



UNIVERSIDADE CATÓLICA PORTUGUESA

Consumers' behavior towards online grocery shopping

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April



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Master's Final Work in the modality of Dissertation presented to Católica Porto
Business School for the degree of master's in Marketing

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April 202

Resumo

O presente estudo tem como objetivo estudar a capacidade da teoria do comportamento planeado - ao prever as intenções de compra de mercearia online dos consumidores portugueses. A investigação empírica incluiu uma amostra de 100 pessoas. Foi utilizada uma componente principal e uma metodologia de análise de agrupamento em duas fases para identificar três categorias bem definidas e altamente interpretáveis baseadas em atitudes, normas, percepções da Teoria do Comportamento Planeado (TPB) que foram depois perfiladas pelas características demográficas e de compra de mercearia.

As principais conclusões deste estudo sugerem que a atitude e controlo comportamental percebido são componentes que têm um impacto significativo na intenção dos consumidores portugueses quando realizam compras de mercearias online.

Palavras-chave: Comportamento do consumidor, Atitudes, Teoria da Intenção de Comportamento Planeado, Compras de Mercearia Online

Abstract

The purpose of this article is to examine the ability of the theory of planned behavior - in predicting the online grocery purchasing intentions of Portuguese consumers. The empirical investigation included a sample of 100 people. A main component and two-stage cluster analysis methodology was used to identify three well-defined and highly interpretable categories based on attitudes, norms, perceptions from the Theory of planned behaviour (TPB) which were then profiled by demographic and grocery purchasing characteristics.

The study's key findings reveal that attitude and perceived behavioral control are the components that have a substantial impact on influencing Portuguese consumers' intention to purchase online groceries.

Keywords: Consumer behaviour, Attitudes, Intention Theory of Planned Behaviour, Online Grocery Shopping

Number of words: 10 000

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Chapter 1

Introduction and General Research Objectives

Internet shopping first appeared in the mid-1990s, allowing consumers to buy at the click of a button. Consumers are increasingly turning to online services as their disposable income rises, electronic payments become more reliable, and the number of suppliers and the size of their delivery networks expand.

On this note, online grocery shopping has been increasing in demand over the years to the new technological paradigm. However, the Covid-19h has accelerate this process, as grocery store aisles were deserted, and fears of getting the virus were exacerbated by congested stores with long lines. Shoppers began looking for alternatives to in-store shopping in order to stay safe and avoid the mayhem. Grocers around the country responded by increasing the availability of online shopping, adding delivery options, and offering curbside pick-up, allowing a whole new shopping pattern for this activity to immerse.

In Portugal, existing grocery store chains can still gain a competitive advantage in the online channel, where adoption is modest, and no pure online competitor has secured a significant market share. It's all about adapting and becoming hybrid for them. To date, no grocery store-based business in Portugal has discovered the formula for huge wins from the internet, which could indicate that they have not discovered the correct technique to approach the channel. This might be due to the limitation of in-depth research available for the example of Portugal, as it represents a small market with low penetration and earnings. Therefore, the aim of this research is to contribute to a better understanding of the factors influencing consumers' decision in Portugal to adopt, totally or partially for online grocery shopping.

Overview of the firm where the degree internship took place

This chapter will briefly introduce the firm where our degree internship took place, Mercadão, and our role as a trainee during the internship there.

Mercadão is a quick-commerce start-up that was founded by Gonçalo Soares da Costa in Porto in 2015, with a focus on online grocery deliveries to consumers through their online platform.

It's an on-demand service that purchases, picks up, and delivers items that customers order through its platform online. Also, it provides a variety of services, the most popular of which is grocery service deliveries in over 60 regions in Portugal. The company's mission statement is to improve people's lives by stretching their time, so they have more hours to do what they love. Mercadão hires independent workers to delivery groceries and other products to consumers from a distance up to 10km.

Mercadão is an exclusive partnership with Jerónimo Martins, the group that has ownership over Pingo Doce. Around 90% of total orders made by clientes are from Pingo Doce, following other brands such as Lev, Ornimundo, Decathlon, Odisseias and others. It's daily delivery order ranges from 1,000 to 2,000 orders depending on specific days. This number can alter quite often as many external factors play a role in the fluctuation of order (weather, inflation, staff, product availability).

As of 2022, Mercadão's total equity is of 1,420,242€ and employees over 100 individuals both in their Porto and Lisbon offices.

The degree internship had a duration of 6 months, starting on September 7th and finishing on March 7th. During this period, I had the position of an Operations Management and Marketing intern. My main responsibilities were managing recruitment process and working directly with hiring managers on the Operations Team to attend daily meetings with new and current recruitment partners and achieve daily goal of new hires and improving the process of retention of current

employees. I was also accountable for the control over materials and inventory processes, detecting issues and proposing new solutions. I participated in different marketing campaign projects for seasonal promotions through the elaboration of social media advertisement. Most activities were conducted on excel and other data analysis software.

In summary, working with different departments and the combinations of different task assigned allowed me to better understand the scope of online grocery shopping from the process of implementation to the consumers point of view.

Thus, enhanced my ability to dive deeper in the notion of research that I believe that was necessary to conduct in order to improve this service.

Chapter 2

Literature Review

In the first phase of this study, a literature review was done and reported here, in which concepts and definitions relevant to the research theme are exposed. It includes a review of articles on online grocery shopping and aiming at a broad understanding of the factors affecting consumer's behaviors towards this action. Additionally, we added a review of the Theory of Planned Behaviour, as we considered it, as we will argue later, a suitable theoretical framework to the study of the factors underlying consumers' adoption of online grocery shopping. As this theory has been widely applied in quantitative studies. It was determined important to use its principles to discover the core aspects influencing the purchasing behavior of Portuguese consumers when it came to online grocery, for two primary reasons: to provide a solid foundation for the exploratory investigation, as well as to permit future quantitative research on this topic.

Online Shopping

Online shopping is a method of obtaining products and services through Internet-based stores, which gives customers convenient access to products and pricing information, as well as allowing them to compare products (Chu et al., 2010). This form of commerce has increased globally in recent years. As the internet expands in scope and popularity, an increasing number of individuals get acquainted with it and accept it as a medium for obtaining information and purchasing online (Farag et al., 2007; Keisidou et al., 2011). Hence, has become a procedure in which a consumer purchases goods and services directly from the supplier through the internet. In other words, it is a sort of E-commerce in which the consumer purchases items without the need of an intermediary (Rizwan et al., 2014).

From a consumer's perspective, internet shopping enables them to search for and compare various product or service alternatives from various online retailers situated in various regions of the world. The interactive feature of the Internet allows consumers to make better use of online buying facilities by increasing the availability of product information, enabling direct multi-attribute comparison, and lowering interested customers' information search costs (Alba et al., 1997).

Online Grocery Shopping

Online grocery shopping (OGS) began in the United States in the late 1980s, and since then it has caught the interest of many businesses and grocery consumers in many locations worldwide (Morganosky & Cude, 2000).

Overall, customers desire a convenient, quick, and seamless customer experience from the beginning of their product search to the last mile, which includes delivery method, delivery time, returns, and refunds (Galipoglu et al., 2018; Hübner et al., 2016; Yumurtacı Hüseyinoğlu et al., 2017) . As a result, market leaders strive to meet users' expectations appropriately (Nilsson et al., 2015). Therefore, this has increased the pressure on businesses to retain their customers while simultaneously pushing online

grocery buyers to increase the frequency of their food ordering purchases (Hansen, 2008). Martín et al. (2019) noted that annual increase in OGS research occurred from 2000 to 2017, as well as the fact that many marketing studies evaluated the benefits and drawbacks of e-commerce and physical retail.

For instance, studies conducted by several authors (Keh & Shieh, 2001; Morganosky & Cude, 2000; Robinson et al., 2007) suggest that OGS has been typically seen as a non-pleasurable activity that is more utilitarian/functional than what occurs with the purpose of acquiring other products online. In this sense, online supermarket shopping is frequently designed to facilitate the transaction rather than to bring pleasure to the user. In this manner, websites should have interactive menus, recipes, and videos of product preparation, increasing the desire to make online grocery purchases (Keh & Shieh, 2001). Also, past research into internet OGS has compared online and offline purchase behavior in terms of brand loyalty (Danaher et al., 2003), shopping patterns (Andrews & Currim (2004), and the significance of brand names (Degeratu et al., 2000). For instance, Robinson et al. (2007) observed several reasons why people order groceries online, as well as why they avoid food products online. These causes are primarily related to situational variables such as lifestyle change, (for example, moving house or shifting employment, getting laid off, starting a family, having pets), moving to an area where the typical supermarket is not present, and/or owing to the influence of advertising. These authors emphasize the importance of the circumstances.

Online grocery shopping during COVID-19

The coronavirus (COVID-19) pandemic has caused significant disruptions in our daily activities and lifestyle (Nicola et al., 2020).

During this period, consumers of all generations were more willing to acquire products and services digitally (Jílková & Králová, 2021). Individuals have been advised to purchase more on online marketplaces as a result of global lockdown,

social isolation, and other measures introduced to minimize the spread of the COVID-19 pandemic (Alessa et al., 2021). This triggered a surge in internet online due to the limitation of physical store visits. Thus, lead to organizations taking advantage of the opportunity to relocate their operations to an online environment, resulting in a massive increase in online shopping (Dannenberg et al., 2020). However, online grocery shopping was no exception to this. Smaller businesses developed an online platform since there was no other way of selling their produce and other larger retail store with a previous functional website, focused all their efforts on this omnichannel to sell groceries. Research found that social distancing techniques and worries about buying in crowded grocery stores increased online grocery shopping (Ellison et al., 2021; Melo, 2020).

Purchase Intention

Purchase Intention is defined as a form of decision that examines why a consumer would want to buy a particular brand and can be used to predict a customer's purchasing habits. (Dani et al., 2012).

According to (Keller, 2001), the purchasing intention of consumers is rather challenging to determine. Purchasing intent is usually linked to a consumer's behavior, perception, and attitude. Consumers' purchase behavior is an important factor to examine when assessing and evaluating a product.

Price, as well as perceived quality and value, can impact purchase intention. During the purchasing process, consumers are influenced by internal and external motives (Gogoi, 2013). To forecast that an intention will lead to behavior, the measurement of intention must correlate to the measurement of behavior. Hence, the stronger the intention, the more probable a person is to engage in a behavior (Ajzen, 1991a).

According to of (Blomqvist & Lennartsson, 2015), in order to fulfill the intention to predict behavior, two conditions must be met. Primarily, the behavior must be measured after the intention, as intentions can change on a regular basis. Second,

respondents must be aware to make a choice or decision, such as when shopping for groceries online.

When it comes to online purchase intention, a customer is willing and intends to engage in an online transaction. Online transactions are defined as activities that involve the retrieval, transfer, and purchase of information and products through the internet (Pavlou, 2003). Therefore, with the interest of increasing online purchase intention and ultimately leading to more online transactions, companies need to meet consumers needs and desires (Forsythe & Shi, 2003).

In the case of online grocery shopping, a qualitative study by (Ramus & Nielsen, 2005) discovered that the convenience, wide selection of items, and time saving of online shopping are crucial factors for consumers when deciding whether or not to purchase food online.

Web Design

The effect of website design on online purchasing is just as essential to customers as the impacts of good service and low pricing in traditional retailing (Koufaris, 2002). A website's capacity to attract and keep online consumers is identical to a conventional store's ability to satisfy consumers' expectations through careful design of physical, social, and aesthetic features (Eroglu et al., 2001; Rosen & Purinton, 2004). Therefore, customers are more likely to return to a purchasing website with a well-designed user experience (Fan & Tsai, 2010). However, previously scholars investigated this subject from several points of perspective.

(Huizingh, 2000) examined website sources as well as the benefits of industry and size based on how different sorts of businesses arrange their websites on the Internet. The study concentrated on the content and design of websites. Therefore, website design was divided into three features, which were all objectively measured: navigational structure, search function, and content.

In line with this, website design according to Newman & Landay (2000) should incorporate navigation, information, and graphic elements. The complete and correct layout of the website structure to promote user convenience and allow them to swiftly discover essential information is known as navigation design. The purpose of information design is to make the material on a website interesting and easy to understand. Thus, using multimedia elements to make the screen more appealing to visitors and to make website information simpler is known as visual design. As a result, if consumers view the website to be of good quality, they will believe the website to be of high usefulness and will build a willingness to purchase (Heijden et al., 2003). Essentially, a user-friendly web interface of an online grocery's website will be a significant feature for customers when evaluating their online shopping experience. Also, Tomas et al., (2007) found that online business quality is an important driver of consumers' propensity to repurchase from online grocery websites.

Trust

Since people do not know what others' motives and intentions are, trust is a difficult concept to define (Kramer, 1999). There are two likely explanations for the presence of multiple definitions of trust in literature. To begin, trust is an abstract concept that is frequently used interchangeably with related concepts such as credibility, dependability, or confidence. As a result, researchers have found it difficult to define the term and distinguish between trust and its related concepts. Second, trust is a multidimensional concept with cognitive, emotional, and behavioral dimensions (Lewis, 1985).

According to Bauman & Bachmann (2017) trust can be seen as one of the most important components of business strategy since it reduces perceived risk and generates positive word of mouth. Consumers must feel safe and secure, and it is the seller's responsibility to achieve and maintain their trust (Palvia, 2009; Pavlou &

Fygenson, 2006). Additionally, Eggert (2006) believes that sufficient trust should exist when a consumer places an order online and submits financial data and other personal information in order to complete financial transactions.

In most buyer–seller interactions, trust serves as a binding force. Many academics indicated that trust is necessary for comprehending interpersonal conduct and economic transactions (Hirsch, 1976).

Consequently, a significance of trust is emphasized even more in an online transaction scenario, particularly when dealing with consumables such as food and groceries (Citrin et al., 2003) , because it's a necessary element for an online grocer's success (Toufaily et al., 2013). As consumers cannot physically see the items and are unable to determine which product is fresher or has a more appealing aesthetic, they must place their trust in the person in charge of this action. Employees who choose food for someone else must be very careful with the product they choose to transfer and improve the customers' trust when delivering their groceries.

Convenience

The term "convenience" refers to the overall amount of time and effort that an individual consumed to obtain a service or acquire a product (Copeland, 1923).

According to Wilson-Jeanselme (2001) online shopping is more convenient than in-store buying since it can be done from anywhere, at any time. It also saves time because there is no need to visit a traditional retail store or to pick and pack products. Consumers devote less time to shopping and more to other activities, their need for convenience has risen, and as a result, their emphasis has shifted to online shopping. Individuals today are multitasking, so they value everything which makes their lives easier. At the click of a button, online shopping provides a wide range of alternatives. Traditional shopping is not only physically exhausting but also time intensive. (Berry et al., 2002a) stated that customers prefer to buy items and services that save them time and effort. Thus, one of the primary motives for individuals to adopt online

purchasing is the convenience factor. The higher the time costs connected with a service, the lower the degree of consumers' perceived service convenience. Hence, the timesaving component of convenience has received a lot of attention in the consumer waiting literature, particularly in terms of consumers' attitude to waiting time (Gehrt & Yale, 1993). So, promoting online grocery shopping as a time saver is likely to be helpful for consumers who are under time constraints. Those who are under stress would almost probably welcome anything that would lessen their activity level and time demands. The ability to purchase online at any time and from any location where they internet is accessible may be quite enticing because it allows users to shop while still engaging in other activities. On the other hand, (Morganosky & Cude, 2000b) study observed that when there were situational constraints such as declining health or the presence of little children in the household, convenience was a particularly relevant motivator for shopping groceries online.

Perceived Usefulness

According to empirical studies, personal factors as well as consumers' perceptions of risks and benefits along with acceptability impact online grocery shopping and the usage of modern technology, which are strong indicators of both online shopping behavior and the intention to continue using these tools for acquiring food products (Hansen, 2005, 2008b). So, The Technology Adoption Model (TAM), created by (Davis, 1989a) and later extended by (Venkatesh & Davis, 2000) was one of the first theoretical models used to predict consumers' acceptance and continued intention to buy online grocery products. TAM argues that an individual's acceptance of new technology is influenced by Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), which are defined as the degree to which a person believes that adopting a certain system would improve work performance or is free from effort.

The perceived usefulness of technology reflects how an individual 's belief can enhance their efficiency or performance in any task given (Davis, 1989). When used in

context of online shopping, usefulness refers to the degree to which customers perceive that using the Internet as a means will increase their performance or effectiveness, hence improving the outcome of their shopping experience (Perea Y Monsuwé et al., 2004). Customers are more likely to adopt a product if its use is expected to be beneficial. The usefulness and accuracy of a website may impact a person's attitude as well. Therefore, consumers may continue to utilize an online service if they find it useful, regardless of whether they were dissatisfied with their previous use (Bhattacharjee, 2001).

Choi (2013) claims that perceived usefulness of online purchasing is linked to perceived benefits such as maximizing time savings, lowering transaction costs, and making online grocery shopping more convenient. For this reason, perceived usefulness is one of the most important factors to evaluate when individuals compare online grocery shopping to traditional shopping (Chiu et al., 2009).

Perceived Ease of use

Perceived ease of use (PEOU) relates to how well a user sees a certain technology, such as accessing websites, Internet services, and web-interface usability. PEOU is defined as "the degree to which an individual believes that using a specific system will require no physical or mental effort." (Davis, 1989).

Additionally, it can be seen as the extent to which consumers believe an online website may add benefits and effectiveness to their online shopping experience (Hu et al., 2009). Companies that sell their service and products through an online platform should have the goal to create a user-centric design to make it as simple as possible for individuals to use.

Moreover, when applied to online shopping, PEOU refers to consumers' judgments that shopping on the internet would need the least amount of effort.

Consumers' attitudes about internet shopping are also influenced by "usefulness" and "ease of use." "Perceived usefulness" is influenced by "ease of use," according to the

technology acceptance model (TAM), because the simpler a technology is to use, the more useful it can be (Davis, 1989b; Venkatesh, 2000). Various studies have utilized the efficiency of this methodology in the field of grocery online shopping. For example, (Driediger & Bhatiasevi, 2019) discovered that consumers who find online grocery shopping easy to use perceive it as more useful, possessing a positive influence on their intention to use it, and that this positive perception is positively affected by subjective norms and thus by the environment in which consumers live. However, (Bauerová & Klepek, 2018) determined that perceived ease of use has no direct effect on consumers purchase intention. The concept of a simple web page navigation, a quick purchase process, or simple task completion online is insufficient. Consequently, the customer is not interested in shopping for groceries online if perceived usefulness is not present as well. Hence, for a higher probability of consumers to adopt an online grocery behavior, the two elements of perceived ease of use and perceived usefulness would simultaneously need to be present.

Theory of Planned Behavior and online groceries shopping Intention research

The Theory of Planned Behavior (TPB) is the extension of the Theory of Reasoned Action (TRA) (Fishbein & Azjen Icek, 1975). TRA considers consumer behavior to be determined by the consumer's behavioral intention, where behavioral intention is a function of 'attitude towards the behavior' (i.e., the general feeling of favorability or unfavourability for that behavior) and 'subjective norm' (i.e. the perceived belief of other people in relation to the behavior in question).

Azjen (1985) proposed an expansion of the TRA by developing the theory of TPB, which assumes that an individual's decision to engage in each behavior, may be predicted by their intention to engage in that behavior.

Moreover, a consumer's intention to engage in a particular behavior may be influenced by the consumer's normative social norms. In comparison to TRA, TPB

includes perceived behavioral control (PBC) as a predictor of behavioral intention. According to (Rossi & Armstrong, 1999) , PBC is a person's belief about how difficult or easy it will be to accomplish the action.

For a multitude of reasons, the theory is well-suited for studying consumer online grocery purchasing behavior. Current academic research has investigated key parts of online grocery shopping, including well-established acceptance frameworks such as this theory of planned behavior (TPB) (Hansen, 2008a; Hansen et al., 2004; Ramus & Nielsen, 2005). Originally, research suggested that consumers may perceive obstacles and difficulties (PBC) when engaging in online shopping behavior. Second, because consumers may perceive both difficulties and risk when considering online grocery shopping, it is reasonable to expect them to use cognitive resources in forming beliefs about the related attributes, which may result in the development of an overall feeling (attitude) toward the behavior in question (Schmidt et al., n.d.; Zaichkowsky, 1985). Furthermore, in order to lower perceived risk, customers may seek normative counsel from trustworthy sources.

In summary, intentionality comes before conduct and is determined by the interaction of three unique and crucial antecedents: attitudes, subjective norms, and perceived behavior controls. A person's attitude toward the activity is their overall assessment of the behavior (Ajzen, 1991b). Moreover, the framework of TPC enables us to totally organize the determinants of online grocery shopping decision revealed in the literature review under the three antecedents for behavioral intention: attitude, subjective norm, and perceived behavioral control.

Thus, a conceptual model such as TPB is ideal for a more in-depth understanding of Portuguese consumer's readiness to grocery shop online while using personal values, attitudes, and behavior connected with this action.

Such insights may also assist Portuguese online grocery retailers in determining which online features to emphasize when attempting to attract consumers who have not previously purchased groceries via the Internet.

Specific Research Questions

The topic of acquiring groceries over the internet has been raised in a few international and European studies. However, little research has been done with the intention of analyzing Portuguese consumers' attitudes toward this type of consumption through digital platforms in Portugal. In this regard, the primary goal of this Final Master's Thesis is to provide a deeper understanding of Portuguese customers' motive (intention) and abilities (behavioral control) toward grocery shopping using the internet. As a result, the following research questions were formulated:

1- Which antecedents of online grocery shopping intention proposed by the TPB (attitude, subjective norm, and perceived behavioral control), best explain this intention?

The main goal of this first question is to find which component(s) of the TPB best predicts a Portuguese consumer's intention to buy groceries online.

2- How do consumers differ in the values of the 3 antecedents of online grocery purchase intention?

The second research question target issues related to the key variations between the different groups of consumers that will be studied to capture which beliefs and constructions do relate with the intention to purchase online groceries.

3- If there are distinct consumer profiles regarding the antecedents of online grocery purchase intention, do they have distinctive socio-economic characteristics?

Finally, the goal of this last research question stated is to discover how different socioeconomic variables in customer profiles influence their purchase intention when it comes to online grocery shopping.

Chapter 3

Methodology

Overview

A quantitative questionnaire was developed taking into account the above specific research questions, whose answers would allow to (i) better understand the importance to consumers of each of the three TPB antecedents of their intention to buy groceries online and (ii) to collect information on the profile of purchasing behaviour (including future intentions), and also (iii) to clarify is possible the socioeconomic profile of consumers with different intention towards online grocery shopping.

Thus, a dissemination of a questionnaire through the Internet was deemed relevant because it is a means with many advantages due to its characteristics, such as the ability to collect many answers relatively quickly, the reduction of the costs inherent in its dissemination, the quality of the answers obtained, the reduction of the researcher's interference in data collection, and the ability to request all answers for the completion of the questionnaire.

On this manner, the developed questionnaire was elaborated on the internet platform of Google Forms.

Questionnaire's Structure and Respondents' Sample

Relying on the major results of the literature review of this study, the questionnaire was developed in accordance with the theory of planned behavior (TPB) (Ajzen, 1991b) aiming at getting further insight into Portuguese customers' intentions to (or not to) purchase groceries through the internet and the factors influencing their intention.

The first set of questions target the collection of information on respondents' general use of online shopping in general and online groceries shopping in particular. For these initial questions an agreement 5 points Likert scale was used.

The following set of questions were designed to study the PBT variables concerning online groceries shopping intention (attitude; subjective norm; perceived behavioural control). A list of statements for each of these three variables was written based on scale items published by Ajzen (1991) but adapted for the behaviour intention under study, online groceries shopping. Also, for these questions a agreement degree 5 points Likert scale was used for measurement purposes ¹.

Furthermore, additional questions were asked to also collect information on respondents' perception of their own likelihood of incurring on online groceries shopping in the coming year, as well as information respondents' socio-economic characteristics.

The survey was distributed between the 30th of March and 5th of April 2022. During this period, a convenience sample of 100 consumers and shoppers of grocery were invited to answer a survey. All answers were considered valid and were subsequently used in the statistical analysis of the data. The survey was distributed using a variety of social media platforms and by using the snowball technique, with the support of individuals who shared the survey to others.

Choice of analytical frameworks and methods

Survey answers were analyzed using the statistical package SPSS, following four analytical sequential steps: First, for all the questions answers frequency distributions, or averages, as applicable, were analyzed. Second, the PBT variables were factor analyzed to validate its expected separate dimensionality. Third, a

¹ Appendix I gives all the applied constructs and measurements items.

single variable for each PBT behaviour intention antecedent was chosen, based on the factor scores, to be the proxy to measure the respondent's score for each of the three PBT antecedents. Fourth a cluster analyses of the 100 respondents was done with the three PBT antecedents plus Future online groceries shopping intention variable. Fifth, a ANOVA of the resulting clusters was done to the socio-economic variables also collected from each respondent.

Chapter 4

Major Results

Descriptive Analysis of the Respondents' Sample

65% of the survey participants were female, 88% ranging from ages 18 to 34 years old, 52% with a bachelor's degree, 70% employed and 55% belonging to a household with an average disposable monthly income from 1001€ e 2000€; The appendix II includes additional socio-economic information on the survey respondents.

In terms of online grocery shopping, when asked how often they shop on the internet regardless of the type of product 39% answered "sometimes", as well as 34% claimed "most of the time" they buy products online. However, when asked the same question but only concerning the purchase of groceries online, 30% of respondents which represent the majority, claimed they had never done any type of action associated with online grocery shopping before. Meanwhile, 45% said that they are mostly responsible for the general grocery shopping for their household.

A sample summary is also made available on Appendix I.

Respondents were also asked to refer which of the first three brands came to mind when thinking of online grocery shopping stores. Continente placed number one in consumers' minds as we can see in figure 1, a belief example of how most participants answered to this question. In addition to this, individuals were asked

following given a list which various online store did they know for selling groceries and once again Continente was primary to appear in consumers 'thoughts as well as being the platform that is utilized the most by users for this type of activity (Figure 2).

Participant's Response Number	3 Top to Mind Online Grocery Stores
1	Continente
2	Continente
3	Continente, pingo doce, auchan
4	Continente Online, Mercadão, El Corte Inglés
5	Thoman, Sportzone, Amazon
6	Dott, Pingo Doce, Continente
7	Continente, Mercadão, Glovo
8	Mercadão, Continente Online, El Corte Inglés
9	Continente, Pingo Doce, Mini Preço
10	Mercadão, Glovo, Too Good to Go

Figure 1: Table of first 10 responses from the survey.

First to last most used online platform for groceries according to participants (n=100)
1 - Continente
2 - Prozis
3 - Glovo
4 - Mercadão
5 - Pingo Doce Online
6 - Auchan Online
7 - Mini Preço
8 - Dott
9 - Getir
10 - Supercor

Figure 2: Scale of most preferred online platform for groceries

Lastly, regarding the retention of general information about buying groceries through the internet, respondents were asked to select from a list which aspects they believe could bring value to online grocery shopping (figure 3) – the most relevant answers were “Delivery Time” (73%); “the price” (69%) and “Not having to leave home” (59%).

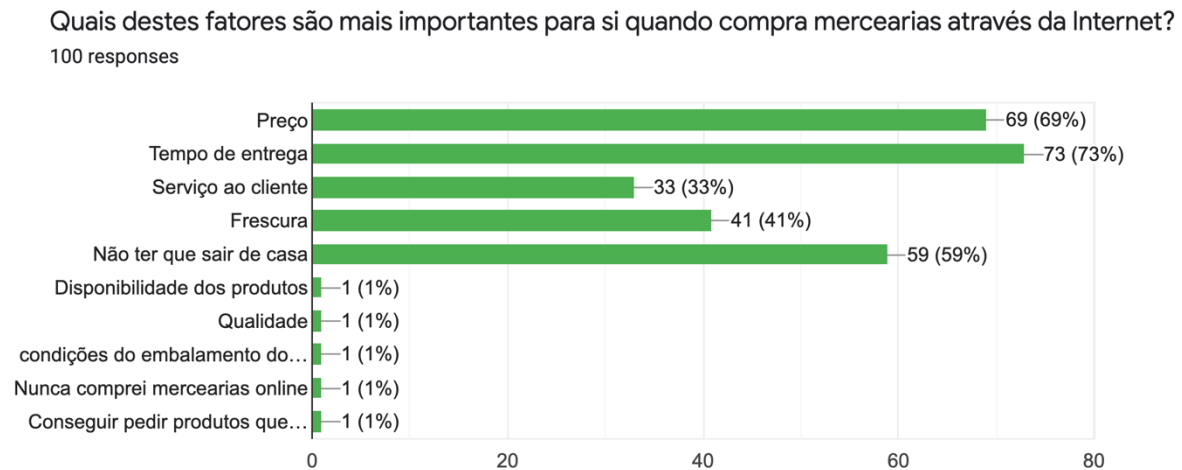


Figure 3: Most important factors when purchasing online groceries

Concerning questions used to assess respondents' online grocery buying intention (BI): (1) What is the likelihood that you will make purchases through the internet in the coming year? (2) How likely are you to do grocery shopping over the Internet by next year? A seven-point semantic scale (1=not likely at all; 4=not at all probable) measured the respondents' response.

About the first question, 60% of participants believed that it will be highly probable that they will intend do make any purchase using the internet over the next year. However, when asked about purchasing for groceries online only 31% indicated that they intent to follow through with this action.

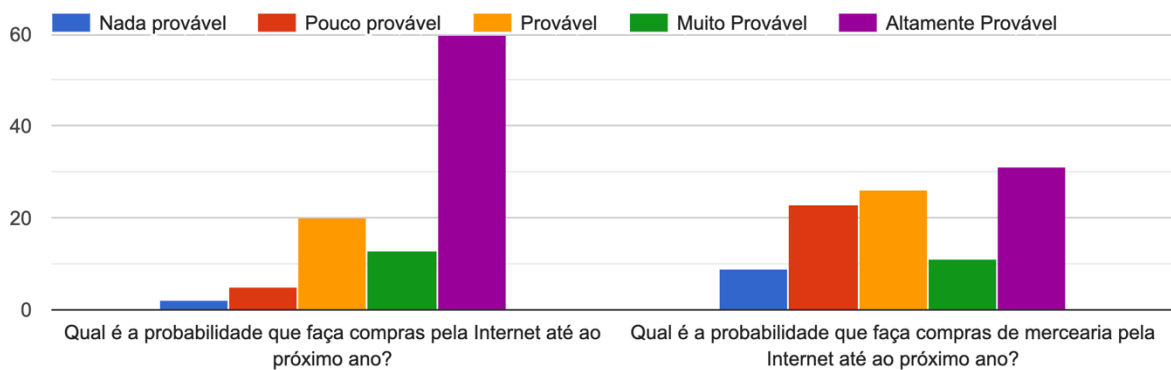


Figure 4: Participants regarding their probability of purchasing any item from the internet until next year vs purchasing groceries online until next year

Factor Analysis of the PBT Variables

A confirmatory factor analysis (CFA) was found to be appropriate for this evaluation, as it's used to validate scales (Hair, 2010) and confirm the multidimensionality of a theoretical concept (Byrne, 2001). The items and the components are displayed in the component matrix, were 9 variables, according to the factor analysis are reading 3 dimensions.

For each statement concerning the PBT constructs, multiple item scales were developed, as mentioned above.

Attitude towards online grocery shopping was measured by three items representing respondents' overall evaluation of the attractiveness of carrying out online grocery shopping. A 5-point Likert scale (1 = strongly disagree; 5 = strongly agree) was used to assess respondents' level of agreement with the following three statements: (1) Online grocery shopping with home delivery has made my life much easier; Online grocery shopping with home delivery does not give me any advantage over shopping in a store (2).

The amount of agreement to the following four statements was used to determine the Subjective Norm (perceived social influence) of the respondents: (1) My family members generally think it is a good idea to buy groceries on the Internet; (2) My family members generally think that it's not that great of a deal to buy groceries on the Internet; (3) Most of my friends and acquaintances think that grocery shopping over the Internet is beneficial; (4) Most of my friends and acquaintances think that grocery shopping over the Internet doesn't add any value. A 5-point Likert scale (1= disagree totally; 5 = agree totally) measured respondents' level of agreement to the four statements.

Perceived behavioural control was measured by means of four statements representing respondents' perceptions of the ease of online grocery shopping as well as possible barriers related to online grocery shopping. The following assertions were measured as well on a 5-point Likert scale (1=disagree totally; 5=agree totally): (1) In general, online grocery shopping is too complicated for me; (2) I can easily find the grocery products I want to choose over the Internet; (3) It is difficult to find the products I need when grocery shopping over the Internet; (4) Home delivery of grocery purchases made over the Internet is usually a simple process; (5) Groceries made over the internet are usually a problem to be delivered to my house. On table 1 next, this set of 9 PBT variables is summarized, and given the expected PBT variable associated to each statement submitted to respondents to state their degree of agreement with initially assumed for further validation.

#Var.	Variable name (SPSS)	Statement	Expected associated PBT variable
1	Atitude_OlMerc_1	Online grocery shopping with home delivery has made my life much easier	Attitude
2	Atitude_OlMerc_2	Online grocery shopping with home delivery does not give me any advantage over shopping in a store	Attitude
3	NormaS_Olmerc_fam1	My family members generally think that it is a good idea to buy groceries on the Internet	Attitude

4	NormaS_Olmerc_amig1*	My family members generally think that it is not a good idea to buy groceries on the Internet	Attitude
5	NormaS_Olmerc_fam2*	Most of my friends and acquaintances think that grocery shopping over the Internet is beneficial	Subjective Norm
6	NormaS_Olmerc_amig2	Most of my friends and acquaintances think that grocery shopping over the Internet is of little benefit	Subjective Norm
7	PercCapacComport_Ol1a	In general, online grocery shopping is too complicated for me	Behavioural Control Perception
8	PercCapacComport_Ol2b	I can easily find the grocery products I want to choose over the Internet	Behavioural Control Perception
9	PercCapacComport_Ol3b*	It is difficult to find the products I need when grocery shopping over the Internet	Behavioural Control Perception

Table 1: PBT variables initially considered for Groceries Online Shopping Intention

A summary of answers to all the above BCT variables is given on Appendix II. Our main analytical concern was to assess the factorial structure of this set of 9 variables above described. After the PBT we expected 3 distinct but correlated factors, namely, one factor grouping the PBT behavioural intention, Attitude, another factor grouping the Subjective Norm, and still another factor grouping the Behavioural Control Perception. To assess the true structure coming from respondents' answers we applied an Exploratory Factor Analysis to the data. Following Ajzen (1991), that these three factors should not to a certain extent associated, due to the mediating effect on Behaviour Intention of the Perceived Behavioural Control on the other two factors, we decide for an oblique rotation (Oblimin).

The analysis produced a factor structure mostly confirming the expected 3 factors, as it is commented next. Before it is important to say that the KMO (Kaiser-Meyer-Olkin) and the Bartlett's Test of the factor solution found give evidence that that structure did not come by chance. The obtained KMO value of 0.697 was nearly 0.7, the lower threshold to admit evidence of distinct latent factors behind the correlation matrix. The factor model's explanatory power is also supported by the Bartlett's Test of Sphericity significance level at 0.0001, by far lower than the upper

limit for reliability, 0.1 (1%), which indicates that the variables are significantly correlated.

On table 2 the rotated matrix for the three principal components (the ones retained for Eigenvalues of at least 1) is presented. Most of the items clearly score in a unique those three principal components. The best represented factor is Principal Component 1, with all the items expected to refer to Attitude with the highest score on that component. Therefore, this item was validated as measuring the consumer's attitude toward online grocery shopping. Not as clear, but also with most of the items scoring highest on a unique component, Principal Component 2, come the ones initially assumed as reflecting Perceived Behavioural Control. Thus, we identified this component 2 as representing the Perceived Behavioural Control. Finally, and this not so clear as for the two first components, we one of the items initially included as reflecting the Subjective Norm with high scores on Principal Component 3. It should be noted that for this third component there is another item scoring an even higher score, but we initially associated to Perceived Behavioural Control instead.

As a conclusion for this factor analysis, we propose that there is reasonable evidence that the three Behaviour Intention antecedents proposed by the BCT are also relevant to explain online groceries shopping intention.

	Component 1 - Attitude	Component 2 – Perceived Behavioural Control	Component 3 – Subjective Norm
Atitude_OIMerc_1	-,722	-,016	,492
Atitude_OIMerc_2	,651	,286	,010
NormaS_Olmerc_fam1*	-,750	,089	,242
NormaS_Olmerc_fam2	,735	,117	,081
NormaS_Olmerc_amig1*	-,492	,168	,677
NormaS_Olmerc_amig2	,658	,401	-,181
PercCapacComport_OI1a	,304	,799	-,031
PercCapacComport_OI2b	,013	-,338	,824
PercCapacComport_OI3b*	,075	,849	-,179

Tabel 2: Structure Matrix

Respondents' Cluster Analysis on PBT antecedent variables values

As the final analysis step, we pick three items assumed as the more clearly associated with one of the three factors identified by Factor Analysis as measuring the three PBT behavioural intention antecedents (marked * on Table Y first column). Then we attempted a classification of the 100 respondents using as the clustering criteria those three variables. To fulfill this, we have used the SPSS Cluster Analysis functionality, K-mean cluster, analyzing the results for the three K clustering alternatives: 2, 3 and 4 cluster. Comparing these 3 K clustering procedures by means of an Analysis of Variance of a behavioural variable (Future Online Groceries Shopping Intention) and four external selected descriptors (age, gender, education, and family disposable income), we concluded that the 4 clusters solution was the most interpretable and with more firm policy implications. On table 3 and 4 the cluster average scores on online groceries shopping intention and its antecedents is given, together with the number of respondents assigned to each cluster. On table 4 the ANOVA shows the significance differences across clusters on the behavioural intention and on the above mentioned socioeconomic respondent's characteristics

is shown. From table 4 we can conclude that both the combined scores on the behavioural intention antecedents is a predictor of the behavioural intention itself, and also two of the socioeconomic characteristics also significantly differ across clusters, but for age and disposable income only.

	Cluster 1	Cluster 2	Cluster 3	Cluster 4
Atitude	3,85	2,47	2,33	4,24
Perceived Behavioural Control	2,42	4,67	3,40	4,48
Subjective Norm	4,15	4,13	2,87	3,90
Number (%) of respondents	26	15	30	29
Intention of future online groceries shopping - average score	3.7	3.7	2.1	4.0

Table 3: Four Clusters of PBT intention antecedent variables Profiles

			Mean Square	F	Sig.
ProbComprasOL * Cluster Number of Case	Between Groups	(Combined)	2,176	1,976	,123
	Within Groups		1,101		
ProbComprasOlmerc * Cluster Number of Case	Between Groups	(Combined)	20,607	16,224	,000
	Within Groups		1,270		
Age * Cluster Number of Case	Between Groups	(Combined)	2,100	2,761	,046
	Within Groups		,761		
Gen * Cluster Number of Case	Between Groups	(Combined)	,172	,750	,525
	Within Groups		,230		
Escolarid * Cluster Number of Case	Between Groups	(Combined)	,576	1,365	,258
	Within Groups		,422		
RendDisp * Cluster Number of Case	Between Groups	(Combined)	2,500	2,512	,063
	Within Groups		,995		

Table 4: ANOVA of Intention to Buy Groceries Online and Socioeconomic variables on PBT antecedents four clusters

Chapter 5

Conclusions

In order to answer to the stated research questions, we measure, by means of a specially designed survey and questionnaire consumers' attitudes and perceptions towards online groceries shopping. The survey was directed to a convenience consumers' sample attempted to be as diverse as possible.

The data collection and analysis end up with some evidence that the Theory of Planned Behaviour shows good explanatory power to explain online groceries shopping behaviour. That is, not only consumers believes that groceries shopping might be a convenient decision, but also that their intention to do it also relies on the perceived capacity to do it efficiently, let's say, and relies, less clearly however, on opinions of influencers external to the household, such as friends or relatives.

Going now back to the specific research questions, one by one, we can answer them, at least provisionally, pointing out some evidence from our data:

1- Which antecedents of online grocery shopping intention proposed by the TPB (attitude, subjective norm, and perceived behavioral control), best explain this behavioural intention? Answer: from our findings presented above all three antecedents have behavioural intention explanatory power for online groceries shopping, but more clearly the Attitude, and the perceived behavioural control.

2- How do consumers differ in the values of the 3 antecedents of online grocery purchase intention? Answer: there are some evidences that four distinct groups of groceries shoppers concerning their combined attitude, perception, and intention levels towards groceries online shopping. This groups might be identified by means of a short attitude questionnaire developed from the items this research was able to validate.

3- If there are distinct consumer profiles regarding the antecedents of online grocery purchase intention, do they have distinctive socio-economic characteristics? Answer as discussed above, we found at least two socioeconomic characteristics influencing online groceries shopping intention, the consumer's age, and the consumer's household disposable income, out of the four socioeconomic characteristics checked, which also included Education and Gender.

Chapter 6

Limitations and Further Research Needs

One of the study's primary drawbacks is the paucity of existing research on online grocery shopping in Portugal concerning their overall purchasing intentions.

Second, the number of participants and questions in the survey was small in compared to usual surveys used in this field of study, owing primarily to time constraints, and each variable should have more items to prove its validity and relevance. In addition to our limitations, the questionnaire's homogeneity was not reached, since 60% of participants were of the same gender. Hence, the results presented can be negatively affected in this manner.

We propose that such investigations encompass a large number of participants and includes search and experience goods. In this regard, we recommend that groceries in an online setting might be thought of as a good with aspects to consider (product freshness), including a mix of search parameters (e.g., price, brand, country of origin, fat content) and experience factors (e.g. taste, flavour).

In addition, it would be relevant to apply the TPB theories across similar countries in Europe in order to obtain more information about consumers perspectives regarding online grocery shopping that could be used to distinguish elements of behavioral nature. This can serve for web designers and marketeers to enhance their

current strategies to attract or retain consumers by adjusting or developing new elements in the creation of online grocery platform designs through the results gathered.

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Appendix I – Questionnaire Sample

The importance of consumer behavior in online grocery shopping

This questionnaire was developed as part of my final thesis for the Master's degree in Marketing at UCP - Católica Porto Business School.

Its main objective is to study the experience of online grocery shopping, with a view to improving this service for users.

In this sense, I invite you to participate in this research work by answering this questionnaire, which will take no more than 5 minutes of your time.

There are no right or wrong answers, the important thing is that you answer truthfully and convey your personal opinion in each case. All the answers and data you provide will be used only for the purpose of this research and will be kept completely confidential.

Your answers are very important for the development of this work and, therefore, I thank you for your willingness to participate in this study.

1. How often have you shopped online regardless of the type of product?
 - Always or almost always
 - Very often
 - A few times
 - Rarely
 - Never

2. What is your general role in grocery shopping for your household?

- I am always the one who decides and does the shopping
- It is almost always me
- I rarely do it
- I never do (do not continue with the questions)

3. How often have grocery purchases been made online by your household?

- Always or almost always
- Often
- Sometimes
- Rarely
- Never

4. What are the first three brands that come to mind when you think of online grocery shopping stores?

Open answer

5. Of the following listed online stores name the ones you know selling grocery products?

- Continente Online
- Mercadão
- Prozis
- 360 Hyper
- Auchan Online
- Pingo Doce Online
- Bolt Market
- Dott
- Glood
- Other

6. And the ones you have already used?

- Continente Online
- Mercadão
- Prozis
- 360 Hyper
- Auchan Online
- Pingo Doce Online
- Bolt Market
- Dott
- Glood
- Other

7. Attitude towards online grocery buying (attitude)

Online grocery shopping with home delivery has made my life much easier.

- 1- I strongly disagree
- 2- I disagree
- 3- Don't care
- 4- I agree
- 5- I totally agree

Online grocery shopping with home delivery does not give me any advantage over shopping in a store.

- 1- I strongly disagree
- 2- I disagree
- 3- Don't care
- 4- I agree
- 5- I totally agree

8. Social norm (SN)

My family members generally think that it is a good idea to buy groceries on the Internet.

- 1- I strongly disagree
- 2- I disagree
- 3- Don't care
- 4- I agree
- 5- I totally agree

My family members generally think that it is not a good idea to buy groceries on the Internet.

- 1- I strongly disagree
- 2- I disagree
- 3- Don't care
- 4- I agree
- 5- I totally agree

Most of my friends and acquaintances think that grocery shopping over the Internet is beneficial.

- 1- I strongly disagree
- 2- I disagree
- 3- Don't care
- 4- I agree
- 5- I totally agree

Most of my friends and acquaintances think that grocery shopping over the Internet is of little benefit.

- 1- I strongly disagree
- 2- I disagree
- 3- Don't care
- 4- I agree
- 5- I totally agree

9. Perceived behavioural control (PBC)

In general, online grocery shopping is too complicated for me.

- 1- I strongly disagree
- 2- I disagree
- 3- Don't care
- 4- I agree
- 5- I totally agree

I can easily find the grocery products I want to choose over the Internet.

- 1- I strongly disagree
- 2- I disagree
- 3- Don't care
- 4- I agree
- 5- I totally agree

It is difficult to find the products I need when grocery shopping over the Internet.

- 1- I strongly disagree
- 2- I disagree
- 3- Don't care
- 4- I agree
- 5- I totally agree

Home delivery of grocery purchases made over the Internet is usually a simple process.

- 1- I strongly disagree
- 2- I disagree
- 3- Don't care
- 4- I agree
- 5- I totally agree

Home delivery of grocery purchases made over the Internet is usually a problem.

- 1- I strongly disagree
- 2- I disagree
- 3- Don't care
- 4- I agree
- 5- I totally agree

10. Intention to Purchase

How likely are you to do Internet grocery shopping by next year?

- 1 - Not at all likely
- 2 - Not at all likely
- 3 - Likely
- 4 - Very Likely
- 5 - Highly Likely

How likely is it that you will do grocery shopping over the Internet within the next year?

- 1 - Not at all likely
- 2 - Not at all likely
- 3 - Likely
- 4 - Very Likely
- 5 - Highly Likely

11. Which of these factors are most important to you when buying groceries online?

- Price
- Delivery time
- Customer service
- Freshness
- Other (please specify)

12. Age

- <18
- 18-24
- 25-34
- 35-44
- 45-64
- 65-74
- >74

13. Nationality

Open answer

14. Municipality of usual residence

Open answer

15. Professional status

- Student
- Employee
- Self-employed
- Unemployed
- Retired
- Other

16. Level of education

- Elementary level
- Secondary level
- Higher Level
- Master's degree
- Doctorate

17. Total monthly disposable household income

- Less than \$500
- Between 501€ and 1000€
- Between \$1001 and 2000€
- Between 2001€ and 4000€
- Over 4000€

Appendix II – SPSS Statistical Analysis Output Files

Frequency distribution of respondents' answers for all scale questions

		Statistics					
		Idade	Gen	Nacion	Escolari d	RendDis p	Freq_compr asOL
N	Valid	100	99	100	100	100	100
	Missing	0	1	0	0	0	0

		Statistics			
		Respons_com prasOLMerc	Freq_compras OLmerc	ProbCompras OL	ProbCompras Olmerc
N	Valid	100	100	100	100
	Missing	0	0	0	0

		Idade			
		Frequenc y	Percent	Valid Percent	Cumulative Percent
Valid	1,00	1	1,0	1,0	1,0
	2,00	54	54,0	54,0	55,0
	3,00	34	34,0	34,0	89,0
	4,00	3	3,0	3,0	92,0
	5,00	8	8,0	8,0	100,0
	Total	100	100,0	100,0	

		Gen			
		Frequenc	Percent	Valid	Cumulative
		y		Percent	Percent
Valid	1,00	65	65,0	65,7	65,7
	2,00	34	34,0	34,3	100,0
	Total	99	99,0	100,0	
Missing System		1	1,0		
Total		100	100,0		

		Nacion			
		Frequenc	Percent	Valid	Cumulative
		y		Percent	Percent
Valid	1,00	95	95,0	95,0	95,0
	2,00	5	5,0	5,0	100,0
	Total	100	100,0	100,0	

		Escolarid			
		Frequenc	Percent	Valid	Cumulative
		y		Percent	Percent
Valid	1,00	12	12,0	12,0	12,0
	2,00	52	52,0	52,0	64,0
	3,00	36	36,0	36,0	100,0
	Total	100	100,0	100,0	

		RendDisp			
		Frequenc	Percent	Valid	Cumulative
		y		Percent	Percent
Valid	1,00	3	3,0	3,0	3,0
	2,00	16	16,0	16,0	19,0
	3,00	38	38,0	38,0	57,0
	4,00	28	28,0	28,0	85,0
	5,00	15	15,0	15,0	100,0
	Total	100	100,0	100,0	

Freq_comprasOL					
		Frequenc	Percent	Valid	Cumulative
		y		Percent	Percent
Valid	1,00	12	12,0	12,0	12,0
	2,00	39	39,0	39,0	51,0
	3,00	34	34,0	34,0	85,0
	4,00	15	15,0	15,0	100,0
	Total	100	100,0	100,0	

Respons_comprasOLMerc					
		Frequenc	Percent	Valid	Cumulative
		y		Percent	Percent
Valid	,00	3	3,0	3,0	3,0
	1,00	34	34,0	34,0	37,0
	3,00	45	45,0	45,0	82,0
	4,00	18	18,0	18,0	100,0
	Total	100	100,0	100,0	

Freq_comprasOLmerc					
		Frequenc	Percent	Valid	Cumulative
		y		Percent	Percent
Valid	,00	30	30,0	30,0	30,0
	1,00	27	27,0	27,0	57,0
	2,00	17	17,0	17,0	74,0
	3,00	15	15,0	15,0	89,0
	4,00	11	11,0	11,0	100,0
	Total	100	100,0	100,0	

ProbComprasOL					
		Frequenc y	Percent	Valid Percent	Cumulative Percent
Valid	1,00	2	2,0	2,0	2,0
	2,00	5	5,0	5,0	7,0
	3,00	20	20,0	20,0	27,0
	4,00	13	13,0	13,0	40,0
	5,00	60	60,0	60,0	100,0
	Total	100	100,0	100,0	

ProbComprasOImerc					
		Frequenc y	Percent	Valid Percent	Cumulative Percent
Valid	1,00	9	9,0	9,0	9,0
	2,00	23	23,0	23,0	32,0
	3,00	26	26,0	26,0	58,0
	4,00	11	11,0	11,0	69,0
	5,00	31	31,0	31,0	100,0
	Total	100	100,0	100,0	

Appendix III - Factor Analysis Complete SPSS Procedure and Results

Descriptive Statistics			
	Mean	Std. Deviation	Analysis N
Atitude_OImerc_1	3,6700	1,27964	100

Atitude_OIMerc_2	2,4400	,98801	100
NormaS_Olmerc_fam 1	3,3000	1,06837	100
NormaS_Olmerc_fam 2	2,5400	1,14080	100
NormaS_Olmerc_ami g1	3,6900	,84918	100
NormaS_Olmerc_ami g2	2,2700	1,01359	100
PercCapacComport_ OI1a	2,0200	1,20588	100
PercCapacComport_ OI2b	3,7600	1,01623	100
PercCapacComport_ OI3b	2,3500	1,06719	100

Total Variance Explained

Component	Rotation
	Sums of Squared Loadings ^a
	Total
1	2,821
2	1,766
3	1,509

Structure Matrix

	Component		
	1	2	3
Atitude_OIMerc_1	-,722	-,016	,492
Atitude_OIMerc_2	,651	,286	,010
NormaS_Olmerc_fam 1	-,750	,089	,242

NormaS_Olmerc_fam 2	,735	,117	,081
NormaS_Olmerc_ami g1	-,492	,168	,677
NormaS_Olmerc_ami g2	,658	,401	-,181
PercCapacComport_ O1a	,304	,799	-,031
PercCapacComport_ O2b	,013	-,338	,824
PercCapacComport_ O3b	,075	,849	-,179

Component Correlation Matrix

Component	1	2	3
1	1,000	,116	-,164
2	,116	1,000	-,037
3	-,164	-,037	1,000

Appendix IV – Cluster Analysis Complete SPSS Procedure and Results

Initial Cluster Centers

	Cluster			
	1	2	3	4

NormaSubject	5,00	5,00	2,00	2,00
PercContrComp ort	1,00	5,00	2,00	4,00
Atitude1	3,00	2,00	1,00	5,00

Iteration History^a

Iteration	Change in Cluster Centers			
	1	2	3	4
1	1,686	1,406	1,873	1,645
2	,059	,357	,255	,393
3	,137	,208	,020	,207
4	,000	,000	,089	,098
5	,000	,000	,000	,000

Final Cluster Centers

	Cluster			
	1	2	3	4
NormaSubject	4,15	4,13	2,87	3,90
PercContrComp ort	2,42	4,67	3,40	4,48
Atitude1	3,85	2,47	2,33	4,24

**Number of Cases in
each Cluster**

Cluster 1	26,000
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	2	15,000
	3	30,000
	4	29,000
Valid		100,000
Missing		,000

Case Processing Summary

	Included		Cases Excluded		Total	
	N	Percent	N	Percent	N	Percent
ProbComprasOL * Cluster Number of Case	100	100,0%	0	0,0%	100	100,0%
ProbComprasOlmerc * Cluster Number of Case	100	100,0%	0	0,0%	100	100,0%
Idade * Cluster Number of Case	100	100,0%	0	0,0%	100	100,0%
Gen * Cluster Number of Case	99	99,0%	1	1,0%	100	100,0%
Escolarid * Cluster Number of Case	100	100,0%	0	0,0%	100	100,0%
RendDisp * Cluster Number of Case	100	100,0%	0	0,0%	100	100,0%

Report

Cluster Number of Case		ProbCompr asOL	ProbCompr asOlmerc	Idade	Gen	Escolari d
1	Mean	4,1923	3,6923	2,7308	1,4000	2,1538
	N	26	26	26	25	26
	Std. Deviation	1,13205	1,25759	,82741	,50000	,67482

	Minimum	1,00	1,00	1,00	1,00	1,00
	Maximum	5,00	5,00	5,00	2,00	3,00
2	Mean	4,5333	3,7333	2,5333	1,4667	2,0000
	N	15	15	15	15	15
	Std. Deviation	,91548	1,43759	,83381	,51640	,65465
	Minimum	2,00	1,00	2,00	1,00	1,00
	Maximum	5,00	5,00	5,00	2,00	3,00
	Mean	3,9000	2,1333	2,3000	1,2667	2,3000
3	N	30	30	30	30	30
	Std. Deviation	1,21343	,93710	,65126	,44978	,65126
	Minimum	1,00	1,00	2,00	1,00	1,00
	Maximum	5,00	5,00	5,00	2,00	3,00
	Mean	4,4828	4,0000	2,9310	1,3103	2,3793
	N	29	29	29	29	29
4	Std. Deviation	,82897	1,00000	1,09971	,47082	,62185
	Minimum	3,00	2,00	2,00	1,00	1,00
	Maximum	5,00	5,00	5,00	2,00	3,00
	Mean	4,2400	3,3200	2,6300	1,3434	2,2400
	N	100	100	100	99	100
	Std. Deviation	1,06477	1,36241	,89505	,47727	,65320
Total	Minimum	1,00	1,00	1,00	1,00	1,00
	Maximum	5,00	5,00	5,00	2,00	3,00

Cluster Number of Case		RendDisp
1	Mean	3,0769
	N	26
	Std. Deviation	1,12865
	Minimum	1,00
	Maximum	5,00
2	Mean	3,5333
	N	15

	Std. Deviation	,83381
	Minimum	2,00
	Maximum	5,00
3	Mean	3,1667
	N	30
	Std. Deviation	1,05318
	Minimum	1,00
	Maximum	5,00
4	Mean	3,7241
	N	29
	Std. Deviation	,88223
	Minimum	2,00
	Maximum	5,00
Total	Mean	3,3600
	N	100
	Std. Deviation	1,02020
	Minimum	1,00
	Maximum	5,00

Measures of Association

	Eta	Eta Squared
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ProbComprasOL * Cluster Number of Case	,241	,058
ProbComprasOlmerc * Cluster Number of Case	,580	,336
Idade * Cluster Number of Case	,282	,079
Gen * Cluster Number of Case	,152	,023
Escolarid * Cluster Number of Case	,202	,041
RendDisp * Cluster Number of Case	,270	,073