------|------|
| Perceived Power Construct | Based on Mean                        | ,189             | 2   | 597     | ,828 |
|                           | Based on Median                      | ,387             | 2   | 597     | ,679 |
|                           | Based on Median and with adjusted df | ,387             | 2   | 593,944 | ,679 |
|                           | Based on trimmed mean                | ,167             | 2   | 597     | ,846 |

**ANOVA**

| Perceived Power Construct |                |     |             |      |      |
|---------------------------|----------------|-----|-------------|------|------|
|                           | Sum of Squares | df  | Mean Square | F    | Sig. |
| Between Groups            | 1,639          | 2   | ,820        | ,678 | ,508 |
| Within Groups             | 721,583        | 597 | 1,209       |      |      |
| Total                     | 723,222        | 599 |             |      |      |

**Descriptives**

Perceived Power Construct

|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 3,606 | 1,1063         | ,0605      | 3,487                            | 3,725       | 1,0     | 5,0     |
| 25 to 31 years old | 120 | 3,742 | 1,0633         | ,0971      | 3,549                            | 3,934       | 1,0     | 5,0     |
| > 31 years old     | 146 | 3,632 | 1,1126         | ,0921      | 3,450                            | 3,814       | 1,0     | 5,0     |
| Total              | 600 | 3,639 | 1,0988         | ,0449      | 3,551                            | 3,728       | 1,0     | 5,0     |

**Multiple Comparisons**

Dependent Variable: Perceived Power Construct

Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|------|-------------------------|-------------|
|                    |                    |                       |            |      | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | -,1359                | ,1144      | ,462 | -,406                   | ,134        |
|                    | > 31 years old     | -,0266                | ,1102      | ,968 | -,286                   | ,233        |
| 25 to 31 years old | 18 to 24 years old | ,1359                 | ,1144      | ,462 | -,134                   | ,406        |
|                    | > 31 years old     | ,1092                 | ,1338      | ,693 | -,206                   | ,425        |
| > 31 years old     | 18 to 24 years old | ,0266                 | ,1102      | ,968 | -,233                   | ,286        |
|                    | 25 to 31 years old | -,1092                | ,1338      | ,693 | -,425                   | ,206        |

## Appendix 11| Attitude Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                    | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|--------------------|--------|-----|-------|----------------|-----------------|
| Attitude Construct | Female | 406 | 4,425 | ,5028          | ,0250           |
|                    | Male   | 194 | 4,042 | ,6023          | ,0432           |

**Independent Samples Test**

|                    |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|--------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                    |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                    |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Attitude Construct | Equal variances assumed     | 7,237                                   | ,007 | 8,168                        | 598     | ,000            | ,3828           | ,0469                 | ,2907                                     | ,4748 |
|                    | Equal variances not assumed |   |      | 7,667                        | 325,740 | ,000            | ,3828           | ,0499                 | ,2846                                     | ,4810 |

**Group Statistics**

|                    | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|--------------------|-------------------------|-----|-------|----------------|-----------------|
| Attitude Construct | No Higher Education     | 282 | 4,307 | ,5955          | ,0355           |
|                    | With Higher Education   | 318 | 4,296 | ,5387          | ,0302           |

**Independent Samples Test**

|                    |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|--------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                    |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                    |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Attitude Construct | Equal variances assumed     | 6,591                                   | ,010 | ,229                         | 598     | ,819            | ,0106           | ,0463                 | -,0803                                    | ,1016 |
|                    | Equal variances not assumed |   |      | ,228                         | 570,463 | ,820            | ,0106           | ,0466                 | -,0809                                    | ,1021 |

| Tests of Homogeneity of Variances |                                      |                  |     |         | ANOVA |                    |         |             |       |       |      |
|-----------------------------------|--------------------------------------|------------------|-----|---------|-------|--------------------|---------|-------------|-------|-------|------|
|                                   |                                      | Levene Statistic | df1 | df2     | Sig.  | Attitude Construct |         |             |       |       |      |
|                                   |                                      |                  |     |         |       | Sum of Squares     | df      | Mean Square | F     | Sig.  |      |
| Attitude Construct                | Based on Mean                        | 5,751            | 2   | 597     | ,003  | Between Groups     | 5,072   | 2           | 2,536 | 8,114 | ,000 |
|                                   | Based on Median                      | 4,516            | 2   | 597     | ,011  | Within Groups      | 186,583 | 597         | ,313  |       |      |
|                                   | Based on Median and with adjusted df | 4,516            | 2   | 580,985 | ,011  | Total              | 191,655 | 599         |       |       |      |
|                                   | Based on trimmed mean                | 5,431            | 2   | 597     | ,005  |                    |         |             |       |       |      |

**Descriptives**

| Attitude Construct |     |       |                |            |                                  |             |         |         |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 4,219 | ,5791          | ,0317      | 4,157                            | 4,281       | 2,5     | 5,0     |
| 25 to 31 years old | 120 | 4,404 | ,4622          | ,0422      | 4,321                            | 4,488       | 3,2     | 5,0     |
| > 31 years old     | 146 | 4,404 | ,5842          | ,0484      | 4,309                            | 4,500       | 1,7     | 5,0     |
| Total              | 600 | 4,301 | ,5656          | ,0231      | 4,256                            | 4,346       | 1,7     | 5,0     |

**Multiple Comparisons**

Dependent Variable: Attitude Construct  
Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|-------|-------------------------|-------------|
|                    |                    |                       |            |       | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | -,1851*               | ,0528      | ,002  | -,309                   | -,061       |
|                    | > 31 years old     | -,1850*               | ,0578      | ,004  | -,321                   | -,049       |
| 25 to 31 years old | 18 to 24 years old | ,1851*                | ,0528      | ,002  | ,061                    | ,309        |
|                    | > 31 years old     | ,0001                 | ,0642      | 1,000 | -,151                   | ,151        |
| > 31 years old     | 18 to 24 years old | ,1850*                | ,0578      | ,004  | ,049                    | ,321        |
|                    | 25 to 31 years old | -,0001                | ,0642      | 1,000 | -,151                   | ,151        |

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

## Appendix 12| Subjective Norm Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                           | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|---------------------------|--------|-----|-------|----------------|-----------------|
| Subjective Norm Construct | Female | 406 | 2,825 | 1,3343         | ,0662           |
|                           | Male   | 194 | 3,057 | 1,2548         | ,0901           |

**Independent Samples Test**

|                           |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |        |
|---------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|--------|
|                           |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |        |
|                           |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper  |
| Subjective Norm Construct | Equal variances assumed     | 4,162                                   | ,042 | -2,027                       | 598     | ,043            | -,2316          | ,1143                 | -,4560                                    | -,0072 |
|                           | Equal variances not assumed |   |      | -2,071                       | 401,990 | ,039            | -,2316          | ,1118                 | -,4514                                    | -,0118 |

**Group Statistics**

|                           | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|---------------------------|-------------------------|-----|-------|----------------|-----------------|
| Subjective Norm Construct | No Higher Education     | 282 | 3,057 | 1,3526         | ,0805           |
|                           | With Higher Education   | 318 | 2,761 | 1,2620         | ,0708           |

**Independent Samples Test**

|                           |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|---------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                           |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                           |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Subjective Norm Construct | Equal variances assumed     | ,043                                    | ,836 | 2,770                        | 598     | ,006            | ,2957           | ,1068                 | ,0860                                     | ,5054 |
|                           | Equal variances not assumed |   |      | 2,758                        | 577,322 | ,006            | ,2957           | ,1072                 | ,0851                                     | ,5063 |

**Tests of Homogeneity of Variances**

|                           |                                      | Levene Statistic | df1 | df2     | Sig. |
|---------------------------|--------------------------------------|------------------|-----|---------|------|
| Subjective Norm Construct | Based on Mean                        | ,968             | 2   | 597     | ,380 |
|                           | Based on Median                      | 1,479            | 2   | 597     | ,229 |
|                           | Based on Median and with adjusted df | 1,479            | 2   | 595,839 | ,229 |
|                           | Based on trimmed mean                | ,928             | 2   | 597     | ,396 |

**ANOVA**

| Subjective Norm Construct |                |     |             |       |      |
|---------------------------|----------------|-----|-------------|-------|------|
|                           | Sum of Squares | df  | Mean Square | F     | Sig. |
| Between Groups            | 24,033         | 2   | 12,016      | 7,117 | ,001 |
| Within Groups             | 1007,967       | 597 | 1,688       |       |      |
| Total                     | 1032,000       | 599 |             |       |      |

**Descriptives**

### Subjective Norm Construct

|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 2,864 | 1,2723         | ,0696      | 2,727                            | 3,001       | 1,0     | 5,0     |
| 25 to 31 years old | 120 | 2,621 | 1,2785         | ,1167      | 2,390                            | 2,852       | 1,0     | 5,0     |
| > 31 years old     | 146 | 3,212 | 1,3757         | ,1139      | 2,987                            | 3,437       | 1,0     | 5,0     |
| Total              | 600 | 2,900 | 1,3126         | ,0536      | 2,795                            | 3,005       | 1,0     | 5,0     |

**Multiple Comparisons**

Dependent Variable: Subjective Norm Construct

Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|------|-------------------------|-------------|
|                    |                    |                       |            |      | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | ,2429                 | ,1359      | ,176 | -,078                   | ,564        |
|                    | > 31 years old     | -,3486*               | ,1335      | ,026 | -,663                   | -,034       |
| 25 to 31 years old | 18 to 24 years old | -,2429                | ,1359      | ,176 | -,564                   | ,078        |
|                    | > 31 years old     | -,5915*               | ,1630      | ,001 | -,976                   | -,207       |
| > 31 years old     | 18 to 24 years old | ,3486*                | ,1335      | ,026 | ,034                    | ,663        |
|                    | 25 to 31 years old | ,5915*                | ,1630      | ,001 | ,207                    | ,976        |

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

## Appendix 13| Perceived Behavioural Control Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|   | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|---|--------|-----|-------|----------------|-----------------|
| Perceived Behavioural Control Construct | Female | 406 | 3,579 | 1,0596         | ,0526           |
|   | Male   | 194 | 3,569 | 1,0574         | ,0759           |

**Independent Samples Test**

|   |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|---|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|   |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|   |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Perceived Behavioural Control Construct | Equal variances assumed     | ,143                                    | ,706 | ,109                         | 598     | ,913            | ,0101           | ,0924                 | -,1714                                    | ,1916 |
|   | Equal variances not assumed |   |      | ,109                         | 380,865 | ,913            | ,0101           | ,0924                 | -,1715                                    | ,1917 |

**Group Statistics**

|   | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|---|-------------------------|-----|-------|----------------|-----------------|
| Perceived Behavioural Control Construct | No Higher Education     | 282 | 3,517 | 1,1171         | ,0665           |
|   | With Higher Education   | 318 | 3,628 | 1,0017         | ,0562           |

**Independent Samples Test**

|   |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|---|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|   |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|   |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Perceived Behavioural Control Construct | Equal variances assumed     | 3,471                                   | ,063 | -1,287                       | 598     | ,199            | -,1113          | ,0865                 | -,2812                                    | ,0585 |
|   | Equal variances not assumed |   |      | -1,279                       | 568,423 | ,202            | -,1113          | ,0871                 | -,2823                                    | ,0597 |

**Tests of Homogeneity of Variances**

|   |                                      | Levene Statistic | df1 | df2     | Sig. |
|---|--------------------------------------|------------------|-----|---------|------|
| Perceived Behavioural Control Construct | Based on Mean                        | 3,341            | 2   | 597     | ,036 |
|   | Based on Median                      | 2,010            | 2   | 597     | ,135 |
|   | Based on Median and with adjusted df | 2,010            | 2   | 560,495 | ,135 |
|   | Based on trimmed mean                | 2,895            | 2   | 597     | ,056 |

**ANOVA**

| Perceived Behavioural Control Construct |                |     |             |       |      |
|---|----------------|-----|-------------|-------|------|
|   | Sum of Squares | df  | Mean Square | F     | Sig. |
| Between Groups                          | 3,341          | 2   | 1,670       | 1,495 | ,225 |
| Within Groups                           | 667,234        | 597 | 1,118       |       |      |
| Total                                   | 670,575        | 599 |             |       |      |

**Descriptives**

Perceived Behavioural Control Construct

|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 3,516 | 1,0479         | ,0573      | 3,403                            | 3,629       | 1,0     | 5,0     |
| 25 to 31 years old | 120 | 3,706 | ,9499          | ,0867      | 3,534                            | 3,877       | 1,0     | 5,0     |
| > 31 years old     | 146 | 3,605 | 1,1574         | ,0958      | 3,416                            | 3,794       | 1,0     | 5,0     |
| Total              | 600 | 3,576 | 1,0581         | ,0432      | 3,491                            | 3,660       | 1,0     | 5,0     |

**Multiple Comparisons**

Dependent Variable: Perceived Behavioural Control Construct

Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|------|-------------------------|-------------|
|                    |                    |                       |            |      | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | -,190                 | ,104       | ,164 | -,43                    | ,06         |
|                    | > 31 years old     | -,089                 | ,112       | ,705 | -,35                    | ,17         |
| 25 to 31 years old | 18 to 24 years old | ,190                  | ,104       | ,164 | -,06                    | ,43         |
|                    | > 31 years old     | ,101                  | ,129       | ,717 | -,20                    | ,41         |
| > 31 years old     | 18 to 24 years old | ,089                  | ,112       | ,705 | -,17                    | ,35         |
|                    | 25 to 31 years old | -,101                 | ,129       | ,717 | -,41                    | ,20         |

## Appendix 14| Perceived Value Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                           | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|---------------------------|--------|-----|-------|----------------|-----------------|
| Perceived Value Construct | Female | 406 | 4,243 | ,7431          | ,0369           |
|                           | Male   | 194 | 3,827 | ,9478          | ,0680           |

**Independent Samples Test**

|                           |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|---------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                           |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                           |                             |   |      |                              |         |                 |                 | Lower                 | Upper                                     |       |
| Perceived Value Construct | Equal variances assumed     | 9,760                                   | ,002 | 5,851                        | 598     | ,000            | ,4161           | ,0711                 | ,2764                                     | ,5557 |
|                           | Equal variances not assumed |   |      | 5,375                        | 310,255 | ,000            | ,4161           | ,0774                 | ,2638                                     | ,5683 |

**Group Statistics**

|                           | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|---------------------------|-------------------------|-----|-------|----------------|-----------------|
| Perceived Value Construct | No Higher Education     | 282 | 4,050 | ,8913          | ,0531           |
|                           | With Higher Education   | 318 | 4,160 | ,7837          | ,0439           |

**Independent Samples Test**

|                           |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|---------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                           |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                           |                             |   |      |                              |         |                 |                 | Lower                 | Upper                                     |       |
| Perceived Value Construct | Equal variances assumed     | 4,911                                   | ,027 | -1,600                       | 598     | ,110            | -,1094          | ,0684                 | -,2437                                    | ,0249 |
|                           | Equal variances not assumed |   |      | -1,587                       | 563,555 | ,113            | -,1094          | ,0689                 | -,2447                                    | ,0260 |

**Tests of Homogeneity of Variances**

|                           |                                      | Levene Statistic | df1 | df2     | Sig. |
|---------------------------|--------------------------------------|------------------|-----|---------|------|
| Perceived Value Construct | Based on Mean                        | 2,500            | 2   | 597     | ,083 |
|                           | Based on Median                      | 2,161            | 2   | 597     | ,116 |
|                           | Based on Median and with adjusted df | 2,161            | 2   | 563,568 | ,116 |
|                           | Based on trimmed mean                | 1,968            | 2   | 597     | ,141 |

**ANOVA**

| Perceived Value Construct |                |     |             |       |      |
|---------------------------|----------------|-----|-------------|-------|------|
|                           | Sum of Squares | df  | Mean Square | F     | Sig. |
| Between Groups            | 1,931          | 2   | ,966        | 1,380 | ,252 |
| Within Groups             | 417,787        | 597 | ,700        |       |      |
| Total                     | 419,718        | 599 |             |       |      |

**Descriptives**

Perceived Value Construct

|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 4,082 | ,8013          | ,0438      | 3,996                            | 4,168       | 1,0     | 5,0     |
| 25 to 31 years old | 120 | 4,222 | ,7576          | ,0692      | 4,085                            | 4,359       | 1,0     | 5,0     |
| > 31 years old     | 146 | 4,075 | ,9674          | ,0801      | 3,917                            | 4,234       | 1,0     | 5,0     |
| Total              | 600 | 4,108 | ,8371          | ,0342      | 4,041                            | 4,175       | 1,0     | 5,0     |

**Multiple Comparisons**

Dependent Variable: Perceived Value Construct

Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|------|-------------------------|-------------|
|                    |                    |                       |            |      | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | -,140                 | ,082       | ,206 | -,33                    | ,05         |
|                    | > 31 years old     | ,007                  | ,091       | ,997 | -,21                    | ,22         |
| 25 to 31 years old | 18 to 24 years old | ,140                  | ,082       | ,206 | -,05                    | ,33         |
|                    | > 31 years old     | ,146                  | ,106       | ,351 | -,10                    | ,40         |
| > 31 years old     | 18 to 24 years old | -,007                 | ,091       | ,997 | -,22                    | ,21         |
|                    | 25 to 31 years old | -,146                 | ,106       | ,351 | -,40                    | ,10         |



## Appendix 15| Willingness to Pay Premium Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                                      | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|--------------------------------------|--------|-----|-------|----------------|-----------------|
| Willingness to Pay Premium Construct | Female | 406 | 3,643 | 1,1480         | ,0570           |
|                                      | Male   | 194 | 3,466 | 1,2121         | ,0870           |

**Independent Samples Test**

|                                      |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|--------------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                                      |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                                      |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Willingness to Pay Premium Construct | Equal variances assumed     | 2,676                                   | ,102 | 1,728                        | 598     | ,084            | ,1764           | ,1020                 | -,0240                                    | ,3767 |
|                                      | Equal variances not assumed |   |      | 1,696                        | 362,199 | ,091            | ,1764           | ,1040                 | -,0282                                    | ,3809 |

**Group Statistics**

|                                      | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|--------------------------------------|-------------------------|-----|-------|----------------|-----------------|
| Willingness to Pay Premium Construct | No Higher Education     | 282 | 3,495 | 1,2142         | ,0723           |
|                                      | With Higher Education   | 318 | 3,667 | 1,1271         | ,0632           |

**Independent Samples Test**

|                                      |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|--------------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                                      |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                                      |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Willingness to Pay Premium Construct | Equal variances assumed     | ,527                                    | ,468 | -1,799                       | 598     | ,073            | -,1720          | ,0956                 | -,3597                                    | ,0158 |
|                                      | Equal variances not assumed |   |      | -1,791                       | 576,253 | ,074            | -,1720          | ,0960                 | -,3606                                    | ,0166 |

**Tests of Homogeneity of Variances**

|                                      |                                      | Levene Statistic | df1 | df2     | Sig. |
|--------------------------------------|--------------------------------------|------------------|-----|---------|------|
| Willingness to Pay Premium Construct | Based on Mean                        | 2,382            | 2   | 597     | ,093 |
|                                      | Based on Median                      | 2,405            | 2   | 597     | ,091 |
|                                      | Based on Median and with adjusted df | 2,405            | 2   | 595,314 | ,091 |
|                                      | Based on trimmed mean                | 2,397            | 2   | 597     | ,092 |

**ANOVA**

| Willingness to Pay Premium Construct |                |     |             |       |      |
|--------------------------------------|----------------|-----|-------------|-------|------|
|                                      | Sum of Squares | df  | Mean Square | F     | Sig. |
| Between Groups                       | 2,926          | 2   | 1,463       | 1,067 | ,345 |
| Within Groups                        | 818,404        | 597 | 1,371       |       |      |
| Total                                | 821,330        | 599 |             |       |      |

**Descriptives**

### Willingness to Pay Premium Construct

|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 3,596 | 1,1448         | ,0626      | 3,473                            | 3,719       | 1,0     | 6,0     |
| 25 to 31 years old | 120 | 3,688 | 1,0828         | ,0988      | 3,492                            | 3,883       | 1,0     | 6,0     |
| > 31 years old     | 146 | 3,479 | 1,2931         | ,1070      | 3,268                            | 3,691       | 1,0     | 6,0     |
| Total              | 600 | 3,586 | 1,1710         | ,0478      | 3,492                            | 3,680       | 1,0     | 6,0     |

**Multiple Comparisons**

Dependent Variable: Willingness to Pay Premium Construct

Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|------|-------------------------|-------------|
|                    |                    |                       |            |      | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | -,0917                | ,1170      | ,714 | -,368                   | ,184        |
|                    | > 31 years old     | ,1164                 | ,1240      | ,617 | -,176                   | ,409        |
| 25 to 31 years old | 18 to 24 years old | ,0917                 | ,1170      | ,714 | -,184                   | ,368        |
|                    | > 31 years old     | ,2080                 | ,1457      | ,328 | -,135                   | ,551        |
| > 31 years old     | 18 to 24 years old | -,1164                | ,1240      | ,617 | -,409                   | ,176        |
|                    | 25 to 31 years old | -,2080                | ,1457      | ,328 | -,551                   | ,135        |

## Appendix 16| Purchase Intention Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                              | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|------------------------------|--------|-----|-------|----------------|-----------------|
| Purchase Intention Construct | Female | 406 | 4,348 | ,7534          | ,0374           |
|                              | Male   | 194 | 3,777 | ,9913          | ,0712           |

**Independent Samples Test**

|                              |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                              |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                              |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Purchase Intention Construct | Equal variances assumed     | 10,378                                  | ,001 | 7,817                        | 598     | ,000            | ,5715           | ,0731                 | ,4279                                     | ,7151 |
|                              | Equal variances not assumed |   |      | 7,108                        | 303,247 | ,000            | ,5715           | ,0804                 | ,4133                                     | ,7297 |

**Group Statistics**

|                              | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|------------------------------|-------------------------|-----|-------|----------------|-----------------|
| Purchase Intention Construct | No Higher Education     | 282 | 4,054 | ,9608          | ,0572           |
|                              | With Higher Education   | 318 | 4,260 | ,7878          | ,0442           |

**Independent Samples Test**

|                              |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |        |
|------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|--------|
|                              |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |        |
|                              |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper  |
| Purchase Intention Construct | Equal variances assumed     | 3,531                                   | ,061 | -2,878                       | 598     | ,004            | -,2056          | ,0714                 | -,3459                                    | -,0653 |
|                              | Equal variances not assumed |   |      | -2,844                       | 544,411 | ,005            | -,2056          | ,0723                 | -,3476                                    | -,0636 |

**Tests of Homogeneity of Variances**

|                              |                                      | Levene Statistic | df1 | df2     | Sig. |
|------------------------------|--------------------------------------|------------------|-----|---------|------|
| Purchase Intention Construct | Based on Mean                        | 2,854            | 2   | 597     | ,058 |
|                              | Based on Median                      | 3,583            | 2   | 597     | ,028 |
|                              | Based on Median and with adjusted df | 3,583            | 2   | 565,820 | ,028 |
|                              | Based on trimmed mean                | 3,243            | 2   | 597     | ,040 |

**ANOVA**

| Purchase Intention Construct |                |     |             |       |      |
|------------------------------|----------------|-----|-------------|-------|------|
|                              | Sum of Squares | df  | Mean Square | F     | Sig. |
| Between Groups               | 11,161         | 2   | 5,581       | 7,383 | ,001 |
| Within Groups                | 451,277        | 597 | ,756        |       |      |
| Total                        | 462,438        | 599 |             |       |      |

**Descriptives**

**Purchase Intention Construct**

|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 4,095 | ,9049          | ,0495      | 3,997                            | 4,192       | 1,0     | 5,0     |
| 25 to 31 years old | 120 | 4,436 | ,6348          | ,0579      | 4,321                            | 4,551       | 2,3     | 5,0     |
| > 31 years old     | 146 | 4,096 | ,9493          | ,0786      | 3,941                            | 4,251       | 1,0     | 5,0     |
| Total              | 600 | 4,163 | ,8786          | ,0359      | 4,093                            | 4,234       | 1,0     | 5,0     |

**Multiple Comparisons**

Dependent Variable: Purchase Intention Construct

Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|-------|-------------------------|-------------|
|                    |                    |                       |            |       | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | -,3413 <sup>*</sup>   | ,0762      | ,000  | -,521                   | -,162       |
|                    | > 31 years old     | -,0011                | ,0929      | 1,000 | -,220                   | ,218        |
| 25 to 31 years old | 18 to 24 years old | ,3413 <sup>*</sup>    | ,0762      | ,000  | ,162                    | ,521        |
|                    | > 31 years old     | ,3402 <sup>*</sup>    | ,0976      | ,002  | ,110                    | ,570        |
| > 31 years old     | 18 to 24 years old | ,0011                 | ,0929      | 1,000 | -,218                   | ,220        |
|                    | 25 to 31 years old | -,3402 <sup>*</sup>   | ,0976      | ,002  | -,570                   | -,110       |

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

## Appendix 17| Purchase Behaviour Construct by Sex, Age and Academic Qualifications

**Group Statistics**

|                              | Sex    | N   | Mean  | Std. Deviation | Std. Error Mean |
|------------------------------|--------|-----|-------|----------------|-----------------|
| Purchase Behaviour Construct | Female | 406 | 3,422 | 1,3557         | ,0673           |
|                              | Male   | 194 | 2,914 | 1,3392         | ,0961           |

**Independent Samples Test**

|                              |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|                              |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|                              |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper |
| Purchase Behaviour Construct | Equal variances assumed     | ,040                                    | ,841 | 4,309                        | 598     | ,000            | ,5079           | ,1179                 | ,2764                                     | ,7394 |
|                              | Equal variances not assumed |   |      | 4,328                        | 384,381 | ,000            | ,5079           | ,1174                 | ,2772                                     | ,7386 |

**Group Statistics**

|                              | Academic Qualifications | N   | Mean  | Std. Deviation | Std. Error Mean |
|------------------------------|-------------------------|-----|-------|----------------|-----------------|
| Purchase Behaviour Construct | No Higher Education     | 282 | 3,112 | 1,3824         | ,0823           |
|                              | With Higher Education   | 318 | 3,387 | 1,3481         | ,0756           |

**Independent Samples Test**

|                              |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |        |
|------------------------------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|--------|
|                              |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |        |
|                              |                             |   |      |                              |         |                 |                 | Lower                 |   | Upper  |
| Purchase Behaviour Construct | Equal variances assumed     | ,795                                    | ,373 | -2,460                       | 598     | ,014            | -,2745          | ,1116                 | -,4937                                    | -,0553 |
|                              | Equal variances not assumed |   |      | -2,456                       | 585,608 | ,014            | -,2745          | ,1118                 | -,4940                                    | -,0550 |

**Tests of Homogeneity of Variances**

|                              |                                      | Levene Statistic | df1 | df2     | Sig. |
|------------------------------|--------------------------------------|------------------|-----|---------|------|
| Purchase Behaviour Construct | Based on Mean                        | 2,831            | 2   | 597     | ,060 |
|                              | Based on Median                      | 6,635            | 2   | 597     | ,001 |
|                              | Based on Median and with adjusted df | 6,635            | 2   | 544,511 | ,001 |
|                              | Based on trimmed mean                | 3,657            | 2   | 597     | ,026 |

**ANOVA**

| Purchase Behaviour Construct |                |     |             |        |      |
|------------------------------|----------------|-----|-------------|--------|------|
|                              | Sum of Squares | df  | Mean Square | F      | Sig. |
| Between Groups               | 56,870         | 2   | 28,435      | 15,903 | ,000 |
| Within Groups                | 1067,482       | 597 | 1,788       |        |      |
| Total                        | 1124,353       | 599 |             |        |      |

**Descriptives**

**Purchase Behaviour Construct**

|                    | N   | Mean  | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|--------------------|-----|-------|----------------|------------|----------------------------------|-------------|---------|---------|
|                    |     |       |                |            | Lower Bound                      | Upper Bound |         |         |
| 18 to 24 years old | 334 | 2,983 | 1,3757         | ,0753      | 2,835                            | 3,131       | 1,0     | 5,0     |
| 25 to 31 years old | 120 | 3,600 | 1,2424         | ,1134      | 3,375                            | 3,825       | 1,0     | 5,0     |
| > 31 years old     | 146 | 3,605 | 1,3224         | ,1094      | 3,389                            | 3,821       | 1,0     | 5,0     |
| Total              | 600 | 3,258 | 1,3701         | ,0559      | 3,148                            | 3,368       | 1,0     | 5,0     |

**Multiple Comparisons**

Dependent Variable: Purchase Behaviour Construct

Games-Howell

| (I) Age            | (J) Age            | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|--------------------|--------------------|-----------------------|------------|------|-------------------------|-------------|
|                    |                    |                       |            |      | Lower Bound             | Upper Bound |
| 18 to 24 years old | 25 to 31 years old | -,6170*               | ,1361      | ,000 | -,938                   | -,296       |
|                    | > 31 years old     | -,6220*               | ,1328      | ,000 | -,935                   | -,309       |
| 25 to 31 years old | 18 to 24 years old | ,6170*                | ,1361      | ,000 | ,296                    | ,938        |
|                    | > 31 years old     | -,0050                | ,1576      | ,999 | -,377                   | ,367        |
| > 31 years old     | 18 to 24 years old | ,6220*                | ,1328      | ,000 | ,309                    | ,935        |
|                    | 25 to 31 years old | ,0050                 | ,1576      | ,999 | -,367                   | ,377        |

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

## Notes for Model (Default model)

### Computation of degrees of freedom (Default model)

Number of distinct sample moments: 65  
 Number of distinct parameters to be estimated: 19  
 Degrees of freedom (65 - 19): 46

### Result (Default model)

Minimum was achieved  
 Chi-square = 2271,608  
 Degrees of freedom = 46  
 Probability level = ,000

### Estimates (Group number 1 - Default model)

#### Scalar Estimates (Group number 1 - Default model)

#### Maximum Likelihood Estimates

#### Regression Weights: (Group number 1 - Default model)

|                |      |                  | Estimate | S.E. | C.R.   | PLabel |
|----------------|------|------------------|----------|------|--------|--------|
| Attitude       | <--- | BehavioralBelief | ,167     | ,041 | 4,091  | ***    |
| SubjectiveNorm | <--- | NormativeBelief  | ,423     | ,041 | 10,346 | ***    |
| PBC            | <--- | ControlBelief    | -,045    | ,041 | -1,091 | ,275   |
| PI             | <--- | Attitude         | ,263     | ,040 | 6,519  | ***    |
| PI             | <--- | SubjectiveNorm   | ,001     | ,038 | ,022   | ,983   |
| PI             | <--- | PBC              | ,073     | ,041 | 1,788  | ,074   |
| PI             | <--- | PV               | ,495     | ,041 | 12,113 | ***    |
| PI             | <--- | WPP              | ,148     | ,041 | 3,634  | ***    |
| PB             | <--- | PI               | ,904     | ,035 | 25,651 | ***    |

**Standardized Regression Weights: (Group number 1 - Default model)**

|                |      |                  | Estimate |
|----------------|------|------------------|----------|
| Attitude       | <--- | BehavioralBelief | ,165     |
| SubjectiveNorm | <--- | NormativeBelief  | ,389     |
| PBC            | <--- | ControlBelief    | -,045    |
| PI             | <--- | Attitude         | ,230     |
| PI             | <--- | SubjectiveNorm   | ,001     |
| PI             | <--- | PBC              | ,063     |
| PI             | <--- | PV               | ,427     |
| PI             | <--- | WPP              | ,128     |
| PB             | <--- | PI               | ,724     |

**Intercepts: (Group number 1 - Default model)**

|                         | Estimate | S.E. | C.R.    | PLabel |
|-------------------------|----------|------|---------|--------|
| <b>BehavioralBelief</b> | 5,189    | ,041 | 126,994 | ***    |
| <b>NormativeBelief</b>  | ,549     | ,041 | 13,434  | ***    |
| <b>ControlBelief</b>    | 1,355    | ,041 | 33,163  | ***    |
| <b>Attitude</b>         | 3,434    | ,216 | 15,904  | ***    |
| <b>SubjectiveNorm</b>   | 2,668    | ,047 | 57,241  | ***    |
| <b>PBC</b>              | 3,636    | ,069 | 52,842  | ***    |
| <b>PV</b>               | 4,108    | ,041 | 100,549 | ***    |
| <b>WPP</b>              | 3,586    | ,041 | 87,761  | ***    |
| <b>PI</b>               | ,204     | ,338 | ,604    | ,546   |
| <b>PB</b>               | -,507    | ,152 | -3,329  | ***    |

**Variances: (Group number 1 - Default model)**

|            | Estimate | S.E. | C.R. | PLabel |
|------------|----------|------|------|--------|
| <b>E1</b>  | 1,000    |      |      |        |
| <b>E2</b>  | 1,000    |      |      |        |
| <b>E3</b>  | 1,000    |      |      |        |
| <b>E4</b>  | 1,000    |      |      |        |
| <b>E5</b>  | 1,000    |      |      |        |
| <b>E6</b>  | 1,000    |      |      |        |
| <b>E9</b>  | 1,000    |      |      |        |
| <b>E10</b> | 1,000    |      |      |        |
| <b>E7</b>  | 1,000    |      |      |        |
| <b>E8</b>  | 1,000    |      |      |        |

**Squared Multiple Correlations: (Group number 1 - Default model)**

|                         | Estimate |
|-------------------------|----------|
| <b>ControlBelief</b>    | ,000     |
| <b>NormativeBelief</b>  | ,000     |
| <b>BehavioralBelief</b> | ,000     |
| <b>WPP</b>              | ,000     |
| <b>PV</b>               | ,000     |
| <b>PBC</b>              | ,002     |
| <b>SubjectiveNorm</b>   | ,152     |
| <b>Attitude</b>         | ,027     |
| <b>PI</b>               | ,256     |
| <b>PB</b>               | ,523     |

## Model Fit Summary

### CMIN

| Model              | NPAR | CMIN     | DF | PCMIN/DF    |
|--------------------|------|----------|----|-------------|
| Default model      | 19   | 2271,608 | 46 | ,000 49,383 |
| Saturated model    | 65   | ,000     | 0  |             |
| Independence model | 20   | 1544,670 | 45 | ,000 34,326 |

### Baseline Comparisons

| Model              | NFI    | RFI   | IFI    | TLI   | CFI   |
|--------------------|--------|-------|--------|-------|-------|
|                    | Delta1 | rho1  | Delta2 | rho2  |       |
| Default model      | -,471  | -,439 | -,485  | -,452 | ,000  |
| Saturated model    | 1,000  |       | 1,000  |       | 1,000 |
| Independence model | ,000   | ,000  | ,000   | ,000  | ,000  |

### Parsimony-Adjusted Measures

| Model              | PRATIO | PNFI  | PCFI |
|--------------------|--------|-------|------|
| Default model      | 1,022  | -,481 | ,000 |
| Saturated model    | ,000   | ,000  | ,000 |
| Independence model | 1,000  | ,000  | ,000 |

### NCP

| Model              | NCP      | LO 90    | HI 90    |
|--------------------|----------|----------|----------|
| Default model      | 2225,608 | 2073,232 | 2385,328 |
| Saturated model    | ,000     | ,000     | ,000     |
| Independence model | 1499,670 | 1374,966 | 1631,749 |

### FMIN

| Model              | FMIN  | F0    | LO 90 | HI 90 |
|--------------------|-------|-------|-------|-------|
| Default model      | 3,792 | 3,716 | 3,461 | 3,982 |
| Saturated model    | ,000  | ,000  | ,000  | ,000  |
| Independence model | 2,579 | 2,504 | 2,295 | 2,724 |

### RMSEA

| Model              | RMSEA | LO 90 | HI 90 | PCLOSE |
|--------------------|-------|-------|-------|--------|
| Default model      | ,284  | ,274  | ,294  | ,000   |
| Independence model | ,236  | ,226  | ,246  | ,000   |

## AIC

| Model              | AIC      | BCC      | BIC | CAIC |
|--------------------|----------|----------|-----|------|
| Default model      | 2309,608 | 2310,319 |     |      |
| Saturated model    | 130,000  | 132,432  |     |      |
| Independence model | 1584,670 | 1585,418 |     |      |

## ECVI

| Model              | ECVI  | LO 90 | HI 90 | MECVI |
|--------------------|-------|-------|-------|-------|
| Default model      | 3,856 | 3,601 | 4,122 | 3,857 |
| Saturated model    | ,217  | ,217  | ,217  | ,221  |
| Independence model | 2,646 | 2,437 | 2,866 | 2,647 |

## HOELTER

| Model              | HOELTER | HOELTER |
|--------------------|---------|---------|
|                    | .05     | .01     |
| Default model      | 17      | 19      |
| Independence model | 24      | 28      |